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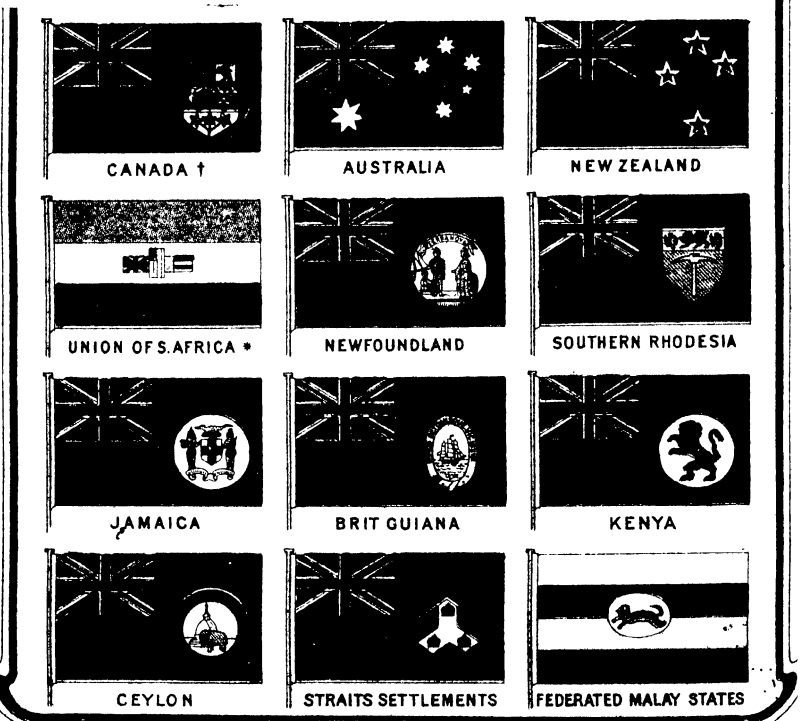


†*The flag flown over Canadian government buildings outside Canada, and the Canadian Mercantile Marine. Inside Canada the Union Jack is used.* **National flag flown in conjunction with the Union Jack.*

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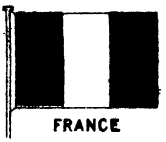
FRANCE

ITALY
MERCHANT

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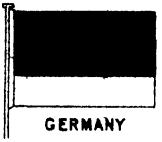
MERCHANT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SWITZERLAND

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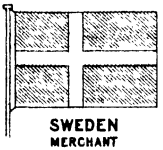
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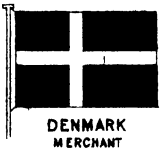
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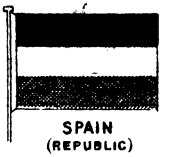
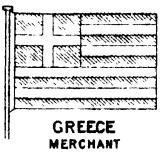

SPAIN
(REPUBLIC)

PORTUGAL
MERCHANT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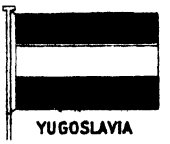
MERCHANT

POLAND

CZECHOSLOVAKIA


YUGOSLAVIA

RUMANIA
MERCHANT

BULGARIA
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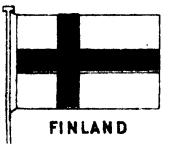
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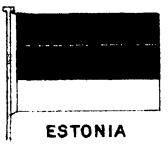
AUSTRIA

HUNGARY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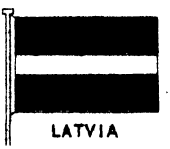
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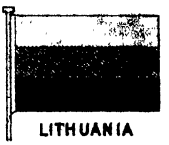
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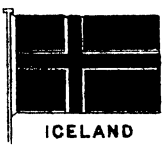
RUSSIA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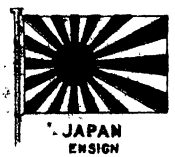
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In conclusion, the Editor always welcomes corrections and suggestions and would like to thank the many users of the *Cyclopaedia* in all parts of the world who have helped Messrs. A. & F. Pears to keep it a thoroughly up-to-date and easily comprehensible book of reference for the general public.

THE EDITOR.

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# EVENTS



PEARS—THE PURE SOAP

*For particulars of Pears Famous Toilet Preparations turn to end of Book*

# Pears' Dictionary of Events

SETTING FORTH IN CHRONOLOGICAL ORDER THE LEADING EVENTS IN THE HISTORY OF THE WORLD

*In the record of the years here set down, it has only been possible to mention in the briefest manner the principal events in the world's history, with the dates of their occurrence. The story is naturally fullest in relation to our own country, but few of the more important facts in the history of other countries have been passed over.*

B.C.
2234 Chaldean astronomical observations begun.
2200 Hia dynasty founded in China.
1273 Assyrian empire founded.
1263 Pythian games started.
1200 Period of Trojan war.
1100 Chow dynasty founded in China.
1055 David king of Israel.
1012 Building of Solomon's temple.
1000 Homer flourished.
900 North-west Palace of Nimroud built.
876 First Assyrian Empire ends.
800 Chaldeans in Mesopotamia.
747 Babylon independent under Nabonassar.
710 Judah invaded by Sennacherib.
659 Byzantium founded by Megarians.
624 Draco legislates at Athens.
610 Battle of Megiddo: death of Josiah.
609 Fall of Nineveh; Babylon under Nabopolassar.
605 Zoroaster in Persia.
594 Solon at Athens. [second captivity.
586 Jerusalem taken by Nebuchadnezzar;
579 Nebuchadnezzar takes Tyre.
569 Nebuchadnezzar conquered Egypt.
546 Cyrus conquers Lydia.
538 Cyrus conquers Babylon.
536 Jews begin to rebuild the Temple.
529 Death of Cyrus; succeeded by Cambyses.
525 Cambyses conquers Egypt; Æschylus b.
518 Pindar b.
510 The Pisistratidæ expelled from Athens.
508 First treaty between Rome and Carthage.
497 Battle of Lake Regillus.
496 Conquest of Thrace, Pæonia, and Macedonia by Darius.
495 Sophocles b.
492 First Persian expedition against Greece.
490 Second Persian expedition against Greece; Miltiades victorious at Marathon.
485 Xerxes becomes king of Persia.
484 Persians recover Egypt; Herodotus b.
481 Xerxes proceeds against Greece. [Xerxes.
480 Battle of Thermopylæ; Athens taken by
477 Athenian supremacy established.
471 Thucydides b.
466 Revolt of the Helots.
465 Death of Xerxes.
457 Return of the Jews under Ezra.
451 First Roman Decemvirate.
447 Battle of Coronea.
444 Pericles obtains supreme power at Athens.
431 Peloponnesian war began—lasted 27 years.
429 Death of Pericles.
428 Revolt of Mytilene.
427 Plato b. First Athenian expedition to Sicily; Aristophanes flourished.
412 Diogenes b. Constitution of the Four Hundred at Athens.
408 Foundation of Rhodes.
404 Athens taken by Lysander.
403 Democratic government restored at Athens.
401 Retreat of 10,000 Greeks under Xenophon.
399 Death of Socrates.
385 Demosthenes b.
384 Aristotle b.
379 Lacedæmonians expelled from Thebes.
376 Spartans defeated by Chabrias off Naxos.
372 Athens and Sparta make peace.
371 Spartans defeated by Epaminondas at Leuctra.
367 Aristotle proceeds to Athens to join Plato.

B.C.
364 Prætorship instituted at Rome.
362 Epaminondas slain at the battle of Mantinea.
359 Philip becomes king of Macedonia.
358 Chios and Byzantium besieged. Philip captures Amphipolis.
357 Sacred war begins—Phocians take Delphi.
356 Alexander the Great b. Temple of Ephesus destroyed by fire.
355 Rhodes, Byzantium, and Chios proclaimed independent.
352 First Philippic of Demosthenes delivered.
346 Sacred war ends.
343 Timoleon conquers Syracuse.
340 First Samnite war.
338 Battle of Chæronea. Greece subdued.
336 Murder of Philip—Alexander succeeds.
335 Alexander destroys Thebes, and becomes chief of the Greek army.
334 Battle of Granicus.
333 Battle of Issus.
332 Conquest of Egypt and Tyre, and foundation of Alexandria.
331 Battle of Arbela and subjugation of Persia.
330 Darius murdered.
327 Alexander's expedition to India.
323 Death of Alexander; his empire divided. Second Samnite war.
321 Romans surrender to the Samnites.
320 Ptolemy carries 100,000 Jews into Egypt.
315 Cassander restores Thebes.
312 Battle of Gaza. Appian way constructed.
304 Rhodes taken by Demetrius.
298 Third Samnite war.
295 Battle of Sentinum.
294 Athens taken by Demetrius.
287 Archimedes b.
284 Alexandrian library founded.
280 Pyrrhus invades Italy.
279 Gauls in Greece; driven out into Asia; Pyrrhus defeated at Beneventum.
264 First Punic War begins.
256 Regulus victorious at Ecnomus; Invasion of Africa.
241 Carthaginians defeated by Catulus; end of First Punic war.
237 Spain conquered by the Carthaginians. Sardinia and Corsica taken by the Romans.
219 Hannibal besieges Saguntum; Second Punic war begins.
218 Hannibal marches from Spain into Italy.
217 Hannibal crosses the Apennines; Battle of
216 Battle of Cannæ. [Lake Trasimenus.
212 Syracuse captured by Marcellus.
211 Defeat and death of the two Scipios; First Macedonian war.
204 Siege of Utica.
202 Hannibal suffers defeat at Zama.
201 End of Second Punic war; first Macedonian war.
200 Second Macedonian war begins.
197 Flaminius defeats Philip at Battle of Cynos-
184 Death of Plautus. [cephalæ.
179 Perseus king of Macedonia.
172 Third Macedonian war.
168 Jerusalem taken by Antiochus Epiphanes.
167 Judas Maccabeus revolts.
166 Terence's first comedy acted at Rome; Jews delivered from Syrians.
159 Death of Terence.

B.C.
149 Third Punic war begins.
146 Rome wars against the Achæan League; Carthage destroyed by Scipio; Corinth destroyed.
133 Laws of Tiberius Gracchus passed at Rome; Gracchus assassinated.
106 Pompey and Cicero b.
102 Marius gains victory over Teutones at Aquæ Sextiæ (Aix); 200,000 killed; Julius Cæsar b.
101 Marius defeats Cimbri at Vercellæ; 120,000 slain, 60,000 prisoners; end of war.
95 Lucretius b.
88 First Mithridatic war.
86 Death of Marius.
82 Sylla, Roman dictator.
74 Third Mithridatic war.
70 Pompey and Crassus consuls; Virgil b.
65 Pompey conquers Syria.
63 Jerusalem taken.
60 First Triumvirate formed—Pompey, Cæsar, and Crassus.
59 Livy b.
55 Cæsar invades Britain.
51 Subjugation of Gaul by Cæsar completed.
49 Pompey driven from Italy; Cæsar dictator.
48 Pompey murdered in Egypt.
47 War in Egypt.
46 African war.
45 Cæsar made dictator for life.
44 Cæsar murdered; Antony seizes Rome.
42 Death of Brutus and Cassius.
41 Antony and Cleopatra meet at Tarsus.
40 Herod becomes king of the Jews.
27 Roman empire established.
17–7 Herod rebuilds Temple at Jerusalem.
12 Drusus invades Germany.

BIRTH OF CHRIST.

A.D.
4–6 Tiberius invades Germany.
14 Death of Augustus.
33 The Crucifixion.
37 Caligula becomes emperor.
41 Claudius emperor on assassination of Caligula.
43 Claudius invades Britain.
50 Caractacus taken prisoner to Rome.
61 Boadicea leads Britons against Romans.
64 Nero burns Rome.
70 Jerusalem taken by Titus.
79 Destruction of Pompeii and Herculaneum.
86 Dacian war begins.
98 Trajan emperor.
117 Hadrian emperor.
120 Hadrian in Britain.
121 Hadrian's wall built.
138 Antoninus Pius emperor.
161 Marcus Aurelius and Lucius Verus become joint emperors.
193 Emperor Pertinax assassinated.
208 Severus invades Britain. Wall of Severus built.
211 Severus d. at York; Caracalla and Geta, emperors.
212 Geta put to death.
226 Artaxerxes ruler of new Persian empire.
249 Decius emperor.
250 Goths invade Roman empire.
251 Gallus emperor.
253 Franks invade Gaul.
260 Gallienus emperor.
263 Franks again invade Gaul.
267 Scythians and Goths defeated by Romans.
268 Claudius emperor.
270 Aurelian emperor.
275 Tacitus emperor.
284 Diocletian emperor.
296 Constantius in Britain.
305 Martyrdom of St. Alban. Constantius and Galerius emperors.
306 Constantius dies at York; Constantine proclaimed.
323 Constantine sole emperor; Constantinople founded.
325 Council of Nice; Nicene Creed settled.
337 Constantine II., Constantius II., and Constans joint emperors.
361 Julian emperor.
363 Julian killed.
364 Valentinian and Valens joint emperors; Roman law against magicians.
373 Death of Athanasius.
375 Invasion of the Huns.
382 Alaric king of the Goths.

A.D.
394 Theodosius holds supreme sway.
395 Honorius emperor of the West; death of Theodosius.
400 Alaric overruns Italy.
410 Rome sacked by Alaric.
411 Roman legions leave Britain.
429 Vandals invade Africa.
433 Attila made king of the Huns.
439 Vandals attack Carthage.
449 Invasion of Jutes under Hengist and Horsa.
451 Attila invades Gaul.
452 Venice founded.
453 Death of Attila.
457 Kingdom of Kent established by Hengist.
477 First invasion of Britain by Saxons.
482 Clovis king of the Franks.
489 Theodoric conquers Italy, and becomes king.
495 Saxons under Cerdic land in Britain.
527 Justinian emperor.
536 Belisarius captures Rome.
540 Belisarius captures Ravenna.
546 Totila takes Rome.
552 Narses takes Rome.
560 First English Abbey founded at Bangor.
565 Ethelbert king of Kent; Christianity preached amongst the Picts.
569 Mohammed b. at Mecca.
593 Ethelfrith founds kingdom of Northumbria.
597 Augustine in England.
602 Canterbury made seat of archbishopric.
604 See of London established
611c. Mohammed announces himself as a prophet and proclaims Islamism.
637 Jerusalem taken by Caliph Omar.
642 Theodorus first "Sovereign Pontiff" or Rome.
692, 698 Saracens destroy Carthage.
710 Saracens invade Spain.
714 Charles Martel ruler of France.
720 Saracens invade France.
723 Saracens conquer Sardinia.
735 Death of the Venerable Bede.
741 Charles Martel dies.
762 Bagdad founded.
768 Charlemagne and Carloman kings of the Franks.
772 Charlemagne reigns alone.
786 Haroun al Raschid becomes Caliph of Bagdad.
797 Danes invade England.
814 Death of Charlemagne.
827 Egbert overlord of England's kingdoms.
849 Alfred the Great b.
857 Death of Ethelwulf; Ethelbald succeeds.
860 Death of Ethelbald; Ethelbert succeeds.
866 Death of Ethelbert; Ethelred succeeds.
871 Alfred king of Wessex on death of Ethelred.
878 Alfred defeats Danes at Ethandune.
896 Rome taken by Arnolph of Germany.
916 Saracens defeated in Spain, 70,000 slain.
940 Edmund king of Wessex.
946 Dunstan rises to power; Edred king of Wessex.
959 Edgar, king of all England.
960 Dunstan archbp. of Canterbury.
975 Edward the Martyr king of England.
979 Edward assassinated; Ethelred the Unready succeeds.
987 Hugh Capet king of France.
988 Death of Dunstan.
1013 Sweyn of Denmark subdues England.
1016 Edmund Ironside king of England.
1017 Canute king of England.
1035 Death of Canute; Harold "Harefoot" succeeds.
1040 Death of Harold; Hardicanute succeeds.
1042 Edward the Confessor king of England.
1057 Malcolm III. king of Scotland.
1065 Westminster Abbey founded by Edward the Confessor.
1066 Harold II. king of England; Oct. 14, Battle of Hastings, Harold slain; William the Conqueror assumes the kingship.
1086 Completion of Domesday Book.
1087 William II. (Rufus) king of England.
1091 Scotch invasion under Malcolm III.
1093 Anselm archbp. Canterbury; Malcolm killed at the siege of Alnwick.
1095 First Crusade.
1097 Westminster Hall built.
1098 Edgar king of Scotland.

A.D.
1099 Capture of Jerusalem; Knights of St. John instituted.
1100 William II. killed in New Forest; Henry I. succeeded.
1118 Order of Knights Templars established.
1135 Stephen king of England.
1138 Battle of the Standard at Northallerton, David, king of Scotland defeated.
1141 Stephen taken prisoner; Matilda crowned at Winchester.
1145 Matilda, defeated, retires to France.
1147 Second Crusade.
1154 Henry II. king of England; Nicholas Breakspeare, an Englishman, Pope as Adrian IV.
1162 à Becket, archbp. Canterbury.
1170 Henry and à Becket reconciled; Dec. 26, Assassination of à Becket.
1173 Saladin sultan of Egypt; à Becket canonised.
1177 Saladin defeated by Renaud de Chatillon.
1180 Carthusian monasteries established in England.
1187 Saladin takes Jerusalem; Third Crusade.
1189 Siege of Acre; Richard I. king of England.
1190 Richard embarks for the Crusade.
1191 Crusaders capture Acre. [Austria.
1192 Richard held captive by Leopold duke of
1198 Richard defeats French at Gisors.
1199 John king of England. [war.
1202 Fourth Crusade; France and England at
1203 Crusaders conquer Constantinople; Prince Arthur murdered by John.
1206 Mogul empire founded.
1209 Franciscan order established.
1215 Magna Carta signed by John.
1216 Henry III. king; first Parliament in England.
1217 Fifth Crusade.
1219 Crusaders capture Damietta.
1227 Thomas Aquinas b.
1228 Sixth Crusade.
1229 Jerusalem ceded to Christians.
1236 Henry III. marries Elenor of Provence.
1248 Seventh Crusade.
1253 Jews driven out of France.
1264 Battle of Lewes, Barons victorious.
1265 First British Commons meet; Battle of Evesham, De Montfort killed.
1266 Roger Bacon presents his *Opus Majus* to Pope Clement IV.
1272 Edward I. king of England.
1282 "Sicilian Vespers" massacre; Edward I. conquers Wales.
1290 Jews expelled from England.
1295 First regular English Parliament.
1296 Edward I. subdues Scotland.
1297 Battle of Stirling, Wallace victorious.
1298 Battle of Falkirk, Edward I. defeats Wallace.
1304 Edward I. captures Stirling.
1305 Wallace executed in Smithfield.
1306 Robert Bruce king of Scotland.
1307 Edward II. king of England. [Stirling.
1313 Boccaccio b.; Edward Bruce besieges
1314 Battle of Bannockburn.
1318 Edw. Bruce defeated and killed at Dundalk.
1324 Wyclif b.
1327 Edward III. king of England.
1329 David II. (Bruce) king of Scotland.
1332 Scotland invaded by Edward III.
1333 Edward III. defeats Scots at Halidon Hill.
1339 France invaded by Edward III.
1340 Edward obtains victory over French fleet at Sluys.
1346 Battle of Crécy, Edward III. defeated
1347 Calais captured by the English. [French.
1348 Black Death plague makes its appearance.
1350 Order of the Garter instituted.
1351 Statute of labourers passed in England.
1353 Rienzi made Senator of Rome.
1354 Rienzi killed.
1356 Battle of Poictiers, English defeat French.
1359 Tamerlane in Persia.
1376 Edward I., Black Prince, d.
1377 Richard II. king of England.
1380 Thomas à Kempis b.
1381 Poll tax established in England; peasant rising under Wat Tyler.
1384 Death of Wyclif.
1385 Scots invade England, and Richard II. retaliates by taking Edinburgh.

A.D.
1386 Duke of Gloucester made Regent.
1387 Barons seize Tower of London.
1388 Another invasion of England by Scots; Battle of Otterburn, Scots victorious.
1397 Duke of Gloucester murdered. [England.
1399 Richard II. deposed, Henry IV. king of
1400 Revolt in Wales headed by Owen Glendower.
1402 Scots defeat at Homildon Hill, Sept. 14.
1403 Battle of Shrewsbury, the Percys defeated.
1406 James I., king of Scotland, seized and imprisoned in Tower of London.
1413 Henry V. king of England.
1414 Council of Constance.
1415 Capture of Harfleur; Battle of Agincourt.
1417 Henry V. takes Caen.
1420 Henry V. regent of France.
1422 Henry VI. king of France.
1424 James I. of Scotland liberated and crowned.
1428 English lay siege to Orleans.
1429 Joan of Arc enters Orleans.
1430 Joan of Arc made prisoner.
1431 Joan of Arc burnt at the stake.
1437 James I. of Scotland murdered.
1438 First printing at Haarlem, by Kosler.
1440 Eton College established.
1450 Jack Cade's insurrection.
1452 Savonarola b.; Leonardo da Vinci b.
1454 Duke of York proclaimed Protector.
1455 Battle of St. Albans (May 23) beginning the Wars of the Roses.
1460 Battle of Northampton, Henry VI. taken prisoner; Battle of Wakefield, Yorkists defeated, Duke of York killed.
1461 Second Battle of St. Albans, Yorkists defeated; Edward IV. king of England; battle of Towton Field, Yorkists victorious.
1464 Battle of Hexham, Lancastrians defeated.
1466 Henry VI. confined in the Tower and deposed.
1467 Erasmus b.
1469 Marriage of Ferdinand of Aragon and Isabella of Castile; Machiavelli b.
1470 Edward IV. escapes to Flanders.
1471 Edward IV. returns to claim his dukedom of York. The battles of Barnet and Tewkesbury are fought, resulting in the victory of the Yorkists, and the deaths of Henry VI. and Warwick.
1475 Edwd. IV. invades France; Michael Angelo b.
1476 Caxton begins printing at Westminster.
1477 Titian b.
1478 Inquisition established in Spain.
1483 Edward IV. d. and was succeeded by his son Edward V., who only reigned two months and 13 days, having been confined in the Tower and murdered, Richard III. succeeding; Raphael b.
1485 Aug. 22, Battle of Bosworth Field, Richard III. slain; Henry VII. king of England.
1486 Lambert Simnel Rebellion.
1492 Ferdinand II. captures Granada and drives the Moors from Spain; Columbus sails on his first expedition, Aug. 23; Henry VII. invades France; Perkin Warbeck in Ireland.
1494 Columbus discovers Jamaica.
1495 Perkin Warbeck rebellion in England.
1497 The Cabots discover Newfoundland; Vasco di Gama doubles the Cape of Good Hope.
1498 Savonarola put to death; third voyage of Columbus, touches the mainland of the American continent; Vasco di Gama discovers sea route to India.
1499 Perkin Warbeck executed.
1500 Discovery of Brazil by the Portuguese.
1502 Fourth voyage of Columbus.
1506 Death of Columbus; foundation stone of St. Peter's, Rome, laid.
1509 Henry VIII. king of England, April 22.
1510 Spaniards take Cuba; Luther goes to Rome.
1513 Battle of Flodden; Scots defeated.
1514 Wolsey archbishop of York.
1515 French invade Italy; Wolsey made cardinal and chancellor.
1519 Cortes conquers Mexico.
1521 Luther excommunicated; Henry VIII. opposes Lutheran ideas; Magellan discovers the Philippines. Diet of Worms.
1526 Tyndale's New Testament published.
1527 The imperialists capture Rome and make a prisoner of the Pope.

A.D.
1528 Conquest of Peru.
1529 Fall of Wolsey.
1530 Confession of Augsburg; death of Wolsey.
1534 Act of Supremacy passed and the Papal power in England abolished.
1535 Fisher and More executed; Barbarossa captures Tunis; Loyola founds Jesuits; Charles V. captures Tunis from Barbarossa; Coverdale's Bible, first printed English Bible.
1536 Death of Catherine of Aragon; Anne Boleyn executed May 19; Henry marries Jane Seymour May 26; Wales united to England; dissolution of smaller monasteries.
1537 Death of Jane Seymour; Etna in eruption. Henry VIII. granted charter to the Hon. Artillery Compy.
1538 Parish registers established in England; Pope Paul III. excommunicates Henry VIII.
1539 Revolt of Ghent; general dissolution of monasteries in England.
1540 Henry VIII. marries Anne of Cleves Jan. 6; Henry marries Catherine Howard July 28.
1542 Catherine Howard executed; Council of Trent; Mary Queen of Scots b. Dec 14; Copernicus d.; Henry VIII. marries Catherine Parr.
1544 Henry VIII. invades France.
1545 Needles first made in England.
1547 Earl of Surrey executed; Edward VI. king of Eng. Jan 28; Somerset made Protector.
1549 Act of Uniformity.
1551 Another Council of Trent.
1552 Somerset executed; Charles V. besieges Metz.
1553 Mary Tudor queen of England, July 6; Lady Jane Grey proclaimed, July 10.
1554 Wyatt's insurrection; Lady Jane Grey executed; Mary marries Philip of Spain.
1555 Diet of Augsburg.
1556 Cranmer burnt at stake; Cardinal Pole archbp. Canterbury; Ridley and Latimer burnt.
1557 Battle of St. Quentin, Aug. 10, French defeated by English and Spanish forces.
1558 Calais taken by French; Mary Queen of Scots marries the Dauphin; death of Charles V., Nov. 17; Elizabeth queen of England.
1559 John Knox returns to Scotland from France.
1560 Reformation established in Scotland.
1561 Mary Queen of Scots returns to Scotland.
1562 English occupy Havre.
1563 Council of Trent renewed; Church of England's 39 articles settled; Duc de Guise assassinated.
1564 Shakespeare b.; Calvin d.
1565 Mary Queen of Scots marries Darnley.
1566 Pius V. Pope; murder of Rizzio; revolt of the Netherlands.
1567 Murder of Darnley (Feb. 10); Mary Queen of Scots marries Bothwell (May 15); Mary forced to resign in favour of her son James VI.; Mary imprisoned, Murray made Regent.
1568 Revolt of Moors in Spain; Mary Queen of Scots escapes to England; death of Don Carlos.
1569 Battle of Jarnac, Huguenots defeated, and Condé killed.
1570 Regent Murray assassinated.
1571 Holy League against Turks.
1572 Duke of Norfolk executed; massacre of St. Bartholomew, Aug. 24; death of John Knox.
1573 Siege of La Rochelle.
1577 Drake's first voyage round the world.
1580 Spain annexes Portugal.
1584 Virginia discovered and colonised.
1585 Drake sets out for West Indies.
1586 Babington's plot against Elizabeth; Battle of Zutphen, Spaniards defeated by English and Dutch; Sir Philip Sidney receives death wound; trial of Mary Queen of Scots.
1587 Mary beheaded, Feb. 8; Drake's expedition against Cadiz; Davis's Straits discovered.
1588 Spanish Armada leaves Lisbon June 1; defeat of Spanish Armada; Guise assassinated.
1589 Death of Catherine de Medici; Henry IV. of Navarre king of France.
1590 Battle of Ivry, League defeated by Henry IV.; Henry IV. lays siege to Paris.
1591 Maurice captures Zutphen and Devent.
1594 Henry IV. crowned at Chartres.
1595 Tyrone rebellion.
1598 Spaniards take Calais; France and England join forces against Spain; English and Dutch capture Calais.

A.D.
1598 Edict of Nantes, granting toleration to Protestants in France.
1599 Oliver Cromwell b.
1600 Gowrie Conspiracy to dethrone James VI. of Scotland; English East India Co. formed.
1603 Death of Queen Elizabeth, James VI. of Scotland succeeds as James I.; England and Scotland thus united.
1604 Hampton Court Conference between Church prelates and Puritans.
1605 Gunpowder plot; *Don Quixote* published.
1607 Dutch destroy Spanish fleet at Gibraltar.
1610 Henry IV. assassinated by Ravaillac; Louis XIII. king of France.
1611 Gustavus Adolphus king of Sweden; Ulster plantation; baronets first created.
1613 Romanoff dynasty founded in Russia.
1615 Arabella Stuart dies in the Tower; Louis XIII. marries Anne of Austria.
1616 Death of Shakespeare.
1618 Raleigh executed; Thirty Years' War begins.
1620 Treaty of Ulm, by which the Elector Frederick lost Bohemia; Spinola invades Palatinate; "Pilgrim Fathers" land in New England in *Mayflower*, Dec. 11.
1623 Spanish marriage treaty broken.
1624 Monopolies declared illegal in England; Barbadoes colonised by English; Virginia becomes a Crown Colony.
1625 Charles I. king of England; Charles marries Henrietta of France; English attack on Cadiz; Parliament dissolved by Charles I.
1626 Buckingham impeached; Charles I. dissolves his second Parliament.
1627 Siege of Rochelle.
1628 Cromwell enters Parliament for Huntingdon; Petition of Right; Buckingham assassinated; Richelieu takes Rochelle.
1629 Charles I. dissolves his third Parliament.
1630 Italy invaded by Richelieu, Germany invaded by Gustavus Adolphus; death of Spinola.
1631 France and Sweden in alliance against Germany; Magdeburg taken by Tilly; Battle of Leipsic, Gustavus defeats Tilly.
1632 Death of Tilly; Gustavus seizes Munich and Nuremberg; Battle of Lutzen, Gustavus is slain but victorious; Christina becomes queen of Sweden.
1634 France annexes Lorraine; assassination of Wallenstein; Charles I. demands ship-money; East Anglian fens reclaimed.
1639 Rebellion in Scotland.
1640 Charles I. dissolves Short Parliament; Long Parliament meets.
1641 Trial and execution of Strafford; Star Chamber abolished; rebellion in Ireland; the Grand Remonstrance; coffee first used in England.
1642 Charles I. orders the arrest of the Five Members; Charles sets up his standard at Nottingham; Cinq-Mars executed; death of Richelieu; Charles I. occupies Oxford; New Zealand and Tasmania discovered; Battle of Worcester, Sept. 23, Rupert victorious; Battle of Edgehill, Oct. 23.
1643 Louis XIV. king of France; Anne of Austria Regent; Mazarin first Minister; death of Hampden; Charles I. besieges Gloucester; Rupert captures Bristol; Battle of Newbury, Falkland killed.
1644 Laud tried and condemned; Battle of Marston Moor, July 2, Rupert defeated; second Battle of Newbury.
1645 Laud beheaded; Battle of Naseby, Royalists defeated; Rupert surrenders Bristol.
1646 Charles I. surrenders to Scots; Oxford surrendered to Roundheads.
1647 Charles I. surrendered to Parliament, taken prisoner at Holmby House, June 4.
1648 Battle of Preston, Cromwell victor; Fairfax occupies Colchester; end of Thirty Years' War; "Rump" Parliament elected.
1649 Execution of Charles I. Jan 30; Commonwealth declared, May 19; Cromwell captures Drogheda and Wexford.
1650 Montrose's rebellion; execution of Montrose; Cromwell defeats Lesley at Dunbar.
1651 Charles II. invades England, Battle of Worcester, Charles defeated, flies to France; Navigation Act passed.

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**1652** England at war with Dutch; Dunkirk captured by Spanish; Blake's victory over Dutch.
**1653** Blake defeats Van Tromp; Cromwell dismisses "Rump" Parliament; Cromwell made Lord Protector.
**1654** England and Holland at peace; Scotland incorporated with England; Christina of Sweden abdicates.
**1655** Cromwell dissolves Parliament; Jamaica captured by British.
**1656** Warsaw surrendered to Poles, afterwards re-taken by Charles and the Great Elector; Blake takes Spanish treasure fleet off Cadiz.
**1657** Cromwell declines the English crown.
**1658** Turenne takes Dunkirk; death of Cromwell; Richard Cromwell named Protector.
**1659** Richard Cromwell resigns.
**1660** General Monk occupies London; Charles II. proclaimed May 8.
**1661** Bodies of Cromwell, Ireton, and Bradshaw exhumed and hung in chains at Tyburn.
**1662** Act of Uniformity passed; Charles II. marries Catherine of Braganza; Nonconformist clergy deprived of their livings.
**1664** England and Holland at war; Conventicle Act passed; New Amsterdam (New York) captured by British.
**1665** Great plague in London; *London Gazette* first issued; Five Mile Act passed.
**1666** France declares war against England; Dutch fleet defeated off North Foreland, July 25; Great Fire of London.
**1667** De Ruyter's fleet in the Thames; war with Holland ended; "Cabal" ministry; Clarendon impeached; "Paradise Lost" issued.
**1668** Triple Alliance (England, Holland, and Sweden) against France; Bombay ceded to East India Co.
**1670** Second Conventicle Act; Hudson's Bay Co. formed.
**1672** France and England form treaty; Declaration of Indulgence to Nonconformists; England and France join forces against the Dutch.
**1673** Withdrawal of Declaration of Indulgence.
**1674** England and Holland at peace; Sobieski king of Poland.
**1677** Prince of Orange defeated at Cassel by French; Princess Mary of England marries William of Orange.
**1678** English and Dutch alliance.
**1679** Habeas Corpus Act passed; Monmouth obtains victory over Covenanters at Bothwell Bridge.
**1680** Stafford executed. [sylvania.
**1681** William Penn receives grant of Penn-
**1682** Algiers bombarded by French; Peter the Great and Ivan V. joint-Czars of Russia.
**1683** Rye House plot.
**1685** Death of Charles II., James II. succeeds, Feb. 6; Monmouth insurrection; Argyll executed, June 30; Battle of Sedgemoor; Monmouth defeated and captured, July 6; Monmouth executed July 15; Judge Jeffreys opens the "Bloody Assize," Aug.; revocation of the Edict of Nantes.
**1686** Test Act suspended.
**1687** Declaration of Indulgence.
**1688** Fresh Declaration of Indulgence by James; trial of seven bishops; William of Orange lands at Torbay, Nov. 5; James II. abdicates and flies to France, Dec. 11; Smyrna destroyed by earthquake.
**1689** William and Mary proclaimed k. and q. of England, Feb. 13; James II. lands in Ireland, March; James besieges Londonderry, April 20, relieved, July 30; Toleration Act passed; Battle of Killiecrankie, July 27; Bill of Rights passed.
**1690** English and Dutch fleets defeated by French off Beachy Head; Battle of the Boyne, July 1, William defeated James; William lays siege to Limerick.
**1691** Nonjuring bishops deprived of their sees; Limerick capitulates Oct. 3.
**1692** Massacre of Glencoe, Feb. 13; Battle of La Hogue, May 19; Battle of Steinkirk, Aug 3.
**1694** Bank of England incorporated.
**1695** William III. captures Namur.
**1696** Plot to kill William III.; death of Sobieski.
**1697** Charles XII. king of Sweden; Peace of Ryswick; Peter the Great in England.

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**1701** Frederick III. king of Prussia; Marlborough goes to Holland as commander-in-chief; war of the Spanish Succession begins.
**1702** Hanoverian Act of Settlement passed; death of William III., Mar. 8; Anne, queen of Great Britain; England declares war against France and Spain; Marlborough takes Liège, Oct. 23.
**1703** Battle of Pultusk, Swedes defeat the Poles; Marlborough takes Bonn.
**1704** Admiral Rooke captures Gibraltar; Battle of Blenheim, Aug. 13.
**1705** Battle of Cassano; British invest and capture Barcelona; Charles XII. invades Silesia.
**1706** Battle of Ramillies, May 12; French defeated by Marlborough; English enter Madrid, June 24; Battle of Turin, Prince Eugene defeats French; English enter Milan.
**1707** Scotch Parliament passes Act of Union; Charles XII. invades Russia; First Parliament of Great Britain, Oct. 23.
**1708** Pretender James in Scotland; Battle of Oudenarde, Marlborough victorious.
**1709** Marlborough and Eugene take Tournay; Battle of Malplaquet, Marlborough victorious; Allies take Mons.
**1710** Allies take Douay; Battle of Saragossa, Aug. 20; French defeated by Austrians.
**1713** Frederick William I. king of Prussia; peace of Utrecht, Mar. 31.
**1714** Death of Queen Anne; George I. king of England, Aug. 1.
**1715** Fresh war between Prussia and Sweden; Riot Act passed; Louis XV. king of France; Jacobite rebellion; Walpole Premier; Battle of Sheriffmuir, Nov. 13; Battle of Preston, Nov. 12, 13, rebels defeated.
**1716** Lords Derwentwater and Kenmure executed.
**1717** Triple Alliance, England, France, Holland; Eugene defeats Turks at Belgrade, Aug. 16.
**1718** Spaniards invade Sicily; Quadruple Alliance, Gt. Britain, France, Holland, and the Emperor; England declares war against Spain.
**1719** France at war with Spain
**1720** Spain joins Quadruple Alliance; South Sea Bubble bursts.
**1727** Gibraltar besieged by Spaniards; Peter II. Czar of Russia; George I. dies, George II. succeeds July 10.
**1729** Peace between Britain, France, and Spain.
**1733** Fred. Aug. II. of Poland died; France and Spain support Stanislas as his successor; Russia and the Emperor declare for Fred. Aug. Elector of Saxony and elect him; war results between France and the Emperor.
**1734** Siege of Dantzig, French take Treves.
**1735** Don Carlos king of Two Sicilies.
**1738** Lorraine ceded to France.
**1739** Nadir Shah defeats and captures Great Mogul; Turks besiege Belgrade; peace declared between Turkey and the Emperor; England goes to war with Spain.
**1740** Frederick the Great king of Prussia.
**1741** Battle of Mollwitz, Frederick defeats Austrians; Maria Theresa crowned queen of Hungary, June 25; Sweden declares war against Russia; Frederick takes Breslau; Ivan VI. deposed, Elizabeth Petrovna made empress; Behring's voyage.
**1742** Elector of Bavaria elected emperor as Charles VII.; Austrians take Munich; France declares war against Maria Theresa, Holland, and Great Britain.
**1743** Austrians take Munich; Battle of Dettingen, French defeated by George II.
**1744** Charles Edward makes attempt to enter England, but is frustrated; Louis XV. declares war against Great Britain; French capture Munich, Oct. 16; Frederick captures Prague, Sept. 16.
**1745** Battle of Fontenoy (Cumberland defeated); British capture Cape Breton; Charles Edward lands in Scotland, July 23; Battle of Prestonpans, rebels victorious, Sept. 21; Pretender takes Carlisle, Nov. 15 retreats to Scotland, Dec. 20.
**1746** Battle of Falkirk, Jan. 17 (rebels victorious); Battle of Culloden, April 16 (rebels defeated and rebellion crushed by Cumberland); Marshal Saxe takes Antwerp; Lords Kilmar-

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nock and Balmerino executed; French capture Madras.
1747 French fleet defeated by Anson off Cape Finisterre, May 14; French invade Brabant; execution of Lord Lovat; Nadir Shah murdered; Pretender escapes to France; Hawke defeats French fleet off Belle Isle, Oct. 14.
1748 French capture Maestricht; peace concluded at Aix-la-Chapelle; Afghans invade India.
1749 English regain Madras.
1751 Clive captures Arcot, Aug. 31.
1752 Great Britain adopts New Style Calendar.
1755 British expedition against French in Canada fails; Lisbon earthquake; eruption of Etna.
1756 Great Britain declares war against France; French defeat Admiral Byng off Minorca, May 20; Calcutta taken by Suraja Dowla, June 18; "Black Hole" atrocity; Seven Years' War begins; Frederick defeats Austrians at Löwositz, Oct. 1.
1757 British recapture Calcutta, Jan. 2; Admiral Byng shot, Mar. 14; Clive victorious at Plassey, June 23; French take Minden, Aug. 3.
1758 Russians invade Prussia; French take Arcot, Oct. 4; Prussians defeated at Hochkirchen, Oct. 14.
1759 British capture Surat, Mar. 2; Battle of Minden (Aug. 1), French defeated; Charles III. king of Spain; Boscawen defeats French fleet at Lagos, Aug. 18; Battle of Quebec; death of Wolfe after complete victory over Montcalm, who was also killed; Hawke's victory over French in Quiberon Bay.
1760 British recapture Arcot; Canada conquest completed; Russians enter Berlin; death of George II., George III. succeeds, Oct. 25.
1762 Great Britain declares war against Spain, Jan. 2; British take Martinique; Prussia makes peace with Russia, May 5; Czar Peter III. deposed and succeeded by Catherine II.; British capture Havana.
1763 Great Britain, France, Spain and Portugal sign a Treaty of Peace at Paris, Feb. 10, ending the Seven Years' War; John Wilkes arrested.
1766 Second Pitt Administration, Aug. 2.
1767 Corsica surrendered to France by Genoa.
1768 Wilkes elected M.P. for Middlesex.
1769 The first letter of "Junius" appears, Jan.
1770 Lord North Prime Minister; Captain Cook discovers New South Wales.
1772 Treaty for partition of Poland between Russia, Austria, and Prussia; Warren Hastings appointed Governor of Bengal; Cook's second voyage round the world.
1773 Strong opposition to the Tea Tax in Boston.
1774 Boston Harbour closed until restitution made for tea destroyed; Warren Hastings made first Governor-General of India.
1775 Battle of Lexington, April 19, Gage victorious, Washington assumes command of American army; Battle of Bunker's Hill, June 17, and of Long Island, August 27, Americans defeated in both engagements; Washington lays siege to Boston.
1776 British troops retire from Boston, March 17; Declaration of American Independence, July 4; British troops in New York, Sept. 15; Battle of Trenton, Dec. 26.
1777 Battle of Brandy Wine, Sept. 11; Washington defeated by General Howe, who a few days later takes Philadelphia; Battle of Germantown, Oct. 4, Burgoyne victorious; Battle of Saratoga, Oct. 7, Burgoyne forced to surrender.
1778 France recognises American Republic, Jan. 16; death of Earl of Chatham, May 11; siege of Gibraltar; France declares war against Great Britain, July 10; British capture Savannah, Dec. 28.
1779 Capt. Cook killed at Owhyhee, Feb. 14; Spain declares war against England, June 16.
1780 Rodney's victory over the Spanish fleet off Cape St. Vincent, Jan. 16; Charleston captured by the British, who took 6,000 prisoners; Gordon riots in London.
1781 Spaniards lay siege to Gibraltar from April to November without success; Florida conquered by Spaniards; Lord Cornwallis occupies Yorktown, Aug. 1; Washington captures Yorktown, Oct. 19.
1782 Rodney defeats French fleet off Dominica, April 12; loss of the *Royal George*, Aug. 29; British troops retire from Charleston; American Independence acknowledged by Britain, Nov. 30.
1783 Fox and North's Coalition Ministry; peace established between England and U.S., Sept. 3; at Paris, and on the same date Great Britain, France, and Spain agree upon terms of peace; Coalition Ministry defeated and Pitt appointed Prime Minister.
1786 Warren Hastings impeached; Lord Cornwallis Governor-General of India.
1788 Death of Prince Charles Edward; *Times* first published, Jan. 1; trial of Warren Hastings opens Feb. 13.
1789 Mutiny of the *Bounty*, April 28; Washington elected first President of U.S.; French Revolution began; Bastille in Paris destroyed, July 14.
1791 Death of John Wesley, March 2; death of Mirabeau, April 2; Louis XVI. escapes from Paris, June 20, but discovered and brought back the following day; New French Constitution adopted by National Assembly.
1792 Gustavus III. assassinated, March 16; slavery abolished in St. Domingo, April 4; attack on the Tuileries, Aug. 10; French royal family imprisoned in the Temple; National Convention, Sept. 21; Royalty abolished in France and Proclamation of the Republic.
1793 Louis XVI. executed, Jan. 21; insurrection in La Vendée; Reign of Terror begins; Charlotte Corday assassinates Marat, July 13; she is executed four days later; death of Lord Mansfield; Lord Hood captures Toulon, Aug. 28; Marie Antoinette executed, Oct. 15.
1794 Polish insurrection under Kosciusko; Danton executed, April 6; Lord Howe's victory over French off Brest; defeat of Robespierre and end of Reign of Terror, July 27.
1795 Warren Hastings acquitted, April 23; insurrection in Paris; Directory established, Aug. 22; British take possession of Cape of Good Hope; France annexes Belgium, Oct. 1.
1796 Battle of Lodi, Napoleon victorious; Napoleon enters Milan, May 15, Bologna, June 18; Spain declares war against England; Battle of Arcola, Napoleon victorious.
1797 Battle of Rivoli, Napoleon again victorious, Jan. 14; Mantua surrenders to Napoleon, Feb. 1; Spanish fleet defeated by Jervis off Cape St. Vincent, Feb. 14; mutiny at the Nore; Napoleon enters Venice, May 16; vaccination introduced by Jenner.
1798 Rome occupied by the French, Feb. 10, and a Republic proclaimed; the French conquer Switzerland; Napoleon captures Malta, June 11, and in July invades Egypt; Battle of the Pyramids, July 21, Napoleon victorious; Battle of the Nile, Aug. 1–2, French fleet defeated by Nelson. Rebellion in Ireland;
1799 French occupy Naples. Napoleon invades Syria, and storms Jaffa, March 7; lays siege to Acre (March 16 to May 21), but is repulsed; Seringapatam attacked by the British and Tippoo killed, May 4; Battle of Aboukir, July 25, Napoleon defeats Turks; French occupy Zurich, French Directory overthrown, Nov. 9, and Napoleon made First Consul, Dec. 24; death of Washington, Dec. 14; Pitt imposes Income Tax.
1800 East India Co. obtains possession of Surat, May 13; Napoleon crosses the Great St. Bernard, May 17–20; Battle of Marengo, June 14, Austrians defeated by Napoleon; Legislative Union of Great Britain and Ireland effected, July 2; British capture Malta, Sept. 5; Battle of Hohenlinden, Dec. 3, Austria defeated.
1801 First Parliament of U.K., Jan.; Pitt resigns Feb. 5, is succeeded by Addington; Battle of Alexandria, British victorious, Abercromby killed; Czar Paul murdered, Mar. 24, succeeded by Alexander I.; Battle of Copenhagen; Nelson obtains complete victory over Danish fleet, April 2; French retire from Egypt; Treaty of peace between Great Britain and France, Oct. 1.
1802 Napoleon appointed First Consul for life, Aug. 3; France annexes Piedmont, Sept. 11.
1803 Dutch recover Cape of Good Hope; Napoleon sells Louisiana to U.S., April 30; Great Brit. declares war against France, May 18; insurrection in Ireland under Robt. Emmet.

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**1804** Code Napoleon published; Napoleon orders Duke of Enghien to be shot; Pitt again Prime Minister, May 12; Napoleon made Emperor, May 18; Napoleon and Josephine crowned by the Pope at Paris, Dec. 2; Spain declares war against Great Britain.

**1805** Napoleon crowned king of Italy, May 26; Battle of Trafalgar; Nelson's great victory and death, Oct. 21; French occupy Vienna, Nov. 13; Battle of Austerlitz, Dec. 2, Napoleon defeats Austrians and Russians.

**1806** British re-occupy Cape of Good Hope; death of Pitt, Jan. 23; Administration of Grenville and Fox; England declares war against Prussia; death of Fox, Sept. 13; Napoleon occupies Berlin, Oct. 27, after Battle of Jena; Berlin decree, by which Napoleon declared Great Britain in a state of blockade.

**1807** Battle of Eylau, Feb. 8; slave trade abolished in British Empire; French occupy Dantzig, May 26; Battle of Friedland, June 14; Russians defeated by Napoleon; Copenhagen bombarded by British forces, Danish fleet to surrender; dissolution of German Empire; Sierra Leone and Gambia are organised as English Crown colonies.

**1808** Napoleon enters Rome, Feb. 2; Charles IV. of Spain abdicates, March 19; Murat occupies Madrid, March 22; Joseph Bonaparte, king of Spain, June 26; Murat king of Naples, July 15; Wellington (Wellesley) enters Spain, Aug. 1; Saragossa besieged from June 15 to Aug. 4, when raised; Battle of Vimiera, Aug. 21; British defeat French; Napoleon enters Madrid, Dec. 4.

**1809** Battle of Corunna and death of Sir John Moore, Jan 16; Gustavus IV. of Sweden deposed in favour of Charles XIII.; Soult takes Oporto, Mar. 29; Wellington crosses the Douro and enters Oporto, May 12; Napoleon occupies Vienna, May 13; Pope arrested, July 5, after excommunicating Napoleon; Battle of Wagram, July 6, French defeat Austrians; Battle of Talavera, July 27, British victorious; Walcheren expedition sails, July 28; France and Austria sign treaty of peace, Oct. 14; Josephine divorced, Dec. 15; Walcheren evacuated by the English.

**1810** Cuidad Rodrigo taken by French (July); Napoleon and Marie Louise married, April 1; Russians take Silistria, June 23; France annexes Holland after abdication of Louis Bonaparte; English take Mauritius, Dec. 3.

**1811** Massacre of Mamelukes at Cairo, Mar. 1; French take Badajos, Mar. 10; Battle of Fuentes d'Onore, May 4–5, Wellington victorious; Battle of Albuera, May 16, British defeat Soult; Luddite riots.

**1812** Ciudad Rodrigo taken by Wellington, Jan. 19; storming of Badajos by British, April 6; Liverpool Administration, June 8; war declared against Great Britain by United States, June 18; Napoleon declares war against Russia, June 22; Battle of Salamanca, July 22, British victory; Wellington occupies Madrid, Aug. 12; Battle of Borodino, Sept. 7, French defeat Russians; burning of Moscow, Napoleon occupies the ruined city from Sept. 14 to Oct. 19.

**1813** Execution of 14 Luddites at York, Jan. 10; Battle of Lutzen, May 2, Napoleon checks Allies; Battle of Vittoria, June 21, Wellington victorious; Battles of the Pyrenees, July 28 to Aug. 2, Wellington defeats Soult; Wellington storms St. Sebastian, Aug. 31; France invaded by Wellington, Oct. 7; Battle of Leipsic, Oct. 16–18, defeat of Napoleon.

**1814** Norway ceded to Sweden, Jan. 14; Battle of Orthes, Feb. 27; Wellington defeats Soult; allied sovereigns enter Paris; Napoleon deposed, March 31; Battle of Toulouse, April 10; Wellington defeats Soult; Napoleon abdicates, April 11; Louis XVIII. king of France; Napoleon banished to Elba; peace of Paris, May 30; Belgium annexed to Holland; Washington occupied by General Ross, Aug. 24; peace between England and the United States, Dec. 24.

**1815** Battle of New Orleans, Jan. 8th, British defeated; escape of Napoleon from Elba, Feb. 26; Napoleon at Cannes, March 1; Napoleon enters Paris, March 20; Murat surrenders Naples to Ferdinand IV., May 20; Napoleon proclaims a new constitution, June 1; Battle of Ligny, June 16, Blucher defeated; Battle of Quatre Bras, June 16, defeat of Ney; Battle of Waterloo, June 18, Napoleon defeated and overthrown; re-abdication of Napoleon, June 22; allies enter Paris, July 7; Restoration of Louis XVIII., July 5; Napoleon is placed on board the *Bellerophon*, July 15; Napoleon arrives at St. Helena, Oct. 16; Ney shot, Dec. 7.

**1816** Algiers bombarded by Lord Exmouth, Aug. 26.

**1817** Riots at Manchester, rioters scattered by military, March 11; death of Kosciusko, Oct. 15; Battle of Mehudpore, Dec. 21, Holkar defeated.

**1818** Bernadotte made king of Sweden (Charles XIV.), Feb. 6; royal marriages: Duke of Clarence (afterwards William IV ) with Princess Adelaide of Saxe-Meiningen, and Duke of Kent with Princess Mary of Saxe-Coburg, July 13; death of Queen Charlotte, Nov. 17.

**1819** Florida ceded to U.S. by Spain, Feb. 22; Kotzebue murdered, March 23; Princess (afterwards Queen) Victoria b., May 24; great Reform meeting at Manchester dispersed by military ("Peterloo"), Aug. 17.

**1820** Death of Duke of Kent, Jan. 23; death of George III., Jan. 29; George IV. succeeds; death of Grattan, May 14; Carbonari revolt in Naples, July 2.

**1821** Austrians occupy Naples; Victor Emmanuel I., king of Sardinia abdicates in favour of his brother, Chas. Felix, Mar. 23; Napoleon dies at St. Helena, May 5; Provisional Government in Greece, Jan. 9; coronation of George IV., July 19; death of Queen Caroline, Aug. 7.

**1822** Greek Declaration of Independence, Jan. 1; massacre of 40,000 persons at Scio by Turks, April–May; Greeks take Athens, June 22; Brazilian Independence proclaimed; Caledonian Canal opened, Nov. 1.

**1823** French invade Spain, Apl. 7; French bombard Cadiz, Sept. 20, and take it, Oct. 1.

**1824** Bolivar becomes Dictator of Peru, Feb. 10; British take Rangoon, May 11; Louis XVIII. died; Charles X. king of France, Sept. 16.

**1825** Navarino taken by Ibrahim Pasha, May 18; Nicholas I. Czar of Russia; Empire set up in Brazil.

**1826** France and England sign treaty of navigation, Jan. 26; Dom Pedro of Brazil becomes king of Portugal, Mar. 10; Menai Suspension Bridge opened, Jan. 30.

**1827** Kingdom of Greece founded, July 6; death of Canning, Aug. 8; Lord Goderich Premier, Aug. 11; death of Ugo Foscolo, Oct. 10; Battle of Navarino, Turkish and Egyptian fleets destroyed.

**1828** Goderich resigns, Jan. 8, Wellington Administration succeeds, Jan. 25; Russia declares war against Turkey, April 26; Dom Miguel king of Portugal; Ibrahim Pasha evacuates Greece, Oct. 4; Russians take Varna, Oct. 11; death of Lord Liverpool, Dec. 4; repeal of Test Act.

**1829** Death of Leo XII., Feb. 10; Andrew Jackson President U.S.; duel between Wellington and Winchilsea, March 21; Pius VIII. Pope, March 31; surrender of Silistria, June 18; peace of Adrianople signed, Sept. 14.

**1830** Death of George IV., William IV. succeeds, June 26; French take Algiers, July 5; revolution in Paris, flight of Charles X. (July 30), abdicates, Aug. 2; Louis Philippe proclaimed king of the French, Aug. 9; Belgian independence proclaimed, Oct. 4; Wellington resigns, Nov. 15; Grey Ministry succeeds; death of Pius VIII., Nov. 30.

**1831** Gregory XVI. Pope, Feb. 2; Lord John Russell introduces the first Reform Bill, March 1; revolution in Brazil, Dom Pedro abdicates, April 7; Leopold I. king of the Belgians, June 4; coronation of William IV.; Bristol riots, Oct. 29; first epidemic of Asiatic cholera in England, Nov.; British Association founded.

**1832** Poland annexed by Russia, Feb. 26; Reform Bill passed, June 7; Otho king of Greece, Aug. 30; French besiege Antwerp, Nov. 13, which surrenders, Dec. 24.

**1833** Slavery abolished in British colonies, Bill passed Aug. 28; Isabella II. queen of Spain,

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Sept. 29; first Government grant made to English schools.
**1834** Lord Melbourne, Premier, July 14; Houses of Parliament burned, Oct. 16; Sir R. Peel Premier, Dec. 8; Faraday discovers electric self-induction.
**1835** Lord Melbourne again Premier, April 18.
**1836** Thiers First Minister of Louis Philippe, Feb. 22; Louis Napoleon attempts a rising at Strasburg, Oct. 29.
**1837** Death of William IV., Queen Victoria succeeds June 20; Morse alphabet adopted.
**1838** Royal Exchange destroyed by fire, Jan. 10; National Gallery opened, April 9; coronation of Queen Victoria, June 28; *Great Western* steamer crosses the Atlantic.
**1839** British occupation of Kandahar, April 26; Chartist riots at Birmingham, July 15; Christian VIII. king of Denmark; gold discovered in Australia; Aden is annexed by England.
**1840** Penny postage instituted, Jan. 10; Queen Victoria and Prince Albert married; Fred. Wm. IV. king of Prussia; Canton blockaded by British, June 28; Louis Napoleon's attempt to incite insurrection at Boulogne, Aug. 6; William II. king of Holland; Napoleon's remains transferred to Paris, Dec. 15.
**1841** Second Peel Administration; Prince of Wales (Edward VII.) b., Nov. 9; armoury at Tower of London burnt; Livingstone discovers Lake Ngami.
**1842** Massacre of British troops, in retreat from Cabul, Jan. 13; Khyber Pass captured by General Pollock, Apl. 5–14; great Chartist procession in London, and presentation of monster petition to Parliament, May 2.
**1843** Battle of Meeanee, Feb. 17, British defeat Afghans; Thames Tunnel opened, Mar. 25; annexation of Natal; Sinde annexed; Irish Repeal Agitation, O'Connell arrested, Oct. 14; Battle of Maharajpore, defeat of Mahrattas, Dec. 29.
**1844** Joseph Smith, founder of Mormonism, murdered June 27; Brigham Young succeeds him.
**1845** Sir John Franklin's Arctic expedition sails, May 23; Maynooth College endowed, June 30; Battle of Moodkee, Gough defeats Sikhs, Dec. 18; Battle of Ferozeshah, Dec. 21, further defeat of Sikhs; famine in Ireland.
**1846** Battle of Aliwal, Jan. 28; Sikhs defeated; Battle of Sobraon, Feb. 10, Sikhs defeated by Gough; Louis Napoleon escapes from Ham, May 26; repeal of the Corn Laws, June 26; Sir R. Peel resigns, June 29; Lord John Russell Premier; Planet Neptune discovered; Pius IX. elected Pope.
**1847** Death of O'Connell, May 15; Earl of Dalhousie made Governor-General of India; Abd-el-Kader surrenders, Dec. 22; Ten Hours Factory Bill passed; British Museum opened.
**1848** Gold discovered in California; general revolutionary movement throughout the Continent; riots at Milan, Messina, Munich, Paris, etc.; Louis Philippe abdicates and escapes to England, Feb. 24; French Republic proclaimed; monster meeting of Chartists on Kennington Common, Apl. 10; Lombardy annexed by Sardinia, June 4; Louis Napoleon elected to National Assembly; insurrection in Paris; Louis Napoleon president French Republic, Dec. 20.
**1849** Annexation of the Punjab; Republic proclaimed at Rome, Feb. 8; Charles Albert abdicates in favour of his son, Victor Emmanuel, March 24; French occupation of Civita Vecchia; Austrians occupy Leghorn, May 12; Rome besieged by French, June 3; Hungary invaded by Russians, June 17; Rome surrenders to French, July 3; Austrians take Venice, Aug. 22; repeal of the old Navigation Laws.
**1850** Britannia Tubular Bridge opened, March; submarine telegraph between England and France laid, Aug. 28.
**1851** Great exhibition in Hyde Park, May to Oct.; Paris *coup d'état*, Dec. 2; Louis Napoleon elected President of the French Republic for 10 years, Dec. 20.
**1852** First Derby Administration, Feb. 27; British capture Rangoon, April 14; Brit. take Pegu, June 4; Paraguay independence recognised, July 17; death of Duke of Wellington, Sept. 14; Louis Napoleon proclaimed Emperor, Dec. 2; Lord Derby resigns, Dec. 17; Lord Aberdeen's Ministry, Dec. 27.
**1853** Napoleon III. marries Eugénie de Montijo, Jan. 29; Brit. and French fleets in the Dardanelles; Russia and Turkey at war, Oct. 23; Turkish fleet destroyed off Sinope by Russians.
**1854** Brit. and French fleets enter the Black Sea, Jan. 4; war declared against Russia by France, March 27, Great Brit., March 28; allied fleets bombard Odessa, April 22; Crystal Palace opened, June 10; allied armies land in the Crimea, Sept. 14; Battle of the Alma, Sept. 20; siege of Sebastopol begins, Oct. 17; Battle of Balaklava, Oct. 25; Battle of Inkerman, Nov. 5.
**1855** Sardinia joins England and France against Russia, Jan. 26; first Palmerston Administration, Feb. 6; death of Czar Nicholas, March 2, Alexander II. succeeds; great exhibition in Paris, May to Oct.; newspaper stamp abolished, June 15; Malakoff and Redan stormed, Sept. 8; Russians defeated before Kars, Sept. 29; Kars capitulated, Nov. 28.
**1856** Oudh annexed, Feb. 7; peace treaty signed at Paris, March 30; Crimea evacuated by allied armies, July 12; Persia declares war against India, Nov. 1; *British bombard Canton, Nov. 3.*
**1857** Indian Mutiny breaks out; Persians defeated at Khooshab, Feb. 8; treaty of peace with Persia, March 4; mutineers at Lucknow, May 10–11, at Delhi, May 11, Meerut, May 10–11; Cawnpore massacre, July 15; Havelock occupies Cawnpore, July 17; Delhi stormed, Sept. 14; Relief of Lucknow, Sept. 25; Lucknow garrison rescued, Nov. 22; death of Havelock, Nov. 25; visit to England of Emperor and Empress of the French, Aug. 8; Canton captured by English and French, Dec. 28–29.
**1858** Attempted assassination of Napoleon III. by Orsini and others, Jan. 14; *Great Eastern* launched, Jan. 31; Derby Ministry succeeds that of Palmerston, Feb.; siege of Lucknow, March 18–21, when captured; Queen Victoria and Prince Albert visit Napoleon III. at Cherbourg, Aug. 4–5; Atlantic cable's first message, Aug. 20; Crown assumes Government of India.
**1859** Victor Emmanuel declares war against Austria, May 3; Battle of Montebello, May 20, Austrians defeated; Garibaldi takes Como, May 27; Battle of Magenta, Austrians defeated; Napoleon III. and Victor Emmanuel enter Milan, June 8; Lombardy annexed to Sardinia; Derby Ministry defeated, Palmerston succeeds again; Battle of Solferino, June 24, Austrians defeated; peace treaty signed at Villafranca, where Nap. III. and Empr. Franc. Jos. meet, July 11; Chinese repulse British, June 25; Harper's Ferry insurrection, Oct. 17; John Brown hanged, Dec. 2.
**1860** Treaty of commerce between Great Britain and France signed, Jan 23; Tuscany annexed to Sardinia, Mar. 22; Savoy and Nice ceded to France, Mar. 24; Garibaldi enters Palermo, May 27; *Great Eastern's* first trip across Atlantic, June 17–27; Prince of Wales (Edward VII.) visits Canada and the United States; French and English forces occupy Tientsin, Aug. 23; Garibaldi occupies Naples and proclaims Victor Emmanuel king of United Italy, Sept. 9; Battle of Volturno, Garibaldi defeats Neapolitans, Oct. 1; treaty of peace with China, Oct. 24; Two Sicilies annexed to Sardinia, Nov. 3; S. Carolina secedes from Union, Dec. 20; first English ironclad (*The Warrior*) launched.
**1861** William I. king of Prussia, Jan. 2; further secession of American States—Mississippi, Jan 9; Florida, Georgia, Alabama, Louisiana, and Texas followed between Jan. 10 and Feb. 1; Confederate States proclaimed with Jeff. Davis Pres., Feb. 4; Abraham Lincoln Pres. U.S.; Victor Emmanuel recognised as king of Italy, March 17; Confederates capture Fort Sumter, April 13; Virginia joins Confederate States, April 17; Arkansas, Tennessee, and N. Carolina secede, May 6, 8, 20; Southern ports blockade, April 19; death of Count Cavour, June 6; Great Britain and France recognise Confederate States as belligerents, June 15; Jeff. Davis elected President Confederate States for six years; death of Prince Albert, Dec. 14.

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**1862** Fight between *Merrimac* and *Monitor*, March 9; second great exhibition S. Kensington, May 1–Nov. 1; Battle of Williamsburg, May 5, Confederates victorious; *Alabama* leaves the Mersey, July 29; Garibaldi captured at Aspromonte, Aug. 29; second Battle of Bull Run, Aug. 30, Federals defeated; Battle of South Mountain, Sept. 14, Confederates defeated; cotton famine in Lancashire.

**1863** Slavery abolished in U.S. by proclamation of President Lincoln, Jan. 1; Ismail Pasha khedive of Egypt, Jan. 18; Maori rebellion, New Zealand; Prince of Wales (Edward VII.) marries Princess Alexandra of Denmark, March 10; Prince George of Denmark elected king of Greece, March 18; French in Mexico, General Forey enters city of Mexico, June 10; Vicksburg surrendered to General Grant, July 4; Battle of Gettysburg, July 1–3; Maximilian of Austria made emperor of Mexico, July 10; Battle of Chattanooga, Confederates defeated, Nov. 24.

**1864** Sir J. Lawrence Viceroy of India, Jan. 12; German ultimatum to Denmark on Schleswig-Holstein question, Jan. 16; Holstein entered by German army, Jan. 21; Prussians take Dupple, April 18; war suspended May 12, resumed June 26; peace signed Oct. 30; *Alabama* sunk off Cherbourg by *Kearsage*, June 19; Federal army enters Atlanta, Sept. 2; General Sherman captures Savannah, Dec. 21; Geneva Convention originated.

**1865** President Lincoln elected for second term; death of Cobden, April 2; surrender of General Lee to Grant, April 9; Lincoln assassinated, April 14; Jeff. Davis captured, May 10, war ends; death of Palmerston, Oct. 18; Earl Russell Premier, Oct. 19; death of Leopold I. king of Belgians, Leopold II. succeeds, Dec. 10; Lister introduces antiseptic surgery in Glasgow.

**1866** Bank of England Charter Act suspended, May 11; Fenian raids in Canada, May 31, June 7; demobilisation of Prussian army demanded by Austria, April 9; Prussians enter Saxony and Hanover, June 15; Austria declares war, June 17; Prussia and Italy do the same, June 18–20; Battle of Custozza (June 24), Austrians defeat Italians; Battle of Sadowa (July 3), Austrians defeated by Prussians; Austria surrenders Venetia to France, July 5; Prussians take Frankfort, July 16; Battle of Lissa, July 20; Italians defeated by Austrians in naval fight; Prussia and Austria sign treaty of peace, Aug. 23; peace signed between Austria and Italy, Oct. 3; Venetia annexed to Italy, Nov. 4; French evacuate Rome, Dec. 3–11.

**1867** Schleswig-Holstein annexed to Prussia, Jan. 24; ships pass through the Suez Canal; French retire from Mexico, March 16; Emperor Maximilian of Mexico shot, June 19; Dominion of Canada established, March 29; N. German Constitution formed, June 15; Garibaldi advances on Rome, Oct. 26; French enter Rome, Oct. 30; Garibaldi taken at Mentana, Nov. 3; British Abyssinian expedition.

**1868** Resignation of Lord Derby, Disraeli succeeds, Feb. 29; Magdala taken and K. Theodore of Abyssinia committed suicide, April 13; Michel III. of Servia assassinated, June 10; succeeded by Prince Milan, July 2; Isabella II. escapes from Spain, and her deposition declared, Sept. 29; provisional Government formed; Disraeli resigns, Dec. 2; Gladstone's Ministry succeeds, Dec. 9; Lord Mayo Viceroy of India.

**1869** General Grant, President U.S.; Hudson Bay Territory added to British America, April 9; Serrano becomes Regent of Spain, June 18; Irish Church disestablished, Act passed, July 26; Suez Canal formally opened, Nov. 17.

**1870** Death of Dickens, June 9; Isabella II. formally abdicates, June 25; Spanish Government propose to grant kingship to Leopold of Hohenzollern, July 4; French Government express disapproval, July 6; France declares war against Prussia, July 19; French take Saarbruck, Aug. 2; Battle of Woerth, Aug. 6, French defeated; Battle of Gravelotte, Aug. 18, French defeat; Battle of Sedan, Sept. 1, and surrender of Napoleon III. and his army, Sept. 2; 25,000 French were taken prisoners in the battle and 83,000 surrendered; Napoleon III. taken a prisoner to the castle of Wilhelmhöhe, Sept. 5; Republic proclaimed in Paris, Sept. 4; Empress escapes to England; Germans besiege Paris, Sept. 19; Strasburg surrenders, Sept. 28; Rome and Papal States annexed to kingdom of Italy, Oct. 28; Communist insurrection in Paris, Oct. 31; Germany proclaimed an united empire, Dec. 10; Duke of Aosta elected king of Spain, Nov. 16; Marshal Prim assassinated, Dec. 28, Irish Land Act passed, Aug. 1; smokeless powder invented.

**1871** William I. of Prussia proclaimed emperor of Germany at Versailles, Jan. 18; Paris capitulates, Jan. 28; National Assembly at Bordeaux, Feb. 12; Thiers First Minister; Peace preliminaries confirmed, Mar. 1; National Assembly at Versailles, Mar. 20; Commune proclaimed, Mar. 28; formal treaty of peace concluded, May 21; Communists destroy Tuileries, Hôtel de Ville, Vendôme Column, and set fire to Louvre, Palais Royal, and other Parisian public buildings, May 24; Archbishop of Paris shot, May 24; Government troops enter Paris and crush Communists, May 28; Thiers made President of the Republic, Aug. 31; Purchase system abolished in British army, July 20; Mont Cenis Tunnel opened, Sept. 17; Great Fire at Chicago, Oct. 8–10; Tichborne trial from May 11 to March 6, 1872, claimant non-suited; Trade Unions are legalised.

**1872** The Ballot is introduced in England; Earl Mayo assassinated, Feb. 8; Lord Northbrook succeeds him as Viceroy of India, Feb. 22; death of Mazzini, Mar. 10; fresh commercial treaty between England and France, Nov. 5; Alabama Convention at Geneva on Sept. 14 award damages over £3,000,000 to U.S.A.

**1873** Death of Napoleon III., Jan. 9; General Grant President U.S. (2nd term); death of Dr. Livingstone, May 4; Marshal MacMahon succeeds Thiers as President of the French Republic, May 24; Ashantee War; Shah visits England, June 18–July 5; Alabama claims paid, Sept. 9; Marshal Bazaine tried and sentenced; Scholes invents Remington typewriting machine.

**1874** British capture Coomassie, Feb. 4; Gladstone Ministry resigns, Feb. 17; Disraeli succeeds, Feb. 18; Tichborne claimant sentenced to 14 years' imprisonment for perjury, after a trial lasting 188 days, Feb. 28; Czar Alexander II. visits England, May 13–21; Marshal Bazaine escapes from prison, Aug. 9; Alfonso (son of Isabella II.) declared king of Spain.

**1875** Gladstone retires; Prince of Wales (King Edward) left England for Indian tour, Oct. 11; England purchased Khedive's shares in the Suez Canal, Nov. 26.

**1876** Prince of Wales in Calcutta, Jan. 1; Philadelphian Exhibition, May–Oct.; Bulgarian massacres; Sultan Abdul Aziz deposed, May 29; Disraeli becomes Earl of Beaconsfield, Aug. 16.

**1877** The Queen declared Empress of India, Jan. 1; Col. Gordon made Governor of the Soudan, Feb. 12; Diaz formally proclaimed President of Mexico, Feb. 18; Transvaal annexed to British Empire, April 12; Russia declares war against Turkey, April 24; Roumania declared independent, May 21; Russians repulsed at Plevna, July 30; fall of Plevna, Dec. 10.

**1878** Death of King Victor Emmanuel, Jan 9; Russians take Adrianople, Jan. 20; Leo XIII. elected Pope; Cleopatra's Needle arrives in London, Jan. 21; Paris Exhibition, May to Oct.; Berlin Congress; Cyprus ceded to England; failure of City of Glasgow Bank; Marquis of Lorne Governor-General of Canada; war with Afghanistan; death of Princess Alice, Dec. 4; electric lighting is introduced; David Hughes discovers microphone.

**1879** Gen. Roberts occupies Kandahar, Jan. 8; war in Zululand, Isandhlwana and Rorke's Drift, Jan. 22; Alexander of Battenberg elected prince of Bulgaria, April 29; Prince Louis Napoleon killed in Zululand, June 1; Khedive Ismail Pasha deposed, Tewfik succeeds, June 26; death of Lord Lawrence, June 27; Battle of Ulundi, July 4; Cetewayo captured, Aug. 28; Cavagnari and his escort massacred by Afghans, Sept. 3; Gen. Roberts occupies Cabul, Oct. 12; Gladstone's Midlothian campaign, Nov.; Tay Bridge destroyed, Dec. 28.

**1880** Beaconsfield Ministry succeeded by second

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Gladstone Ministry. April 23; Garfield President U.S.. Nov. 2; Parnell arrested for conspiracy, Nov. 3; Transvaal declared a Republic, Dec. 16.

1881 Parnell conspiracy trial ends, Jan. 25, jury disagree; British defeat at Lang's Nek, Jan. 28; Battle of Majuba Hill, Feb. 27; assassination of Czar Alexander II., Mar. 13; Peace arranged with Boers, Mar. 22; death of Lord Beaconsfield, April 19; President Garfield shot, July 2, died Sept. 20; Transvaal Convention signed, reserving British suzerainty, Aug. 3.

1882 Arabi Pasha Egyptian War Minister, Feb. 2; Servia proclaimed a kingdom, March 6; assassination of Lord F. Cavendish and Mr. Burke in Phœnix Park, Dublin, May 6; Alexandria bombarded, July 11; British military expedition to Egypt under command of Sir. G. Wolseley; Battle of Tel-el-Kebir, Sept. 13; Cairo occupied by British troops, Sept. 14, Arabi Pasha made prisoner, and (Dec.) banished from Egypt.

1883 Phœnix Park murderers arrested on evidence of James Carey, Feb.; Royal Coll. of Music opened, May 7; Fisheries Exhibition in London, May–Oct.; trial and condemnation of Phœnix Park murderers (April), five of whom were hanged; Lord Lansdowne, Gov.-Genl. of Canada; Capt. Webb drowned at Niagara, July 24; Carey the informer murdered, July 29; Mahdi's forces destroy Hicks Pasha's army, Nov. 3; tribute of £38,000 presented to Parnell in Dublin.

1884 Gen. Gordon starts for Khartoum, Jan. 18; death of Cetewayo, Feb. 8; death of Duke of Albany, Mar. 8; Health Exhibition in London, May–Oct.; Lord Wolseley heads an expedition to Khartoum to rescue Gordon; the Fabian Society founded.

1885 Battle of Abu Klea, Col. Burnaby killed, Jan. 17; Khartoum captured, Gordon slain, Jan 26; Inventions Exhibition in London, May–Oct.; Gladstone resigns, June 12, Lord Salisbury succeeds; King Theebaw of Burma surrenders to British, Nov.

1886 Upper Burma annexed, Jan. 1; Salisbury Government defeated; Gladstone again Premier, Feb.–Aug.; Indian and Colonial Exhibition in London, May–Oct.; Home Rule Bill defeated in Commons, June 8; King Ludwig of Bavaria commits suicide, June 15; General Election, Conservative majority, Lord Salisbury again Premier.

1887 H. M. Stanley sets out on Emin Pasha relief expedition, Jan.; Queen Victoria's Jubilee celebration, June 21.

1888 Lord Dufferin resigns Viceroyalty of India; Lord Lansdowne succeeds, Feb. 8; death of Emperor William I., March 9; death of Emperor Frederick, June 15; William II. succeeds; Parnell Commission opened, Oct. 22.

1889 Tragic death of Prince Rudolf of Austria, Jan. 30; Milan of Servia abdicates, March 6; Paris Exhibition, May–Oct.; Shah visits England, July; Princess Louise of Wales and Duke of Fife married, July 27; great London dock strike, Aug. 15–Sept. 16; Republic proclaimed in Brazil, Dom Pedro deposed; Parnell Commission concludes sittings, Nov. 23 (129th day); disappearance of Piggott after confessing forgery; death of Jeff. Davis, Dec. 6.

1890 Opening of Forth Bridge, March 4; Bismarck resigns, March 17, Caprivi succeeds; H. M. Stanley returns from Emin Pasha expedition, April 26; Heligoland ceded to Germany, Aug. 9.

1891 German Emperor and Empress visit England, July 4; death of Parnell, Oct. 6; United States of Brazil formed; Education Act passed, giving free education in England.

1892 Death of Duke of Clarence, Jan 14; death of Cardinal Manning, Jan. 14; death of Spurgeon, Jan. 31; hurricane in Mauritius, April 29; Parliament dissolved, June 28; General Election, Salisbury defeated; fresh Gladstone administration.

1893 Home Rule Bill introduced, Feb. 13; Home Rule Bill, second reading, April 21; Chicago World's Fair, May–Oct.; Nansen's Arctic expedition starts, June 24; Duke of York marries Princess Mary of Teck, July 6; Duke of Edinburgh becomes Duke of Coburg, Aug. 22; Home Rule Bill passes third reading in Commons, Sept. 1; Lords reject Home Rule Bill, Sept. 8.

1894 Opening of Manchester Ship Canal, Jan. 1; Gladstone resigns, March 3, Lord Rosebery succeeds; death of Kossuth, March 20; President Carnot assassinated, June 24; opening of Tower Bridge, June 30; Japan declares war against China, Aug. 1; death of Czar Alexander III., Nicholas II. succeeds, Nov. 1; Dreyfus (wrongfully) convicted of treason, Dec. 22.

1895 Faure President French Republic, Jan. 17; Mr. Gully elected Speaker, April 10; opening of Kiel canal, June 21; Rosebery resigns, June 22, Salisbury Ministry succeeds; Parliament dissolved, July 12; Lord Wolseley succeeds Duke of Cambridge as Commander-in-Chief, Nov. 1; Ashanti expedition, Nov.; Jameson raid, Dec. 29.

1896 Jameson raiders defeated by Boers, Jan. 1; Cecil Rhodes resigns Cape Colony Premiership, Jan. 6; British forces occupy Kumassi, Jan. 18; Shah of Persia assassinated, May 1; conviction of Jameson raiders, July 28; McKinley President of U.S.A., Nov. 3; Röntgen discovers *X*-rays.

1897 Turkey declares war against Greece, April 17; Sir A. Milner appointed High Commissioner in South Africa, May; Queen Victoria's Diamond Jubilee, June 22.

1898 *Maine*, U.S. warship, blown up in Havana harbour; Port Arthur ceded to Russia, March 23; U.S. goes to war with Spain, April 21; Dewey destroys Spanish fleet at Manila, May 1; Cerera's fleet destroyed off Santiago, Cuba, by U.S. ships, July 3; death of Bismarck, July 30; peace between U.S. and Spain, Aug.; Empress of Austria assassinated, Sept. 10.

1899 Hague Peace Conference, May–July; Boer war begins, Oct. 10; Battle of Elandslaagte, Oct. 21; British defeat at Nicholson's Nek, Oct. 30; Battle of Modder River, Nov. 28; Buller's forces defeated at Colenso, Dec. 15; Lord Roberts appointed Commander-in-Chief in South Africa and Lord Kitchener Chief of Staff, Dec. 16; retrial, condemnation and pardon of Capt. Dreyfus; Marconi experiments in wireless telegraphy.

1900 Boers attack Ladysmith, Jan. 6; Battle of Spion Kop, Buller repulsed with severe losses, Jan. 24; Lord Roberts begins advance from Modder River, Feb. 11; relief of Kimberley, Feb. 15; surrender of Cronje, Feb. 27; Ladysmith relieved, Feb. 28; Roberts enters Bloemfontein, Mar. 13; Paris Exhibition opened, May–Oct.; Mafeking relieved, May 17; Boxer outbreak in China, May; annexation of Orange Free State, May 26; Roberts occupies Johannesburg, May 31; King Humbert assassinated, July 29; Parliament dissolved, Sept. 25; General Election, Unionist majority; Lord Roberts Commander-in-Chief, Sept.; proclamation of annexation of Transvaal, Oct. 25; Australian Commonwealth proclaimed, Dec. 30.

1901 Queen Victoria died, Jan. 22; proclamation of King Edward VII., Jan. 24; Empress Frederick of Germany d. Aug. 5; President McKinley assassinated, Sept. 14.

1902 Treaty concluded between Britain and Japan, Jan. 30; death of Cecil Rhodes, Mar. 26; St. Pierre destroyed by eruption of Mont Pelée, 36,000 lives lost, May 8; accession of King Alfonso of Spain, May 17; surrender of Boer leaders at Pretoria, war ended, May 31; Peace rejoicings through the kingdom, June 8; Lord Salisbury resigned, July 11; Mr. A. J. Balfour became Premier, July 12; coronation of King Edward VII., Aug. 9.

1903 Coronation Durbar at Delhi, Jan. 9; wireless telegraphic messages passed between King Edward and President Roosevelt, Jan. 20; fire fatality Colney Hatch Asylum, 51 inmates perish, Jan. 27; King Edward left England on a visit to Portugal, Mar. 31; disaster to British Somaliland expedition, 180 men and 10 officers killed, April 17; Royal Family of Serbia assassinated, June 11; Pope Leo. XIII. d., July 20; Cardinal Sarto elected Pope Pius X., Aug. 4; Lord Salisbury d., Aug. 22; Ministerial crisis; Mr. Chamberlain and other members of the Government resign over the Protectionist proposals, Sept. 17; Mr. Chamberlain's Fiscal Policy promulgated, Oct. 6.

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**1904** Russo-Japanese War commenced, Feb. 8; Duke of Connaught appointed Inspector-General of the Forces, March 1; death of the Duke of Cambridge, March 17; King and Queen left London for Ireland, April 25; great Japanese victory on the Yalu River, May 1; excursion steamer caught fire at New York, nearly 1,000 lives lost, June 15; death of ex-President Kruger, July 14; British force reached Lhasa, Aug. 3; Russian Port Arthur fleet defeated by the Japs., Aug. 10; Vladivostock squadron defeated, 14; Earl Grey appointed Governor-General of Canada, Sept. 1; treaty with Tibet signed at Lhasa, Sept. 7; *Discovery* returned to Spithead from the Antarctic expedition, Sept. 10; Russian forces defeated in four days' fight and driven back into Mukden, Oct. 10; Russian Baltic squadron fired on Hull trawlers fishing on the Dogger Bank, Oct. 22; Government expressed regret at the act; President Roosevelt re-elected, Nov. 8.

**1905** Port Arthur forts transferred to the Japs., Jan. 3; " Red Sunday " massacre at St. Petersburg, Jan. 22; Grand Duke Sergius of Russia assassinated, Feb. 17; Lord Milner resigned High-Commissionership of South Africa, Earl of Selborne succeeded, March 1; Japanese entered Mukden after a fierce fight in which 30,000 Russian dead were left on the field, and 40,000 prisoners secured, the Jap. loss being estimated at 50,000, March 10; terrific earthquake in northern India, nearly 20,000 lives lost, April 4; King Edward visited President Loubet in Paris, April 6; plague rampant in India, 34,000 deaths announced in one week, May 9; Togo defeated remnant of Russian fleet, and captured Admiral Rozhdestvensky in battle of Sea of Japan, May 27; attempted assassination of King of Spain in Paris, June 1; King of Spain arrived in London, June 5; Mr. Gully (Viscount Selby) resigns the Speakership, 6; King Oscar deposed from the Norwegian throne, June 7; Mr. Lowther made Speaker of the House of Commons, Aug. 10; Great Eastern Railway disaster to Cromer express at Witham, 10 killed, Sept. 1; peace signed at Portsmouth (U.S.A.) between Russia and Japan, Sept. 5; Dr. T. J. Barnardo, founder of Children's Homes, died Sept. 19; new Anglo-Japanese treaty formulated, Sept. 27; death of Sir Henry Irving, Oct. 13; King Edward opened Kingsway, Oct. 18; freedom of London City conferred on General Booth, Oct. 26; Czar signed a Constitution at Peterhof, called the " Russian Magna Charta," Count Witte appointed Premier, Oct. 30; King of Greece at Windsor, Nov. 13; Prince Charles of Denmark elected (as King Haakon) to the Norwegian throne, Nov. 18; steamer *Hilda* wrecked off St. Malo, 138 lives lost; Mr. A. J. Balfour's Conservative Government resigned, Dec. 4; Sir H. Campbell-Bannerman became Premier.

**1906** Disturbances in Russia, over 1,000 persons shot dead in Moscow alone, Jan. 2; Parliament dissolved, General Election commenced; Jan. 8; M. Fallières elected President of France, Jan. 17; King of Denmark, father of Queen Alexandra, died Jan. 29; General Election concluded; result, a combined Liberal-Labour and Nationalist majority over the Conservatives and Unionists of 354, Feb. 13; H.M.S. *Dreadnought* launched by the King at Portsmouth, Feb. 10; terrible colliery calamity at Courrières, in the Pas-de-Calais, France; over 1,150 lives lost, Mar. 10; San Francisco destroyed by earthquake and fire, April 18; wedding of King Alfonso and Princess Ena of Battenberg, May 31; Simplon tunnel opened for railway traffic, June 1; earthquake at Valparaiso, over 2,000 killed, Aug. 17; new Anglo-Irish route (through Fishguard and Rosslare harbours) opened, 30; typhoon at Hong Kong, nearly 10,000 deaths, Sept. 18; Women's Suffrage movement becomes aggressive.

**1907** Amir of Afghanistan arrives at Peshawar on visit to India; earthquake at Kingston, Jamaica, great loss of life and property, Jan. 14; Mr. Wm. Whiteley murdered by Horace G. Rayner, 24; collision between ss. *Larchmont* and *Harry Knowlton* in Block Island Sound, causing sinking of the former and loss of nearly

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200 lives; sinking of *Orlando*, steamer, after colliding with *Heliopolis* in Bristol Channel, 14 lives lost, Feb. 17; wreck of the ss. *Berlin* off the Hook of Holland, with great loss of life; the King opens new Central Criminal Court, Old Bailey, 27; first Transvaal Parliament opened, Mar. 11; Colonial Conference opened; Peace Congress opened at New York, Apr. 15; Charing Cross and Hampstead Tube Railway opened, 22; discovery of theft of State regalia at Dublin Castle, July 8; new docks at Cardiff opened by the King and Queen; £50,000 damages and costs paid by the Associated Newspapers, Ltd., to Lever Brothers, Ltd., for libel in *Daily Mail*, 17; Deceased Wife's Sister Bill passed the Lords, Aug. 26; accident to bridge over St. Lawrence, 70 killed, 31

**1908** Panic at cinematograph exhibition at Barnsley, 16 children killed, Jan. 11; cinematograph explosion at Boyestown, Pennsylvania, over 160 killed, 13; King and Crown Prince of Portugal assassinated while driving through Lisbon, April 3; Rotherhithe Tunnel opened, June 12; Austria's intention of annexing Bosnia and Herzegovina announced, Oct. 3; Mr. William Taft elected President of United States, Nov. 3; terrible earthquake, destroying a great part of Calabria and Sicily, 156,500 lives lost, Dec. 28.

**1909** Old age pensions came into operation, Jan. 1; colliery accident at West Stanley pit, Durham, 168 men and boys killed, Feb. 16; deposition of Sultan Abdul Hamid and succession of his brother Mehemed V., April 27; Mr. Lloyd George introduced his first Budget, 30; Constitution of the South African Union signed at Bloemfontein, May 11; Sir Curzon Wyllie and Dr. Laicaca, who tried to rescue him, shot and killed at Imperial Institute by Indian student Dhingra, who was hanged, July 1; Submarine C11 sank after collision, 11 lives lost, 18; despatch published claiming the discovery of the North Pole by Commander Peary, Sept. 6; Prince Ito, Japanese statesman, assassinated by a Korean, 26; King Leopold II. of Belgium d., Dec. 17.

**1910** General Election, Liberals remain in power, Jan. 15; King Edward attacked by bronchitis, bulletin issued, May 5; King Edward d., 6; King George V. proclaimed, 9 ; funeral of King Edward, 20; cholera in Russia, Aug. 9; revolution in Lisbon, fall of the monarchy, proclamation of a Republic, Oct. 3; Crippen sentenced, Oct. 22; colliery disaster at Pretoria Pit, Bolton, 344 lives lost, Dec. 21.

**1911** Coronation of King George V. and Queen Mary, June 22; payment of Members resolution passed in H. of C., Aug. 10; strike riots at Liverpool, 13; general railway strike begun; strike riots at Llanelly, 5 persons killed; railwaymen resume work, 21; Leonardo da Vinci's " La Gioconda " stolen from Louvre, 22; Liverpool strike ended, 25; T. W. Burgess swam the Channel, Sept. 6; Italy declared war against Turkey, Oct. 6.

**1912** Republic established in China, Feb. 12; great strike of coal miners, about 1,000,000 men out, 29; Capt. Amundsen reaches South Pole, March 8; coal strike ends, April 6; *Titanic* disaster off Cape Race, 1,635 lives lost, 14; King of Denmark died in Hamburg, May 14; first Alexandra Day in London, over £12,000 realised for charities, June 26; dedication of Rhodes memorial, Rhodesia, by Lord Grey, July 5; Emperor of Japan d., 30; war declared against Turkey by Montenegro, Oct. 8; Peace Conference opened at St. James's Palace, Dec. 10; Lord Hardinge wounded by bomb at Delhi, 23.

**1913** Home Rule Bill passed H. of Commons, majority 110, Jan. 17; war in Balkans resumed, Feb. 3; news received of Antarctic tragedy, involving deaths of Capt. Scott and Oates, Evans, Wilson and Bowers, in March, 1912, from exposure and privation, 10; King George of Greece assassinated, Mar. 18; fall of Scutari, April 22; Treaty of London signed, May 30; recovery of Leonardo da Vinci's " Mona Lisa "; Robert Bridges becomes Poet Laureate.

**1914** Great strike in S. Africa, martial law proclaimed, Jan. 9; lock-out by London master builders, 30,000 men affected, 26; M. Calmette

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editor of *Le Figaro*, killed by Mme. Caillaux, wife of ex-Premier, Feb. 16; Mr. Asquith assumes post of Minister of War, Mar. 30; fishery disaster off Newfoundland, 224 lives lost, April 1; King and Queen's State visit to Paris, 21; third reading of Home Rule Bill passed Commons, majority 77, May 25; the Archduke Francis Ferdinand, nephew and heir to the Emperor Francis Joseph of Austria, was, together with his consort, assassinated at Sarajevo, the capital city of Bosnia, June 28; s.s. *Empress of Ireland* sunk in St. Lawrence after collision with *Storstadt*, 1,014 lives lost; Joseph Chamberlain d., July 2; Mme. Caillaux acquitted; Austria declares war against Servia, 28; M. Jaurès murdered, 31; Germany declares war against Russia, Aug. 1; Great Britain declares war against Germany, 4; 80,000 Germans attack Liège, 5; H.M.S. *Amphion* sunk by mine, 7; German submarine U 15 sunk by British cruiser *Birmingham*, 9; Great Britain declares war on Austria, 12; first British Expeditionary Force lands in France, 16; Germans enter Brussels, 21; Japan declares war on Germany, 23; Germans capture Namur, 24; Germans destroy Louvain. Allies fall back towards Cambrai, 25; Ostend occupied by British marines. *Kaiser Wilhelm der Grosse* sunk by H.M.S. *Highflyer* off Rio de Oro, 27; name of St. Petersburg altered to Petrograd, 29; Germans take Amiens, Sept. 1; great defeat of Austrians at Lemberg, 2; Dinant sacked. French Government leave Paris for Bordeaux, 3; H.M.S. *Pathfinder* blown up by German submarine, 259 lives lost, Germans take Rheims, 5; Allies begin to drive the Germans back from the north-east of Paris. *Oceanic* struck a rock and sank off Scotland, 7; British army crosses the Marne, 9; Cardinal della Chiesa elected Pope as Benedict XV., 10; Louvain retaken by Belgians, 11; Germans in retreat, 62 miles gained in six days. German cruiser *Hela* sunk by torpedo from British submarine E 9, 1; British auxiliary cruiser *Carmania* sinks *Cap Trafalgar*, German armed cruiser, off S. America, 14; Verdun relieved. Crown Prince's army retreating. Home Rule and Welsh Ch. Bills ordered to pass to the Statute Book, 15; three British cruisers (*Aboukir*, *Hogue* and *Cressy*) sunk. German cruiser *Emden* shells Madras, 22; Malines bombarded for the third time, cathedral destroyed, 26; Czar prohibits Govt. sale of alcohol in Russia, Oct. 4; Germans cross the Scheldt at Termonde, Schoonaborde and Wetteren. A British Marine Brigade and two Naval Brigades, representing a total of 8,000 men, enter Antwerp in aid of the Belgian garrison. The seat of the Belgian Government is removed from Antwerp to Ostend, 7; Germans impose a war levy of £20,000,000 on Antwerp, 10; the Russian cruiser *Pallada* (7,775 tons) torpedoed and blown up by a German submarine in the Baltic, 568 lives lost, 11; Germans are now marching on Ostend. Belgian Ministry removes to Havre, 13; the Franco-British forces occupy Ypres. H.M.S. *Yarmouth* sinks two of the *Emden's* supply ships off Sumatra, 14; German forces enter Ostend. H.M.S. *Hawke* is attacked by German submarines in the North Sea and sunk, 15; the new light cruiser *Undaunted*, commanded by Captain Fox, formerly of the *Amphion*, and accompanied by four destroyers, engages and sinks four German destroyers. A Japanese cruiser sunk by a mine in Kiao-chau Bay, 260 lives lost, 17; another roving German cruiser, the *Karlsruhe*, appears on Atlantic waters, destroys 13 British merchant ships, and successfully eludes capture, 23; the British destroyer *Badger* (Commander Charles Freemantle, R.N.) sinks a German submarine, 24; the French steamer *Admiral Ganteaume*, having on board between 2,500 and 2,600 Belgian and French refugees, was blown up by a torpedo when some distance out from Calais. The fortunate presence of the Channel steamer *British Queen* in the vicinity enabled all but from 30 to 40 passengers to be saved, 26; Prince Louis of Battenberg resigns his position as First Sea Lord of the Admiralty. Lord Fisher succeeds him, 29; Lille is taken by the Allies. The German cruiser *Emden* reappears in the roadstead of Penang, flying the Japanese

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flag, and succeeds in torpedoing two warships—a Russian cruiser and a French destroyer, 30; the London Scottish troops make a splendidly successful charge at Ypres. H.M.S. *Hermes* is torpedoed in the Straits of Dover and sunk by a German submarine; all the crew saved except 45, 31; naval battle between German and British ships off the coast of Chili the *Good Hope*, *Monmouth*, and *Glasgow* cruisers engaged the *Scharnhorst*, *Gneisenau*, *Leipzig*, and *Dresden* in stormy weather, the action lasting an hour. The *Good Hope* and the *Monmouth*, caught fire and sank; The *Glasgow* was not greatly damaged, Nov. 1, the German raiding cruiser *Karlsruhe* sinks three more British merchant ships, 2; Great Britain declares war against Turkey, 5; the Admiralty makes official announcement of the capture and destruction of the German raiding cruiser *Emden*, at Keeling (Cocos) Islands, in the Indian Ocean, by H.M.S. *Sydney*. The German cruiser *Königsberg* has also been forced out of harm's way. She was discovered on Oct. 30 by H.M.S. *Chatham* hiding in shoal water about six miles up the Rufigi River, opposite Mafia Island, German East Africa, 10; H.M.S. *Niger*, a gunboat submarined in the Downs; officers and crew saved, 11; Lord Roberts died, 14; the German forces are once more thrown back over the Yser. A German submarine is sunk off Westende. Turkish forts at the southern end of the Red Sea are captured by Indian troops, assisted by H.M.S. *Duke of Edinburgh*, 15; British warships bombard the entrance to the Zeebrugge ship canal to Bruges, 18; German submarine, U 18, is rammed by a British warship off the coast of Scotland. German destroyer, S 124, rammed by the United Steamship Company's *Anglo-Dane*, 23; at 7·53 this morning the *Bulwark* battleship, lying in Sheerness harbour, blew up and entirely disappeared, nearly 800 lives being lost. Only 12 saved, 26; the Russian army of Galicia wins a signal victory. 25,000 Austrians have been taken prisoners within the past fortnight 29; De Wet is captured by the S. African forces, Dec. 1; four German warships—the raiding cruisers *Scharnhorst*, *Gneisenau*, *Nurnberg*, and *Leipzig*—sunk off the Falkland Islands by a British squadron commanded by Sir F. Sturdee. The engagement lasted five hours and the *Dresden* escaped, 8; the Germans make another attempt to "smash through" the Allies' lines near Ypres, but without success, 11; British submarine B 11 dives under five rows of mines in the Dardanelles and torpedoes the Turkish warship *Messudiyeh*, 13; Serbians recapture Belgrade, 14; British Protectorate over Egypt proclaimed, 17; a German cruiser force made a raid upon our North-east coast, shelling Scarborough, Whitby, and Hartlepool, between 8 and 9 a.m. A British patrolling squadron tried to cut them off, but they succeeded in making good their escape, 16; seven British naval seaplanes make an attack at daylight on German warships lying in Schillig Roads off Cuxhaven, escorted by the *Arethusa*, the *Undaunted*, a destroyer flotilla and submarines. Our ships while standing by to pick up the seaplanes were themselves attacked by enemy Zeppelins, seaplanes and submarines, beating off the attack, and succeeding in picking up six of our seaplanes after they had discharged bombs "on points of military significance," 25.

1915 The battleship *Formidable* is sunk in the Channel by a German submarine, Jan. 1; a complete defeat overtakes the Turkish army in the Caucasus, 5; the French advance in Alsace continues, 7; earthquake in Lake Fuccino dist. of Italy, many thousands killed, Avezzano destroyed; Mgr. Benson d. German success near Soissons, the Kaiser a spectator, 14; British patrolling squadron sights three German battle-cruisers and an armoured cruiser, the *Blücher*. The *Lion*, flying the flag of Vice-Admiral Sir David Beatty, leads the British line. The *Lion*, *Tiger*, *Princess Royal*, *New Zealand* and *Indomitable* are the British ships engaged; and opposed to them are the *Derfflinger*, *Seydlitz*, *Moltke*, and *Blücher*. A running fight ensues, and shortly after one o'clock the *Blücher* capsizes and sinks. No British ships are lost; our casualties are 14 killed and

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29 wounded. Of the *Blücher's* crew of 885, 123 are saved, 24; Turks made an attempt to cross the Suez Canal at Toussoum, near Ismailia. British troops deliver an attack and the Turks fly in disorder, Feb. 2; the German Admiralty issues an order that neutral ships shall not be interfered with if they are not suspected of carrying contraband, but that every British ship, whether a war or a merchant vessel, will be sent to the bottom of the sea, 11; the German advance continues in East Prussia, 13; East Prussia evacuated by Russians, 15; air-raid by 40 aeroplanes (British) on the German positions on the Belgian coast. 240 bombs dropped in Ostend, Middelkerke, Ghistelles, and Zeebrugge. Eight French aeroplanes assisted by a simultaneous attack on the Ghistelles aerodrome to prevent German aeroplanes from cutting off our machines, 16; the German Marine Staff declares a blockade of the British Isles from 18; a fleet of 32 British and French warships attack the forts at the mouth of the Dardanelles, 19; Great Britain declares the blockade of Germany, Mar. 1; the operations in the Dardanelles progress. British battleships enter the Straits and attack several of the forts, doing much damage, 3; the German submarine U 8 sunk off Dover by British destroyers, 4; German submarine U 12 sunk to-day by H.M.S. *Ariel*, 10; the German cruiser *Dresden* caught near Juan Fernandez by the *Glasgow*, the *Kent* and the *Orama*. After five minutes' fighting the *Dresden* hoisted the white flag, and blew up and sank, 14; an action is fought between the combined British and French squadrons and the great fortresses of the Narrows in the Dardanelles. Four of the forts were silenced, but three vessels of the Allied fleets—the *Irresistible* and the *Ocean*, of the British fleet, and the *Bouvet* of the French squadron—were sunk by mines, 18; the fortress of Przemysl falls, 22; the German submarine U 29 was sunk to-day, 25; Ld. Rothschild, d., 31; the Allies gain a brilliant success between Arras and La Bassée, April 15; British troops gain a notable success near Ypres, conquering Hill 60, 19; the *Leon Gambetta*, French cruiser, torpedoed by an Austrian submarine, nearly 700 lives lost, 27; Cunard liner *Lusitania* torpedoed by a German submarine off the Old Head of Kinsale. Nearly 1,500 lives lost, May 7; H.M.S. *Goliath* torpedoed in the Dardanelles, 500 lives lost, 13; Rway. accident near Gretna Green, 157 killed and over 200 injured; Italy declares war on Austria, 22; Coalition Govt. formed, 23; H.M.S. *Triumph* torpedoed off the Gallipoli Peninsula, 26; Italian army crosses the Isonzo. Austrians defeated, June 2; Ministry of Munitions Bill passed; Przemysl retaken by German and Austrian forces, 3; Zeppelin destroyed between Ghent and Brussels by R. A. J. Warneford at a height of 6,000 ft., 7; Germans capture Haliez, 27; O'Donovan Rossa d., 29; Leyland liner *Armenian* sunk off the Cornish coast by a German submarine; 29 lives lost, 21 being Americans, July 1; conquest of German S.W. Africa, 9; strike of 200,000 S. Wales miners, 15; strike ended, 20; Leyland liner *Iberian* sunk by German submarine, 30; fall of Warsaw, Aug. 4; British troops win a notable success north and west of Hooge. Turkish battleship, *Hairredin Barbaroes*, sunk by British submarine, 9; British transport *Royal Edward* sunk in the Ægean with great loss of life, 14; German Dreadnought *Moltke* torpedoed and sunk by British submarine, 18; White Star steamer *Arabic* torpedoed and sunk, 19; Italy declares war on Turkey, 20; fall of Brest Litowsk, 25; J. Keir Hardie, M.P., d., 26; Sir G. Farwell d., 30; Vilna falls, Sept. 18; British make further progress near Loos. Turks defeated at Kut-el-Amara, 28; George Edwardes d. Oct. 4; Bulgarians enter Serbia, 11; Great Britain declares war against Bulgaria, 14; France declares war on Bulgaria, 16; Italy declares war on Bulgaria, 18; five German transports sunk by a British submarine in the Baltic, 16; Sir Andrew Noble d., 22; Dr. W. G. Grace, cricketer, d.; German cruiser *Prinz Adalbert* torpedoed and sunk in the Baltic, 23; Lord Welby d.; Sir Charles Tupper, ex-Premier of

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Canada, d., 30; German cruiser *Undine* sunk by British submarine off the coast of Sweden, Nov. 7; Lewis Waller d.; E. S. Willard d., 9; fall of Novi Bazar, 20; fierce battle at Ctesiphon, 22; fall of Monastir, Dec. 2; General Townshend reaches Kut-el-Amara, 3; Sir John French resigns the British command in France and Flanders. Sir Douglas Haig succeeds Sir John French in the British command in France and Flanders, 15; British forces withdrawn from Anzac and Suvla, 19; P. & O. steamer *Persia* sunk by German submarine in the Mediterranean, with great loss of life. H.M.S. *Natal* sunk as the result of internal explosion while in port.

1916 Mr. Asquith introduces Military Service Bill, Jan. 5; evacuation of Gallipoli completed, 8; M.S. Bill passed, 24; H.M.S. *Arethusa* strikes a mine and is wrecked, Feb. 13; furious fighting at Verdun, 25; French transport, *Provence II.*, sunk in the Mediterranean, nearly 1,000 lives lost, 26; the *Maloja*, the largest P. & O. liner, sunk off Dover, 155 lives lost, 27; Germany declared war on Portugal, March 11; the cross-Channel steamer *Sussex* torpedoed, 24; British defeated on the Tigris, April 9; capture of Trebizond, 17; Germans first use gas on Western front, 27; fall of Kut, surrender of General Townshend, 30; First Daylight Saving Bill passed. White Star steamer *Cymric* sunk, May 8; great naval Battle of Jutland, 31; Lord Kitchener drowned; Yuan Shi-Kai, President of China, d., June 5; new German attacks at Verdun, 16; Italian cruiser *Cello de Messina* and the French destroyer *Fourché* torpedoed in the Straits of Otranto. British steamer *Brussels* captured by Germans, 23; Great British offensive begun in the West, July 1; heavy battles on the Thiepval Plateau, 5; Mr. Lloyd George becomes Secretary of State for War, and Lord Derby Under Secretary, 6; second stage of great British advance on the Somme begins, 7; Delville Wood taken by the British, 15; Sir Victor Horsley d., 16; J. Sant, R.A., d. War is costing Britain £6,000,000 a day, 17; British capture Pozieres, 25; Captain Fryatt, of the Great Eastern steamer *Brussels*, captured in the North Sea, is court-martialled and shot by the Germans at Bruges, 28; Sir W. Ramsay d., 30; Italians capture Gorizia, Aug. 10; Russians take Stanislav, 11; H.M. destroyer *Lassoo* sunk off the Dutch coast by enemy submarine, 13; German High Seas Fleet out, but were driven back after slight encounter, in which our light cruisers the *Nottingham* and *Falmouth* were lost, and two enemy submarines were disposed of and a German battleship damaged, 19; great defeat of Prussian Guards at Guillemont, 25; Rumania declares war against Austria and Germany, 27; the French score a signal success at Verdun, Sept. 6; British operating on the Salonika front cross the Struma and defeat Bulgarian troops, 10; "Tanks" first used by British, 15; Allied air raid on Krupp's works at Essen, 24; Allies take Thiepval and Combles 26; British attack German lines on the Somme, Oct. 1; French transport *Gallia* sunk by German submarine with loss of several hundred lives. Cunard liner *Franconia* sunk by submarine in the Mediterranean, 4; 40 Allied aeroplanes raid the Mauser works at Oberndorf and drop 4 tons of bombs, 13; King Otto of Bavaria d., 16; Cunard liner *Alaunia* sunk, 19; French obtain great triumph at Verdun, 23; P. & O. liner *Arabia* sunk in the Mediterranean, Nov. 8; Sienkiewicz d., 9; British storm Regina trench, and extend their line to the north of Thiepval, 11; great battle opens on both sides of the Ancre, 13; Monastir captured by the Allies, 19; the Emperor of Austria (Francis Joseph) dies. British hospital ship *Britannic* sunk in the Ægean Sea, 50 lives lost, 21; Sir Hiram Maxim d., 24; Emile Verhaeren, Belgian poet, d.; *City of Birmingham* sunk by German submarine, 27; Admiral Sir John Jellicoe appointed First Sea Lord, and Vice-Admiral Sir David Beatty assumes command of the Grand Fleet, 29; liner *Caledonia* torpedoed, Dec. 4; Lloyd George resigns. Later Mr. Asquith resigns. King sends for Mr. Bonar Law, 5; Lloyd George accepts Premiership, 6;

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War Cabinet instituted, 11; allied ultimatum to Greece, 14; President Wilson sends a Note to all belligerents, suggesting an avowal of views, 21; Sir Douglas Haig made Field-Marshal, 30.

1917 H.M.S. *Cornwallis* sunk in the Mediterranean, Jan. 7; Admiral Dewey d.; Wm. de Morgan d.; Lord Goreil killed in action, 16; Duke of Atholl d.; Earl of Elgin d., 20; Lord Cromer d.; British advance on the Tigris, holding Turkish trenches on a front of 4,800 yards. H.M.S. *Laurentic* sunk off the Irish coast, 29; diplomatic relations between United States and Germany broken off, Feb. 3; British capture Grandcourt, 7; J. W. Waterhouse, R.A., d., 10; Duchess of Connaught d., 14; fall of Kut-el-Amara, Sanna-i-Yat evacuated and Turks in retreat; over 1,700 prisoners taken, 24; Cunard liner *Laconia* torpedoed; French transport *Athos* and Italian vessel taking troops to Salonika torpedoed; Belgian relief ship *Euphrates* sunk, 25; Count Zeppelin d., Mar. 9; British troops occupy Baghdad, 11; President Wilson decides to arm American merchant ships. Revolution in Russia, 12; St. Pierre Vaast Wood occupied by British, 16; British take Bapaume, 17; British take Péronne, Nesle and Chaulnes, 18; French Dreadnought *Danton* sunk in Mediterranean. M. Ribot becomes French Premier, 19; British take 40 more villages. French carry Jussy, and force the Crozat Canal. British hospital ship *Asturias* torpedoed, 21; General Murray gains a complete victory over 20,000 Turks at Gaza, capturing 900 prisoners, 27; war resolution passes the American Senate by 81 votes to 6. The House of Representatives adopted it by 373 votes to 50, April 5; Cuba declared war against Germany, 7; Vimy Ridge taken by Canadians, 10; General Maud annihilates 18th Turkish Army Corps, taking 1,217 prisoners, 18; Sir F. C. Burnand d., 21; great British advance along the Scarpe, 23; German naval raid on Ramsgate, 5 casualties, 26; General Foch appointed Chief of Staff of the French Army, May 15; Lord St. Audries d. British transport *Cameronian* sunk by submarine in Mediterranean, 63 lives lost, June 2; six German destroyers engaged by Commodore Tyrwhitt, sinking S 20. Raid on naval establishments in the Medway, 38 casualties; 4 machines brought down and others damaged, 5; British victory in the Ypres salient, Messines Ridge taken, 7; King Constantine of Greece abdicates, his son Alexander succeeds, 11; P. & O. liner *Mongolia* sunk off Bombay, 23; first American contingents arrive in France, 26; Gen. Allenby assumes Palestine command, 29; Sir H. Tree d., July 2; Austrian front west of Stanislau broken, 8; H.M.S. *Vanguard* blown up, over 700 lives lost, 9; Russian retreat begins, 16; H.M.S. *Ariadne* torpedoed, 38 killed, 30; British capture Hill 70, Aug. 15; Canadians enter Lens, 21; Russia proclaimed a Republic, Sept. 15; H.M.S. *Drake* torpedoed off Ireland, Oct. 2; Sir W. Laurier resigns Canadian Liberal leadership, 3; British victory on Passchendaele Ridge, 4; Mr. and Mrs. Claude Askew drowned at sea, 5; Hussein Kemal Pasha, Sultan of Egypt d., 9; Sir W. Byles d.; Rev. T. Spurgeon d. Two British destroyers, *Mary Rose* and *Strongbow*, sunk; 135 lives lost, 17; Sir J. Whitehead d., 20; Mr. Redmond moves vote of censure on Government on Irish policy. Defeated by 211 votes to 78; French victory on the Aisne, 23; Italians in retreat, 24; Passchendaele won by Canadians, Nov. 6; Hindenburg Line smashed on a 10-mile front, 20; United States declares war with Austria-Hungary, Dec. 7; fall of Jerusalem, 9; Russo-German armistice signed, 15; German attacks at Cambrai, aided by liquid fire, 31.

1918 New Man Power Bill introduced in the House of Commons by Sir Auckland Geddes, Jan. 14; naval engagement at Imbros; *Goeben* and *Breslau* emerge from the Straits and sink H.M.S. *Raglan* and a small monitor; *Breslau* sunk and *Goeben* beached; two German destroyers mined and sunk in North Sea, 17 survivors, 20; Anchor liner *Tuscania*, carrying American troops, torpedoed off the Irish coast: 2,233 saved: 166 missing, Feb. 5; Russia out of the war, 10; Dover shelled by a German submarine, 15; British hospital ship *Glenart Castle* sunk in Bristol Channel: 38 saved out of 200, 26; Rumania agrees to enemy peace terms, Mar. 4; John Redmond d., 6; hospital ship *Guildford Castle* torpedoed in Bristol Channel, but reaches port, 10; Germans launch their first attack on a front of 50 miles, from the Oise, near La Fère, to the Sensé, near Croiselles, 21; British withdraw to the Somme, 28; Neale and Courcelette evacuated by the British and French, 25; massed German onslaught at Vimy Ridge, 28; great enemy assault with 20 divisions along roads leading to Amiens, April 4; British pressed back to top of Ridge and to Ploegsteert, 10; second German attack on Messines Ridge, 11; General Foch appointed Generalissimo of the Allied armies in France, 14; British withdrawal in the Passchendaele area, 16; British naval raid on Zeebrugge and Ostend, 22; British regain Villers-Bretonneux, 25; big German defeat on a 10-mile front, 29; peace signed between Rumania and the Central Powers, May 7; H.M.S. *Vindictive*, laden with concrete, sunk in Ostend harbour, 9; British armed mercantile cruiser *Moldavia* torpedoed and sunk, 23; great battle between the Aisne and Vesle, 28; Germans bomb Paris, 30; U.S. transport *President Lincoln* torpedoed and sunk in European waters, 31; great Austrian offensive, June 15; great Austrian defeat, 23; H.M. hospital ship *Llandovery Castle* torpedoed and sunk, homeward bound from Canada: 234 missing, 27; Americans carry the village of Vaux, July 1; Australians and Americans capture Hameil, 4; Vahid Ed-Din proclaimed Sultan of Turkey, 8; great new German attack opens on a 50-mile front east and west of Rheims. H.M. transport *Barunga* sunk, 15; Ex-Czar Nicholas shot, 16; great French counter-attack on a 27-mile front, 18; White Star liner *Justicia* torpedoed and sunk off Ireland: 10 lives lost, 20; Allies cross the Marne at Chassins and Passy, 22; armed mercantile cruiser *Marmora* torpedoed: 100 of the crew lost, 23; desperate attack by Americans on Prussian Guards, Aug. 2; Soissons and Crise line won, 3; Education Bill passed, 5; British take Morlancourt, 9; Montdidier carried, 10; French complete capture of Lassigny Massif, 15; British troops cross the Ancre, 16; General Byng opens a strong offensive north of the Ancre, and by night had captured Beaucourt, Bucquoy, Ablainzeville, Meyermeville, and Courcelles, 21; British press forward, recapturing Albert, taking 5,000 prisoners. Lassigny occupied, 22; the British offensive makes great strides, 23; the French capture Roye, 27; British capture Bapaume. French take Noyon, 29; Bailleul occupied by British, 30; Australians capture Péronne, Sept. 1; German retreat from the Vesle begins, 4; Americans capture the St. Mihiel salient, 13; Bulgarian front broken through near Monastir. Great strike of Lancashire cotton-spinners, 16; Bulgaria pleads for armistice, 28; French capture St. Quentin. All the German Secretaries of State resign, Oct. 3; Germans retreat on Lille, 4; Ferdinand of Bulgaria abdicates, 7; Cambrai taken by British and Canadian troops, 9; Le Cateau captured. Irish mail-boat *Leinster* torpedoed, 400 passengers killed or drowned, 10; French occupy Laon, 13; British occupy Ostend. General Plumer's forces capture Werviecq, Comines, and Halluin, and 150 guns, 17; Douai captured, 19; Anglo-Italian forces cross the Piave, 25; great Italian advance, 29; British enter Valenciennes, Nov. 2; Austria accepts imposed terms, and makes full surrender, 3; American troops enter Sedan, 6; revolutionary movement spreads over Germany, 8; Kaiser abdicates and escapes to Holland, 9; Canadians occupy Mons; armistice signed by German plenipotentiaries; firing stopped on all fronts; great jubilation throughout Britain and allied countries, 11; King Nicholas of Montenegro deposed; Montenegro unites with Serbia under King Peter, 29.

1919 Peace Conference in Paris, Feb. 3; Hawker and Grieve start from Newfoundland for their flight across the Atlantic, May 18; first direct air-flight across the Atlantic by Capt. Alcock and Lieut. W. Brown, June 15; Interned

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fleet scuttled at Scapa Flow, 19; of Peace with Germany signed at les, 28; British Naval Airship R 34 leaves on her voyage across the Atlantic, July 2; R 34 lands on Long Island, 6; Peace Celebration throughout the country, 19; Two minutes' silence kept at 11 o'clock in memory of the Glorious Dead, Nov. 11; Lady Astor returned as M.P. for Plymouth, 28; Capt. Ross Smith completed flight from England to Australia, Dec. 10; Attempt on life of Lord French near Phoenix Park, Dublin, 19.

1920 Peace Treaty ratified in Paris, Jan. 13; First meeting of League of Nations in Paris under presidency of M. Léon Bourgeois, 16; M. Paul Deschanel elected Pres. of French Republic; Prohibition came into force in U.S., 17; Esthonian independence recognised, Feb. 2; Parliament opened, 10; First meeting in London of Council of League of Nations, Mr. Balfour presiding, 11; Opening meeting of Supreme Allied Council at Downing Street, 12; Massacre of 7,000 Armenians in Cilicia by the Turks, 16; Announcement of Allies' decision not to deprive Turkey of Constantinople, 17; Denmark joined the League of Nations, March 4; Militarist Revolution in Germany, 14; Prince of Wales left England on his tour to Australia and New Zealand; Constantinople occupied by Allied Troops, 16; French troops occupy Frankfurt, Darmstadt and Hanau as a result of the German advance on the Ruhr; Further massacres in Armenia, April 6; Joan of Arc canonised at St Peter's at Rome, May 16; Title of Duke of York conferred on Prince Albert, June 5; Fighting between British and Turks at Ismid, 16; Annexation, under name of Kenya Colony, of East Africa Protectorate announced, July 8; Protocol containing the Allies' disarmament terms signed by Germany at Spa, 9; Lord Fisher d., 10; Empress Eugénie d., 11; Rioting in Belfast, 22; Peace Treaty with Turkey signed at Sèvres, Aug. 10; Garrisons cut off in Mesopotamia, Sept. 9; Resignation of French President, M. Deschanel, 15; M. Millerand elected President of France, 23; Women graduates admitted for first time to degrees in Oxford University, Oct. 14; Coal strike declared, 16; King Alexander of Greece d., 25; End of coal strike, Nov. 4; Anniversary of Armistice; Cenotaph unveiled by the King in Whitehall; an Unknown Warrior buried in Westminster Abbey, 11; First meeting of League of Nations at Geneva, 15; Outrage in Dublin, 14 British officers murdered, 21; D'Annunzio declares war against Italy, Dec. 1; New silver coins issued, 13; Austria admitted to the League of Nations, 15; King Constantine returns to Athens, 19; Italians attack Fiume, 27; Surrender of D'Annunzio, 29.

1921 Submarine K 5 sunk with all hands, Jan. 24; Allies at Paris Conference fix German Reparations Bill: total of £11,300,000,000 to be payable in 42 years, Feb. 7; Arrival in London of the German representatives to the Supreme Council, 28; Allied ultimatum to Germany stating that unless Paris Agreement signed by following Monday measures would be taken to enforce it, Mar. 3; German delegates leave for Berlin; Sinn Fein outrages in Dublin, 7; Allied troops occupy Dusseldorf, Duisburg and Ruhrort, 8; Coal strike declared; State of emergency proclaimed in Great Britain, 31; Conference between the Government and the miners ended in deadlock, April 7; Decision by transport workers and railway men to declare strike in support of miners, 13; Triple Alliance strike threat withdrawn, 15; Mr. Whitley elected Speaker of the House of Government offer of grant of ten rejected by miners, 28; Riots in pt, May 23; First election for the Northern and Parliament, 24; Battle in Dublin, Customs House burnt down, 25; First sitting of Ulster Parliament in Belfast, Sir James Craig appointed Premier, June 7; Miners' ballot results in rejection of Government terms; Sinn Fein raids in London suburbs, telegraph and signal wires cut, 17; Census of Great Britain taken, 19; The King opened the first Parliament of Northern Ireland in Belfast, 22; End of coal strike, July 1; H. G. Hawker, the noted airman, killed while flying, 12; First rainfall in England after prolonged drought, 15; Government proposals made to Ireland offering Dominion status with complete autonomy in taxation and finance and power to maintain a military home defence force, 20; Railways decontrolled, Aug. 15; Meeting of Dail Eireann to discuss Government's offer; Death of King Peter of Serbia, 16; The Emir Feisal crowned King of Irak (Mesopotamia), 23; Airship R 38 wrecked by explosion over the Humber, 24; Official end of Great War, 31; Fighting in Turkey, Sept. 1; The *Quest* left London for Antarctic; Eighty-four million working days lost by strikes in 1921, 17; Oppau (Germany) explosion, 2,500 killed and wounded, 21; Heligoland fortresses demolished, Oct. 14; Revolutionary movement in Portugal, Prime Minister killed, 19; Ex-King Carl of Austria flies to Hungary and joins Royalist army, 23; Ex-King Carl's coup fails, he is taken prisoner, 24; Parliament prorogued, Nov. 10; Armistice Day commemorated throughout the kingdom, 11; Washington Conference opened by President Harding; Mr. Hughes proposes ten years' naval holiday and scrapping of older warships, to conform to limit of proposed ratio; Mr. Balfour proposes forbidding construction of submarines, 12; M. Briand at Washington Conference states France's necessities, and Mr. Balfour promises British support in case of German aggression, 21; The four-power (U.S.A., Great Britain, France, and Japan) agreement for preservation of peace in Pacific for 10 years arrived at; also Yap agreement between U.S.A. and Japan. Both signed 13th; Anglo-Japanese alliance to be dropped, Dec. 10; Washington Conference agrees proposed naval limitations, percentage in capital ships to be U.S. and Great Britain 5, Japan 3, France and Italy 1·70, 15; Financial transactions in Russia at rate of 500,000 roubles to one United States dollar, 16; Parliament prorogued, 19; Zaghlul Pasha ordered to leave Cairo, 22, deported to Ceylon 30th.

1922 Great fire at Hartlepool, hundreds homeless, Jan. 4; Dublin Castle handed over to Provisional Government, 16; Lord Mountstephen leaves £750,000 to King Edward's Hospital Fund, 26; Five-power naval treaty passed at Washington; Britain gives up Wei Hai Wei to China; Britain's dead-weight debt for 1921–2 announced as £7,585,409,690, Feb. 1; Cardinal Ratti, Archbishop of Milan, elected Pope Pius XI., 6; Princess Mary marries Viscount Lascelles; Termination of British Protectorate over Egypt announced, 28; Submarine H 42 sunk with all hands at Gibraltar, March 23; Four-power Pacific Treaty ratified by U.S. Senate, 24; P. & O. steamer *Egypt* sunk off Ushant, May 20; s.s. *Wiltshire* wrecked on Great Barrier Island, 31; Field-Marshal Sir Henry Wilson assassinated, June 22; Heavy fighting in Dublin, the Four Courts blown up, July 2; King opens new L.C.C. County Hall, 17; H.M. Cruiser *Raleigh* wrecked in Straits of Belle Isle, Aug. 9; Arthur Griffiths, President of Dail Eireann dies in Dublin, 12; General Michael Collins shot dead in ambush, 22; Geneva assembly of League of Nations opens, Sept. 4; Air race for King's Cup won by Barnard; Irish Free State Parliament meets; Mr. Cosgrave elected President, 9; Smyrna in flames; value of Russian rouble about 44 million to the £, 14; Mustapha Kemal, the Turkish National leader, now practically dictator, sends arrogant demands to the Allies; British fleet ordered to oppose Turkish army crossing to Europe, 17; King Constantine of Greece abdicates in favour of his son George, 26; Mr. Lloyd George resigns Premiership; Mr. Bonar Law asked to form Cabinet, Oct. 19; Irish Republicans repudiate Irish Free State and appoint De Valera President of Republic, 26; Fascisti coup in Italy, 27; Signor Mussolini forms a Cabinet, 29; Kemalist coup in Turkey; Sultan dethroned, Nov. 8; Sultan leaves Turkey in British battleship, 17; New Caliph elected; Execution of rebels in Ireland, 17; Lausanne Conference opens, 20; Erskine Childers executed in Dublin, 24; Great find of treasures in tomb of King Tutankhamen near Luxor in Egypt by Lord Carnarvon, 29;

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Mr. T. M. Healy appointed Governor-General Irish Free State and Duke of Abercorn for Northern Ireland (Ulster), Dec. 8.

1923 Reparation Conference fails; French troops despatched to Ruhr, Jan. 8; Ex-King Constantine dies in exile, 11; U.S. terms for funding of debt accepted, Feb. 2; Turks refuse to sign Peace Treaty at Lausanne, 4; Value of mark falls below 150,000 to £, 13; Lord Carnarvon dies in Cairo, April 5; Budget Speech, 16; 6*d.* off Income Tax; Corporation Tax reduced to 6*d.*; Beer £1 per Barrel; Postage, 1½*d.* for 2 oz., 20; Lausanne Conference resumed, 23; Duke of York marries Lady E. Bowes-Lyon, 26; German offer of 1,500 millions for Reparations rejected by France, 6; Peremptory note by Britain to Soviet Government, 8; 90 Irish deportees released, 17; Mr. Bonar Law ill and resigns Premiership, 19; Mr. Stanley Baldwin asked to form a Government, 22; Text of new Rent Control Bill issued, June 4; Mr. Irish's "Papyrus" wins Derby, 6; New German reparation order; Revolution in Bulgaria; Princess Christian dies, 9; Death of Pierre Loti, 10; Maurice Hewlett dies, 15; Etna in eruption, 16; survivors of s.s. *Trevessa* reach land after 1,200 miles (22 days) in small boats, 26; Sir Jas. Reid, M.D., dies, 28; 40,000 dockers on strike, July 5; France ratifies Washington Navy Treaty, 7; Turkish peace agreement at Lausanne, 9; Capt. E. H. Robinson wins King's Prize at Bisley, 21; 27 killed in pit explosion at Maltby in Yorkshire, 28; President Harding, U.S.A., dies, Aug. 2; Mr. Calvin Coolidge, vice-president, succeeds, 3; Channel swum by Sullivan in 27 hours; Carter wins Aerial Derby at 192 miles per hour, 6; Tiraboschi swims Channel in 16½ hours, 11; Hong Kong swept by typhoon, 18; Allied evacuation of Constantinople, 25; Italo-Greek conflict, Corfu bombarded, 31; Great earthquake in Japan, Tokio and Yokohama in ruins, Sept. 1; Sir William Trelear dies, 6; Lord Leverhulme abandons his industrial schemes at Stornoway and gives building and land valued at £1,000,000 to inhabitants of Lewis; C. Toth swims from France to England in 16 hours 54 minutes, 9; Irish Free State admitted to League of Nations, 10; Army revolt in Spain, King Alfonso calls on Marquis de Estrella, the leader, to form a Government, 14; Lord Morley of Blackburn dies, 23; Gordon-Bennett balloon race ends disastrously, 5 lives and 3 balloons lost, 24; Pit disaster at Falkirk, 41 miners trapped by water, 25; Civil Dictator appointed in Bavaria, 28; French boxer Carpentier defeats Beckett in 20 seconds, Oct. 1; 5 men rescued alive at Falkirk after 9 days' imprisonment in mine, 4; Tsao Kun installed President of China, 10; Rhine Republic proclaimed, Bavaria defies the Reich, 20; Turkish Republic proclaimed, Kemal Pasha first president, 29; Mr. Bonar Law dies, 30; Mr. Baldwin at Manchester advocates protection for British industries, Nov. 2; Mr. Bonar Law buried in Westminster Abbey, 5; Ludendorf and Hitler fail in their Bavarian revolt, 8; Sir L. Newton installed Lord Mayor of London, 9; Parliament assembles, 13; Premier announces dissolution, 16; German Cabinet falls; Luxor Tomb reopened, 23; Dr. Marx forms a new German Cabinet; Lord Loreburn dies, 30; Disastrous floods in Italy, Dec. 1; Pit disaster at Sheffield, 7 killed, 46 injured, 3; General Election, Mr. Baldwin's policy defeated; 259 Conservatives elected, 191 Labour, 165 Liberals and others; Eight women members returned, 6; Sir F. Treves dies, 7; Lord Shaughnessy dies, 10; King George II. of Greece expelled, 19; French airship *Dixmude* lost with all hands, 20; Lord Jersey dies, 31.

1924 Venizelos elected President of Greek National Assembly, 5; Parliament meets; Mr. Whitley re-elected Speaker, 8; Submarine L 24 sunk, 43 lives lost, 10; King opens Parliament, 15; Mr. Baldwin's Govt. defeated, 21; Serious railway strike starts, 21; Lenin dies; Mr. Baldwin resigns, Mr. Ramsay MacDonald invited to form a Government, 22; Woodrow Wilson dies, Feb. 3; Venizelos resigns, 4; Parliament meets, 12; Great dock strike, 18; Explosion at Erith, 12 killed, 18; Sir H. Lucy dies, 20; Dock strike ends, 25; Abolition of Caliphate, March 3; Sir F. Bridge dies, 18; King George II. of Greece deposed and a Republic declared, 25; Tram strike ends, 31; Reparations Expert Committee Report issued, April 9; Free travel for M.P.'s voted; Herr Stinnes dies, 10; Shipyard lockout, 12; Anglo-Soviet Conference in London, 14; Wembley Exhibition opened by King, 23; Newcastle beat Aston Villa 2–0 in Cup Final, 26; First Labour Budget by Mr. Snowden—reduction in sugar and tea duties, 29; Gen. Townshend dies, May 18; Sir E. Goschen dies, 20; Lord Pirrie dies, 6; Lord Derby's "Sansovino" wins Derby, 11; Pres. Millerand resigns, M. Doumergue elected, 13; Mallory and Irvine killed on Mt. Everest, 19; Sir D. M. Probyn dies, 20; Pte. D. Burke, Canada, wins King's Prize at Bisley, July 19; Joseph Conrad dies, Aug. 3; Treaties with Soviet signed; much dissatisfaction expressed, 8; Germans at London Conference, 9; Military riots in Sudan, 15; Dawes Scheme accepted by London Conference, Ruhr evacuation agreed to; Cobham wins Air Race, King's Cup, 16; London Agreement signed, Reichstag accepts, 30; Chinese Civil War starts, Sept. 3; U.S. airmen complete world flight, 23; Zaghlul Pasha in London, 25; Fighting at Mecca, King Hussein abdicates, King Ali elected, Oct. 1; League of Nations session ends, Peace protocol adopted with Disarmament Conference arranged for 1925, 2; Labour Govt. defeated and resigns, 9; Chinese Civil War ends, 13; Pekin coup; Pres. Tsao Kun resigns, 25; General Election: large Conservative majority, 29; Mr. Ramsay MacDonald resigns, Mr. Baldwin forms a new Cabinet, Nov. 4; U.S. Presidential election: Mr. Coolidge re-elected, 10; Sir A. L. Bower Lord Mayor of London, 10; Sirdar assassinated in Cairo; ships sent to Egypt, 19; Soviet Treaties dropped, 21; King opens Parliament, Dec. 9; Mr. F. Dickson new P.R.A., 16; Aeroplane crash at Purley: 8 killed, 24; Gales and floods fall over the country during closing days of 1924.

1925 Trotsky dismissed, Jan. 17; Mr. Asquith accepts peerage as Earl of Oxford and Asquith, 26; Lord Grenfell dies, 27; Lord Blyth dies, Feb. 8; Parliament reassembles, 10; President Ebert dies, 28; Geneva protocol rejected by Great Britain, March 12; Madame Tussaud's burnt down, 18; Lord Curzon dies, 20; Singapore base approved again, 23; Prince of Wales starts on African tour, 28; Lord Rawlinson dies; Cambridge finish boat-race alone, Oxford boat swamped, time 21 min. 51 sec., 28; Mine disaster at Newcastle, 38 miners trapped by water, 30; Jean de Reszke dies, April 3; Attempt to murder King Boris of Bulgaria; John Sargent, R.A., dies, 14; Airship R 33 torn from moorings in a storm, but returns next day; Bomb outrage in Sofia Cathedral, 140 killed, 16; New French Cabinet, M. Painlevé Prime Minister, 17; Mr. Churchill's Budget: 6*d.* off income tax; slight relief in super tax, but increased death duties; McKenna duties restored, and a revenue duty on silk proposed, together with old age pensions at 65 and pensions for widows and children, 21; Sheffield United defeat Cardiff in final for Football Cup, 25; Hindenburg elected German President, 26; Lord Leverhulme and Admiral Sturdee die, May 7; Duke of Rutland dies, 8; Sir J. Baird to be Gov.-Gen. of Australia, 8; Lord Milner dies, 13; Sir Rider Haggard dies, 14; Amundsen starts to fly to N. Pole, 21; Lord Allenby resigns, Sir George Lloyd succeeds as High Comr. for Egypt, 21; Earl of Ypres dies, 22; Mr. Morris's "Manna" wins Derby, 27; Rioting in Shanghai serious, June 1; Flammarion, French astron., dies, 4; Allied note on disarmament handed to Germany, 4; Amundsen returns to Spitzbergen after four weeks' absence at Pole; continued attacks on British in China; *coup d'état* in Athens, 25; Coal mining deadlock, owners' proposals rejected, July 3; Capt. Barnard wins King's Cup air race round Britain, 4; Moroccan war—peace offer to Abdel Krim; Reported discovery of cancer germ, 11; Summer Time Bill passes, 3rd Sat. in April to 1st Sat. in Oct., 17; King's Prize at Bisley won by A.

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Smith, City of London Rifle Club, 18; Wm. J. Bryan, U.S.A. dies, 25; £10,000,000 voted in subvention of coal miners' wages, Aug. 6; Serious seamen's strike in Australia, 20; French and Spanish troops co-operate in Moroccan war, 20; U.S. airship *Shenandoah* destroyed, 13 killed, Sept. 3; Mr. Chamberlain speaks on "Security Pact" at Geneva, 10; Prince of Wales held up in Chile by snow, 12; Parliament buildings in Tokio destroyed by fire, 18; Robt. Williams elected Chairman of Labour Party, Oct. 2; Locarno Conference on Security Pact, 5; Vertical ascent of special aeroplane at Farnborough, 13; Prince of Wales arrives home, 16; Shah of Persia deposed, 31; Reservoir bursts near Conway, 17 lives lost, Nov. 2; Sir Wm. Pryke installed Lord Mayor of London, 9; Submarine M 1 sunk off Devon coast with all hands, 12; Lord Leith of Fyvie dies, 14; Parliament meets, 16; Australian elections—victory for Constitutional Methods in both Houses, 16; Queen Alexandra dies, 20; King of Siam dies, 26; Treaty of Locarno signed in London, Dec. 1; Mr. Chamberlain receives the K.G.; Rating and Valuation Bill passes third reading; Irish Boundary question settled, 8; Riza Shah Pahlevi elected Shah of Persia, 13; League of Nations Council grants Iraq claims; Safeguarding of Industries Bill (Duties) passed; King Ali of Hedjaz resigns, Abdul Aziz I. Saud now rules, 19; Hagley's Hall burnt, 24; Year 1925 finishes with great floods all over Europe.

1926 General Pangalos virtual dictator in Greece, Jan. 4; Widows' and Orphans' Pensions Act comes into operation, 5; Ibn Saud proclaimed king of the Hedjaz in Yeddah, 11; Evacuation of Cologne by British troops, 31; King opens Parliament, Feb. 2; Germany requests membership of League of Nations, 8; Cobham arrives Cape Town, 17; Shakespeare Memorial Theatre burned, Mar. 6; League of Nations Council meets at Geneva, 8; Cobham's Cape flight finishes at Croydon, 13; League of Nations crisis on Germany's application which Brazil obstructs—Sweden offers to resign; Coal Report—No further subsidy and nationalisation rejected, 15; Deptford market sold to War Office for £387,000; International Conference on working day hours, 19; Government accepts Coal Commission Report, 31; Parliament adjourns, April 1; Moslem-Hindu riots in Calcutta, many killed, 2; Military coup in Peking—Chief Executive deposed; Aeroplane collision at Henlow, 5 killed, 10; Pangalos elected Greek President, 11; Parliament meets; Coal dispute—Miners' Reply to recommendations of Commission, 13; Coal deadlock—Premier meets Miners' Federation; Thirteen Labour members suspended, 15; A great General Strike in support of the miners is called which lasts until May 12—Extraordinary scenes in London and provinces owing to stoppage of transport—Many textile and other industries idle for lack of fuel and raw material.—The daily newspapers appear as single sheet, or not at all; Volunteers flock to Government's assistance in large numbers and amateur drivers run trains, buses, and food lorries under convoy and thus effectually break the strike against the community, 3; Lieut. Byrd, U.S.N., flies over Polar region and reports no open water, 9; Marshal Pilsudski captures Warsaw and forms new Government for Poland, 14; Airship *Norge* makes successful flight across Polar region, 16; Coal dispute—deadlock complete, 20; Abd-el-Krim surrenders, 27; Lord Woolavington's "Coronach" wins Derby, June 2; Lord Astor's "Short Story" wins Oaks, 4; Foundling Hospital, Bloomsbury, closed; Melba's farewell, 25; Mining hours Bill carried, July 1; Captain Broad wins King's Air Cup, 10; Miss Edeale swims Channel in record time, Aug. 6; Submarine H 29 sinks at Devonport, 6 victims, 9; Cobham arrives Melbourne, 15; Lancashire wins Cricket Championship, Sept. 2; Michel swims Channel in 11 hours 5 mins.; T.U. Congress snubs Russian dictation; "Coronach" wins St. Leger in record time, 9; League of Nations—Germany admitted—Spain withdraws, 10; French air liner crashes near Tonbridge, 7 people burned to death, Oct. 2; Government's Coal proposals rejected—decision

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to call out safety men, 7; Imperial Conference—opening ceremony, 19; H.M.S. *Valerian* founders in hurricane near Bermuda, 22; Belgian franc stabilised—Exchange rate 35 new Belgas of 5 francs each, or 175 paper francs to English pound, 25; Third reading of Electricity Bill, 12; Italy wins Schneider Cup—average speed 246 miles per hour, 13; Coal dispute ending; 9 killed and 6 injured in rail smash near Rotherham, 19; Imperial Conference ended, 23; Peace in Coalfields—men ordered back to work, 26; China—naval detachments landed at Hankow, 29; Miners return to work—emergency regulations revoked, Dec. 2.

1927 Sir J. Craig made a Viscount, Jan. 1; Wireless telephone to New York at a charge of £15 for 3 minutes opened, 7; 73 lives lost in Montreal cinema fire, 9; State opening of Council House at New Delhi, 18; Explosion at Betteshanger Colliery, Kent—4 killed, 28; Revolt in Oporto—town bombarded, Feb. 5; King opens Parliament, 8; train collision at Hull, many killed and injured, 14; Council of League of Nations at Geneva—Herr Stresemann as president, Mar. 7; Earthquake in Japan—great loss of life, 10; Calcutta Cup—Scotland beats England by 21 points to 13, 19; Outrage on foreigners at Nanking—Consulates looted, 24; Grand National won by "Sprig," 25; Duke of York arrives at Sydney, 26; Major Seagrave drives a car at a speed of over 200 miles per hour, April 1; Government brings in Trades Dispute Bill, 4; Beam service to Australia starts, 8; Apology demanded from China for Nanking outrage; Budget proposals—increased duty on wines, tobacco and matches—12 millions to be appropriated from Road Fund surplus, 11; China—new Government set up at Nanking, 18; Duke of York arrives in Melbourne, 21; New Zealand offers one million towards cost of Singapore base; Cardiff beats Arsenal in English Cup Final, 23; Parliament assembles, 26; Extensive Mississippi floods—thousands of refugees in camps, May 1; Newcastle Association League Champions—Middlesbrough lead Second League, 7; Canberra, the new Capital of Australian Commonwealth, inaugurated by Duke of York, 9; Colonial Office Conference—24 Colonies represented, 11; Arcos offices raided by police, 12; Great floods on Mississippi, 16; French President in London, 17; Lindbergh flies Atlantic alone, 21; Relations with Soviet Government severed—Trade Agreement abrogated, 24; British Note to Egypt presented, 30; Derby won by "Call Boy," June 1; Oaks won by "Beam," 3; Chamberlain flies from New York to Berlin, 6; Russian Red Terror revived: many executions, 15; Trade Unions Bill—third reading in Commons; Mr. Cosgrave re-elected President Irish Executive Council, 23; Duke of York arrives home, 27; Eclipse of sun, thrilling spectacle at Giggleswick, 29; Money Lenders Bill—third reading in Commons, July 1; Beam Wireless to South Africa opened; King Fuad in England, 4; New Prayer Book approved by Church Assembly; R.S.M. W. Jagger wins King's Prize at Bisley, 9; Kevin O'Higgins, Irish Minister of Justice, murdered, 10; Serious riots in Vienna, 15; Gladstone Dock, Liverpool, opened by King, 19; King Ferdinand of Bulgaria dies; Prince of Wales and Mr. Baldwin leave for Canada, 23; Capt. Barnard killed while flying, 28; Parliament adjourns, 29; Geneva—no agreement arrived at on the Cruiser problem, Aug. 4; Temme swims Channel in 14 hrs. 29 min., 5; Collapse of a large building in Cornhill, 6; Irish Republicans take the oath in Dail, 11; Zaghlul Pasha dies; Deal express wrecked—12 killed, many injured, 24; Lord Cecil resigns, 25; League of Nations Council opens at Geneva, Sept. 5; Lancashire wins County Cricket Championship; 7; Trades Union Council breaks with "Red" Union, 10; Lord George Hamilton dies, 22; Great Britain wins Schneider Cup at Venice—speed over 281 miles per hour, 26; Telephone to Canada inaugurated, Oct. 3; Miss Gleitz swims Channel, 7; Marquis of Cambridge dies; South African flag agreement, 24; Italian liner *Princess Mafalda* sinks off Brazilian Coast—several hundred drowned,

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25; Sydney Harbour ferry boat sunk, many drowned, Nov. 3; New Prayer Book proposals rejected in House of Commons by 33 votes; Severe frost and snow in England, Dec. 20; Parliament prorogued, 22.

1928 New pensions—widows and orphans; old age at 65—come into force, Jan 2; 13 lives lost in pit disaster at Whitehaven, Feb. 12; Hinkler flies London to Australia (12,000 miles) in 16 days, 22; Egypt rejects proposed treaty, Mar. 2; Lieut. Kinkead killed while flying in the Solent; Geneva—British note on naval disarmament presented, 21; Visct. Cave dies, 29; "Tipperary Tim" wins Grand National—the only horse of 42 starters that did not fall, 30; *Royal Oak* trial ends—Captain and Commander dismissed ship; Atlantic flown westward by German aeroplane, April 13; Summer time starts in Great Britain, France, Belgium, Spain and Portugal, 14–15; Capt. Wilkins flies across Arctic Regions—no land seen, 16; Earthquake in Greece—Corinth destroyed, 23; Budget proposals—Relief to rates on productive industries—farthing in lb. off raw sugar—extra relief for children allowance; New taxes: 4d. gallon on imported oils—duties on buttons and mechanical lighters, 24; Church Assembly passes revised Prayer Book, 27; British ultimatum to Egypt sent, 29; Everton win Association Football Championship, May 5; 3rd Reading of Franchise Bill passed by Commons, 7; The airship *Italia* lost in the Arctic, 25; Cobham completes flight round Africa, 31; Derby won by Sir Cunliffe-Owen's "Felstead," June 6; "Toboggan" wins Oaks, 8; Capt. Kingsford-Smith flies the Pacific, 9; The new Prayer Book again rejected in the Commons by 46 votes, 14; The Speaker, Mr. Whitley, retires, succeeded by Capt. Fitzroy, 19; General Nobile rescued by aeroplane from Arctic one month after disaster, 24; Darlington train accident—23 killed, 50 injured, 27; Sergt.-Major Willans wins King's Prize at Bisley, July 7; Aeroplane crash at Croydon—4 killed, 13; Kellogg Peace Pact accepted by Gt. Britain and Colonies, 18; Rating Bill and Totalisator Bill 3rd Reading passed in Commons, 18; Hope wins King's Cup Air Race; Ellen Terry dies, 21; Oscar Slater, convicted of murder in 1909, awarded £6,000 for wrongful conviction, August 4; Great hurricane in W. Indies, many lives lost; 51 nations agree to Kellogg Peace Pact, 13 still to be heard from; Lancashire win County Cricket Championship, Sept. 13; Mr. Bernhard Baron gives £500,000 in trust for hospitals; 2 killed and many injured in railway collision at Glasgow, Oct. 12; railway disaster Gloucestershire–14 dead, 13; German airship with 60 persons crosses Atlantic, 15; King opens Parliament, Nov. 6; Lord Byng succeeds Horwood at Scotland Yard, 8; Archbishop of Canterbury resigns, 12; s.s. *Vestris* sinks off Virginian coast, many lives lost, 12; Eruption of Etna subsiding—5,000 people homeless, 13; Rye lifeboat disaster—crew of 17 drowned; Great gale over England—30 killed and much damage, 16; The King seriously ill, 22; Prince of Wales leaves S. Africa for home, Dec. 2; King's illness—Councillors of State appointed, 4; s.s. *Celtic* wrecked at entrance to Cork Harbour, 10; Afghan revolt against King Amanullah's reforms, 17; Serious gas explosions in West Central London, 20; British women and children removed from Kabul by aeroplanes.

1929 The King makes slow progress towards recovery, Jan. 1; King Amanullah of Afghanistan abdicates, 14; Peace Pact signed in Washington, 17; Lateran treaty signed—Pope's sovereignty recognised; severe cold in England—thermometer drops to zero, Feb. 14; Seagrave drives the "Golden Arrow" car at 231 miles per hour, Mar. 11; Grand National won by Gregalach, 22; King makes good progress, 29; Regular Air Service to India starts—fare, £130, 30; Bomb outrage in Delhi Assembly, April 8; the aeroplane, *Southern Cross* found by another plane in N. Australia—crew 11 days in bush and starving, 12; Budget—Repeal of Tea Tax—Rating relief on agricultural property—Betting tax changes; Reparations—Germany offer only 1,300 millions against Allied demand of 1,900 millions in capital value, 15; U.S. disarmament proposals at Geneva, 22; Radium for Hospitals—Government offers pound for pound subscribed up to £100,000, 22; Bolton Wanderers beat Portsmouth for Football Cup 27; Tacna-Arica dispute at last settled, May 2; Fund for relief of miners closed at £843,000, 4; Radium fund—public subscribe £160,000 in a week, 6; Parliament dissolved, 10; Police centenary—13,000 reviewed in Hyde Park, 25; General Election result—Labour 289, Conservative 260, Liberal 58, Independent 8—Mr. Baldwin resigns; Mr. MacDonald sent for; German reparation figures announced, June 4; Vesuvius in eruption; Derby won by Trigo, 5; Oaks won by Pennycomequick, 7; Air disaster in Channel—7 passengers drowned, 10; King's Air Cup won by Atcherley at 150 m.p.h., July 6; Thanksgiving for King's recovery, 7; Thanksgiving funds amount to £186,000 for Radium, and for King Edward Hospital, £243,000; Submarine H 47 sunk in collision—22 lives lost, 9; Bisley—King's Prize won by Lieut.-Col. Blair of Canada, 20; Peace Pact ratified by 15 countries at Washington, 24; N.G. Lloyd s.s. *Bremen* crosses to New York in 4 days, 17 hours, 22; Great drought over England; the Pope appears outside the Vatican, 25; Explosion on H.M.S. *Devonshire*—17 lives lost, 26; the new Charing Cross Bridge scheme approved, Aug. 1; Duchess of Bedford flies to India and back within 8 days, 9; Graf Zeppelin flies from New York to Freidrichshaven in 55½ hours, 10; s.s. *Mauretania* crosses Atlantic in 4 days, 17 hours, breaking her own previous record after 22 years' service; grave rioting between Jews and Mohammedans in Palestine, 25; Graf Zeppelin at Los Angeles, having crossed Pacific from Japan in 68 hours; Reparations—agreement reached at The Hague on Young Scheme, 28; Graf Zeppelin reaches New York, having flown round the world with three stops in 21 days, 7 hours—Actual flying time 12 days, 29; League of Nations assembly at Geneva; Schneider Trophy won for England by Waghorn at average speed of 328 miles per hour, Sept. 7; an individual straight run of 368 miles per hour was accomplished by Orlebar, 9; British troops start withdrawal from Germany, 14; League of Nations; the Optional Clause of the Statute of the permanent Court of International Justice signed by Great Britain and Colonies, 19; Hatry Group Crash—Huge losses by Banks and Investors; Admiral Sir H. Meux dies, 20; New Tilbury Dock opened, 26; Prime Minister leaves for New York; Bank Rate rises to 6½%, 27; Gustav Stresemann, famous German Foreign Minister, dies; Prime Minister gets great reception in New York, Oct. 4; Lord Meath dies, 11; Airship R 101 makes successful flight over London; Naval Reductions—Invitations sent for a five-power conference in London in January, 14; Sirdar Mohammed Nadir Khan elected King of Afghanistan, 21; The New Widows Pension Bill explained, 22; British air liner *City of Rome* lost in Gulf of Genoa—7 lives lost, 26; German air liner crashes near Caterham—6 killed, Nov. 6; Prince of Wales' dinner to 321 V.C.s at House of Lords; Sir William Waterlow installed Lord Mayor of London, 9; T. P. O'Connor, M.P., dies; Atlantic earthquake—9 submarine cables broken, 18; M. Clemenceau, famous French statesman, dies, 24; Commander Byrd flies over South Pole, 30; Heavy rains over British Isles—serious floods in south of England during December; All India National Congress opens at Lahore—Mr. Gandhi proposes civil disobedience and non-payment of taxes, 29; 60 children killed in cinema fire at Paisley, 31.

1930 Extraordinary exhibition of famous Italian pictures at Burlington House, Jan. 1; great gale—many deaths on land and sea, 12; King opens Naval Conference, 20; Parliament reassembles; R 100 flies at 80 miles per hour, 21; air accident in Kent—2 passengers killed, Feb. 9; Naval Conference—satisfactory progress being made on Naval Limitation—Britain proposes abolition of submarines, 10; Church Street win Waterloo Cup, 14; new Charing Cross Bridge Scheme read 2nd time in Commons, 19; Arab kings make a peace pact on British

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ship, 22; fire at Luton hat factory—6 deaths, 25; Cardinal Merry del Val dies, 26; Government majority falls to 9 on Coal Mines Bill, 27; Lord Beaverbrook launches the United Empire Party during February; Civil disobedience in India—Viceroy warns Gandhi, Mar. 3; Great floods in Southern France, 6; Naval Conference deadlock, 10; Tariff truce Conference meets at Geneva, 24; Grand National won by Shaun Goilin, 28; End of Boards of Guardians, April 1; Bill for new Charing Cross Bridge to cost 12 millions before a Committee of House of Commons—it was eventually rejected, 3; Gandhi still defiant, 5; Disorders in India—many arrests, 13; Naval Conference—3-Power pact between U.S., Great Britain and Japan agreed to—France and Italy not content, 14; Budget proposals—6*d.* extra on Income Tax and increases on Surtax and Estate Duty, 14—*Shamrock V* launched; Arsenal win F.A. Cup at Wembley, 26; Duchess of Bedford flies to Cape and back in 21 days, 30; Gandhi arrested, May 5; *Daily Chronicle* amalgamates with *Daily News* June 2; Aga Khan's Blenheim wins the Derby, 4; Lord Glanely's Rose of England wins the Oaks, 6; Simon Commission report issued, 10; Channel Tunnel scheme rejected by Government, 11; Sir H. Seagrave killed on Lake Windermere while travelling 100 miles per hour, 13; St. Paul's Cathedral reopened, 25; Maltese Constitution suspended; Rhineland completely evacuated, 30; Miss W. Brown wins King's Cup Air Race, July 5; D. Bradman scores 334 runs in 3rd Test Match, 12; Miss M. Foster wins King's Prize at Bisley, 19; Air disaster in Kent, 6 killed, 21; 2 millions out of work, 28; Andrée's body found after 33 years, Aug. 6; R 100 flies home from Montreal in 57 hours, 16; s.s. *Tahiti* sinks in Pacific—passengers and crew saved, 18; *Enterprise* beats *Shamrock* in 4 races during September; Imperial Conference meets, Oct. 1; R 101 destroyed in France on first flight to India—48 lives lost, 5; Imperial Conference—Mr. Bennett (Canada) offers preference to Great Britain and Colonies by advancing present tariff elsewhere by 10 per cent., 8; Kingsford-Smith flies to Australia in 10 days, 19; two great mine disasters in Germany—300 lives lost, 25; Britain joins United States and Japan in ratifying Naval Reductions Agreement, 27; King opens Parliament, 28; India Round Table Conference opens in London–speech by King, 12; Imperial Conference breaks up, 14; Third Party risks—motorists forced to insure by Jan. 1, 1931; Italian salvage ship *Artiglio* blows up—12 lives lost, Dec. 7; 70 fathoms had been reached for 1¼ hours; 42 persons, including J. W. H. T. Douglas, drowned in the Kattegat; Parliament adjourns, 19; during December another revolution in Panama took place; many heavy Bank failures in U.S. reported; British unemployed reported as 2,640,000 and the cost announced at 107 millions per annum; 45 millions contributions, 22 from Exchequer and 40 millions borrowed.

**1931** New Road Traffic Act comes into force; miners strike in S. Wales—130,000 men out, Jan. 1; the thousand millionth National Savings Certificate sold since Feb. 1916, 8; 25,000 cotton operatives locked out at Burnley; India Round Table Conference closes, 10; coal dispute settled, 15; Parliament reassembles, 20; Gandhi released, 26; 27 lives lost in pit explosion at Whitehaven, 29; during January many Sunday entertainments stopped owing to the Sunday Observance Act, 1781; Heavy loss of life and great damage by earthquake in North Island, New Zealand, Feb. 3; Air disaster at Plymouth, 9 lives lost, 4; Capt. Campbell motors at 245·736 miles per hour, 5; Pope Pius XI. addresses the world from the new Vatican Broadcast Station; Crisis in Spain—King Alfonso acts firmly, 14; Cotton Trade lock-out ends—work starts, 15; Naval Agreement between Italy and France reached, 28; London County Council Election, Municipal Reform majority slightly increased, Mar. 5; H.R.H. the Prince of Wales and Prince George open British Empire Exhibition at Buenos Aires, 14; Naval Agreement between U.S.A., Japan, France and

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Italy generally concurred in, 19; *Royal Scot* derailed outside Leighton Buzzard, 6 killed, 22; Rioting in Cawnpore 200 killed, 300 rioters arrested, 25; Inauguration ceremony of the New Capital of India—New Delhi, 26; Grand National won by Grakle; Agreement reached between Lord Beaverbrook and Mr. Baldwin, 27; Delhi Pact ratified by Congress, 29; Earthquake at Managua, Nicaragua, 2,000 dead, 5,000 injured; Lt.-Comdr. Glen Kidston flew from England to Cape Town in 6 days 10 hours 31 min.; Collision between French liner *Florida* and Air-Craft Carrier *Glorious* 30 miles S.E. of Malaga, 30 killed; Motor Boat speed record by Kaye Don in "Miss England II.," 103·49 m.p.h., April 2; First official Australian Air Mail left Croydon, 4; Flight from Lympne to Port Darwin, Australia, by C. W. A. Scott in 9 days 4 hours 11 min., 10; King Alfonso XIII. of Spain informally abdicated the Spanish throne; Provisional Republic proclaimed, 14; Bromborough Dock opened by Mr. Graham, President of Board of Trade, 17; West Bromwich Albion win F.A. Cup at Wembley, 25; Census of England, Wales and Scotland taken, 26; Budget proposals, 2*d.* extra per gallon on petrol, 27; Prince of Wales and Prince George arrived in England by air from Paris, 29; Italian Government expresses agreement on French Naval proposals; Bombardment of a rebel post near Funchal by Portuguese cruiser *Vasca da Gama*, May 1; Unconditional surrender of Madeira rebels, 4; Lt.-Comdr. Glen Kidston and Capt. T. A. Gladstone killed in aeroplane crash on Drakensberg Mtns., S. Africa; Mr. Courtauld rescued by Mr. Watkins after being in a hut by himself on the Greenland Ice-cap since Dec. 5, 1930, for some weeks in total darkness, 5; Annual output of 100,000,000 tons of British coal to be controlled as to prices; Rockefeller Foundation gift of £142,000 to School of Economics and Political Science, 7; M. Paul Doumer elected President of French Republic, 13; Launch at Kiel of first German battleship built since the war, 10,000 tons, 6 eleven-inch guns, 19; Hon. Degree of Dr. of Science conferred upon Professor Albert Einstein at Oxford; Opening of new Zoological Gardens at Whipsnade, 23; Presidency of the Disarmament Conference Committee for 1932 offered to Mr. Henderson, 25; Prince of Wales flew to Southampton and inspected the new Canadian liner *Empress of Britain*; Italian Government ordered closing of Catholic Clubs (Azione Cattolica), greatly opposed by the Pope; Prof. Piccard and M. Kipser left Augsburg in a sealed aluminium ball attached to a balloon to try and beat the altitude record of 45,500 feet, nearly 10 miles—they reached 53,000 and descended on the Gross Gurgler Ferner Glacier the same night, 27; Michele Schirru executed in Rome for plotting against Mussolini, 29; the Derby won by Cameronian—H.M. the King present for the first time since his illness, June 3; The worst earthquake experienced in England for 1,000 years occurred shortly after midnight on Saturday, the land being shaken from the English Channel to the Highlands—shocks were also felt in Northern France, Belgium and Norway, 6; H.M.S. *Poseidon* (submarine) collided off Wei-Hai-Wei with a Chinese vessel and sank, 20 drowned, 11; Sir Hubert Wilkins' submarine *Nautilus* disabled in mid-Atlantic; Whirlwind in Birmingham, 1 killed and 10 injured; French pleasure steamer sunk with loss of 500 souls, 14; German Budget deficit of £64,000,000, 17; English Channel successfully crossed by L. Beardmore in a glider from Lympne to St. Inglevert in 1¼ hours; President Hoover (U.S.A.) proposes a moratorium of all payments, both interest and principal, on Inter-Governmental reparations and relief debts; generally accepted by whole of world, 21; Royal Naval Cordite Factory explosion at Holton Heath, 10 killed and 23 injured, 22; fire at French Colonial Exhibition, Paris—Netherlands Pavilion totally destroyed, £120,000 damage; unveiling ceremony of statue of Field Marshal Lord Haig at Montreuil-sur-mer, 28; summit of Mount Kamet achieved by Mr. F. Smythe's party (25,447 feet)—this is the highest summit at-

tained by man, 29; railway across Africa from Lobito Bay to Beira opened, July 1; Post and Gatty, United States airmen, at Roosevelt Field after a round-the-world flight in 9 days; Mr. McGovern, Labour M.P., forcibly ejected from the House of Commons; Peter Kurten, Jack the Ripper of Germany, executed, 2; third reading of Finance Bill passed; New Zoological Gardens at Oxford opened, 3; France accepts Hoover Plan; King and Queen arrive at Edinburgh; H.M.S. *Dorsetshire* and *Norfolk* entered Kiel Harbour—the first visit of British warships to Germany since the War; the Pope issued an encyclical likely to embitter feeling between the Church and State, 4; Stalin introduced a system of payments by results and difference between skilled and unskilled labour to be acknowledged; great German Textile (Wool) Combine announce £10,000,000 losses, 6; Census returns for 1931 show an increase of 2,061,000 over 1921, 7; German industrialists forced to guarantee £25,000,000 to maintain credits abroad, 8; Dr. Luther starts "Pilgrimage" in search of foreign credits; Coal Bill passed into Law; new motor-boat record by Kaye Don on Lake Garda, 110 m.p.h., 9; Dr. Shafa'at Ahmed Khan denounces Indian Congress; valuable Van Dyck stolen in Frankfurt; Dr. Luther, President of the Reichbank, returned to Berlin from Paris—France hinting that before agreeing to help Germany she must make concessions in the matter of Customs Union with Austria and the second pocket battleship; the Government of India refused to accede to Mr. Gandhi's suggestion of a Court of Enquiry into the alleged breaches of the Delhi agreement by the Government; Messrs. MacDonald, Baldwin and Lloyd George addressed huge gathering at Albert Hall on Disarmament, 11; Petty Officer Willis and other survivors of the submarine *Poseidon* promoted, German banks reopen after being closed two days, 16; Sergt. Fulton won the King's Prize at Bisley for the third time—a record, 18; England defeated U.S.A. in Paris for Davis Cup, 19; Conference of Ministers called to consider German crisis opened in London (held in Premier's room, House of Commons); 7 months' strike of Bedwas Navigation Colliery, nr. Cardiff ended, 20; L.C.C. decided to apply to Parliament for power to build new Charing Cross Bridge and if successful to recondition Waterloo Bridge, 21; London conference on Germany's financial crisis ended, maintenance of credits to be renewed, 23; Graf Zeppelin left Friedrichshafen for Arctic exploration flight (returned to Friedrichshafen on the 30th), 24; King's Cup won by Flying Officer E. C. T. Edwards, 25; France won Davis Cup; World gliding record of 737 miles made by Herr Groenoff from Wasserkuppe to Meizerein; Mr. Macdonald and Mr. Henderson left for Berlin, 25; Serious operation performed on Mr. Lloyd George, 29; Lord Kylsant sentenced to 12 months in the 2nd division for fraudulent statements in prospectus of R.M.S.P. Co. (confirmed on appeal 4th Nov.), 30. Great floods in China, 16 provinces devastated, 4,000,000 homes destroyed and 23,000,000 people affected, Aug. 5; J. A. Mollison flew from Australia to England in 8 days 20 hours 19 minutes, thus beating Scott's record by 2 days 3 hours, 6; Cabinet Economy Committee consisting of Messrs. Macdonald, Snowden, Wm. Graham, Arthur Henderson and J. H. Thomas met to consider drastic means to balance Budget, 12; Mr. Baldwin returned to London from France in order to attend Cabinet Committee which was considering the task of balancing the Budget, 13; Indian delegates for Round Table Conference left Bombay, 15; Graf Zeppelin's flight to England, 18; London Stock Exchange decide to open on Saturdays as from 19th September, 1931, 20; Duke of Gloucester operated upon for appendicitis, 22; Resignation of Mr. Macdonald's Cabinet; National Government formed with Mr. Macdonald as leader, 24; Burma to have its own Round Table Conference to discuss separation from India, 27; Karl Naumestnik, an Austrian schoolmaster, crossed the English Channel from Cap Gris Nez to Dover on water-skis in 8 hours

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50 minutes; Credits of £40,000,000 each from U.S.A. and France arranged for 1 year, 28; Graf Zeppelin left Germany for South America and returned to Friedrichshafen on 7th September, 29; Mutiny of Ratings of Chilian warships at Santiago de Chili. Fleet surrenders on 7th September, Sept. 1; Proposed tunnel under Mont Blanc by International Conference on Motor Roads at Geneva; Agreement reached between the Holy See and the Italian Government over the activities of the Azione Cattolica and its dependent organisations; Decided that the Azione Cattolica will not concern itself with politics or attempt to form Workers' Associations on the lines of a Trade Union; Constitution granted to Yugoslavia, 2; Clash with Police by strikers in Madrid and Barcelona, 4; General Council of Labour Party withdraw their support of Mr. J. H. Thomas as their representative; Mr. Kaye Don set up a record in motor boat speed at 89·913 m.p.h. over a 30-mile triangular course, 6; News received from Sir H. Wilkins after 7 days' silence; National Economy—King George V participates to the extent of a reduction of £50,000 per annum in his civil list; Prince of Wales contributes £10,000, 7; Faraday Centenary celebrations during September, 8; Hurricane in Belize, British Honduras, 700 dead, 10; The new Emergency Budget proposals for 1931–32 and 1932–33 include an additional 6*d.* on Income Tax, making 5*s.* in the £, 1*d.* pint on Beer, 8*d.* per lb. on Tobacco, 2*d.* a gallon on Petrol, 1*d.* in every 6*d.* Entertainment Tax, Reduced Unemployment grants and increased weekly contributions, Earned Income allowance increased from 1-6th to 1-5th, Married persons' allowance reduced from £225 to £150, Single Persons from £135 to £100, Children's allowances reduced from £60 to £50 for first child and from £50 to £40 for each subsequent child (*vide* pp. 128–30). Gandhi arrived in England, 12; Schneider Cup Race (3 records made)—Course speed 340·08 m.p.h., 100 kilos 342·9 m.p.h., 3 kilos course 379·05 m.p.h., 13; G.W.R. record 77¼ miles in 59 mins. = 78 m.p.h., 15; Mukden City occupied by Japanese troops; Canadian Government passed order in Council prohibiting export of gold, 19; Temporary suspension of gold standard by Great Britain, 20; Government of India decides to suspend temporarily the obligation to sell sterling or gold against rupee; Denmark off gold standard, 22; Norway and Sweden temporarily off the gold standard, 27; Arrival of Sir Hubert Wilkins in England; Air speed record by Flight-Lt. Stainforth, averages 408·8 m.p.h., 29. First consignment of wheat (227,000 bushels) arrived in London from Churchill, Canadian port on Hudson Bay, this route brings Canada 800 miles nearer to England, Oct. 4; British Cabinet decided to make an appeal to the country; 2nd reading passed in House of Commons of Bill to prevent profiteering; Non-stop flight from Sabushiro Beach, Japan, to Wenatchee, Washington, made in 41 hours 13 minutes by Mr. Herndon and Mr. Pangborn, 5; Parliament dissolved; Lord Trenchard, G.C.B., D.S.O., appointed Commissioner of the Police of the Metropolis in succession to Lord Byng, retired; Sir Frederick Sykes left England to resume his governorship of Bombay, 7; League of Nations summoned to meet at Geneva to consider Chinese and Japanese difficulty; L.55 sunk in 1919 raised and commissioned by the Bolshevists; Dr. Bruning completed his negotiations for a new cabinet with President von Hindenburg at its head, 9; Northern Rhodesia, Southern Rhodesia and Finland off the gold standard, 12; King George V presented to the Royal United Service Museum a pair of brass guns which were captured from the Arabs at the battle of Tel-el-Kebir in 1882; Church separated from State in Spain, 13; I.F.S. Public Safety Bill passed in Dail Eireann, 16; Canada off the gold standard; Serious rioting in Cyprus by 5,000 agitators for union with Greece, Government House set on fire and completely destroyed; H.R.H. the Prince of Wales suffered the loss by fire of 2 cattle barns on his ranch at Highriver, Canada, damage estimated at $18,000; 19; Al Capone

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(Chicago's notorious gangster) sentenced to 11 years' imprisonment and a fine of $50,000 and costs; Wedding of Lady May Cambridge (niece of Queen Mary) to Capt. Henry Abel Smith, 24; General Election—Nationalist Government Party sweeping majority of 499; Labour lost 213 seats: 34 ex-ministers defeated, 27; Repayment of £10,000,000 each to France and U.S.A. on account of the £25,000,000 credit granted to the Bank of England by France and U.S.A., Repayment of balance of £30,000,000 extended until 31st January, 1932; Coal-mine explosion at Bowhill Colliery, Cardenden, Fife, 10 killed, 31. The Borough Elections throughout the country resulted in severe losses to the Labour Party, Nov. 2; British troops entered the territory of the Maharajah of Kashmir to help maintain order against Moslem invaders; An amphibious tank designed and constructed by Messrs. Vickers-Armstrong—road speed of 40 m.p.h., speed in the water 6 m.p.h., 3; Iraq to be admitted to the League of Nations in 1932, 4; Miss Peggy Salaman and Mr. Store (navigator) flew from England to Cape Town in 5 days 8 hrs. 37 mins.; Mr. John D. Rockefeller, John D. Rockefeller, Junr. and Mr. Edward Harkness have subscribed $1,750,000 towards the fund which is being raised for Unemployed relief in U.S.A.; Record flight to Australia by C. A. Butler, who covered the distance in 1 hour less than C. W. A. Scott, 9; Ex-king Alphonso of Spain found guilty of "lèse-majesté" and sentenced to confinement for life and confiscation of property; H.M.S. Minesweeper *Petersfield* ran ashore on north side of Tung Yung Island near Foochow and became a total loss; no loss of life occurred, crew rescued by German steamer *Derflinger*, 12; Mr. J. A. Mollison left to attempt second flight to Cape, 18; Mr. J. A. Mollison crashed in Upper Egypt; Browning's house in Venice purchased by Commune of Venice, 14; Memorial to 17 men who lost their lives in the Rye lifeboat disaster 15th November, 1928, unveiled in Rye churchyard, 15; Airship R 100, sister ship to the ill-fated R 101, sold as scrap metal; 16; Mr. Philip Snowden takes title of Viscount Snowden of Ickornshaw; Chinese army in Manchuria 26,000 strong completely routed by Japanese force of 3,000, 18; Assyrian nation appeals to the League of Nations to emigrate from Iraq, where it is said that within a few years they will be wiped out of existence; Great fire occurred in the luxury motor liner *Bermuda*, lying in Belfast Lough; ship was completely gutted, 19; Air mail service inaugurated between Melbourne, Australia and England; First Liner carries 50,000 mail articles and 2 passengers; Abnormal Importations (Customs Duties) Act received Royal assent, From Nov. 25th, 1931, this Act imposes a 50% Duty (or if already taxed) 50% additional Duty on 23 classes mentioned in the Schedule; Explosion at Bentley Colliery, nr. Doncaster, resulting in the death of 44 persons; The submarine *Nautilus* in which Sir Hubert Wilkins made his Polar voyage was sunk outside Bergen, 20; Mr. Bert Hinkler flew the South Atlantic Ocean from Brazil to Gambia in 22 hours, about 2,000 miles; Australian Government defeated, 25; Australian Parliament dissolved; Certain Fresh Fruits, Vegetables and Flowers to be taxed under the Abnormal Importations Act, 26; Burma Round Table Conference opened by H.R.H. the Prince of Wales in the King's Robing Room of the House of Lords, 27; Mr. Gandhi and other members of his entourage leave England on their return to India, Dec. 5; United States of America Budget for 1933 shows a deficit of £283,400,000, and the 1932 Budget it is estimated will disclose a deficit of £424,536,000, 10; Work on the largest Cunarder which is being built by John Brown and Co., Ltd., of Clydebank suspended, 11; Total cost to the British Exchequer of the Indian Statutory (Simon) Commission and its auxiliary inquiries was £80,000, 12; Installation of Don Alcala Zamora as President of Spain; Suspension of the Gold Standard by Japan, and the following is a list of the countries which are now temporarily off the Gold Standard, viz. Great Britain, Denmark,

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Sweden, Norway, Finland, Spain, India, Australia, New Zealand, Canada, Argentine, Brazil, Northern and Southern Rhodesia; Mr. Winston Churchill knocked down by Motor Taxi in New Jersey, U.S.A., and severely injured, 13; Mr. Charles Geoffrey Buckland Stevens, District Magistrate of Comilla, Bengal, shot dead by two Bengali girls, 14; First direct Air Mail Service Liner arrives in England from Melbourne, Australia, in 27 days, 16; Train smash near Dagenham Dock Station, L.M.S., resulted in two persons being killed; Jack Diamond, America's notorious gangster, shot dead, 18; Australian General Election, defeat of the Federal Labour Party; Outboard Motor Boat Record achieved for Great Britain by Mr. Charles Harrison piloting Mr. J. W. Shillan's "Non Sequitur X" at 55·33 miles per hour at Cowes. Additional List of Import Duties imposed on Cotton Goods, Electrical Fittings, Cameras, Wireless Valves, etc., etc., 19; Collapse of the Vatican Library, 5 lives lost, 22; Statue of Eros restored to old site in Piccadilly Circus, 27.

1932 Princess Mary, Countess of Harewood, to bear the style and title of Princess Royal, JAN. 1; Mr. Ghandi arrested in Bombay; Japanese enter Chinchow without opposition; Attempted assassination of the Emperor of Japan, 8; Cabinet differs on Tariffs, Viscount Snowden, Sir H. Samuel, Sir Donald MacLean and Sir Archibald Sinclair offered to resign but agreed to carry on, 21; Serious rioting occurred amongst the convicts at Dartmoor Prison, 24; H.M. Submarine M 2 lost off Portland, 26; Disarmament Conference opens in Geneva with Mr. Arthur Henderson as President; New South Wales defaults on its obligations to Bondholders overseas, FEB. 2; H.M. Submarine M2 located; Severe earthquake in Cuba, about one-third of Santiago de Cuba destroyed, 12 persons killed and 300 injured, 3; Assassination of the Marquis Inouye, a former Japanese Minister of Finance; Ecuador off Gold Standard, 9; League of Nations warns Japan; L.C.C. decided to demolish and re-construct Waterloo Bridge at a cost of £1,295,000, 16; Japanese Commander delivers an ultimatum to the Chinese Commander to cease all hostilities and completely withdraw to a distance of 12½ miles from the International Settlement boundary at Shanghai, 18; China rejects Japanese ultimatum, 19; M. Tardieu elected French Premier; General advance from Woosung and Chapei begun by the Japanese, 20; Chinese troops offer stout resistance to Japanese attack, 22; Sir Malcolm Campbell achieved a new record by driving 253·968 m.p.h. in his "Blue Bird," 24; Imports Duties Bill passed all stages and received Royal Assent, 29; Japanese Foreign Minister accepts the Council of the League of Nations proposal for an international conference to consider the situation at Shanghai, MAR. 1; Japan orders immediate cessation of all military operations. Terms for an armistice formulated by the Japanese have been rejected by China as unacceptable, 3; Death of M. Aristide Briand—aged 69, 7; Mr. de Valera elected President of the Irish Free State Executive Council, 9; League of Nations adopted a resolution for settling the dispute between China and Japan, 11; Grand National won by Forbra, 18; University Boat-race won by Cambridge for the 9th consecutive time; Sydney Harbour Bridge opened, 19; Mr. Gar Wood sets up Speed Boat Record, 111·72 m.p.h., 26; Mr. J. A. Mollison sets up new record by flying to the Cape in 4 d. 17 h. 19 m., 29; Chile off Gold Standard, APR. 4; Failure of the Four Power Conference in connection with the Danubian States, 8; Von Hindenburg re-elected President of Germany, 10; Eight volcanoes in eruption in the Andes, 12; MM. Goulette and Salel set up a fresh record by flying from Paris to Cape Town in 3 days 18½ hours, 21; Newcastle United Football Club won Association Cup at Wembley by 2 goals to 1; Shakespeare Memorial Theatre opened at Stratford-on-Avon by H.R.H. the Prince of Wales, 23; C. W. A. Scott set up a new record by flying from England to Australia in 8 days 20 hours 47 mins., 28.

# PROMINENT PEOPLE



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# Pears' Dictionary of Prominent People

## Past and Present

A BIOGRAPHICAL DICTIONARY, GIVING PARTICULARS OF THE LIVES AND LEADING ACHIEVEMENTS OF THE MOST DISTINGUISHED MEN AND WOMEN OF ALL AGES AND COUNTRIES.

### A

**Abbas II.**, ex-Khedive of Egypt (b. 1874), succeeded Tewfik Pasha, 1892, deposed Dec. 18, 1914.

**Abbot, George** (1562–1633), Archbishop of Canterbury in 1611, and one of the translators of the authorised version of the Bible.

**Abdul-Hamid II.**, Ex-Sultan of Turkey (1842–1918), succeeded his brother, 1876. Began his reign with proposals of reform, but after the Russo-Turkish War (1877–1878) assumed autocratic rule. Went to war with Greece in 1897, and was victorious. Conceded a constitution in 1898, but, becoming the tool of a reactionary movement, in April, 1909, was deposed, his brother and heir, Mohammed V. (*q.v.*), succeeding him.

**Abdul-Medjid**, Sultan of Turkey from 1839 to 1861.

**A'Becket, Thomas** (1118–1170), Archbishop of Canterbury under Henry II. A powerful and ambitious prelate who boldly supported the authority of the Pope against the dictates of the King, and was assassinated in Canterbury Cathedral December 29th, 1170, being canonised two years later.

**Abel, Sir Frederick**, Bart (1827–1902). Joint inventor, with Prof. Dewar, of cordite.

**Abelard, Peter** (1079–1142), scholar, philosopher and theologian. The romantic attachment between him and Héloïse, mainly set forth in the Letters of the latter, has been more written about than perhaps any other love affair. Their remains now lie in one tomb at Père Lachaise, to which they were removed after the Revolution.

**Abercorn, Duke of** (b. 1869), elected Dec. 1922 as First Governor of Ulster, M.P. for Londonderry, 1900–13. Treasurer to H.M.'s Household, 1903–5.

**Abercrombie, James** (1706–1781), a British general who led an expedition against the French in Canada in 1748, and suffered defeat by Montcalm at Ticonderoga.

**Abercrombie, Sir Ralph**, an English general who gained a victory over the French at Alexandria in 1801, but died from wounds received in the battle.

**Aberdeen, Rt. Hon. Geo. Hamilton Gordon**, 4th Earl of (1784–1860). The distinguished statesman; Prime Minister between 1852 and 1855, his Ministry being formed of a coalition between the Whigs and Peelites.

**Aberdeen and Temair (Marquis of), John Campbell Gordon** (b. 1847), Lord Lieutenant of Ireland January to July 1886, and also from 1905 to 1914. Governor-General of Canada (1893–1898). A prominent Liberal peer. The Marchioness of Aberdeen (b. 1857) is a leader among women Liberals, and an assiduous advocate of social reform.

**Abernethy, John** (1764–1831), a celebrated surgeon, noted as much for his eccentric manners as for his professional skill.

**Abruzzi, Duke of the** (b. 1873), has greatly distinguished himself by Arctic exploration. In 1899 he advanced nearer to the North Pole than any previous explorer had done, his expedition reaching 86 degrees 34 minutes N. latitude or 20 minutes beyond Nansen's 1893–1896 achievement. Commander-in-Chief Italian Navy, 1915–17.

**Abt, Franz** (1819–1885). A German composer of popular songs.

**Acland, Rt. Hon. Francis Dyke** (b. 1874), M.P. for Richmond Div. of Yorks, 1906–10, for Camborne or N.W. Div. of Cornwall, 1910–22, and for Tiverton Div. of Devonshire, 1923–24. Parly. Sec. Bd. of Agriculture, 1915–16. Under-Secretary for Foreign Affairs, 1911–15; previously Financial Secretary to the War Office. Chairman of the Dental Board of the U.K., 1921.

**Acton, Lord**, 1st Baron (1834–1902). Became Regius Professor of Modern History at Cambridge in 1895. His library was bought by Mr. Andrew Carnegie, then presented to Mr. John Morley, who gave the greater portion of it to Cambridge University.

**Adams, John** (1735–1826), succeeded Washington as President of the United States, and was the first of the Republic's ambassadors to England.

**Adams, John Couch** (1819–1892), an eminent English mathematician and astronomer.

**Adamson, Rt. Hon. William**, P.C. (b. 1863), Secretary for Scotland, Labour Government, 1929, M.P. for West Fife, 1910, and Chairman of the Labour Party, 1917–21. Gen. Sec. of the Fife, Kinross and Clackmannan Miners' Association.

**Addison, D'Arcy Wentworth** (b. 1872), Agent General for Tasmania in London, 1930.

**Addison, Rt. Hon. Dr. C.**, P.C. (b. 1869), Minister of Agriculture and Fisheries, 1930; Minister of Health, June 1919 to April 1921; Minister of Munitions, 1916–17, M.P. for Hoxton Division, Shoreditch, 1910–18, and for the undivided borough of Shoreditch, 1918–22. Joined the Labour Party, 1923. Parly. Sec. Bd. of Education, 1914–15.

**Addison, Joseph** (1672–1719). The son of an English clergyman, he achieved fame both as a writer and a politician. Held many offices under various governments, and by his famous essays made an undying name. His tragedy "Cato" was a brilliant success.

**Adelaide, Queen** (1792–1849), Princess of Saxe-Coburg-Meiningen, wife of the Duke of Clarence, afterwards King William IV. of England. Became Queen in 1830, and was Queen-Dowager from 1837.

**Adler, Dr. Hermann** (1830–1911). Chief Rabbi United Hebrew Congregations of British Empire from 1891 until his death.

**Æschines** (389–314 B.C.) a great Athenian orator.

**Æschylus**, the father of the Greek tragic drama (525–456 B.C.). Composed seventy plays and gained the prize for dramatic excellence thirteen times.

**Æsop** (b. in Greece about 620, d. 544 B.C.). His fables are the most celebrated productions of the kind.

**Agatha, St.**, a Sicilian virgin martyr who was put to death at Palermo, A.D. 251.

**Agha Khan, Sultan Sir Mahomed Shah**, G.C.V.O., G.C.S., G.C.I.E. (b. 1877), head of the Ismailiah Moslems, settled in British India.

**Agricola, Cnæus Julius** (37–93 A.D.), became

Roman Consul of Britain 78 A.D. Strengthened the power of the Romans in this country, corrected many abuses, and did much to encourage trade and industry. Remained in Britain seven years.

**Agrippa, Cornelius** (1486–1535), soldier, diplomatist, and philosopher, achieved great eminence under the German Emperors Maximilian and Charles V. As a theologian he incurred the violent hatred of the Dominican monks; as a student of the occult he acquired the reputation of a magician.

**Agrippa, Marcus Vipsanius** (63–12 B.C.), the greatest military commander of Rome after Julius Cæsar.

**Agrippina** (the Elder), (12–33), daughter of Marcus Vipsanius Agrippa, wife of Germanicus, and mother of Caligula, was one of the most virtuous and heroic women of her time; remarkable for her bold defiance of the tyrant Tiberius.

**Agrippina** (the Younger), (c. 15–60), daughter of the last named, and mother of Nero, was notorious for her abandoned licentiousness and perfidy. Claudius made her his consort in 48 A.D. Her career was one long course of intrigue and infamy. She was ultimately put to death by the order of Nero.

**Ahmed Mirza** (b. 1897), became Shah of Persia in 1909, on his father's abdication and flight. He was dethroned in 1925.

**Aidan, Saint,** an early missionary who, in the 7th century, founded the monastery of Lindisfarne, and was known as the "Apostle of Northumbria."

**Ainsworth, William Harrison** (1805–1882). Between 1834 and 1850 his novels had considerable vogue. The best known are *Jack Sheppard, The Tower of London, Guy Fawkes,* and *Windsor Castle.*

**Aird, Sir John,** Bart. (1833–1911), a contracting engineer of eminence, associated with the carrying out of many great undertakings in different parts of the world, the wonderful Assouan Dam, on the Nile, being one of his most remarkable achievements. Was M.P. for North Paddington, 1887–1905.

**Airy, Sir George** (1801–1892), for many years Astronomer Royal, and the first to demonstrate the theory of the rainbow.

**Aitchison, Rt. Hon. Craigie Mason, K.C., M.P.** (b. 1882), Lord Advocate for Scotland, 1929.

**Akbar the Great,** Mogul emperor from 1542–1605, and a monarch of great enlightenment and power.

**A Kempis, Thomas.** (*See* **Kempis.**)

**Akenside, Mark** (1721–1770), the son of a butcher of Newcastle-on-Tyne, a poet of some note in his day. He was also a physician.

**Alaric,** the famous chief who led the Visigoths against the Romans, and afterwards invaded both Greece and Italy. He took Rome in 410, died the following year, and was buried with a vast treasure in the bed of the River Busento, and so that the Romans might not discover his remains, the slaves who buried him were put to death.

**Alban, St.,** who flourished in the latter part of the 3rd century, was born at Verulamium (where St. Albans now stands) and served as a soldier under Diocletian at Rome. Later he was converted to Christianity, and was for a time a renowned preacher of that religion, finally suffering martyrdom. Offa, king of the Mercians, built a monastery to his memory near Verulamium, four or five hundred years later. St. Alban's Day in the Calendar of the Roman Church is June 22nd, and in that of the Anglican Church June 17th.

**Albani, Dame** (1852–1930), b. near Montreal. Made her first appearance on the lyric stage in England at Covent Garden in 1872. Married Mr. Ernest Gye in 1878, for many years a leading prima donna, achieving great celebrity as *Elsa* in "Lohengrin." As a concert-room singer also reached high rank. D.B.E. 1925.

**Alberoni, Cardinal** (1664–1752), minister of Philip of Spain, was an Italian of humble birth. For some years he exercised great influence. His object was to restore to Spain her ancient power, but he was too reckless in the conduct of foreign affairs to succeed. Plunging into war with Austria, he found himself confronted with the Quadruple Alliance—Austria, England, Holland and France—and his plans were defeated. He was banished from Spain and died in his native town of Piacenza, leaving great wealth.

**Albert, King of the Belgians** (b. 1875), son of the late Count of Flanders, succeeded his uncle, Leopold II., Dec. 17, 1909. His brave part in the war has won him lasting fame. Married, in 1900, the Princess Elizabeth of Bavaria.

**Albert, Prince Francis Augustus Charles Emmanuel,** Consort of Queen Victoria (1819–1861). On his marriage with the Queen in 1840 Parliament granted him an income of £30,000 a year. The Prince adapted himself with considerable success to the difficulties of his position, and gradually secured the confidence and esteem of statesmen and public alike. The great Exhibition of 1851 owed much of its success to his efforts. He died of typhoid fever in December, 1861. The Albert Memorial forms a national tribute to his memory.

**Albertus Magnus** (1193– some authorities say 1205–1280) was a distinguished German philosopher, and voluminous writer on the occult sciences. Bishop of Ratisbon from 1260. His dabblings in alchemy and astrology gained him wide notoriety.

**Alcæus,** a Greek lyric poet of the 7th century B.C.

**Alcibiades** (b. *circa* 450 B.C., treacherously killed in battle at Melissa, Phrygia, B.C. 404), the celebrated Athenian statesman and general, pupil and friend of Socrates.

**Alcuin** (735–804) was an ecclesiastic and writer of much prominence.

**Aldhelm, St.,** an English missionary and scholar of the 7th century, who was successively Abbot of Malmesbury and Bishop of Sherborne.

**Aldred,** a powerful ecclesiastic of the 11th century in great favour with the Conqueror, whom he crowned. Was Bishop of Worcester (1044–1060), and Archbishop of York (1060–69).

**Alekhine, Alexander** (b. 1892), became chess champion of the world, 1927.

**Alexander, Rt. Hon. Albert V.** (b. 1885), First Lord of the Admiralty, 1929. M.P. for Hillsborough. Parliamentary Secretary, Board of Trade, 1924. Served in the Army. For some years a Baptist Lay preacher.

**Alexander, Samuel,** O.M., LL.D., Litt.D. (b. 1859), a British philosopher. Author of *Moral Order and Progress, Art and the Material,* and many papers on philosophical subjects.

**Alexander I.** (b. 1888), became King of Yugoslavia Aug. 1921.

**Alexander I. of Russia** (1777–1825), succeeded his father, Paul I., and played an active part in the Napoleonic wars, joining the coalition against Napoleon in 1805 and again in 1812, and often taking active part in the military movements.

**Alexander II. of Russia** (1818–1881), succeeded his father, the Emperor Nicolas, in 1855. In 1861 he emancipated 23 millions of serfs. On March 13, 1881, was assassinated by bombs thrown beneath his carriage in St. Petersburg by Nihilists.

**Alexander I. of Servia** (1876–1903), was the son of King Milan and succeeded his father on the latter's abdication in 1889, the rule of the country being carried on under a Regency until 1893. Alexander and his Queen Draga were both assassinated by military revolutionaries in 1903.

**Alexander the Great** (356–323 B.C.). King of Macedon, succeeded his father Philip in 336 B.C., and from the first showed himself fitted for mighty military exploits. He conquered in turn the Thebans, the Persian Satraps, overthrew Darius, overran Syria and Phœnicia, possessed himself of all the cities along the Mediterranean, conquered Egypt, founded Alexandria, and finally retired upon Babylon, where he died eleven days later.

**Alexandra, Queen** (1844–1926), d. of Christian IX. of Denmark, married to the Prince of Wales (afterwards Edward VII.) on March 10, 1863. Queen from Jan. 22, 1901, to May 6, 1910.

**Alfieri, Count Vittorio,** the Italian poet (1749–1803), was the author of twenty-one tragedies and six comedies.

**Alfonso the Wise** (1221–1284), a celebrated King of Leon and Castile, founder of the legal code which became the basis of Spanish juris-

prudence, a liberal patron of literature and science, particularly of astronomy; dethroned by his son Sancho in 1282.

**Alfonso XIII.**, King of Spain (b. 1886), acceded to the throne in May 1886; deposed April 14, 1931.

**Alford, Henry** (1810–1871), an eminent theologian and writer, Dean of Canterbury.

**Alfred the Great** (849–901), succeeded his father, Ethelwulf, king of the West Saxons, at the age of twenty-two, and found himself in conflict with the Danes from the outset. After six years of unsuccessful effort he took refuge in the Isle of Athelney, but the following year defeated the Danes in great force at Edington (Ethandun). Later, the Danes again invaded the country, and the rest of Alfred's reign was occupied in conflict. He died at fifty-two, after a reign of thirty years, and was buried at Winchester.

**Alington, Rev. Cyril**, D.D. (b. 1872), Headmaster of Eton 1916.

**Alison, Sir Archibald** (1792–1867), was the author of a voluminous *History of Europe* from 1789 to 1815.

**Allen, Charles Grant** (1848–1899), a popular writer and novelist possessing a wide range of subjects, writing equally well on science, literature, and art, and achieving note in the field of fiction.

**Allenby, 1st Viscount, Field-Marshal Edmund Allenby**, G.C.B., G.C.M.G. (b. 1861). Commander of the Cavalry Expeditionary Force in 1914, and distinguished himself on the Western Front, 1915–16; in 1917 carried through the Palestine campaign with success, capturing Jerusalem on Dec. 9, 1917. High Commissioner for Egypt, 1919–1925.

**Alleyne, Edward** (1566–1626), a famous actor, contemporary of Shakespeare and founder of Dulwich College.

**Allinson, Thomas R.**, was the founder of the nature cure school of England; a great advocate of fresh air and the simple life. He introduced wholemeal bread into England.

**Alness, Lord (Rt. Hon. Robert Munro)**, P.C. 1913; K.C. (b. 1868), became Lord Justice Clerk, 1922; Sec. for Scotland, 1916; Lord Advocate, 1913–16.

**Alma-Tadema, Sir Lawrence**, R.A. (1836–1912), the son of a Netherlands notary, was educated at Antwerp, and came to England in 1869, where he soon made a name for himself as a painter of classical pictures of great beauty of colour and delicate design.

**Alured** (or **Alfred**) **of Beverley** was one of the early English historians, and flourished in the 12th century. His history of England was written in Latin. It remained in MS. until 1716.

**Alverstone, Viscount (Sir Richard Webster)** (1842–1915); educated at Charterhouse and Trinity College, Cambridge. Admitted to the Bar 1868, made Q.C. 1878, elected M.P. for Launceston in 1885, and became Attorney-General the same year; was re-appointed Attorney-General in 1886, and again in 1895, Master of the Rolls in 1900, when made a peer and Lord Chief Justice. Resigned 1913.

**Amanullah, King of Afghanistan**, toured Europe in 1928, and on his return, endeavoured to introduce great reforms in his kingdom, which were resented especially by the priesthood, and he was forced to fly the country, settling in Italy in 1929.

**Amerigo Vespucci** (1451–1512), an Italian navigator. In 1499 he reached America and explored the coast line for some hundreds of leagues, returning to Spain the same year. It was unknown to him that Columbus had landed in America the year before, that discovery being kept a State secret.

**Amery, Rt. Hon. L. C. M. S.**, M.P. (b. 1873), Sec. State for Colonies, Nov. 1924. Sec. State for Dominion Affairs, 1925–29. Previously First Lord of the Admiralty, 1922–24. Parliamentary and Financial Secretary to the Admiralty, 1921–22; Under Sec. for the Colonies, 1921–22.

**Ampère, André Marie** (1775–1836), a celebrated French mathematician who devoted himself successfully to the study of electricity and magnetism, and was the first to propound the electro-dy_____ theory.

**Amulree, Lord (Sir Wm. MacKenzie, G.B.E., K.C.)** (b. 1860), became Secretary of State for Air, 1930; succeeded the late Lord Thomson as Air Minister.

**Amundsen, Captain Roald** (1872–1928), Norwegian explorer, in 1897 was a member of the Gerlache expedition. In 1906 navigated the North-west passage; in 1911 set out on a South polar quest, and early in 1912 the news came that he had succeeded in reaching the South Pole. In 1925 endeavoured to reach North Pole in an aeroplane and was given up for lost, but returned four weeks later. In 1926 he flew over the North Pole. He finally lost his life in the Arctic in 1928, when attempting to help the rescue of the Nobile expedition.

**Anacreon** (*c.* 560–475 B.C.), the celebrated Greek poet whose Odes hold a high place in poetic literature.

**Anaxagoras** (500–428 B.C.) was a famous Greek philosopher of the Ionic School, among whose pupils were Socrates, Pericles, and Euripides.

**Anaximander** (611–547 B.C.), a celebrated Greek philosopher. He is said to have been the first to note the obliquity of the ecliptic, invented geographical maps, and laid down the theory that the moon shone with light borrowed from the sun.

**Anaximenes**, a Greek philosopher of the Ionian School, flourished 6th century B.C.; friend of Anaximander; regarded air as the principle of things.

**Andersen, Hans Christian** (1805–1875). Perhaps the most gifted writer of fairy tales that the world has known; his *Story of My Life* is as interesting as his fairy tales. Born and died in Denmark.

**Anderson, Elizabeth Garrett** (1836–1917), one of the first Englishwomen to enter the medical profession. Practised in London for many years. In 1909–10 was Mayoress of Aldeburgh, her native town, and the first woman to be a mayor.

**Andrassy** (1823–1890), a prominent Hungarian statesman.

**André, John** (1751–1780), was an English officer, who, while engaged on the British side in the American War of Independence, was arrested as a spy by Washington, tried by court-martial and executed—it is generally believed wrongfully, from a misapprehension of the facts Washington himself declared André to be more unfortunate than criminal. In 1821 André's remains were brought from America and interred in Westminster Abbey.

**Andrea del Sarto** (1487–1531). This celebrated son of a Florentine tailor was one of the great Italian artists of his time, known as the "faultless painter." Most of the famous galleries of the world contain examples of his magnificent fresco and other painting, mainly dealing with religious subjects.

**Andrée, Salomon August**, a Swedish explorer who attempted in 1897 to reach the North Pole by balloon, but, except for a message by pigeon despatched two days after his ascent was not heard of again until in August 1930 Norwegian scientific expedition led by Dr Gunnar Horn discovered the remains of the Andrée expedition on White Island. The discovery included a log-book, sketch maps and the diaries kept by Andrée. A translation of these was published in English in 1931.

**Angelico, Fra** (1381–1455), a famous Italian painter of religious subjects, mostly in the form of frescoes, of which the best examples are at Florence.

**Angelo, Michael.** (*See* **Michael-Angelo.**)

**Anglesey (Henry Paget), first Marquis of** (1768–1854), a celebrated British general, who led the cavalry at Waterloo and achieved much distinction by his tact and bravery.

**Anne Boleyn.** (*See* **Boleyn, Anne.**)

**Anne, Queen** (1665–1714), Queen of Great Britain and Ireland from 1702 to the time of her death, was a daughter of James II., and succeeded William III., her cousin. During her reign England, in alliance with Austria, Holland, Prussia, Savoy, and Portugal, entered upon the War of the Spanish Succession. It was in this war that Marlborough achieved his great victories, and his wife, Sarah, for a long time was Anne's favourite, and wielded an immense influence at Court, the Queen being too want

ing in self-reliance to have much initiative of her own. Anne's reign has been called the Augustan Age of Britain because of the many eminent men of letters who flourished during that period. She was the last of the Stuarts to occupy the British throne, and the first monarch to be styled Sovereign of Great Britain, the union between England and Scotland dating from 1707. Anne was married to Prince George of Denmark, and their numerous progeny all died in childhood.

**Annunzio, Gabrielle d'** (b. 1864), Italian poet, novelist and dramatist. Served in the European War, 1915–18. After the Armistice he opposed the Allies, and entered and took possession of Fiume for the Italians.

**Anselm,** Archbishop of Canterbury (1033–1100), was a native of Aosta, and succeeded Lanfranc as English Primate. He was in serious conflict with William Rufus on the question of ecclesiastical rights, and for a time suffered exile. Under Henry I. he regained power, making a compromise with that monarch which enabled him to carry on his theological work in comparative harmony. He died at Canterbury, and was canonised later, his day being celebrated in the Roman Church on April 21st.

**Anson, Lord George** (1697–1762), a navigator of great eminence, whose "Voyage round the World" is still a popular book of adventure. He won many victories, obtained a peerage, rose to full Admiral's rank in the Navy, and served two terms as First Lord of the Admiralty.

**Anstey, Christopher** (1724–1805), was a poet and wit of repute in whose "New Bath Guide" the fashionable frequenters of Bath, their habits and surroundings, were depicted with much shrewd humour.

**Antoninus Pius,** Emperor of Rome from A.D. 138 to 161, was the successor of Hadrian, and formed an agreeable contrast to most of the Roman Emperors, in that he endeavoured to govern more with an eye to the public well-being than his own personal pleasure. It was during his reign that the wall between the Forth and Clyde was built.

**Antony, Mark** (*circa* 83–30 B.C.), celebrated Roman triumvir and general; a prominent adherent of Cæsar; but engaged in intrigues after the latter's death, and was opposed by Brutus and Cassius. His association with the Egyptian Queen Cleopatra made him a prominent figure of historic romance. Committed suicide after defeat by Octavian.

**Antony, St.** (or **Anthony**) (*circa* 251–356), was a native of Upper Egypt, and according to his own account spent much time in conflict with the devil. He is one of the best known saints of the Roman calendar, and his festival is on January 17th. He was believed to give relief to those who appealed to him when suffering from erysipelas, from which tradition the name St. Anthony's Fire is given to the disease.

**Apelles,** the famous Greek painter, flourished in the time of Alexander the Great, whose friendship he enjoyed. His "Aphrodite Anadyomene," painted for the temple of Æsculapius in Cos, has been accounted the most perfect picture of antiquity.

**Apponyi, Count Albert** (b. 1847), an Hungarian patriot and politician, known as the "Grand Old Man of Hungary."

**Aquinas, Thomas** (1225–1274), the "Father of Moral Philosophy," was a native of Southern Italy and came of a noble family. In 1243 he joined the Dominicans, and the remainder of his life was spent in religious pilgrimages and disputations. In 1263 he visited London. He left behind him numerous theological and philosophical writings of great power. He was canonised in 1323.

**Arabi Pasha** (1841–1911), was the leader of the Egyptian rebellion of 1881, and defended Alexandria against the British fleet. Later he suffered defeat and was captured at Tel-el-Kebir, was banished to Ceylon, but released in 1901.

**Arago, François Jean Dominique** (1786–1853), a French astronomer and natural philosopher of great eminence, whose researches added much to our knowledge of electricity and magnetism. His expositions of the polarisation of light did much to advance that branch of science.

**Aram, Eugene** (1704–1759), was a schoolmaster of considerable learning, and lived at Knaresborough, in Yorkshire, from 1734 to 1745, in which latter year a friend of his, one Daniel Clark, suddenly disappeared. Soon after, Aram also quitted Knaresborough. In 1759, while Aram was teaching in a school at Lynn, a skeleton was discovered at Knaresborough, and it was declared to be that of Daniel Clark. This was denied by a man named Houseman in such a manner as to cause suspicion to fall upon him, and he was arrested, whereupon he confessed that Clark had been murdered in his presence by Aram, and that his body would be found in St. Robert's Cave. Search disclosed the actual skeleton, and Aram was also arrested, tried at York, found guilty, and executed. His defence was powerful and eloquent, but availed him nothing. Lord Lytton's novel, *Eugene Aram*, and Tom Hood's dramatic poem, *The Dream of Eugene Aram*, effectively deal with the romantic story.

**Arbuthnot, John** (1667–1735), a prominent wit, doctor, and littérateur of the Queen Anne period. His *History of John Bull* is his best known work.

**Arch, Joseph** (1826–1919), the founder of the National Agricultural Union, was for many years an agricultural labourer, and championed the cause of his class with great ability.

**Archer, Fred** (1857–1886), a favourite jockey for several years, winner of many leading races, his first Derby falling to him in 1877.

**Archimedes** (287–212 B.C.), a Greek geometrician and philosopher of remarkable power, to whom we are indebted for the discovery of the principles of the lever and of specific gravity, and for the invention of the famous archimedean screw.

**Ardilaun, Baron** (1840–1915), the head of the Guinness family of Dublin.

**Argand, Aimé** (1755–1803), inventor of the lamp bearing his name, which for the first time introduced a current of air to permeate and increase the power of the flame, by using a chimney glass and circular wick. He was a Swiss physician.

**Argyll, Duke of** (1845–1914), married H.R.H. Princess Louise in 1871, was for some time (as Marquess of Lorne) M.P.; Governor-Gen. of Canada from 1878 to 1883; Gov. of Windsor Castle, 1892–1914. Wrote a *Life of Palmerston*. Succeeded his father in 1900.

**Argyll (George Douglas Campbell), Duke of** (1823–1900), a prominent statesman, scientist, and writer, and a member of several Liberal Governments, down to 1881, when he declined to follow Mr. Gladstone on the Home Rule question.

**Argyll, Marquis of (Archibald Campbell)** (1598–1661), was a strong supporter of Charles I. in the Civil War.

**Ariosto, Ludovico** (1474–1533), the author of *Orlando Furioso*, was one of the most celebrated of the Italian poets. In addition to his famous epic he wrote many comedies, satires and poems.

**Aristeides** (or **Aristides**), a Greek writer, and founder of the school of prose romance; flourished in the 2nd century B.C. His *Milesian Tales* are among the most celebrated works of fiction.

**Aristides,** the Athenian general, was of noble descent, and first achieved fame at the battle of Marathon, 490 B.C. He was renowned no less for his valour than for his scrupulous honesty and a desire to do justice to others; hence he was surnamed "the Just."

**Aristippus** (*c.* 435–356 B.C.), founded the Cyrenaic school of philosophy, which taught that sensual pleasure was the only happiness. He was a native of Cyrene, in Africa, but became a pupil of Socrates, and settled in Athens.

**Aristophanes** (*c.* 444–380 B.C.) was one of the foremost Athenian play-writers and the greatest of the Greek comic poets. He is said to have composed fifty-four plays in all. Eleven of these only have survived. They are full of satire, and deal unsparingly with the people and institutions of his time.

**Aristotle** (384–322 B.C.). This, the most famous of all the Greek philosophers, was a disciple of Plato, after whose death he retired from Athens, and later on undertook the education of

**Alexander**, afterwards known as Alexander the Great. Subsequently at Athens he established the Lyceum and founded the Peripatetic school of philosophy, which has had great influence upon the expansion of thought.

**Arkwright, Sir Richard** (1732–1792), was a native of Preston, and in early life a barber and travelling hairdealer. Becoming interested in mechanical problems, he set himself the task of inventing an improved cotton-spinning machine. Hargreaves' spinning-jenny was then the leading machine, but the yarn it produced could only be used for warp; it was not compact enough for weft. Arkwright therefore experimented until, by adopting an arrangement of rollers that moved with different velocities, he succeeded in perfecting his "spinning-frame," which accomplished the desired end. He took out his first patent in 1769, and, entering into partnership with Mr. Jedediah Strutt, of Derby, became a manufacturer on a large scale, in 1771 establishing the first spinning-mill worked by water-power. He was knighted in 1786.

**Armitage, Edward** (1817–1896), a well-known R.A. and historical painter, who contributed some of the frescoes in the Houses of Parliament.

**Armstead, H. H.** (1828–1905), was the sculptor of the south and east sides of the podium of the Albert Memorial, of external decorative work at the Colonial Offices, and a vast number of other works in marble, wood, bronze, and silver. Was elected R.A. in 1879.

**Armstrong, Lord** (1810–1900), was a solicitor at Newcastle, when his attention was drawn to certain mechanical problems, and he devoted himself to the invention of the hydraulic crane and other machinery for the better utilisation of water-power. During the Crimean War he studied the subject of guns, and produced his famous "Armstrong gun," the biggest that had up to that time been constructed. He introduced many improvements in gun construction, and in 1859 was appointed engineer of Rifle and Ordnance, and received the honour of knighthood. Later his immense works at Elswick became the chief establishment in this country for the manufacture of guns and ships of war. He was raised to the peerage in 1887.

**Arne, Dr. J. A.** (1710–1778), an English musical composer of considerable merit and of great popularity in his day. He composed numerous ballad operas, and at Drury Lane, Covent Garden, and Vauxhall organised the chief performances for long periods. His best known opera was "Artaxerxes," and his most popular songs were "Rule, Britannia!" and "Where the Bee Sucks."

**Arnold, Sir Edwin** (1832–1904), educated at University College, Oxford, where he gained the Newdigate Prize in 1852; was at the Government Sanscrit College, Poona, for some years, and, returning to England in 1861, became connected with the *Daily Telegraph's* editorial staff. He was the author of the "Light of Asia" and numerous other poems, and wrote several books of travel that were very popular. Created K.C.I.E.

**Arnold, Matthew** (1822–1888), son of Dr. Thomas Arnold, achieved a high reputation as poet and critic. As the propounder of the principles of "sweetness and light," as well as by his graceful verse, he secured a high place amongst the literary men of the Victorian era.

**Arnold, Thomas**, D.D. (1795–1842), headmaster of Rugby from 1828 to his death. His influence at Rugby was such as to give that institution a supreme position among English public schools. A man of intense spiritual feeling, of a sympathetic and lovable nature, yet possessed of all the necessary attributes of scholarship, he was greatly esteemed and venerated.

**Arnold-Forster, The Rt. Hon. H. O., M.P.** (1855–1909), grandson of Dr. Arnold, and adopted son of the late Rt. Hon. W. E. Forster, was educated at Rugby and Oxford and for some years was a director of Cassell & Co., Ltd. Was elected for West Belfast in 1892, and from the first showed a keen interest in the public services. Was appointed Parliamentary Secretary to the Admiralty in Mr. Balfour's Ministry in 1900, and became Secretary for War in 1903. Was the author of numerous works bearing on public questions. In 1907 published *Letters on Socialism*.

**Arnott, Neil** (1788–1874), a doctor and practical scientist. He was a prolific writer on Natural Science, and invented many useful appliances.

**Arrhenius, Prof. Svante August**, became Director of the Physico-chemical Dept. of the Nobel Institute, 1905. An eminent scientist, the originator of the theory of electrolytic association.

**Arrol, Sir William** (1839–1913), the well-known contractor and engineer, whose firm built the Tay, Forth, and London Tower Bridges. Originally a piecer in a cotton-mill, and later a working blacksmith. He was knighted in 1890.

**Artaxerxes** was the name borne by several ancient Persian kings, some of whom achieved great distinction. The first Artaxerxes was the son of Xerxes, and reigned from 465 B.C. for 40 years; he was succeeded by Darius II. (424–405 B.C.), who in turn was followed by Artaxerxes II., who reigned 45 years. The last to bear the name of Artaxerxes was the founder of the Sassanidæ dynasty, A.D. 223.

**Artemus Ward.** (*See* **Browne, C. F.**)

**Arthur,** a famous British chieftain and supposed king, who is stated to have flourished in the 6th century, and around whose life many beautiful legends have been written, including Lord Tennyson's "Idylls of the King."

**Arundel, Thomas, Archbishop of Canterbury** (1353–1414), in the reigns of Richard II. and Henry II., previously Bishop of Ely and Archbishop of York, and for a time Lord Chancellor. An active politician and bitter enemy of heresy.

**Ashfield, Baron,** cr. 1920 (**Albert Stanley**) (b. 1874). Knighted in 1914; President Board of Trade, 1916–19; M.P. Ashton-under-Lyne, 1916–20; Chairman London Underground Railways, London General Omnibus Co., and of many industrial concerns.

**Ashley, Colonel, Rt. Hon. Wilfrid William, M.P.** (b. 1867); Minister of Transport, 1924–29. Chairman of the Anti-Socialist Union.

**Aske, Robert,** the leader of the Pilgrimage of Grace, directed against the Reformation; executed in 1537.

**Askew, Anne** (1521–1546), was one of the Protestant martyrs who was burned at the stake with three others in Smithfield. She was a Lincolnshire lady who clung to the Protestant faith, despite the fact that her husband and father were avowed Romanists.

**Askwith, Lord,** K.C.B. (b. 1861), as Sir George Askwith was Comptroller-General of the Commercial, Labour, and Statistical Departments of the Board of Trade (1909–11), having been for some years previously engaged in arranging trade disputes. Chief Industrial Commissioner, 1911–18.

**Aspasia,** an Ionian woman of great intellectual power, beauty, and influence, a friend of Socrates, who afterwards married Pericles.

**Asquith, Herbert Henry, Earl of Oxford and Asquith** (1852–1928), M.P. East Fife, 1886–1918, Paisley, 1920–24 (born at Morley), Prime Minister and First Lord of the Treasury, 1908–1916, educated at the City of London School and Balliol College, Oxford; afterwards called to the Bar, entered Parliament in 1886, and in 1892 appointed Home Secretary. Chancellor of the Exchequer, 1905–8. His Premiership was marked by a strong forward policy, of which the Parliament Bill abolishing the veto of the Lords, the Home Rule Bill, and the Welsh Church Bill are prominent examples. Assumed in addition to the Premiership the post of War Minister on the resignation of Col. Seely, March, 1914, relinquishing it to Lord Kitchener in the following August after outbreak of the War. In Dec., 1916, resigned Premiership, being succeeded in that office by Mr. Lloyd George. He was raised to the Peerage as Earl of Oxford and Asquith in 1925.

**Asser, John,** a Welsh monk of the 10th century, noted for having been tutor, friend and biographer of King Alfred. He was made bishop of Sherborne.

**Astor, John Jacob** (1763–1848), the founder of the Astor family of millionaires, was a native of Heidelberg, and emigrating to America, went out to the North-West and began trading in

furs, soon building up a large fortune, which he wisely invested in New York real estate, which rapidly increased in value.

**Astor, Viscount** (b. 1879), a prominent Conservative; a director of the *Observer*.

**Astor, Viscountess,** first woman M.P., an American by birth and wife of the above.

**Athanasius, St.** (296–373), was Bishop of Alexandria. He spent much of his time in bitter theological controversy, and was driven from Alexandria; taking refuge in the desert, he wrote numerous letters in support of Christian doctrine, and under Julian was recalled to Alexandria. The Athanasian creed is supposed to reflect his belief.

**Athelstan** (895–940), grandson of Alfred the Great, was crowned King of England in 925, and was the first ruler of all England.

**Athlone, Earl of,** up to June 1917 known as Prince Alexander of Teck, P.C., K.G., G.C.B., G.C.M.G., G.C.V.O., D.S.O. (b. 1874), 3rd son of the late Duke and Duchess of Teck. Major 2nd Life Guards, saw active service in S. Africa and went to the Front in 1915. Governor-General South Africa, 1923–1931, appointed Governor-General of Canada, 1914, but the appointment was suspended until 1920.

**Atholl, Duchess of,** D.B.E. (b. 1875), Unionist M.P. for Kinross 1923; Parliamentary Secretary Board of Education, 1924–29.

**Attila** (406–453), King of the Huns, was a warlike leader, who achieved many conquests over the Roman forces, committing great ravages and laying large tracts of country waste. He marched through Germany and Gaul, and died as he was preparing for another invasion of Italy.

**Auber, D. F. E.** (1782–1871), was a distinguished French composer of light operas, such as "Masaniello," "Fra Diavolo," "Le Domino Noir," etc.

**Audley, Thomas** (1488–1544), Lord Chancellor of England, temp. Henry VIII. Previously Speaker of the House of Commons (1529), and Lord Keeper (1532).

**Augustine** (354–430) was Bishop of Hippo for over thirty years. He was born in Africa, but went to Rome, and under the influence of St. Ambrose became deeply religious, writing much upon doctrinal subjects, and his works are held in great esteem.

**Augustine, St.,** was the missionary monk who was sent to Britain by Gregory the Great in 597. He succeeded in converting King Ethelbert, after which he made good progress with the people generally, and became the first Archbishop of Canterbury. He died in 604.

**Augustus, Caius Octavianus** (63 B.C.–14 A.D.), was the first Emperor of Rome, succeeded Julius Cæsar. After a triumvirate of twelve years, in which he was associated with Mark Antony and Lepidus, he became supreme ruler and for forty-five years exercised a beneficent and powerful sway. He was a devoted patron of Horace and Virgil. The Augustan Age is still held among the most memorable in the history of letters.

**Aurelius, Marcus Antoninus** (121–180), Emperor of Rome, a man of great intellectual power, and a disciple of the Stoics.

**Aurungzib** (1618–1707), the last of the Great Moguls, Emperors of Hindustan; succeeded his father Shah Jehan in 1658 and reigned until his death. He was a ruler of ability, and greatly extended his empire by conquest, but his zeal for Mahomedanism aroused the hatred of the Hindus, and when he died the disruption of the vast Mogul territory followed rapidly.

**Austen, Jane** (1775–1817), one of the ablest female fiction writers that England has produced. Author of *Sense and Sensibility, Pride and Prejudice*, etc.

**Austin, Alfred** (1835–1913), was educated at London University, and in 1861 published a satire called *The Season*, which contained some vigorous verse of undoubted promise. For some years he was connected with *The Standard* as leader writer, and also wrote for the *Quarterly Review*. Between 1870 and his death some half-dozen volumes of poems were issued by him. He was appointed Laureate in 1896, after the office had been vacant four years.

**Austria-Hungary, Karl Franz Josef, Ex-Emperor of** (1887–1922), son of the late Archduke Otto, succeeded on death of his uncle Franz Josef, Nov. 21, 1916. Abdicated Nov. 1918. Flew from Switzerland to Hungary, and placed himself at head of a Royalist army in attempt to regain Throne. Was defeated 24 Oct., 1921, and taken prisoner and banished. Died in exile, April 1, 1922.

**Autolycus,** a Greek astronomer of the 4th century B.C., who wrote on the fixed stars and the revolving sphere.

**Avebury, Rt. Hon. Lord** (1834–1913), banker, scientist, and politician. Best known to the world under the name he bore until 1900 of Sir John Lubbock. His writings cover a considerable field, and are marked by a keen observation of natural phenomena and animal and vegetable life. As a member of the House of Commons he had the credit of securing the statutory observance of Bank Holidays.

## B

**Babbage, Charles,** eminent mathematician (1792–1871). Was Professor of Mathematics at the University of Cambridge, and attracted much attention by inventing a calculating machine, which, however, only partially realised its designer's aims, and never came into use.

**Baber** (1483–1530), founder of the Mogul dynasty which ruled Northern India for three centuries, and a descendant of Tamerlane.

**Bach, Johann Sebastian** (1685–1750), one of Germany's greatest musical composers, his "Passion Music," "Preludes and Fugues," and other compositions being unrivalled in their class.

**Bacon, Francis,** Lord Verulam, and Viscount St. Albans (1561–1626), was one of the greatest of English philosophers and statesmen, who was Attorney-General to Elizabeth, and under James I. became Lord Chancellor. His political career was tarnished by certain acts of corruption, for which he paid the penalty, but his writings were marked by keen insight, brilliancy of language, and a depth of thought which place them in the first rank of philosophical literature. His *Novum Organum* and his *Essays* are splendid monuments of learning and wisdom.

**Bacon, John** (1740–1799), a British sculptor of eminence, to whom we owe some notable monuments, including those to Lord Chatham in Westminster Abbey and the Guildhall, and that of Dr. Johnson in St. Paul's.

**Bacon, Roger** (1214–1294), generally alluded to as "Friar" Bacon, was a man of remarkable gifts. The invention of gunpowder has been ascribed to him, and he is also said to have invented the air-pump, and was acquainted with the principle of the telescope. For a long time he was looked upon as an alchemist and sorcerer, and only in modern times have his discoveries been rightly appreciated.

**Baden-Powell of Gilwell, Lieut.-Gen. Lord R. S. S.,** K.C.B., G.C.V.O. (b. 1857), attained great popularity by his brilliant defence of Mafeking during the Boer War. After the war he organised the South African Constabulary, and was Inspector-General of Cavalry, 1903–7. Founded the Boy Scouts organisation in 1908. Peerage, 1929.

**Baffin, William** (1584–1622), was a distinguished navigator and explorer who, in 1616, discovered the bay which separates the north-east coast of British North America from Greenland, and bears his name.

**Bailey, Sir Abe** (b. 1864), a Rand millionaire. He presented the Salvation Army with an estate of 80,000 acres in South Africa. He was born in Cape Colony and fought in the Boer War with the South African Light Horse, which force he largely helped to finance. Is proud to be known as one of Kruger's "traitors," who was released from prison on payment of a fine of £2,000.

**Bailey, Lady,** D.B.E. (b. 1892), has completed record flights both for altitude and distance.

**Bailey P. J.** (1816–1902), author of *Festus*, a poem which ran through many editions.

**Baillie, Joanna** (1762–1851), a Scotch poetess and dramatist of considerable merit in her day. Her dramas are for reading rather than the

stage. Sir Walter Scott greatly admired Miss Baillie's works.

**Baily, E. H.** (1788–1867), the sculptor of the Nelson statue, and of the bas-reliefs on the south side of the Marble Arch. Some of his exhibited pieces, such as "Eve at the Fountain," "Girl preparing for the Bath," and "The Graces," were much admired.

**Baily, Francis** (1774–1844), an astronomer, and one of the promoters of the Astronomical Society, who devoted himself with great assiduity and success to the various branches of his favourite science.

**Bain, Alexander** (1818–1903), a psychologist of great attainments.

**Baird, John L.** (b. 1889), invented the Televisor.

**Baker, Sir Benjamin** (1840–1907), an eminent Engineer. He was consulting engineer to the Egyptian Government for the Assouan Dam, joint engineer with Sir John Fowler of the Forth Bridge, and engineer of the Central London Tube Railway.

**Baker, Sir Herbert,** K.C.T.E., A.R.A. (b. 1862), a prominent architect, designer of the Bank of England, Rhodes House, Oxford, and with Sir E. Lutyens, of the New Delhi.

**Baker, Sir Samuel White** (1821–1893), a traveller and author whose services will long be remembered. In the "fifties" he spent much time in Ceylon and wrote two interesting books on the Island; in the "sixties" he set out to explore Central Africa, and achieved the discovery of Lake Albert Nyanza. He was knighted in 1866. In 1869 he was in command of a military expedition to Central Africa for the suppression of the slave trade, and the Khedive made him Governor-General of the new territory for four years at a salary of £10,000 a year, being succeeded by General Gordon.

**Baldwin, Rt. Hon. Stanley,** P.C., M.P. (b. 1867). Prime Minister, May, 1923, until Jan., 1924, and Nov., 1924–1929. Chancellor of Exchequer, Nov., 1922–23. President Board of Trade, 1921. Appointed Lord President of the Council in National Government 1931.

**Balfe, Michael William** (1808–1870), popular composer of English Ballad operas of the 19th century.

**Balfour, Earl of** (better known as **Rt. Hon. Arthur James Balfour**), K.G., O.M. (1848–1930), was educated at Eton and Cambridge. He entered Parliament in 1874, and was private secretary to his uncle, Lord Salisbury. About 1880 he became a member of what was known as the "Fourth Party"; but it was not until Lord Salisbury became Prime Minister in 1885, and made Mr. Balfour President of the Local Government Board, that he came to be regarded as a serious politician. Later, he was Chief Secretary for Ireland. In 1891 he became First Lord of the Treasury, a position which he held also under Lord Salisbury's next Government in 1895 and onward. On Lord Salisbury's resignation in 1902, Mr. Balfour was made Prime Minister, which post he held until the close of 1905. Losing his Manchester seat in 1906, he was elected for the City of London, and was Unionist Leader until Nov 8, 1911. Became First Lord of the Admiralty in the Coalition Government of 1915, was Foreign Sec. 1916–1919, and Lord President of the Council from 1919 to 1922. Visited the United States in the spring of 1917 to consult with the President and Government on steps of war co-operation, and addressed Congress. Took an active part in the Peace Conference. Leader of British Empire Representatives at Washington Conference, 1921–2. Among his published works are the *Defence of Philosophic Doubt* and *Foundations of Belief*. President of the British Association in 1904. Knighted, 1922. Earldom, April 1922.

**Baliol, Sir John De,** founder of Balliol College, Oxford (and father of John Baliol, the claimant to the Scotch throne), after an unsuccessful attempt to overcome Simon de Montfort, was condemned to certain penalties, and died in exile in 1269.

**Baliol, John** (1249–1315), competed with Robert Bruce for the Scottish throne, and Edward I. decided in his favour. Only reigned four years, when Edward deposed him, committing him to the Tower, and finally banished him from the country. He retired to Normandy. His son, Edward Baliol, recovered his father's kingdom in 1332, and was upheld by Edward III. whilst very unpopular by reason of his having given up the south of Scotland to the English. He renounced his title and throne in 1356, and retired to England on an annuity.

**Ball, Sir R. S., LL.D.,** F.R.S. (1840–1913), a distinguished astronomer and mathematician. Wrote many books on astronomical subjects and was a popular lecturer. Knighted 1886.

**Balzac, Honoré de** (1799–1850), one of the greatest of French novelists, and the author of over eighty novels, to which he gave the covering title of "La Comédie Humaine."

**Bampton, John** (1689–1751), an eminent divine, who founded the Oxford Bampton Divinity lectures.

**Bancroft, Sir Squire** (1841–1926), one of the best known actor-managers of the later Victorian period. Managed the old Prince of Wales theatre in London, in conjunction with Marie Wilton (Lady Bancroft), for many years, producing there the popular Robertsonian comedies.

**Banim, John** (1798–1842), the most popular **Irish** novelist of his time, whose tales of the "O'Hara Family," written in conjunction with his brother Michael, are realistic and powerful.

**Banks, Sir Joseph** (1743–1820), was president of the Royal Society for upwards of forty years. As a naturalist he was one of the most eminent men of his time, and encouraged science in every form. When Captain Cook made his voyage to the South Seas in 1768, Sir Joseph accompanied him for the purpose of observing the transit of Venus. He left very valuable botanical collections to the British Museum.

**Bantock, Sir Granville,** Mus. Doc. (b. 1868), a British musical composer and professor of music, Birmingham University.

**Barbara, St.,** an early Christian martyr, who lived in the 3rd century, and was beheaded by her own father, he being killed immediately afterwards by lightning. She is the patron saint of artillery.

**Barbauld, Anna Letitia** (1743–1825), an industrious authoress, who wrote numerous acceptable and highly devotional works for young people, and was a poetess of note in her time.

**Barbour, John** (1316–1395), a Scottish divine and historian, whose poem "The Bruce," is a composition well calculated to inspire national enthusiasm.

**Barclay, Mrs. Florence L.** (1862–1920), authoress of many popular novels, including *The Rosary* and *The Upas Tree*.

**Barham, Richard Harris** (1788–1845), a Kentish-born clergyman who gained a deserved reputation as a humorist by his *Ingoldsby Legends*.

**Baring-Gould, Rev. Sabine** (1834–1924), was the author of numerous novels, including *John Herring*, *Court Royal*, and *Mehalah*.

**Barlow, Sir Thos., Bart.,** F.R.S. (b. 1845), Physician-Extraordinary to the King, and filled the same position to Queen Victoria. Pres. of the Royal Coll. of Physicians, 1910–15. A great consultant.

**Barnabas, St.,** was a native of Cyprus, and is credited with having introduced Christianity into Antioch, and suffered martyrdom A.D. 61.

**Barnard, Lady Anne** (1750–1825), "Auld Robin Gray," one of the most tender of our ballads of humble life, was written when she was a girl of twenty-two, published anonymously, and assumed to be an ancient piece. She revealed the secret of its authorship to Sir Walter Scott.

**Barnado, Dr. T. J.** (1845–1905), the founder of the well-known homes for orphan-waifs, for some forty years devoted himself to the protection, education and advancement of destitute children.

**Barnato, Barnett Isaacs** (1852–1897), a South African Diamond magnate, who lifted himself from poverty to affluence by daring operations. Returning to England broken in health, he leapt into the sea and was drowned.

**Barnes, Alfred,** M.P. (b. 1887), Lord Commissioner of the Treasury 1929; chairman of the Co-operative Party and Secretary of the London Labour M.P.s.

**Barnes, Rt. Rev. Ernest W., D.D., F.R.S.** (b. 1874).

Bishop of Birmingham, 1924; Fellow Trin. Coll., Camb. 1898–1916.

**Barnum, Phineas T.** (1810–1891), was America's most famous showman, and originator of Barnum and Bailey's "Greatest Show on Earth."

**Baron, Bernhard,** late Chairman of Carreras Tobacco Co., gave large sums to various institutions and charities. Died, 1929.

**Barrett, Wilson** (1846–1904), a favourite English actor of the romantic school. He was also a dramatic author of some pretensions, and had a long career of popularity.

**Barrie, Sir J. M., Bt.,** O.M. (b. 1860, at Kirriemuir); after passing through Edinburgh University entered journalism, and later published a series of essays and sketches which at once made him popular. He followed these up with some very clever novels, including *A Window in Thrums*, *The Little Minister*, *Sentimental Tommy*, etc., and in more recent years has achieved considerable success as a dramatist, "Peter Pan" being amongst his most popular plays.

**Barrow, Isaac** (1630–1677), a famous divine, mathematician, Greek scholar, and tutor of Sir Isaac Newton. His "Sermons" are amongst the finest in the language.

**Barry, Sir Charles** (1795–1860), the architect of the present Houses of Parliament which occupied twenty years in building. Knighted in 1852, and was buried in Westminster Abbey.

**Barry, Sir John Wolfe, Wolfe-,** K.C.B. (1837–1918), the eminent engineer, who designed and carried out some of the most prominent undertakings of the time, including Barry Dock and Tower Bridge.

**Barthou, Jean L.** (b. 1862), a prominent member of French ministries; Prime Minister, 1913; Foreign Minister, 1917; Minister of War, 1921–22, and soon after Chairman of the Reparations Commission.

**Bartolommeo, Fra** (1469–1517), the distinguished Florentine painter and friend of Savonarola, at whose death he became a monk.

**Bartolozzi, Francisco** (c. 1728–1815), a Florentine engraver who came to England in 1764, and for many years was engaged upon engravings, of which he produced an enormous number, many of them of great artistic merit and highly valued by collectors to-day. Was a member of the British Royal Academy, and died in Lisbon.

**Bashkirtseff, Marie** (1860–1884), a clever emotionalist diarist and painter of Russian parentage, whose *Memoirs*, published in Paris, caused considerable sensation by their remarkably vivid revelations of an abnormal temperament.

**Battenberg, Prince Henry** (1858–1896), husband of Princess Beatrice, youngest daughter of Queen Victoria. Was stricken with fever while on an expedition in Ashanti in 1895, and died at sea.

**Battenberg, Admiral Prince Louis of.** (*See* **Milford Haven, Marquess of.**)

**Bax, Arnold** (b. 1883), British composer. Has written numerous piano compositions, songs and chamber works.

**Baxter, Richard** (1615–1691), a great Nonconformist, remarkable for the ability and boldness of his writings.

**Bayard, Pierre du Terrail, Chevalier de** (1475–1524), a French knight of exemplary conduct and remarkable for his chivalry. Fell at the Battle of Sesia, and was named "Le Chevalier sans peur et sans reproche."

**Baylis, Miss Lilian,** C.H., became manager and lessee of the Old Vic Theatre, London, 1898.

**Beaconsfield, Benjamin Disraeli, Earl of** (1804–1881), statesman and novelist. Was the son of Isaac d'Israeli, and after being privately educated, passed some time in a lawyer's office, and then took to authorship, meeting with but indifferent success until he published his *Vivian Grey*, which was so audaciously clever that it at once made him a name. He was then only twenty-one. Drifting into Society he was made much of because of his brilliance, and after a few more essays in novel writing he entered Parliament in 1832 and not long afterwards became a prominent and picturesque figure in that assembly. He allied himself with the Tory party, and ultimately became one of its chief leaders. He was made Premier in 1868 on the retirement of Lord Derby, and again in 1874, retaining office until 1880, dying the following year. His foreign policy, particularly on the Eastern question, was aggressive. He was raised to the peerage in 1876.

**Beattie, James** (1735–1803), a Scottish poet of genius, who wrote "The Minstrel," and was also author of numerous essays and philosophical writings.

**Beatty, Earl** (b. 1871), Admiral of the fleet, O.M., G.C.B., G.C.V.O., D.S.O. First Sea Lord, 1919–1927. From 1912 to 1916 Commander of Battle Cruiser Squadron. From Nov. 1916 to 1919 succeeded Lord Jellicoe as Admiral of the main British Fleet. On Aug. 28, 1914, fought the German fleet in the Heligoland Bight. On May 31, 1916, Lord Beatty with his Battle Cruisers was engaged in a great sea fight with the Germans off Jutland, for which he was granted £100,000 and an Earldom in 1919. In this battle the main Battle Fleet under Lord Jellicoe (Commanding the British Fleet) arrived towards the end of the battle and made victory complete.

**Beaumont and Fletcher,** joint authors of many plays, including "The Maid's tragedy" and "Philaster." Beaumont was buried in Westminster Abbey; Fletcher, who died in 1625, was interred in St. Saviour's, Southwark. Thought by some to be authors of plays attributed to Shakespeare.

**Beaverbrook, Lord** (b. 1879) (William Maxwell Aitken), a Newbrunswickian, an active agent in the organisation of the Canadian forces in France. M.P. for Ashton-under-Lyne, 1910–1917. Knighted, 1911; barony, 1916. Appointed Chancellor of the Duchy of Lancaster, 1918. A great newspaper proprietor.

**Bebel, Ferdinand Aug.** (1840–1913), a prominent German Socialist leader.

**Beckford, William** (1759–1844), the eccentric author of *Vathek*. Spent his later years as a recluse on his estate at Fonthill, on which he expended £273,000.

**Bede, "The Venerable"** (673–735), a monk of great influence and ability whose historical works cover a great range and are valuable in the outline they give of the early history of this country.

**Beecham, Sir Thomas** (b. 1879), musical conductor, educated at Rossal and Wadham College, Oxford. Founder of the Beecham Orchestra, and promoter and conductor of English opera seasons at Drury Lane.

**Beecher, Henry Ward** (1813–1887), an eminent American preacher and lecturer, whose church at Brooklyn was for many years the most popular in the United States. Brother of Mrs. H. B. Stowe.

**Beechey, Frederick William** (1796–1856), an Arctic explorer who accompanied Franklin on an expedition in 1818, and made voyages on his own account subsequently. Beechey Island in Melville Sound was named after him.

**Beerbohm, Max** (b. 1872), was educated at Charterhouse and Merton College, Oxford. Is a brilliant critic and caricaturist who has contributed largely to the *Saturday Review*.

**Beethoven, Ludwig van** (1770–1827), born at Bonn, died in Vienna. One of the kings of musical composition, whose symphonies, sonatas, overtures and operas all reach the highest standard of musical imagination. He received lessons from Mozart.

**Begbie, Harold** (b. 1871), has won his way in journalism and literature by a variety of good work, from humorous "By the Way" jottings for the *Globe* to serious war poems and valuable war articles contributed to the *Daily Chronicle*.

**Behring, Emil von** (b. 1853), a distinguished German scientist, Professor at Strasburg; discoverer of an anti-toxin for diphtheria, and claimant to a cure for phases of tuberculosis.

**Behring, Vitus** (1680–1741), was a Danish navigator who entered the Russian service and in 1728 discovered what is called Behring's Strait, afterwards being wrecked on Behring's Island, where he died.

**Beke, Charles T.** (1800–1874), a distinguished diplomatist and traveller, who spent many years in Abyssinia, and published the result of his researches.

**Belisarius (505–565),** a famous Roman general

under Justinian. His defeats of the Goths and Vandals, and of the Persians were great achievements.

**Bell, Alexander Graham** (1847–1922), born in Edinburgh, went to America in 1870, became Professor of Physiology in Boston University. In 1876 he exhibited an invention which was developed into the telephone. He also invented the photophone, and has devoted much attention to the education of deaf-mutes. Regent of the Smithsonian Institute since 1898; was awarded the Volta-Prix by the French Government; and was granted the Hughes Medal of the Royal Society.

**Bell, Sir Charles** (1774–1842), an eminent anatomist to whom we owe the discovery of the distinct functions of the sensory and motor nerves. His Bridgewater treatise on the Hand is well known.

**Bellini, Gentile** (1421–*c.* 1507), a celebrated Venetian painter, whose "Preaching of St. Mark at Alexandria," in St. Mark's College, Venice, is one of the renowned pictures of the world.

**Bellini, Giovanni** (1426–1516), brother of the last-named, and a more celebrated painter.

**Bellini, Vincenzo** (1802–1835), an Italian operatic composer of great popularity during the first half of the 19th century. His "La Sonnambula," "Norma," and "I Puritani," are still performed.

**Belloc, Hilaire** (b. 1870), author of several clever and entertaining works, including the *Bad Child's Book of Beasts, The Modern Traveller, The Old Road,* and *Hills, and the Sea.* Has published also valuable historical studies of Danton, Robespierre and Richelieu.

**Belzoni, Giovanni B.** (1778–1823), a renowned explorer of Egypt who settled in England at the beginning of the 19th century. After a precarious existence began to turn his attention to hydraulic experiments, and went to Egypt with the view of getting the Government to sanction a scheme of his for raising the water of the Nile. He was then attracted to the study of Egyptian antiquities, and engaged in highly successful researches.

**Benedict XV., Pope** (1849–1922), Giacomo della Chiesa. Elected Sept. 3, 1914, being at the time Cardinal Archbishop of Bologna.

**Benedict, Sir Julius** (1804–1885), a composer of mark who for many years occupied a prominent position as conductor and composer. Among his operas may be mentioned, "The Lily of Killarney," "The Crusaders," and "The Gipsy's Warning." He was knighted in 1871.

**Benedict, St.** (480–544), built twelve monasteries, and founded the Order of the Benedictine Monks, at Monte Cassino, near Naples.

**Benn, Capt. W. Wedgwood,** D.S.O. (b. 1877), Sec. of State for India, 1929. Joined Labour Party in 1927.

**Bennett, Enoch Arnold** (1867–1931), author and journalist. His stories of the Pottery Towns, where he was brought up, are of high merit. *The Old Wives' Tales, Clayhanger and Hilda Lessways* are among his most successful novels. His story *The Life of Nash Nicklin* was written for *Pears' Annual* for 1914. He has also written plays, including *Milestones, The Great Adventure* and *Mr. Prohack.*

**Bennett, James Gordon-** (1841–1918), proprietor of the *New York Herald,* and a famous yachtsman and motorist. He sent out Stanley on the expedition which resulted in the finding of Livingstone.

**Bennett, Sir W. Sterndale** (1816–1875), an English composer of eminence, who did much for the advancement of musical art in this country. Schumann pronounced him to be "the most musical of all Englishmen." His Cantatas are among the best produced in England, and include "The May Queen" and "The Woman of Samaria."

**Benson, Sir Frank** (b. 1858), a prominent British actor-manager. His repertory company has successfully produced Shakespeare's plays throughout England.

**Bentham, Jeremy** (1748–1832), the founder of the school of political philosophy, the tenets of which were extended by John Stuart Mill. His works on *Government, Usury,* and *The Principles of Morals and Politics,* expound the Utilitarian system with great lucidity.

**Beranger, Jean Pierre de** (1780–1857), was the most popular song-writer that France has produced. His songs were often written to serve some passing political purpose, and were invariably in harmony with popular sentiment.

**Beresford, Admi. Lord Charles William de la Poer** (1846–1919), second son of the 4th Marquis of Waterford. Had a varied and distinguished career. In 1875–1876 accompanied King Edward VII., then Prince of Wales, on his visit to India. At the bombardment of Alexandria did distinguished service in command of the *Condor,* and in 1884 was on Lord Wolseley's staff in the Nile Expedition. Later he commanded the Naval brigade at the battles of Abu-Klea, Abu-Kru, and Metemmeh; headed the expedition which rescued Sir Charles Wilson's party in the Safia; and became a Lord Commissioner of the Admiralty in 1886. Was in Parliament, when not on active service, off and on from 1885, when he was returned for Marylebone. Lord Charles possesses three medals for life-saving, and among his literary works may be mentioned the *Life and Times of Nelson,* which was published as *Pears' Annual* for 1905. Succeeded to the command of the Channel Fleet in 1907, retiring in 1909. M.P. for Portsmouth, 1910–16. Raised to the peerage, Jan. 1916.

**Berkeley, Bishop** (1685–1753), the propounder of the philosophy that the only things that are real are our ideas of what is presented to our senses. In support of this philosophy he wrote several works of great ingenuity of argument, chief amongst them being his *Alciphron, or the Minute Philosopher.*

**Berlioz, Hector** (1803–1869), was an eccentric but highly endowed French musical composer who studied in Paris and Rome, and afterwards, settling in Paris, devoted himself to conducting and composing with much energy. He suffered hardship and humiliation before he got a hearing, but his originality and his ardent romanticism fascinated such men as Paganini and Liszt, and though musical convention to a great extent prevented the realisation of his aims, he ranks as one of the truest musical geniuses of the 19th century. His "Damnation de Faust" and his "Romeo and Juliet" symphony are his most inspired productions. His wife was an English actress, Miss Smithson, for whom he formed a romantic attachment while she was appearing in Shakespearean parts in Rome.

**Bernadotte, Jean Baptiste** (1764–1844), was a French commander of great distinction who served under Napoleon, and in 1810 was chosen heir to the throne of Sweden. In 1818 he succeeded as Charles XIV., and was a capable ruler.

**Bernard, St.** (1091–1153), took an active part in promoting the crusade of 1146, and founded the monastic order of the Bernardines.

**Bernhardt, Sarah** (1844–1923), the most renowned tragédienne of her time. Became a member of the Comédie Française after the Siege of Paris, and thereafter occupied a specially prominent position as an actress. Her first performance in London was in 1879. Among her most conspicuous successes are "Théodora," "Fédora," and "La Tosca," while she also appeared as Hamlet with distinction.

**Bertie, Francis Leveson,** first **Viscount** (1844–1919), entered the Foreign Office in 1863, and held several important secretaryships. In 1903 was Ambassador to Italy, British Ambassador in Paris, 1905–1918.

**Bertillon, M. Alphonse** (1853–1914), an ingenious Parisian police prefect, who invented the anthropometric method of criminal detection, which has been adopted extensively in Britain and other countries.

**Besant, Mrs. Annie** (b. 1847), President of the Theosophical Society since 1907; previously associated with Bradlaugh in secular movements. Of late years has been actively engaged in theosophical projects in India. Was arrested in 1917 for seditious writings, but afterwards released.

**Besant, Sir Walter** (1836–1901), a prolific author and novelist, whose first stories were written in collaboration with Mr. James Rice. The best-known works which he wrote alone are

*All Sorts and Conditions of Men, Dorothy Forster*, and *Armorelle of Lyonesse*. He also wrote a number of books on ancient London. He was knighted in 1895.

**Bessemer, Sir Henry** (1813–1898), an inventor who became rich and famous by his invention of the well-known process of converting cast-iron direct into steel. His invention entirely revolutionised the steel manufacture, greatly reducing cost of production and making it possible to utilise steel in many directions where previously iron only had been used. He was knighted in 1879. Many other inventions stand to his credit, but they are insignificant in comparison with that of the steel process, which will always remain identified with his name.

**Bethlen, Count**, Hungarian Prime Minister. Concluded an important and friendly Treaty with Signor Mussolini.

**Bethmann-Hollweg, Theobald von** (1856–1921) Chancellor of the German Empire, 1909 to July 1917. In directing the Imperial policy in regard to the war, he showed a great capacity for carrying out the instructions of the Kaiser, but in the end was less pliant and had to go.

**Betty, William Henry** (1791–1874), an Irish actor of singular precocity who as the "Infant Roscius" was famous on the stage at eleven. For some years he enjoyed a marvellous success and made a considerable fortune, retiring in 1824.

**Beveridge, Sir W. H.**, K.C.B. (b. 1879), became Director of the London School of Economics, 1919.

**Binyon, Laurence** (b. 1869), a poet and an art critic; Assistant Keeper in the Prints Department, British Museum.

**Birdwood, Field-Marshal Sir William R.**, G.C.B., G.C.M.G., K.C.B., K.C.S.I. (b. 1865). Com.-in-Chief in India, 1925. A.D.C. General to the King. Served N.W. Frontier, '97, Tirah '98, S. Africa '99, Com'd. Dardanelles Army, 1915.

**Birkbeck, George** (1776–1841), physician, philanthropist, and philosopher. A Yorkshireman who settled in London in 1804, and became the chief founder of Mechanics' Institutes.

**Birkenhead, Earl**, P.C., G.C.S.I. (1872–1930), Sec. State for India, 1924–1928. Lord Chancellor, 1919–1922, and was Attorney-General from 1915 to 1919, being M.P. for the Walton Div. of Liverpool from 1906 to 1918. Peerage, 1919.

**Birmingham, Bishop of.** (*See* **Barnes, Ernest W.**)

**Birrell, Rt. Hon. Augustine**, K.C. (b. 1850), author of *Obiter Dicta* and other works of literary merit; entered Parliament in 1889, M.P. North Bristol, 1906–18; became Education Minister in the Government of Sir Henry Campbell-Bannerman in 1905, and in 1907 Secretary for Ireland, resigning in 1916, after the rebellious outbreak in Dublin and other parts of the country, when serious loss of life and destruction of property occurred.

**Bishop, Sir Henry Rowley** (1786–1855), composer of many popular ballad operas and songs. "Maid Marian," "Guy Mannering" and "The Miller and his Men," are his best known operas. He was also a very successful glee-writer, and was the composer of "Home, Sweet Home." He was knighted in 1842.

**Bismarck, Prince Otto E. L. von** (1815–1898), the most prominent and capable of the German statesmen of the 19th century, entered the diplomatic service in 1851, and filled positions in succession at Vienna, Petrograd, and Paris. In 1862 he was appointed Minister of Foreign Affairs, from which time dates the strong Bismarckian policy which was destined to achieve so much for Prussia. As Imperial Chancellor he may be said to have directed the destinies of his country down to the death of the Emperor William in 1888, when Emperor William II began to assume a direct control, which Bismarck resented, and in 1890 the "old pilot" was dropped, to use a figure of speech made memorable by one of Tenniel's cartoons. Bismarck retired to his country estates, and did not again interfere seriously in political affairs. Made Count in 1865 and Prince in 1871. Germany has over two hundred monuments to him. He presided at the famous Berlin Conference of 1878. His son, Count Herbert von Bismarck (1849), was appointed German Foreign Minister in 1885, but, like his father before him, did not get on well with William II.

**Bizet, Georges** (1838–1875), a French musical composer, who gave the operatic stage several operas full of charming melody, and who in "Carmen" achieved one of the leading operatic triumphs of the latter half of the 19th century.

**Björnsen, Björnstjerne**, the Norwegian poet, dramatist, and novelist (1832–1910), is one of the great names in modern European literature, his poems, plays, and stories being marked by a strong intellectuality and a rich imagination.

**Black, William** (1841–1898), an English novelist of great popularity in his day. His best novels are: *A Daughter of Heth, Madcap Violet, Kilmeny*, and *A Princess of Thule*.

**Blackie, John Stuart** (1809–1895), an eminent and outspoken Scottish writer, philologist, and poet.

**Blackmore, Richard Doddridge** (1825–1900), a novelist who in 1869 made a great reputation with his romantic story of *Lorna Doone*.

**Blackstone, Sir William** (1723–1780), was a Justice of the Court of Common Pleas. His great work, *Commentaries on the Laws of England*, became one of the British classics.

**Blair, Robert** (1699–1746), a noted Scottish poet, whose poem, "The Grave," entitles him to a place in all collections of British poetry.

**Blake, William** (1757–1827), painter, poet, and mystic, whose "Songs of Innocence" and scriptural drawings reveal an intense spirituality.

**Blanc, Louis** (1811–1882), a French Socialist politician who was Minister of Labour after the Revolution of 1848, but found his views too advanced for Louis Napoleon, and lived in exile until the fall of the Second Empire, when he returned to France and died at Cannes in 1882. He was a man of genial and amiable personality, and the author of several important historical works.

**Blatchford, Robert** (b. 1851), an able and trenchant Socialistic writer, late editor of *The Clarion*. His chief books are *In Defence of the Bottom Dog, Merrie England*, and *The Sorcery Shop*. During the war contributed articles of vigorous criticism to well-known papers.

**Blavatsky, Helena Petrovna** (1831–1891), a noted Theosophist of Russian birth, who claimed to possess spiritualistic power, and exercised considerable influence over a small but devoted band. Author of *The Secret Doctrine*, etc.

**Bledisloe, 1st Baron, of Lydney** (b. 1867), (cr. 1918), formerly **Sir Charles Bathurst**, K.B.E., Parliamentary Sec. to Food Control Dept., 1916–17. Chairman of the Sugar Commission, 1917–19, and Director of Sugar Distribution. Parl. Sec. to Ministry of Agriculture and Fisheries, 1924–28. Became Governor-General of New Zealand, 1930.

**Bleriot, Louis**, French airman; the first to fly the English Channel from Calais to Dover, July 25, 1909.

**Blessington, Marguerite, Countess of** (1789–1849), an Irishwoman of literary taste, who with the Count d'Orsay (*q.v.*), established a sort of salon at Gore House, Kensington, where she held fashionable receptions, and was a liberal patron of things literary and artistic. Her novels of high life had quite a vogue in her lifetime, but are not now read.

**Blind, Karl** (1826–1907), was a native of Mannheim, and in 1847 associated himself with the German revolutionary movement, but was arrested and imprisoned. Gaining his liberty, he resided in Brussels for a time, and afterwards settled in London, remaining in close touch with men like Mazzini and Louis Blanc, and by pen and speech constantly advocating political freedom.

**Blomfield, Sir Reginald**, R.A., M.A., F.S.A., Kt. (b. 1856), (cr. 1919); a prominent architect, designer of gardens and country houses. Author of several books on architecture.

**Blondin, Charles** (1824–1897), a famous French rope performer, who crossed Niagara Falls on a tight-rope, and was for many years the most popular acrobat of his day, living mostly in England.

**Blood, Thomas** (1618–1680), the officer who attempted to steal the Royal Regalia from the Tower and was captured and imprisoned. Charles II. not only pardoned him, but granted him a pension of £200 a year.

**Bloomfield, Robert** (1766–1823), a peasant poet, who attained considerable fame by his "Farmer's Boy" and other rural pieces, in which the love of Nature was gracefully and tenderly expressed.

**Blücher, Field-Marshal L. von** (1742–1819), was the famous Prussian commander who, after a long and brilliant military career, joined forces with Wellington in the final campaign against Napoleon, and materially helped to win the great victory of Waterloo by advancing to Wellington's support.

**Blunt, Wilfrid Scawen** (1840–1922), best known for the part he took in Egyptian affairs in 1881–1882 and his continued support of what is called the Egyptian national movement. He was a devoted admirer of Arabi Pasha, and spent much money in his defence. In 1907 he published his *Secret History of the English Occupation of Egypt*, which aroused much controversy. Published a book of *Reminiscences* in 1912. At his Sussex seat he kept the finest stud of Arab horses in the world. He married a granddaughter of Lord Byron.

**Blyth, Lord** (1841–1925), an eminent authority on agriculture, and practical experimenter in farming methods.

**Boadicea**, queen of the Iceni tribe of Britons, who raised an army against and defeated the Roman invaders, but was afterwards vanquished by Suetonius and committed suicide in 62.

**Boccaccio, Giovanni** (1313–1375), an Italian author who has often been called "The Father of Novel-writing." He had a lively imagination and a graceful style, and his famous *Decameron*—condemned by two Popes and by the Council of Trent—has been a fount of inspiration to poets and story-tellers from Shakespeare to Keats.

**Boileau-Despreaux, Nicolas** (1636–1711), a French poet who was contemporary with Molière, and wrote many classical imitations which were highly thought of in his own time and later, and are still frequently referred to.

**Boito, Arrigo** (1842–1918), an Italian poet and musical composer. He wrote the libretti of "Othello" and "Falstaff" for Verdi, and for his own operas of "Mefistofele" and many others.

**Boleyn, Anne** (1507–1536), queen of Henry VIII. and mother of Queen Elizabeth; originally maid-in-waiting to Queen Catharine, who was divorced by Henry to make way for her. She was a promoter of the Reformation, but fell from favour with her fickle spouse, and was beheaded on a charge of treason.

**Bolingbroke, Henry St. John, Viscount** (1678–1751), a statesman and littérateur of the days of Queen Anne, whom he served both as Secretary of War and Foreign Secretary.

**Bolivar, Simon** (1783–1830), the first President of Venezuela, and subsequently Dictator of Peru; commonly called the Washington of South America.

**Bonaventura, St.** (1221–1274), a Franciscan monk of great learning and piety, and a leading Schoolman. He was called "the Seraphic

**Rt. Hon. Margaret.**, M.P., became Minister of Labour, 1929. Represented Northampton, 1923. Wallsend, 1926. The first woman member of a British Ministry.

**Bonheur, Rosa** (1822–1899), a native of Bordeaux, and one of the most noted animal painters of the 19th century. "The Horse Fair" is probably the most popular picture of the kind.

**Boniface, St.** (680–754), a native of Devon, spent most of his life in Germany in Christianising missions, and became Archbishop of Maintz. He and a number of followers were massacred in Friesland.

**Booth, "General" Bramwell** (1856–1929), son and successor of "General" William Booth, the founder of the Salvation Army. Was chief of staff from 1880 to 1912. His wife, **Mrs. Bramwell Booth**, is also a great personality and an active force in the organisation.

**. Hon. Charles** (1840–1916), a Liverpool merchant and shipowner who devoted many years and much of his fortune to the collection of facts concerning the poor of London, of which ten volumes have appeared. In 1904 he was made a Privy Councillor.

**Booth, Edwin** (1833–1893), an American tragedian of great eminence; son of Junius Brutus Booth, the English tragedian, and brother of John Wilkes Booth, who assassinated President Lincoln. As a Shakespearian actor Booth took high rank and is said to have played Hamlet oftener than any other actor. He visited England several times.

**Booth, "General" William** (1829–1912), while quite a young man became a Methodist local preacher and a travelling evangelist. Founded the Salvation Army in 1878, which under his enthusiastic and eminently practical direction became an organisation of world-wide influence.

**Borden, Rt. Hon. Sir Robert L., K.C., M.P.** (b. 1854), Premier of Canada 1911 to 1920, defeating Sir Wilfrid Laurier at the general elections on the Reciprocity Bill; leader of the Conservative party in the Canadian House of Commons since the resignation of Sir Charles Tupper in 1896. Has also had a distinguished career at the Bar. Accompanied by some of his ministers, he visited England in 1912. Was in England in 1915 and 1917, and was present at Cabinet meetings. Was presented with the freedom of the City of London.

**Borgia, Cæsar** (1476–1507), the masterful and unscrupulous son of Pope Alexander VI., who paved his way to power by the murder of those who stood in his way, and aided by Louis XII. of France, became ruler of Romagna, the Marches, and Umbria. Pope Julius II. banished him from Rome, and he was imprisoned in Spain, but escaped to find a soldier's death in the Army of Navarre in the invasion of Castile.

**Borgia, Lucrezia**, sister of Cæsar, was deemed almost as blood-guilty as her brother, and there can be no doubt that many crimes were committed in her name, if not by her own hand.

**Boris III.**, Tsar of Bulgaria (b. 1894), came to the throne Oct. 1918.

**Borromeo, Carlo, Saint** (1538–1584). Cardinal Archbishop of Milan, was a nephew of Pius IV., and of great benevolence. Canonised in 1614.

**Borrow, George** (1803–1881), was for many years travelling agent for the British and Foreign Bible Society, and in the course of his wanderings made a special study of gipsy life, and wrote some of the most charming and picturesque books about the Romany tribes we possess. His *Lavengro* and *Romany Rye* are classics.

**Boscawen, Admiral** (1711–1761), was one of the most gallant of our 18th-century naval commanders, and known as "Old Dreadnought." He was in command of the fleet that took Madras, and in the operations at Cape Finisterre, Quebec, Louisburg, and Cape Breton. Did signal service.

**Bossuet, J.-B.** (1627–1704), an eminent French bishop and theologian, whose sermons are of striking eloquence, and whose historical and controversial works are of high literary merit.

**Boswell, James** (1740–1795), made himself famous by writing *The Life of Dr. Johnson*, for which purpose he came to London from Scotland, and devoted himself assiduously to studying Johnson's character, spending some years in close intimacy with the great lexicographer and produced what is probably the finest biography in the language.

**Botha, General the Rt. Hon. Louis** (1862–1919), the Boer general who succeeded Joubert in command in the Boer War 1899–1902. On parliamentary government being granted to the Transvaal in 1907 he became the first Prime Minister, and attended the Imperial Conference in England the same year. In 1910 made first Premier of the South African Union. After the outbreak of war with Germany took the field at the head of a Union force and, in addition to putting down a rebel movement engineered by Germany, conquered a large portion of German African territory. Took a prominent and useful part in the Peace Conference of 1919.

**Botticelli, Sandro** (1444–1510), Italian painter and disciple of Savonarola, the democrat. Produced many notable pictures, and assisted in the decoration of the Sistine Chapel. His illustrations to Dante's *Divine Comedy* are world-famous.

**Boucicault, Dion** (1822–1890), a prolific playwright and capable actor, who at twenty years of age made a hit with "London Assurance," and during the later period of his life won fame and fortune by the writing of Irish dramas, including "The Colleen Bawn" and "Arrah-na-Pogue."

**Bouguereau, W. Adolphe** (1825–1905), a celebrated French painter, whose pictures of classical and antique subjects gave him celebrity.

**Boulanger, General G. E. J.** (1837–1891), was for a few years the most popular man in Paris, if not in France. Was made War Minister in 1886, and contrived by a violent attitude towards Germany and a flattery of the mob, to attract much attention. In 1888 he may be said to have dominated French politics, and many expected that he would effect a *coup d'état*, and become dictator of France; but his courage was not equal to his opportunity, and he rapidly fell out of favour and left the country in order to avoid arrest. His career was over, and in 1891 he committed suicide at Brussels on the grave of Mdme. Bonnemain, with whom he had formerly lived.

**Boult, Dr. Adrian C.** (b. 1889), a well-known conductor; became Musical Director of the B.B.C., 1930.

**Boulton, Matthew** (1728–1809), a Birmingham engineer and inventor, who provided capital for James Watt in order to develop the steam engine. The two were in partnership for many years, and it was to Boulton's practical business qualities that Watt owed much of his success.

**Bourne, His Eminence Francis,** Roman Catholic Cardinal Archbishop of Westminster, was born in 1861, and became a priest in 1884. In 1896 was appointed Bishop of Epiphania, and in the following year Bishop of Southwark. In 1903 he succeeded Cardinal Vaughan at Westminster.

**Bowdler, Thomas** (1754–1825), a pious English physician, who issued expurgated editions of Shakespeare and Gibbon, eliminating all expressions offensive to good taste. Hence the term to "Bowdlerise."

**Bowhill, Air Commodore F. W.,** C.M.G., D.S.O. (b. 1880), Air Officer commanding Fighting Area, Air Defence of Great Britain, 1931. Director of Organisation and Staff Duties, Air Ministry, 1929–1931.

**Boyce, William** (1710–1779), a composer and organist of note, who produced much Church music.

**Bradbury, 1st Baron** (b. 1872), G.C.B., Sec. to H.M. Treasury, 1913–19; British Representative on Reparations Committee, 1919–25; Chairman of National Food Council, 1925–1929.

**Braddon, Mary Elizabeth (Mrs. Maxwell)** (1837–1915), has a record of over sixty novels, among them being *Lady Audley's Secret*, *Aurora Floyd*, and *Henry Dunbar*.

**Bradlaugh, Charles** (1833–1891), a secularist writer and lecturer, who was very popular with the working classes. Was elected M.P. for Northampton in 1880, and, after an undignified conflict in regard to taking the oath, became recognised as a useful representative, and esteemed by all parties.

**Bradshaw, John** (1602–1659), the Justice who presided at the trial of, and delivered sentence upon, Charles I. He subsequently quarrelled with Cromwell and was removed from office.

**Bragg, Sir Wm. H.,** O.M., K.B.E. (cr. 1920), F.R.S., M.A., D.Sc. (b. 1862), a brilliant scientist. Nobel Physics Prize, 1915. Director of the Royal Institution of Great Britain; became Fullerian Professor of Chemistry, 1923.

**Brahe, Tycho** (1546–1601), a celebrated Danish astronomer, and fellow-worker of Kepler.

**Brahms, Johannes** (1833–1897), a German musical composer of deserved eminence, and the friend and pupil of Schumann. His compositions are of a varied order, most classical in form, and possess deep intensity of expression and poetic significance. His pianoforte music covers a wide range. He wrote some 300 songs, and among his more serious works the "German Requiem," the "Triumphlied," and the "Rhapsodie" are the best known.

**Bramah, Joseph** (1748–1814), a Yorkshireman who devoted himself to invention, introduced numerous mechanical improvements, including the hydrostatic press, a liquid-pumping apparatus, a most ingenious series of safety locks, and bank-note printing machines.

**Brampton, Lord** (1817–1907), long known to the public as Sir Henry Hawkins. Was famous as an advocate, and took part in many celebrated cases, including the Tichborne trial. Was made a judge in 1876, and on his retirement in 1898 was raised to the peerage. His *Reminiscences*, published in 1904, was one of the books of the year. He lived to the age of ninety. His wife, Lady Brampton, died a few months later, leaving the main portion of the Brampton fortune to Roman Catholic churches and charities.

**Brangwyn, Frank,** R.A., R.P.E., Hon. R.S.A.; Officer and Cross of the Legion of Honour, France; Commander of the Order of St. Maurice and St. Lazarus, Italy; Member of the Reale Accademia de St. Luca, Rome; etc., etc.; b. in Bruges of Welsh extraction, 1867. The greatest mural artist and etcher of his day, also noted for many lithographs.

**Brassey, Earl** (1836–1918), son of Thomas Brassey, came into prominence as a politician under Mr. Gladstone, having been both Civil Lord of, and Secretary to, the Admiralty. Was a recognised authority on naval matters, his *Naval Annual* being a standard book of reference. Was Governor of Victoria.

**Brassey, Thomas** (1805–1870), achieved great fame as a railway contractor, constructing the Great Northern Railway and others in this country, the Grand Trunk in Canada, and others in France, India, Australia, etc.

**Bremer, Frederika** (1801–1865), a Swedish novelist. Her best known stories are *The H. Family*, *Brothers and Sisters*, and *The President's Daughters*. These, as translated by Mary Howitt, are simple pictures of domestic life and full of charm.

**Brennan, C. B. Louis** (1853–1932), successful inventor; obtained £110,000 from the British Government for his torpedo; and was the inventor of a gyroscope railway. Hon. Memb., R.E. Institute.

**Brentford, 1st Viscount** (cr. 1929), **William Joynson-Hicks, 1st Bart.** (cr. 1919) (b. 1865), P.C., 1923; Home Sec., 1924–29; Minister of Health, 1923–24; Financial Sec. to Treasury, 1923; M.P. Twickenham, 1918–29. A prominent Conservative politician.

**Brewster, Sir David** (1781–1868), a Scottish philosopher of great scientific attainments who edited the *Edinburgh Encyclopædia* in 1808, invented the kaleidoscope in 1816. Was one of the founders of the British Association, and a voluminous writer on science. Made important discoveries respecting the polarisation of light.

**Briand, Aristide** (1862–1932), 11 times Prime Minister of France, 16 times Foreign Minister, thrice Minister of Justice, 4 times Minister of the Interior and twice Minister of Education.

**Bridge, Sir F.** (1844–1924), organist of Westminster Abbey (1875–1919), educated at Rochester, studied music under Sir John Goss, and from 1902 King Edward Prof. of Music at London University. He composed numerous cantatas, anthems, etc.

**Bridgeman of Leigh, Viscount** (b. 1864), First Lord of the Admiralty, Nov. 1924–29; Home Secretary, 1922–24; M.P. for Oswestry, 1906–29.

**Bridges, Robert,** M.A., O.M. (1844–1930), appointed poet laureate after the death of Mr. Alfred Austin in 1913. Practised medicine up to 1882, thenceforward devoting himself mainly to literature. He published several volumes of poems and plays, displaying refined fancy and a broad philosophic spirit. His *Testament of Beauty* was published in 1930.

**Bridget, St.,** or **St. Bride,** an Irish saint of the 6th century, who was so beautiful that she desired to be made ugly in order to be free from temptation. St. Bridget's day is Feb. 1.

**Bridgewater, Francis Egerton** (1736–1803), 3rd (and last) Duke of. The projector of the famous Bridgewater Canal, which was the beginning of the great English canal system, and yielded his family enormous wealth; was absorbed in 1887 by the Manchester Ship Canal Company, who paid £1,710,000 for it.

**Bridgewater, Francis, Earl of** (1756–1829), grand nephew of the last-named, and founder of the famous *Bridgewater Treatises*, written by the most celebrated divines and scientists of the day, and devoted to demonstrating the power, wisdom, and goodness of God, as manifested in the Creation.

**Bright, John** (1811–1889), a famous Radical Quaker statesman and orator, one of the chief promoters of the Reform movement which led to the introduction of Free Trade.

**Brindley, James** (1716–1772), an eminent engineer who constructed or laid out 400 miles of navigable waterways in England, including the Bridgewater and Grand Trunk Canals.

**Broadhurst, Henry** (1840–1911), was one of the oldest and most respected of the Liberal-Labour members, an able speaker, and possessed of administrative capacity. He sat for Leicester from 1892 to 1905, when he retired. In Mr. Gladstone's 1886 Government he was Under-Secretary for the Home Department, and was Secretary to the Parliamentary Committee of the Trades Union Congress for fifteen years. Started life as a blacksmith.

**Brock, Sir Thomas,** R.A. (1847–1922), was the pupil of Foley, and achieved a high reputation as a sculptor, among his latest work being the Queen Victoria Memorial in front of Buckingham Palace.

**Brodie, Sir Benjamin C.** (1783–1862), the leading English surgeon of his time, and author of numerous medical works. He was medical adviser in succession to George IV., William IV., and Queen Victoria.

**Brontë, Charlotte** (1816–1855), one of the most gifted novelists of the 19th century. Her *Jane Eyre*, published in 1847, attracted universal notice, and her other novels, *Shirley*, *Villette*, and *The Professor*, are all marked by the force of strong genius. Her sisters, Emily and Anne, also wrote novels and poems, Emily's *Wuthering Heights* and some of her verse showing exceptional power.

**Brooke, Rupert** (1887–1915), a British poet who died during the War. His works include "Poems," 1911, and "1914 and other Poems."

**Brooke, the Rev. Stopford A.** (1832–1916), was at one time a popular Church of England preacher and Chaplain to Queen Victoria. In 1880 he separated from the Church and became minister of Bedford Chapel, Bloomsbury, but retired in 1895. His leisure was devoted to literary work, and he was the author of numerous able books, including a *History of Early English Literature*, and *The Life Superlative*, a volume of sermons published in 1906. He published a work on Venice in 1907.

**Brougham, Lord** (1778–1868), one of the chief legal luminaries of the 19th century, who made a great name by defending Queen Caroline against George IV., and afterwards rose to political eminence. Was an eloquent advocate of Reform, and became Lord Chancellor in 1830. Contributed to the *Edinburgh Review*, and was an ardent promoter of education.

**Brown, Sir Arthur Whitten,** K.B.E. (cr. 1919), the first aviator to fly the Atlantic together with Sir J. Alcock in 1919.

**Brown, John,** "of Ossawatomie" (1800–1859), the hero of Harper's Ferry, whose action in inciting certain negro slaves to rebel in 1859 struck the note of alarm which resulted in the Civil War. His attempt to take the Arsenal at Harper's Ferry was defeated, and he was hanged, being afterwards regarded as a martyr by the Abolitionists.

**Browne, Charles Farrer (Artemus Ward)** (1834–1867), was one of the most whimsical and entertaining humorists America has produced. In addition to his books he wrote and delivered exceedingly funny lectures, and was making an English tour with them when he was siezed with his fatal illness, and died at Southampton.

**Browne, Hablot K.** (1815–1882), best known as "Phiz," the illustrator of Dickens's novels, from the Pickwick period down to *Little Dorrit*.

**Browne, Sir James Crichton-** (b. 1840), a famous specialist in mental disorders, and Visitor in Lunacy for the Lord Chancellor's department 1875–1922.

**Browne, Sir Thomas** (1605–1682), the author of *Religio Medici*, was a London physician and antiquary, whose works still attract the devout.

**Browning, Elizabeth Barrett** (1806–1861), an English poetess of eminence who, between 1830 and 1860, wrote many poems showing great intellectual grasp and imaginative fervour. Some of her works, such as "The Cry of the Children," "Lady Geraldine's Courtship," "The Romaunt of the Page," and "Bertha in the Lane," are sure of immortality, and her "Aurora Leigh," a novel in poetic form, is, in portions, on a high level of poetic execution. She was married to Robert Browning in 1846, and afterwards lived mostly in Italy.

**Browning, Robert** (1812–1889), one of the two greatest poets of the later Victorian era. His earlier poems and dramas, though marked by singular insight and power, were far from popular, mainly because of a somewhat obscure and involved style from which he only occasionally freed himself. His "Strafford," and "The Blot on the 'Scutcheon" were both produced by Macready, and attained some measure of stage success; but Browning was essentially a poet to be read, rather than acted. Some of his dramatic characterisations are of striking power. From about 1864 he published many works and knew at last what it was to be an appreciated poet. His "Men and Women," "Dramatis Personæ," and "The Ring and The Book," contained some of the finest poetry of modern times.

**Bruce, James** (1730–1794), a celebrated African traveller of Scottish birth who successively explored Syria, the Nile Valley, and Abyssinia, and reached the source of the Blue Nile.

**Bruce, Robert** (1210–1295), competed with John Baliol for the Crown of Scotland.

**Bruce, Robert** (1274–1329), grandson of the above, took part with Wallace in the revolt against Edward I., later leading the popular cause, achieving one victory after another, until at Bannockburn he overthrew the English army and ultimately secured Scottish independence. He reigned twenty-two years as King Robert I.

**Bruce, Rt. Hon. Stanley,** M.C. (b. 1884), Prime Minister of Australia, 1923–29.

**Brummell, George** (1778–1840), "Beau" Brummell, the fashion leader in English Society when George IV. was Prince of Wales; was a *bon vivant* and gamester whose excesses involved him in imprisonment and ultimate imbecility.

**Brunel, Isambard Kingdom** (1806–1859), a prominent engineer who constructed the more difficult portions of the Great Western Railways, and many other important works. He also achieved eminence as a designer of steamships.

**Brunel, Sir Mark Isambard** (1769–1849), father of the last-named, and constructor of the Thames tunnel, finished in 1843.

**Brunner, Rt. Hon. Sir John, Bart.** (1842–1919), a politician and philanthropist engaged with Dr. Ludwig Mond in a great alkali enterprise, and greatly interested in technical education and public affairs; was made a Privy Councillor in 1906, and was M.P. for Northwich from 1885 to 1910, when he retired.

**Brutus, Lucius Junius,** Roman Consul conjointly with Collatinus, 509 B.C. He was celebrated as the avenger of Lucretia, and for his patriotism in putting to death two of his own sons, who had conspired against Collatinus. Expelled the Tarquins and established the Republic, but fell in battle.

**Bryant, William Cullen** (1794–1878), an eminent American poet and editor. His first poem "Thanatopsis," was welcomed both in his own country and in England as the work of a serious poetic mind.

**Bryce, Rt. Hon. James, Viscount** (1838–1922), P.C., O.M. For many years Professor of Civil Law at Oxford. Was Under-Secretary for Foreign Affairs in 1886, Chancellor of the Duchy of Lancaster in 1892, and President of the Board of Trade in 1894. From 1905 to 1907 was Chief Secretary for Ireland, and from 1907

to 1912 British Ambassador to the United States. Among his historical writings his works on *The American Commonwealth* and *The Holy Roman Empire* hold high rank. Published a work on the South American Republics in 1912, and in the same year paid a visit to Australia.

**Buchan, Col. John,** M.P. (b. 1875), a prominent author, politician and war-correspondent. One of the trustees of the Pilgrim Trust. His works include a history of the War and many interesting novels.

**Buchanan, Rt. Hon. Sir George** (1854–1924), Ambassador to Rome, 1919; to Petrograd, 1910–17. His previous diplomatic career was passed in Germany, Austria, Japan, and Italy; retired from Diplomatic Service, 1921.

**Buchanan, James** (1791–1868), American statesman, at one time United States Minister in London, and (1857–1861) President of the United States.

**Buckingham, George Villiers, Duke of** (1592–1628), the well-known favourite of James I., who afterwards got into disgrace under Charles I., and was assassinated by Felton.

**Buckingham, George Villiers, Duke of** (1627–1688), son of the last-named. An evil and unscrupulous politician and littérateur. He was the organiser of the unpopular "Cabal" ministry of 1667–1673.

**Buckland, Francis T.** (1826–1880), an instructive and entertaining writer on natural history, and a great authority on everything relating to fishing.

**Buckle, George Earle** (b. 1854), was educated at Oxford, and made a brilliant start on the editorial staff of the *Times*, becoming editor on the death of Thomas Chenery in 1884, a position which he held up to 1912, when he retired. Wrote Vol. III. of *The Life of Disraeli*, of which Vols. I. and II. were written by the late Mr. Moneypenny.

**Buckle, Henry Thomas** (1821–1862), the author of *The History of Civilisation in England*, one of the most vigorous productions of the 19th century.

**Buckmaster, Lord** (b. 1861), Lord Chancellor, May, 1915 to Dec., 1916; Solicitor-General, 1913–1915; M.P. for the Keighley Division, 1911–1915. Is an able speaker and has done good service to his party.

**Buffon, G. L. L., Comte de** (1707–1788), devoted his life to the study of natural history, and his famous work in thirty-five volumes gave a more elaborate description than had theretofore been published concerning the animal kingdom.

**Bull, John** (1563–1628), was organist to James I. and composed much acceptable music, including, it is supposed, our National Anthem "God save the King."

**Buller, General Sir Redvers** (1839–1908), served in many campaigns, and received numerous honours. In China, Ashanti, the Zulu War, Egypt, and the Soudan he won distinction, and in 1887 was Under-Secretary for Ireland, Quartermaster-General from 1887–1890, Adjutant-General, 1890–1897. On the outbreak of the Boer War was made commander of the British forces, but owing to reverses, Lord Roberts went out and took supreme command. General Buller afterwards relieved Ladysmith and took an active part in later engagements. After his return to England he displeased his superiors by some remarks at a public dinner, which ended in his being retired on half-pay.

**Bülow, Prince Bernhard von** (1849–1929), after a distinguished career in Rome, Vienna, St. Petersburg, Roumania, Spain, and elsewhere, from 1900 to 1909 was Chancellor of the German Empire. From 1914 to 1915 was Ambassador at Rome.

**Bunsen, Baron Christian von** (1791–1860), a German diplomatist and scholar, who was Prussian ambassador to England from 1842 to 1854, and wrote numerous historical works of importance.

**Bunsen, Robert Wilhelm** (1811–1899), noted German chemist, discoverer of the metals cæsium and rubidium, and inventor of the Bunsen burner, battery, and pump. Made many important observations in spectrum analysis.

**Bunyan, John** (1628–1688), was originally a travelling tinker and fought with the Cromwellians. Joining a Baptist Society in Bedford in 1655, he became imbued with religious enthusiasm and was for some years a popular preacher. After the Restoration he was thrown into prison, and there wrote his *Pilgrim's Progress* and *The Holy War*, the two finest allegorical works in this or any language.

**Burdett-Coutts, Baroness** (1814–1906), youngest daughter of Sir Francis Burdett, and granddaughter of Thomas Coutts, the banker, whose vast fortune came to her in 1837 through the Duchess of St. Albans, who had been Coutts's wife. The Baroness's public and private munificence covered almost every department of charitable effort. She married in 1881 Mr. W. L. Ashmead-Bartlett, who assumed the additional surname of his wife. She was buried in Westminster Abbey.

**Burghley, Cecil, Lord** (1520–1598), Secretary to Lord Protector Somerset, an influential statesman under Edward VI. and Queen Mary, and subsequently Queen Elizabeth's favourite Minister for forty years.

**Burke, Edmund** (1729–1797), the son of a Dublin attorney, went to London in 1756, and made his mark in literature by his famous work on the *Sublime and Beautiful*. Later on was private secretary to the Marquis of Rockingham, then Premier, and entered Parliament, where he quickly made a name. An able and earnest debater, he took part in all the great movements of his time, and in 1795, after his retirement, was awarded a handsome pension from the Civil List.

**Burnand, Sir Francis Cowley** (1836–1917), was educated for the bar, drifted into journalism and play-writing, and for many years was a highly successful burlesque-writer, as well as the author of numerous plays. Joined the staff of *Punch* when twenty-seven, and was subsequently editor of that journal for a quarter of a century. He was knighted in 1902, and retired from *Punch* in 1906. A Civil List pension of £200 was conferred on him in 1907.

**Burne-Jones, Sir Edward** (1833–1898), an English painter of singular power, who at first modelled himself upon Rossetti, whose influence is more or less visible in most of his works. A sad mysticism dominates his pictures, but the colour scheme, the design, and the poetic charm are always evident. His most famous works are "The Days of Creation," "The Mirror of Venus," "The Briar Rose," and "King Cophetua." He was elected A.R.A. in 1885 but resigned in 1893, and was made a baronet in the following year.

**Burnett, Frances Hodgson** (1849–1924), a native of Lancashire, but ranks with American novelists, having lived in the United States from 1865. *That Lass o' Lowrie's*, published in 1877, established her fame as a novelist, since which she wrote *Little Lord Fauntleroy*, *Little Saint Elizabeth*, and many others of merit and distinction.

**Burney, Charles** (1726–1814), achieved celebrity as the writer of a history of music, and as the father of Frances Burney (Madame D'Arblay), the authoress of *Evelina* and other novels.

**Burney, Frances.** (*See* **D'Arblay, Madame.**)

**Burnham, Baron** (1833–1916), son of the late Mr. J. M. Levy, founder of the *Daily Telegraph*. From the age of sixteen was connected with journalism, for the first few years on the *Sunday Times*, and from 1855 for the rest of his life with the *Daily Telegraph*, becoming managing proprietor in 1868.

**Burnham, Viscount,** C.H. (b. 1862). Son of late Baron Burnham. Managing proprietor of *Daily Telegraph*. Pres. Empire Press Union, Chairman Labour Employment Council, London. As the Hon. Harry Lawson was M.P. for various constituencies, 1885–95, 1905–6, and 1910–16.

**Burns, Rt. Hon. John** (b. 1858), was a prominent Parliamentary Labour representative. A working man and a friend of working men, and came into special prominence during the great strike of dockers. Represented Battersea in Parliament, 1892–1918, and was for a number of years an active member of the London County Council. Was President of the Local Government Board, 1905–1914; in March, 1914, became President of the Board of Trade,

but resigned the office when the war broke out in Aug. 1914. In 1919 Mr. Andrew Carnegie left Mr. Burns a legacy of £1,000 a year.

**Burns, Robert** (1759–1796), Scotland's greatest poet. Startled the world with a little book of poems in 1786 which proclaimed him a true son of the muses. With the £500 that his book yielded him he bought a farm, obtained an appointment with the Excise in 1789, and for the last five years of his life lived at Dumfries. In his career he poured forth song after song of emotional tenderness, and made himself immortal.

**Burritt, Elihu** (1810–1879), the "Learned Blacksmith," was a well-known American linguist, writer and publicist, and founder of "The League of Universal Brotherhood"; was U.S. Consul of Birmingham for many years.

**Burton, Sir Richard** (1821–1890), explorer, Orientalist and diplomatist, who became famous after making a pilgrimage to Mecca in 1853 disguised as a Mohammedan. Later he did much exploring in Central Africa, and wrote some of our most popular books on that region. Entered the Diplomatic Service in 1861 and was successively Consul at Fernando Po, Santos in Brazil, Damascus, and Trieste. Perhaps his greatest work was the translation of the *Arabian Nights* in their fullness. This work is in sixteen volumes.

**Butler, Samuel** (1612–1680), renowned as the author of "Hudibras," one of the wittiest poems in the language and one of the most quoted. His last years were spent in poverty, and he was buried in the churchyard of St. Paul's, Covent Garden, and given a memorial in Westminster Abbey, "that he who was destitute of all things when alive might not want a monument when dead."

**Butler, Lieut.-General, Sir William** (1838–1910), soldier, traveller, and author, saw service in many lands; Canada (1870); Ashanti (1874); Zulu War, Egypt, etc.; appointed to command in South Africa, Dec. 1898, but a few months later resigned; in 1899 was given command of the Western District, finally retiring from the army in 1905. Among his books *The Great Lone Land* (1872) and *The Wild North Land* were conspicuous successes. His wife (*née* Elizabeth Thompson) painted "The Roll Call."

**Butt, Dame Clara,** D.B.E. (b. 1873), the leading English contralto, made her first professional appearance in London in 1892. Her success was immediate. She was married to Mr. Kennerley Rumford—also an able vocalist—in 1900.

**Buxton, Rt. Hon. Sydney C. (Earl)** (b. 1853), Governor-General of South Africa, 1914–1920, M.P. for Poplar, 1886–1914; Colonial Under-Secretary, 1892–1895; Postmaster-General (with Cabinet rank), 1905; President Board of Trade, 1910–1914. Served on Royal Commission on Education, 1886–1889; member of Income Tax Committee, 1904.

**Buxton, Sir Thomas Fowell, Bart.** (1786–1845), a philanthropist and abolitionist.

**Byng, John** (1704–1757), son of Viscount Torrington; after a brilliant career in the navy was made—like his father before him—an Admiral and sent on an expedition to Minorca to attack the French, but failing to perform the duty, was tried by court-martial and shot on shipboard at Spithead.

**Byrne, Brig.-Gen. Sir J. A.,** K.C.M.G., K.B.E., C.B. (b. 1874), became Governor of Sierra Leone, 1927.

**Byron, Henry James** (1834–1884), an assiduous playwright for the last twenty years of his life, producing numerous burlesques and a number of comedies.

**Byron, Lord** (1788–1824), was the poet who exercised the greatest influence upon European thought during the early part of the 19th century. Educated at Harrow and Cambridge, he published his "Hours of Idleness" at twenty, a volume which was violently attacked by the *Edinburgh Review*, and provoked the retaliatory "English Bards and Scotch Reviewers," which caused a great sensation because of its unsparing criticisms of the writers of the day. His "Childe Harold's Pilgrimage," the first two cantos of which were published in 1812, at once placed him in the front rank of poets, and thenceforward to the time of his death he continued to produce poems, most of which were marked by an intense Republican sentiment, yet full of passion and charm and beauty. He made an unhappy marriage in 1815 with the daughter of Sir Ralph Milbanke, from whom he parted after a twelvemonth. He lived abroad for the rest of his life and died at Missolonghi, whither he had proceeded with a view of aiding the Greeks in their battle for national independence.

**Cabot, Sebastian** (1477–1557), a naval explorer of note who was born at Bristol, and discovered Labrador in 1497. Later he closely surveyed 1,800 miles of American coast, and entering the service of Spain, made further voyages of discovery for the Emperor Charles V. His later years were spent in England, Edward VI. granting him the appointment of Grand Pilot. He was the son of John Cabot, an Italian navigator in the English service, and with his father was engaged in the search for the north-west passage to India under the patronage of King Henry VII.

**Cadbury, George** (1839–1922), was a prominent member of the Society of Friends, a well-known philanthropist, an ardent Liberal, chief proprietor of the *Daily News and Leader*, and head of the firm of Cadbury Bros., Bournville. He took the lead in the Garden City project, and the village of Bournville may be regarded as the first enterprise of the character to be practically completed; it has an endowment of over £200,000.

**Cade, John,** an adventurous Irishman who, in 1450, headed an insurrection, and entered London with 30,000 men, defeating the Royal forces at Sevenoaks on the way, and committing the wildest excesses. Cade was himself killed the same year near Heathfield in Sussex by a Kentish sheriff named Iden. Cade assumed the name of Mortimer, and it was from the "London Stone" in Cannon Street that he harangued his followers.

**Cadmus,** founder of Thebes, 1550 B.C., was a Phœnician, and is said to have introduced the alphabet into Greece.

**Cadorna, General** (1850–1928), was Chief of General Staff of the Italian army and Commander of 1917 campaign against the Austrians.

**Cædmon,** an Anglo-Saxon monk of Whitby, and the first of our native poets. He paraphrased the Scriptures with poetic effect. He died about 680.

**Cæsar, Julius** (100–44 B.C.), Roman general. Was appointed successively military tribune, quæstor, ædile in 65, and pontifex maximus in 63. A year later he was prætor, and later formed one of the first triumvirate. His military exploits continued to fill the Romans with admiration. He invaded Gaul and Britain, in the Civil War defeated Pompey, and in the Alexandrine war was brought into contact with Cleopatra, whose power over him did not cease till his death. On his return from Africa in 44 the crown was offered to him, a circumstance which caused the aristocratic party to compass his assassination.

**Cagliostro, Count** (1743–1795), an Italian charlatan whose real name was Joseph Balsamo, who for a time had an extraordinarily successful career at the different courts of Europe. He came to grief in connection with the Marie Antoinette diamond necklace scandal, for which he was imprisoned in the Bastille, but escaped. He was afterwards imprisoned in the London Fleet and at Rome, and died in the fortress of San Leone.

**Caillaux, Joseph,** a prominent French politician, former Minister of Finance in the French Cabinet.

**Caine, Sir Hall** (1853–1931), a well-known novelist, who after spending some years as a journalist joined Dante G. Rossetti, with whom he lived until his death. Subsequently published some sonnets and critical books, and in 1885 produced his first novel, *The Shadow of a Crime*, which was successful and clearly indicated that he had found his vocation. He subsequently produced numerous novels, including *The*

*Deemster*, *The Manxman*, *The Christian*, and in 1904 *The Prodigal Son*. His *The Woman Thou Gavest Me* was one of the fiction sensations of 1913. Several of his novels have been dramatised by himself. In 1915, edited *King Albert's Book*, which was highly successful.

**Cairns, Earl** (1819–1885), was one of the ablest lawyers of his day, who, on entering Parliament in 1852, soon gained a high reputation for eloquence and statesmanship. He was appointed Solicitor-General in 1858 by Lord Derby, was subsequently Attorney-General and a Lord Justice of Appeal, and under Mr. Disraeli became Lord Chancellor in 1868, serving in the same capacity in the second Disraeli Administration. In 1878 he was elevated to an Earldom.

**Calamy, Edmund** (1600–1666), a Puritan theologian who engaged with much enthusiasm in the religious controversies of his time.

**Caldecott, Randolph** (1846–1886), a book illustrator of great merit and humour.

**Calderon de la Barca, Pedro** (1600–1681), a Spanish dramatist of great eminence whose plays number nearly 200. He was writer of court spectacles for Philip IV.

**Caligula, Caius Cæsar**, was the third of the Roman Emperors, who from a peaceful beginning in A.D. 37, worked up to a sanguinary and licentious ending. He was murdered in A.D. 41, after having disgusted the people with his monstrous acts.

**Callcott, Sir Augustus Wall** (1779–1844). Attained great eminence as a landscape painter, being elected R.A. in 1810 and knighted in 1837.

**Callcott, John Wall**, Mus. Doc. (1766–1821) Brother of the preceding. A composer to whom we owe many delightful glees and musical grammar.

**Calvé, Madame Emma** (b. 1866). One of Europe's most famous *prime donne*; made her first appearance as Marguerite in Gounod's "Faust" at Brussels in 1882; sang in Mascagni's "Cavalleria Rusticana" at Covent Garden ten years later. Her greatest part is Carmen.

**Calvin, John** (1509–1564), one of the leading Reformers of the 15th century. Was born in Picardy and attained great popularity as a preacher in Paris, but was expelled, and subsequently lived at Geneva, where he continued to preach the new doctrine, giving it that special shape which resulted in the formation of the Calvinist body, distinguished by its greater austerity from that of the Lutherans. Calvin's writings comprise fifty-three volumes.

**Cambon, M. Paul** (1843–1924), French Ambassador in London, 1898–1920, and one of the authors of the French Treaty with Great Britain.

**Cambridge, H.R.H. the Duke of** (1819–1904), was grandson of George III. and cousin to Queen Victoria. Entered the British Army in 1837, receiving the rank of colonel, and held various appointments in Ireland and elsewhere. In 1854, four years after he had succeeded to the dukedom, was sent to the Crimea to take up a command, and was present at the Battles of the Alma, Balaklava and Inkerman. In 1862 was appointed Commander-in-Chief, a post which he held with no little distinction for 33 years. He resigned in 1895.

**Camden, William** (1551–1623), an antiquary, historian, and master of Westminster School, whose researches, especially in the field of topography, have been of the greatest value. He became Clarencieux King-at-Arms, and was buried in Westminster Abbey. The Camden Society is named after him.

**Cameron, Richard**, one of the Scottish 17th century preachers who raised the standard of revolt in defence of the Solemn League and Covenant; he was, after many vicissitudes, slain in combat near Aird's Moss, Ayrshire, in 1680. The members of the Reformed Presbyterian Church were afterwards called Cameronians.

**Cameron, Verney Lovett** (1844–1894), a noted African explorer who was the first to cross the African continent from east to west. Explored Lake Tanganyika, and made many valuable geographical discoveries. In 1872 went out to find Livingstone, and in 1873 met a party of natives bearing the dead body to the coast.

**Camillus, Marcus Furius** (446–365 B.C.), was five times Dictator of the Roman Republic, a supporter of the patrician order, and one of the most successful of the Roman generals. He died of the pestilence, B.C. 365.

**Camoens, Luis de** (1524–1579), the author of the "Lusiad," the great epic poem of Portugal, which sets forth the adventures of the discoverers of India, and celebrates the achievements of the principal personages in Portuguese history.

**Campbell, John Baron** (1779–1861), an eminent lawyer who entered Parliament in 1830. Became Attorney-General in 1834, Irish Chancellor in 1841, Chancellor of the Duchy of Lancaster in 1846, Chief Justice of the Queen's Bench in 1850, and Lord Chancellor in 1859. He inaugurated important legal reforms in connection with newspaper libel and the power of arrest in cases of disputed debt; and also wrote the *Lives of the Lord Chancellors* and the *Lives of the Chief Justices*.

**Campbell, Rev. R. J.** (b. 1867), one of the popular preachers of the day, and pastor of the City Temple, London, from 1903 to 1915, succeeding Dr. Parker. In 1907 propounded the "New Theology." Has written largely on the war in the press, and early in 1916 joined the Church of England. In Oct. 1917 became Rector of Christ Church, Westminster. Incumbent Holy Trinity, Brighton, 1924–30.

**Campbell, Thomas** (1777–1844), the well-known poet who at twenty-two published "The Pleasures of Hope," a British classic. Many of his lyrics and songs take high rank, notably "Ye Mariners of England," "Hohenlinden," "The Battle of the Baltic," and "The Exile of Erin." He was granted a Crown pension of £200 a year, and was buried in Westminster Abbey.

**Campbell-Bannerman, Rt. Hon. Sir Henry** (1836–1908), Premier and First Lord of the Treasury in the Liberal Ministry formed by him in December, 1905, until shortly before his death in April, 1908. Was educated at Glasgow University and Trinity College, Cambridge. Entered Parliament in 1868. From 1871–1874 was Financial Secretary at the War Office and again from 1880–1882; Secretary to the Admiralty, 1882–1884; and Chief Secretary for Ireland, 1884–1885. In 1886 he was Mr. Gladstone's Secretary for War, and filled the same office also in 1892–1895 under Lord Rosebery. Upon the defeat of the Rosebery Ministry in 1895, Sir Henry was forced into Opposition, and was chosen subsequently to succeed Sir William Harcourt as Leader of his Party. He became Prime Minister at the close of 1905, and formed a Government which received a very large majority at the ensuing General Election. A statue of Sir Henry was unveiled at Stirling by Mr. Asquith, Nov. 1, 1913.

**Canning, George** (1770–1827), entered Parliament in 1793 and became a great orator and a devoted adherent of Pitt, under whom he served first as Under-Secretary of State and later as Treasurer to the Navy. He was Secretary for Foreign Affairs under the Duke of Portland, and in 1827 became Prime Minister, but died four months later.

**Canning, Viscount Stratford de Redcliffe** (1786–1880), cousin of George Canning, was the distinguished diplomatist who carried out many difficult and delicate missions abroad with brilliant success, and was apostrophised by Tennyson as "the voice of England in the East." The statues of the three Cannings stand side by side in the North Transept of Westminster Abbey.

**Canova, Antonio** (1757–1822), an Italian sculptor, whose influence was highly marked, and whose works achieved the first eminence.

**Canute the Great** (995–1035), invaded England with a Danish force, and in 1013 succeeded in dethroning Ethelred the Unready, and setting up his own father, Sweyn, in Ethelred's stead. Sweyn dying in 1014, Canute claimed the crown, but it took him some years to firmly establish himself.

**Capablanca, J. R.** (b. 1888), world's chess champion, 1921–27; defeated by Alekhine.

**Capek, Karel,** Ph.D. (b. 1890), an original Czech author and journalist. His "R.U.R." "Insect Play" and "Adam the Creator" have been produced in England.

**Admiral Eduard von** (b. 1856), succeeded ...niral Tirpitz as head of the German navy in March, 1916, and directed the intensified submarine operations against England.

**Caracalla, Marcus Aurelius** (A.D. 186–217), a native of Gaul, who became Roman Emperor in succession to his father, Severus, when the latter died at York in 211. Caracalla made evil use of his opportunities, proved himself excessively selfish and cruel, and was assassinated by one of his guards.

**Caractacus** was the name by which a Prince of ancient Britain became famed for his resistance to the Romans in the 1st century. He was ultimately captured and taken prisoner to Rome, where the Emperor Claudius was so moved by his dignity of bearing that he pardoned him.

**Carew, Bamfylde Moore** (1693–1770), the son of a Devonshire clergyman, acquired notoriety by long association with gypsies, who styled him their "King."

**Carew, Thomas** (1598–1639), a poet of great tenderness whose graceful songs were highly popular in their day, and long retained their place in collections of British poetry.

**Carey, Henry,** was an illegitimate son of George Savile, Marquis of Halifax, and was very popular for a number of years as a writer of light dramatic pieces, in which lyrics formed a chief feature. His best-known song is "Sally in Our Alley," still familiar to everyone. He died in 1743.

**Carey, William,** D.D. (1761–1834), the first Baptist missionary to proceed to India, and from 1800 to 1830 Professor of Oriental Languages at Port William College, Calcutta. Became famed as an Oriental scholar, and published twenty-four different translations of the Scriptures.

**Carleton, William** (1794–1869), an Irish novelist whose stories had great vogue during the first half of the 19th century. His *Traits and Stories of the Irish Peasantry* are probably unequalled in true depiction of the lives, trials, and humours of the Irish people of the novelist's time. He for many years enjoyed a Crown pension of £200.

**Carlile, The Rev. Prebendary W.,** D.D. (b. 1847), Rector of St. Mary-at-Hill, 1892–1926; founder of the Church Army in 1882; total receipts £446,667 for 1928. An indefatigable worker in this cause. Made Hon. D.D. of Oxford University in 1915.

**Carlyle, Thomas** (1795–1881), was educated at Edinburgh University, and, after passing through some years of teaching drudgery, settled in London in 1824 and began the career of a serious man of letters; but, marrying Jane Welsh in 1826, he returned to Scotland and spent the next few years on a farm at Craigenputtoch, coming to London again in 1834. His *Sartor Resartus* was published in 1838. In 1837 he gave lectures in London, and in 1839 his *Chartism* appeared. His *French Revolution, Past and Present, Life and Letters of Oliver Cromwell, Latter-Day Pamphlets,* and *Frederick the Great* were works of noble conception.

**Carmen Sylva** (1843–1916), the pen name of a former Queen of Roumania, who achieved no small fame as a poetess, as well as for noble charities.

**Carnarvon, Earl** (1866–1923), spent large sums in excavating in Egypt. Discovered tomb of King Tutankhamen in 1923, which proved to be a storehouse of furniture, utensils, and decorative objects of ancient Egypt of almost priceless value.

**Carnegie, Andrew** (1835–1919), b. in Dunfermline, emigrated to America with his father in 1848, and after passing through much menial employment became connected with the Pennsylvania Railroad as Divisional Superintendent at Pittsburg, and ultimately established the Carnegie iron works, from which he retired in 1901 with a fortune of many millions. His munificent gifts for Free Libraries, educational work, and charitable objects generally are well known. In 1913, at the opening of the Palace of Peace at the Hague, of which he bore the cost, he was the recipient of many honours.

**Carnock, Baron (Sir Arthur Nicolson),** (1849–1928), P.C., educated at Rugby and Oxford. Entered the diplomatic service in 1874, and held positions at various embassies—Berlin, Pekin, Constantinople, Athens, Teheran, etc., and was ambassador at St. Petersburg from 1905 to 1910.

**Carnot, General Lazare** (1753–1823), was a prominent figure in the French Revolution, and member of the Committee of Public Safety under Robespierre.

**Carnot, Marie François S.** (1837–1894), grandson of the last-named. Elected to the French National Assembly in 1879, and in 1887 became President of the Republic. Was assassinated at Lyons in 1894.

**Carol, King of Rumania** (b. 1893).

**Caroline, Queen,** wife of George IV. (1768–1821), was married to her husband in 1795 while he was Prince of Wales. The Royal couple lived together only a very short time. When George succeeded to the throne in 1820 the Queen took steps to assert her position, and the King retaliated by having a Bill introduced to dissolve the marriage; the result was the famous trial before the House of Lords, when Lord Brougham distinguished himself by a most eloquent defence of the Queen. The Bill was passed by a narrow majority, but public feeling was too strong on the side of the Queen to admit of its being enforced.

**Carpenter, Edward,** the well-known democratic author-poet. His works include *Love's Coming of Age* (1896) and *My Days and My Dreams* (an autobiography) (1916).

**Carpenter, William Benjamin** (1813–1885), an eminent doctor and scientist, whose *Principles of Physiology* is a standard text-book, and whose deep-sea dredging expeditions yielded rich results.

**Carroll, Lewis.** (*See* **Dodgson, C.**)

**Carson, Rt. Hon. Lord** (b. 1854), had a highly successful career first at the Irish and then at the English Bar, being called to the former in 1877 and to the latter in 1893. M.P. for Dublin University, 1892–1918. Duncairn Division, Belfast, 1918–21. In 1900 was made Solicitor-General and knighted. Was before that first Solicitor-General and then Attorney-General for Ireland. From 1912 to 1914 led a semi-militant organisation against the Home Rule Bill. In the Coalition Government of 1915 was Attorney-General for a few months. First Lord of the Admiralty, Dec., 1916, to July, 1917; and later for a time a member of the War Cabinet. Resigned in Jan., 1918. Lord of Appeal, 1921–29.

**Cartier, Jacques,** the famous 15th-century navigator, born at St. Malo, whose exploration of Canada, and especially of the gulf and river of St. Lawrence, proved of great geographical importance.

**Cartwright, Edmund,** D.D. (1743–1823), invented the power loom, and also a wool-combing machine. Although these inventions were ultimately developed into fortune-making instruments, they benefited their inventor but little, and in 1809 Parliament made him a grant of £10,000. In 1904 a Cartwright Memorial Hall was opened at Bradford, the gift of Lord Masham.

**Caruso, Signor** (1873–1921), a celebrated tenor, was born in Florence, and made his first operatic appearance in his native city. His success was unbounded. Besides being a great singer, he was a man of many activities, and, among other things, was a clever caricaturist.

**Casabianca, Louis** (*c.* 1754–1798), captain of the French flagship *L'Orient* at the Battle of the Nile. He and his ten-year-old son died together in the burning ship, refusing to quit the vessel.

**Casals, Pablo** (b. 1876), a celebrated violoncellist.

**Cassel, Rt. Hon. Sir Ernest,** G.C.B., P.C., etc. (1852–1921), one of King Edward VII.'s personal friends, and a great financier. Endowed, in his Majesty's name, a sanatorium for consumptives at a cost of £200,000. He made a gift of similar amount for the benefit of poor Germans in England and poor English in Germany.

**Cassius, Longinus,** a distinguished Roman general who opposed the Dictatorship of Julius Cæsar, and took part in his murder. He died in 42 B.C., after being defeated by Mark Antony.

**Castlereagh, Lord** (1769–1822), British Minister of War and Foreign Secretary during the Napoleonic wars, who incurred much unpopularity because of the disastrous condition of home affairs. Succeeded to the Marquisate of Londonderry in 1821, and ended his life by suicide the following year.

**Catherine, St.,** was the name borne by a celebrated virgin of Alexandria, who was put to death in 307 for professing Christianity, being, according to some accounts, tortured on a spiked wheel before execution, though other authorities aver that the intended torture was miraculously prevented. From this we get the term "St. Catherine's wheel." Her festival is on November 25th.

**Catherine of Aragon** (1485–1536), first wife of Henry VIII., having previously been the wife of Arthur, Henry's elder brother, who died shortly after the marriage. She was the daughter of Ferdinand and Isabella of Spain. The king divorced her in 1526.

**Catherine II., Empress of Russia** (1729–1796), wife of Peter III., who was murdered; succeeding him, she proved herself a capable ruler for a time, but ultimately gave way to licentious excesses, which almost ruined Russia by their heavy cost. She was called the "Semiramis of the North."

**Catherine de' Medici** (1519–1589), wife of Henry II. of France, and a woman of commanding power and influence, especially during her Regency, which continued while her son Charles IX. was in his minority. Her antagonism to the Protestants led to the Massacre of St. Bartholomew. In spite of her cruelty, she was an able woman, and showed a great appreciation of art and literature.

**Catilina, Lucius Sergius** (108–62 B.C.), made himself notorious for the conspiracy he plotted, but failed to carry to success, against the Consul Cicero.

**Cato, Marcus Porcius** (234–149 B.C.), a Roman statesman, soldier, and writer, of strict virtue, simplicity and wisdom, who strongly condemned the luxury of his time. He was surnamed "the Censor."

**Catullus, Caius Valerius** (87–54 B.C.), an elegant Roman poet, whose lyrics to Lesbia are amongst the finest compositions of the kind in literature.

**Cavaignac, Eugène Louis** (1802–1857), a prominent French General of Republican principles who, on the outbreak of the Revolution of 1848, was made Dictator of Paris, and unsuccessfully opposed Louis Napoleon for the office of President.

**Cave, Right Hon. Viscount,** G.C.M.G. (1856–1928), Lord Chancellor 1922 and again in 1924. Home Sec., 1916–1919. Lord of Appeal in Ordinary, 1919–22. Solicitor-Gen., 1915–16. M.P. Kingston, 1906–18, when he was raised to the Peerage.

**Cavell, Edith** (1865–1915), a British nurse and patriot who assisted wounded British soldiers to escape over the Dutch frontier from Belgium during the Great War. She was shot by the Germans.

**Cavendish, Lord Frederick Charles** (1836–1882), adopted a political career, and gave promise of future eminence, but in 1882, after being appointed Chief Secretary for Ireland, was assassinated along with Mr. Burke in Phœnix Park.

**Cavendish, Sir Thomas** (1560–1592), an English navigator who made many daring attacks upon the Spaniards and secured much booty.

**Cavour, Count di** (1810–1861), a distinguished Italian statesman, who, as Premier to Victor Emmanuel, did much for the unification of Italy.

**Caxton, William** (1422–1491), was born in Kent and employed in commerce for a time. While visiting Flanders he obtained an insight into the then new invention of printing, and afterwards ,set up a printing-press of his own at Westminster.

**Cecil, Rt. Hon. Lord Hugh,** M.P. (b. 1869), fifth son of the third Marquis of Salisbury, was educated at Eton and Oxford, and represented Greenwich in Parliament, 1895–1906; became M.P. for Oxford University, 1910.

**Cecil, 1st Viscount of Chelwood,** P.C., 1915, K.C. (b. 1864), third son of the third Marquis of Salisbury. Chancellor of Duchy of Lancaster, 1924–1927. M.P. East Marylebone, 1906–10; Hitchin, 1911–23. Under-Secretary for Foreign Affairs, 1915–16; Assistant Secretary of State for Foreign Affairs, 1918. Took a prominent part in the 1919 Peace Conference, especially in respect of the drafting of the League of Nations. Lord Privy Seal, 1923–24; Chancellor of the Duchy of Lancaster, 1924. Awarded $25,000 prize and medal from Woodrow Wilson Foundation for meritorious services in the cause of international co-operation and peace, Dec., 1924.

**Cecil, Rt. Rev. Lord William Gascoyne,** Bishop of Exeter since 1917 (b. 1863). Rector of Bishops Hatfield, 1888–1917; second son of third Marquis of Salisbury.

**Cecilia, St.,** the patron saint of music. Was a Christian martyr of the 2nd or 3rd century. She is said to have been the first to introduce instrumental with vocal music into Christian worship. Her festal day is November 22nd.

**Cerdic,** a Saxon who invaded Wessex in the early part of the 6th century, and made himself ruler of that kingdom, becoming ancestor of the English Royal line. He conquered the Isle of Wight in 530.

**Cervantes** (1547–1616), famous throughout the world as the author of *Don Quixote*. He had a most adventurous career, taking part in many military expeditions, and not turning to literature until his retirement from the profession of arms. In spite of the great success of his work, he died in poverty.

**Cézanne** (1839–1906), a French painter of power and originality, and intimate friend of Emile Zola.

**Chad, St.,** was Bishop of York and subsequently of Mercia in the 7th century.

**Chaliapin, Feodor Ivanovich** (b. 1873), a world-famous Russian opera singer, a bass with great dramatic gifts.

**Chamberlain, Rt. Hon. A. Neville,** M.P. (b. 1869), second son of late J. Chamberlain; Ld. Mayor of Birmingham, 1915–16; Minister of Health, 1923 and 1924; Chan. of Exchequer, Aug. 1923–Jan. 1924 and 1931.

**Chamberlain, Rt. Hon. Joseph** (1836–1914), was born at Camberwell Grove, London. Made a fortune in screw manufacture in Birmingham, after which he did much active municipal work at Birmingham. In 1876 he entered Parliament, and became a national political figure. At first he was an enthusiastic Liberal with Republican tendencies, and served various offices under Mr. Gladstone. When the Home Rule split occurred, he became the most active member of the Liberal-Unionist party. In 1895 he accepted office as Secretary of State for the Colonies under Lord Salisbury, and in that post won a great reputation, notwithstanding the fact that during his term of office he had the Boer War to contend with, and that outside his own party he was regarded as being the chief author of the trouble. In May, 1903, he caused great sensation by suddenly advocating a scheme of fiscal reform, involving a partial return to Protection. This policy, for the better advocacy of which he resigned the Colonial Secretaryship, was afterwards adopted as one of the leading planks of the Unionist platform. Mr. Chamberlain was incapacitated by illness from parliamentary duties for some years prior to his death.

**Chamberlain, Rt. Hon. Sir J. Austen,** K.G., M.P. (b. 1863), Foreign Secretary, Nov. 1924; Lord Privy Seal, 1921–22, eldest son of late Joseph Chamberlain, and has represented East Worcestershire, 1892, and West Birmingham, 1914. Has filled the positions of Civil Lord of the Admiralty, Financial Secretary to the Treasury and Postmaster-General, and from 1903 to 1905 was Chancellor of the Exchequer; again in 1919. Secretary for India in the Coalition Government from 1915 to July, 1917. Received Knighthood with the Garter in 1925 for very prominent part he played at the Locarno Conference.

**———, Robert** (1802–1871), the younger of the brothers William and Robert Chambers, the well-known publishers of popular literature and founders of *Chambers's Journal*. Early showed literary gifts, besides being a chief contributor to the *Journal* and other publications issued by the firm.

**Chambers, William** (1800–1883), brother of the last-named. Was the business genius of the firm, and by high character and public spirit was much esteemed by his fellow-citizens, becoming Lord Provost of Edinburgh.

**Chambers, Sir William** (1726–1796), a British architect, who rebuilt Somerset House in 1775.

**Champlain, Samuel de** (1567–1635), a French navigator who founded Quebec in 1608, and in the following year discovered the lake known by his name.

**Chancellor, Richard,** the trade pioneer and seaman, who in 1553 made his way to Moscow and negotiated a trading treaty for England with Russia, which led to the formation of the Moscovy Company.

**Channing, William Ellery** (1780–1842), an American Unitarian Minister and writer, whose efforts in the cause of slavery abolition were greatly appreciated.

**Chantrey, Sir Francis** (1781–1842), a renowned English sculptor who contributed many fine statues to Westminster Abbey and St. Paul's. He was made an R.A. in 1818, and received a knighthood in 1836. He left a considerable fortune to the Royal Academy, to take effect after Lady Chantrey's death, and to be appropriated in the purchase of works of art for the encouragement of sculpture and painting.

**Chaplin, Charles S.** (b. 1889), has gained world-wide fame as film-star comedian.

**Chapman, George** (1559–1634), an Elizabethan dramatist, who acquired more fame by his translation of Homer than by his plays. Keats' sonnet on reading Chapman's "Homer" is a splendid tribute to the old dramatist.

**Charlemagne** (742–814), a wise and powerful ruler, general, and statesman, who from being King of the Franks became Emperor of the Romans, and governed an empire comprising Gaul, Italy, and large parts of Spain and Germany.

**Charles Edward** (Stuart), the "Young Pretender" as he came to be called (1720–1788), grandson of James II., and the hero of 1745, lived in exile after Culloden, and his later career was mainly one of dissipation.

**Charles I.** (1600–1649), succeeded his father James I. as King of England in 1625, and from the first was in more or less conflict with Parliament. His monetary demands and unjust taxation led to the violent opposition which resulted in the Civil War, the story of which is known to every reader of history. He was beheaded in front of the Banqueting House at Whitehall, Jan. 30, 1649.

**Charles II.** (1630–1685). Was in command of the Royalist forces in the West during the Civil War, and escaped to the Continent after Naseby. Subsequently he became King at the Restoration, and, following upon the sober quietude of the Commonwealth period, formed an acceptable change to the people at large until, by his excesses, of one kind and another, he proved his unkingliness of character. He contrived to keep himself fairly popular, however, despite his extreme selfishness.

**Charles V.** (1500–1558) was the dominating European figure for many years, being Emperor of Germany and King of Spain, at a time when his tactful policy enabled him to guard the interests of both Catholics and Protestants with considerable success.

**Charles XII. of Sweden** (1682–1718) was a brave but impulsive monarch whose rule was distinguished for a fearless and often foolhardy policy of war, in the execution of which he sometimes sustained serious defeat. Peter the Great was victorious over him at Pullowna, and he was killed at the siege of Frederikshall, Norway.

**Charlotte, Princess Augusta** (1796–1817), only daughter of George IV., married Leopold I. of Belgium in 1816 and died the following year.

**Chassepot, Antoine** (b. 1833), was the inventor of the breech-loading rifle bearing his name, and used by the French army against the Germans in 1870–1871, but now long superseded.

**Chateaubriand, François René** (1768–1848), had an adventurous and somewhat eccentric political career, but in the midst of it all he contrived to write a number of stories, poems and essays, which give him a prominent place in French literature. His *Atala* and *The Martyrs* are works of genius.

**Chatham, William Pitt, Earl of** (1708–1778), had a long and distinguished career as a statesman, and was the most eloquent Parliamentarian of his time. In the long conflict with France that preceded the American War of Independence, Chatham showed great resourcefulness and vigour, but his patriotic efforts were of little avail against the obstinacy of the King and his party, and he ultimately retired from contention, only making a last appearance in the House of Lords to urge a greater resistance to the American Colonists, and, after a powerful speech, fell back in an apoplectic fit and died a few weeks later, being buried in Westminster Abbey.

**Chatterton, Thomas** (1752–1770), was the son of a Bristol sexton, and as a youth in his teens offered a number of MS. poems, ballads, and records as having been unearthed by him from an old chest in the Church of St. Mary, Redcliffe. These were afterwards proved to be by Chatterton himself, and gave him a position as a poet. He went to London, but met with such ill success that in his despair he poisoned himself.

**Chaucer, Geoffrey** (*circa* 1340–1400). Achieved immortality by his "Canterbury Tales," giving a most graphic description of the life and characters of his time. He was buried in Westminster Abbey.

**Chekhov, Anton** (1860–1904), a Russian dramatist and short-story writer whose work has been translated into English and much appreciated.

**Chelmsford, Viscount,** G.C.S.I., G.C.M.G., G.C.I.E., G.B.E. (b. 1868), First Lord of the Admiralty in first Labour Government, 1924, has filled the posts of Governor of Queensland and Governor of New South Wales; Viceroy of India, 1916–1921.

**Chen, Eugene,** prominent in Chinese Civil War, 1927. Was born in Trinidad. He was there a solicitor and his proper name is E. B. Acham.

**Cherubini, Maria Luigi** (1760–1842), an Italian musical composer who spent the best part of his life in Paris, and there wrote operas, masses, and other compositions instinct with melodic grace.

**Chester, Bishop of,** since 1919 (**Rt. Rev. Henry L. Paget,** D.D.) (b. 1853).

**Chesterfield, Earl of** (1694–1773), the fourth Earl, and a statesman of note. His fame rests, however, upon his *Letters to his Son*, which for purity of style and grace of expression have seldom been excelled, though the moral they point is not always one that modern ideas would endorse.

**Chesterton, G. K.** (b. 1874), one of the most active of our modern writers. Contributor to the *Illustrated London News*, etc., and keeps himself in evidence in many literary and journalistic quarters; handles social questions, art, politics, and criticism with equal dexterity and audacity. Has published studies of the lives and works of Robert Browning and Charles Dickens.

**Cheyne, Rev. T. K.,** D.Litt., D.D. (1841–1915), Fellow of Balliol College, and in 1885 appointed Oriel Professor at Oxford and Canon of Rochester. Was a member of the Old Testament Revision Committee, and prolific writer on Biblical subjects.

**Chillingworth, William** (1602–1644), a divine whose *Religion of Protestants* was an influential book. Had a rather curious career, in later life being converted to Romanism from Protestantism, and then turning to Protestantism again and joining the Royal forces on the breaking out of the Civil War, when he was taken prisoner and died.

**Chippendale, Thomas,** a celebrated designer of furniture whose examples are now highly prized and fetch big prices. He was a native of Worcestershire, but made his name in London, having a shop in St. Martin's Lane. Flourished 1760.

**Chirol, Sir Valentine** (1852–1929), director of the foreign department of *The Times*, 1899–1912, and a writer of special weight and authority on Eastern subjects.

**Chisholm, Hugh** (1866–1924), editor of the *Encyclopædia Britannica*, educated at Felsted and Oxford (Corpus Christi), was on the editorial staff of *The Times*, a frequent contributor to the chief reviews.

**Choate, the Hon. Joseph Hodges** (1832–1917), an eminent American lawyer and politician, who was United States Ambassador to Great Britain from 1899 to 1905.

**Chopin, Frédéric F.** (b. at Warsaw, 1810, d. in Paris, 1849). A celebrated composer and pianist, who settled in Paris in 1831 and immediately took up a prominent position, and in the next few years gave to the world some of the most beautiful compositions for the piano ever written. He lived a life of romance, and died of consumption at 39.

**Christie, Sir W. H. M.**, K.C.B. (1845–1922), was educated at Trinity College, Cambridge, of which he became a Fellow. In 1870 was appointed Chief Assistant at the Royal Observatory, and was Astronomer Royal from 1881 to 1910. He wrote a *Manual of Elementary Astronomy*, and was the inventor of valuable improvements in instruments of astral observations.

**Christopher, St.**, was a martyr of the 3rd century, to whom great feats of strength were attributed; he belongs both to the Roman and Greek Churches. His festival day in the former is July 25th and in the latter May 9th.

**Chrysostom, St. John** (347–407), a prominent father and saint of the Greek Church who was made Archbishop of Constantinople and was famous for his eloquent preaching and persuasive writing.

**Churchill, Lord Randolph** (1849–1895), was the second son of the sixth Duke of Marlborough. Entered Parliament in 1874, and four years later became prominent on the Conservative side for his scathing attacks on what he called the "Old Gang" of his own Party, and was one of Mr. Gladstone's most severe critics. In 1885 he became Secretary for India, and in the following year was Chancellor of the Exchequer and Leader of the House of Commons, but after a few months of brilliant work resigned on some difference of opinion with his colleagues, and never again held office. After 1891 failing health diminished his powers, and he died in 1895 without having quite fulfilled his splendid promise.

**Churchill, Rt. Hon. Winston S.**, C.H., M.P. (b. 1874), son of the last-named. Chancellor of Exchequer November, 1924–29. He went through the Spanish Campaign in Cuba. Was with the British force during the Indian frontier troubles of 1897–1898; served in the Soudan Campaign, and during the Boer War had many dramatic adventures and wrote some excellent letters to the papers. During more recent years has been a prominent figure in Parliament, and worked heartily for the Conservatives until Mr. Chamberlain brought out his fiscal proposals, when he declared against them in the most emphatic manner, and eventually joined the Liberal ranks. From 1905 to 1908 was Under-Secretary for the Colonies; 1908–10 President of the Board of Trade; Home Secretary, 1910–11. First Lord of the Admiralty, 1911–15; Chancellor of the Duchy of Lancaster, 1915. Served at the front for a time. Returned to the House of Commons in 1916; Minister of Munitions, 1917; Minister of War, 1918–21; Minister of Air, 1919–21. Sec. of State for the Colonies, 1921–22. Rejoined the Conservatives in 1924.

**Cibber, Colley** (1671–1757), a London actor and dramatist of great repute in his day. "The Careless Husband," and "Love's Last Shift" are the best of his comedies. Poet Laureate, 1730–57.

**Cicero, Marcus Tullius** (106–43 B.C.), a Roman Republican orator and philosopher. His younger brother, Quintus Tullius Cicero (102–43 B.C.), was a Roman soldier of some note. Both were slain.

**Cid**, the name given to the famous Spanish knight, Don Rodrigo Diaz, Count of Rivar (1026–1099), whose exploits in battle and adventure made him the national hero. He drove the Moors out of Spain before he had completed his twentieth year.

**Cimabue, Giovanni** (1240–1302), a Florentine painter, master of Giotto, and the leader of the movement which led to the formation of what is called the Florentine school. His frescoes are of great beauty.

**Clare, John** (1793–1864), a humble Northamptonshire peasant poet, whose "Poems of Rural Life and Scenery" and "The Village Minstrel" contain some very beautiful sentiments and depictions. His later years were spent in a lunatic asylum.

**Clarendon, Edward Hyde, 1st Earl of** (1609–1674), a statesman of great ability who filled the office of Lord High Chancellor under Charles II., and for a time was in high favour, but, refusing to pander to Charles's whims, was dismissed and went to live in retirement. His *History of the Rebellion* is a valuable work, having the advantage of being written by one who was a witness of, and often an important figure in, the events described. His daughter Anne was the wife of the Duke of York, afterwards James II., and it was her daughter who became Queen Anne. Clarendon died in exile at Rouen.

**Clarendon, George Wm. Fredk. Villiers, 4th Earl of** (1800–1870), an English diplomatist and statesman; Minister to Spain, 1833–1839, Lord Privy Seal in 1840, and subsequently Lord Lieutenant of Ireland, Plenipotentiary in Paris, and three times Foreign Secretary under Palmerston, Russell, and Gladstone respectively.

**Clarendon, George Herbert Hyde Villiers, 6th Earl of** (b. 1877), Parl. Under-Sec. of State for Dominion Affairs, 1925–26; Chairman B.B.C., 1927–30; became Governor-General of the Union of South Africa, 1931.

**Clark, Sir Andrew, Bart** (1826–1893), one of the most distinguished doctors of his day and a great authority on lung diseases.

**Clarke, Sir Edward**, K.C., P.C. (1841–1931), one of the most eminent counsel of his day. Entered Parliament in 1880, and was Solicitor-General from 1886 to 1892. At the General Election in 1906 he was returned for the City of London, with the Hon. A. Gibbs, the latter shortly afterwards retiring in favour of the Rt. Hon. A. J. Balfour, who had been defeated at Manchester. Sir Edward eventually resigned his seat. He received his early education at the City of London College and evening classes of King's College, London. Retired from the Bar, 1914.

**Clarkson, Thomas** (1760–1846), was one of the leaders of the Negro Emancipation movement, to which he devoted the main part of his life.

**Claude of Lorraine** (1600–1682), the most famous landscape painter of his century. His real name was Claude Gelée, and he was born at Chamange in the Vosges, going from France to Rome as a lad, and there laying the foundation of his world-wide celebrity. He lived in Rome most of his life.

**Claudius I.** (10 B.C.–A.D. 54), Emperor of Rome, who succeeded his nephew Caligula. He was the grandson of Tiberius Claudius Nero, erected many imposing buildings in Rome, and visited Britain. In his later years he became the tool of favourites, and was poisoned by his wife, Agrippina.

**Clay, Frederic** (1839–1889), an English musical composer of light operas. Best known by his "Princess Toto" and "The Merry Duchess."

**Clay, Henry** (1777–1852), an American orator and politician.

**Clemenceau, Georges Eugène** (1841–1929), a prominent French statesman and editor of strong Radical tendencies who supported General Boulanger for a time and then bitterly opposed him. Was still a leading exponent of French Radicalism, though he sacrificed his independent position to become Premier and Minister of the Interior in October, 1906–1909. Prime Minister and Minister for War, France, 1917–20. He was a great orator, and a sturdy defender of Dreyfus.

**emens, Samuel** ("Mark Twain") (1835–1910). After the Civil War drifted into journalism,

making himself popular as a humorist in 1869 by his *Innocents Abroad*, the result of a trip to Europe. From that time he was actively employed in producing works of humour and editing. Among his other works may be mentioned *A Tramp Abroad*, *Tom Sawyer*, *Huckleberry Finn*, and *Pudd'nhead Wilson*. Visited England in 1907 and was made a D.C.L. of Oxford.

**Clement, St.**, Bishop of Rome in the 1st century, and according to tradition, the third prelate of the Holy See after St. Peter.

**Cleopatra** (69–30 B.C.), the famous Egyptian Queen whose beauty fascinated Julius Cæsar, whom she accompanied to Rome. After Cæsar's death, she returned to Egypt and subdued Antony as she had subdued Cæsar, and on Antony's death ended her life by poison, the tradition is, by applying an asp to her bosom.

**Cleveland, Stephen Grover** (1837–1908), President of the United States from 1885 to 1889 and from 1893 to 1897. A strong Democratic statesman, who at the commencement of his second Presidency convened an extra session of Congress which repealed the purchasing clause of the Sherman Silver Bill.

**Clifford, Sir Hugh,** G.B.E. (b. 1866), a distinguished Colonial Administrator.

**Clifford, Rev. John,** C.H. (1836–1923), worked in a lace factory as a boy, entered the General Baptist College in 1855, qualified for the ministry, and became pastor of Praed St. Church, Paddington, afterwards taking degrees at London University. Westbourne Park Chapel, opened in 1877, was the scene of his ministrations until his retirement in 1915. An ardent political Nonconformist. Wrote numerous religious works. Twice President of the Baptist Union, also President of the National Council of Free Evangelical Churches.

**Clive, Robert, Lord** (1725–1774), went out to India as a clerk in the service of the East India Company when 17, and during the diplomatic difficulties which arose between England and France attracted the attention of his superiors by some able suggestions for the curbing of the French influence. In the war that followed he was given a command and displayed such remarkable military genius that he virtually became Commander-in-chief. In the troubles that followed with the native rulers, he was equally resourceful, and succeeded in laying the foundation of the British Empire in India on a secure basis. On his return to England in 1760 he was raised to the peerage. His latter years were marked by mental disturbance and ultimately he committed suicide.

**Clotilda, St.** (475–545), was the wife of Clovis, King of the Franks. She converted the king to Christianity and lived so good a life that she was canonised after her death.

**Clough, Arthur Hugh** (1819–1861), an English poet of great earnestness of purpose and breadth of mind. His best known poems are "The Bothie" and "The Tragedy of Dipsychus." Matthew Arnold's "Thyrsis" is dedicated to his memory.

**Clovis** (465–511) was the founder of the Merovingian line of Frankish kings, and a convert to Christianity. He defeated the Burgundians and West Goths, and fixed his court at Paris.

**Clyde, Colin Campbell, Lord** (1792–1863), a British General who served in the Peninsular and Crimean wars, and made a great reputation as Commander-in-Chief in India during the Mutiny, after which he was raised to the

**Clynes, Rt. Hon. J. R.**, P.C., M.P. (b. 1869), M.P., Platting—Home Sec., 1929. Lord Privy Seal and Leader of the House of Commons, Jan.–Nov., 1924; Chairman Parliamentary Labour Party, 1921–22.

**Coates, Albert** (b. 1882), was the principal conductor of the Imperial Opera, Petrograd; a famous conductor at Covent Garden, New York, Rochester and other musical centres.

**Cobbe, Frances Power** (1822–1904), a talented and powerful writer on a wide range of social and religious subjects, including women's rights.

**Cobbett, William** (1762–1835), a politician and controversialist, who, through the medium of his *Political Register*, attacked both Radical and Tory in turn. Entered Parliament in 1832.

**Cobden, Richard** (1804–1865), the son of a Sussex farmer, who afterwards became a commercial traveller, and during the Corn Law Agitation came into great prominence as an advocate of Free Trade. He devoted himself so completely to this cause, that for some years he entirely neglected his business affairs and in recognition of his services a subscription of £80,000 was raised for and presented to him. He entered Parliament in 1841, and except for an interval of two years remained a member till his death. In 1860 he negotiated a commercial treaty with France which was of great benefit to the trade of this country. Titles and other honours were offered to him, but declined.

**Cobham, Sir Alan,** K.B.E., knighted in 1926 (b. 1894); a famous aviator who flew from London to Capetown and back in 1926; also to India and back, and has flown to Australia.

**Cochran, Charles Blake** (b. 1872), a prominent London theatrical manager.

**Cocker, Edward** (1631–1675), a famous arithmetician, whose arithmetic went through 112 editions. "According to Cocker" is still a popular phrase.

**Coke, Sir Edward** (1552–1634), an eminent English judge.

**Coleridge, Samuel Taylor** (1772–1834), one of the great poets of the early part of the 19th century, whose "Ancient Mariner" and a few other poems stand unsurpassed for poetic beauty and originality.

**Coleridge-Taylor, S.** (1875–1912), musical composer, who was trained at the Royal College of Music, and in 1898 had an "Orchestral Ballade" performed at the Gloucester Festival. The following year he produced his cantata, "Hiawatha," and in 1911 composed the music for Alfred Noyes's "Peace Poem."

**Colet, John** (1467–1519), was Dean of St. Paul's and founder of St. Paul's School. Among his pupils were Milton, Marlborough, Halley and Pepys.

**Collier, Hon. Philip,** M.L.A., Premier of Western Australia; Treasurer and Minister for Forests and Industries, 1924–30; became Leader of Parliamentary Labour Party in opposition, 1930.

**Collins, Michael** (1890–1922), was General C.-in-C. Irish Free State forces; Minister of Finance, 1921–22; Chairman of Provisional Gov. of Irish Free State, Jan.–August, 1922. Shot in ambush Aug., 1922.

**Collins, Mortimer** (1827–1876), poet, novelist, and miscellaneous writer, and at one time mathematical master at Elizabeth College, Guernsey.

**Collins, William** (1788–1847), a noted landscape and figure painter, and father of Wilkie Collins.

**Collins, W. Wilkie** (1824–1889), the novelist, was for many years associated with Charles Dickens, and wrote *The Dead Secret*, *The Woman in White*, and *No Name*.

**Colman, George** (1732–1794), a dramatist of considerable versatility, whose "Jealous Wife" and "The Clandestine Marriage" (the latter written in conjunction with Garrick) long held the stage.

**Colman, George,** the younger (1762–1836), son of the foregoing and also a dramatist of considerable repute. He wrote "The Poor Gentleman," "The Heir-at-Law," and other pieces, and was an exacting examiner of plays under the Lord Chamberlain.

**Colt, Samuel** (1814–1862), of Hartford, Connecticut, invented the revolver and patented it in 1835. It was some time before its utility was recognised, but after being used with great effect in the war with Mexico it was universally adopted.

**Columba, St.** (521–597), the founder of the monastery of Iona, was a native of Ireland. From his lonely island shrine he made frequent missionary journeys to the Highlands of Scotland, where he made many converts and was greatly revered.

**Columbus, Christopher** (1447–1506), the famous navigator, who, prevailing upon Ferdinand and Isabella of Spain to bear the expense of an expedition of discovery, set out on his first voyage in 1492. He first discovered the Bahamas, Cuba, and other West Indian islands, and, on his third voyage, in 1498, landed on the lowlands of South America.

**Colvin, Sir Sydney** (1845–1927), friend of R. L. Stevenson and biographer of Keats. Was Keeper of Prints at the British Museum, 1884–1912. Author of numerous works on art and literature.

**Combe, Andrew** (1797–1847), a celebrated physician, who was the author of several works on phrenology and physiological science, and was appointed physician to Queen Victoria in 1838.

**Combe, George** (1788–1858), elder brother of the above; an eminent philosopher and author, who first introduced phrenology into Britain. Both the brothers Combe were born in Edinburgh.

**Combe, William** (1741–1823), a clever and witty poet, the author of *The Tour of Dr. Syntax*; he was an adventurer, and passed forty-three years within the King's Bench Prison as a debtor.

**Combes, M. Emile** (1839–1921), a leading French statesman, who after spending some years in the medical profession entered political life and made a prominent position for himself. In 1885 he was made Senator; in 1891 was Minister of Public Instruction, and in 1915–16 was Minister of State.

**Comte, Auguste** (1798–1857), a French philosopher and founder of the "Positive" school of philosophy. He has exercised great influence upon modern political economy, and his system of philosophy was warmly taken up in this country.

**Condé, Louis II.** (1621–1686), called the Great Condé, was a distinguished military commander.

**Congreve, William** (1670–1729), was a famous Restoration dramatist, whose comedies of manners reflect the grossness of his age only too closely, but are redeemed by the brilliancy of his wit. He was buried in Westminster Abbey.

**Congreve, Sir William** (1772–1828), invented the Congreve rocket, which gave him fame and fortune. He was a lieutenant-colonel in the British Army.

**Connaught and Strathearn, H.R.H. the Duke of,** K.G., K.P., P.C., G.C.M.G., G.C.V.O. (b. 1850), third son of Queen Victoria. Entered the army, and held a command in the Egyptian Expedition of 1882. Was made Field-Marshal in 1902. Was Commander-in-Chief at Aldershot from 1893 to 1898, and in 1904 was made Inspector-General of the Forces. From 1907 to 1909 was Commander-in-Chief of the Mediterranean Forces. In 1910 opened the Parliament of the South African Confederation; and from 1911 to 1916 was Governor-General of Canada.

**Conrad, Joseph** (1857–1924), a novelist and master in the merchant service, who wrote some fine sea stories, strong in plot, and full of the true salt flavour. He was a Pole, but had for many years resided when on land in England. His first novel of note was *Almayer's Folly*, 1895. Awarded Civil List pension in 1911.

**Constable, John,** R.A. (1776–1837), was a native of East Bergholt, Suffolk, and became one of the greatest of English landscape painters. He had long to wait for recognition, but ultimately attained high honour and exerted a strong influence in the development of landscape art.

**Constant, Benjamin** (1845–1902), a famous French painter of Oriental subjects and portrait painter. His "Prisoners in Morocco," "The Harem," and "The Emir's Favourite," are among his more celebrated pictures.

**Constantine the Great** (c. 272–337). Emperor of Rome from 306 to his death. He extended the Empire to Byzantium, called Constantinople in his memory.

**Constantine I.** (1868–1923), King of Greece, 1913–17, and 1920; married Princess Sophia of Prussia, sister of the Kaiser. After outbreak of war in 1914, professed neutrality, but was secretly helping Germany. M. Venizelos set up a national movement, and in June, 1917, the Entente Powers forced Constantine to abdicate, putting his son Alexander on the throne. In 1920 Alexander died. At the elections shortly afterwards M. Venizelos was defeated and resigned, and as the result of a plebiscite Constantine was recalled, but exiled in 1922.

**Conway, William Martin (Baron Conway of Allington),** M.A., LL.D., F.S.A., F.R.G.S. (b. 1856), M.P. for the combined English Universities, 1918–31, an intrepid mountain climber and explorer, having climbed the Himalayas (23,000 ft.) and Aconcagua (23,000 ft.). A prolific writer on mountaineering.

**Cook, Sir Edward Tyas,** K.B.E. (1857–1919), an eminent journalist and author, who edited in turn the *Pall Mall Gazette*, the *Westminster Gazette*, and the *Daily News*. Edited a complete edition of Ruskin's works, and in 1911 published a Life of the great critic. Knighted in 1912.

**Cook, Captain James** (1728–1779), an adventurous navigator, whose *Voyages Round the World* is a classic. He made many discoveries in the name of Great Britain, including the Sandwich Islands. He was murdered at Hawaii by natives.

**Cooke, Sir William Fothergill** (1806–79), an English electrician, associated with Wheatstone in the perfection of the telegraph.

**Coolidge, Calvin** (b. 1872), President of U.S.A., [1923–29.

**Cooper, Sir Astley** (1768–1841), one of the greatest surgeons of his time, and the author of several important medical text-books.

**Cooper, Gladys (Lady Pearson)** (b. 1889), a popular English actress.

**Cooper, James Fenimore** (1789–1851), was a very popular American novelist, who from about 1820 to the time of his death produced a succession of stirring stories of adventure, which enjoyed much popularity, among them *The Spy*, *The Last of the Mohicans*, *The Pathfinder*, and *The Deer Slayer*.

**Cooper, Thomas** (1805–1892), poet, lecturer, and Chartist advocate; once a prominent sceptic, but later a Baptist preacher. His *Purgatory of Suicides* attracted considerable attention.

**Cooper, Thomas Sidney** (1803–1902), a gifted animal painter.

**Coote, Sir Eyre** (1726–1783), a distinguished Anglo-Indian general, brilliantly defeated Hyder Ali at Porto Novo in 1781.

**Copernicus, Nicolas** (1473–1543), the famous Polish astronomer who propounded the astronomical system which bears his name. He was a Prussian doctor and canon of the chapter of Frauenburg.

**Coppée, François** (1842–1908), one of the most popular of modern French writers, who, as poet, novelist and dramatist, was equally successful.

**Coquelin, Benoit C.** (1848–1909), eminent French actor ("Coquelin aîné"), and Coquelin, Ernest ("Coquelin cadet"), his youngest brother (1848–1909), were leading lights of the Théâtre Français.

**Corday, Charlotte** (1768–1793), a member of a noble Norman family, who, conceiving a bitter hatred against Marat, whom she regarded as the author of the terrors of the French Revolution, assassinated him, and was afterwards guillotined.

**Corelli, Marie** (1864–1924), a novelist whose works had a very extensive circulation and cover a wide field of observation. Since the publication of her first novel, *A Romance of Two Worlds*, in 1886, was constantly before the public. *Barabbas*, *The Sorrows of Satan*, *The Master Christian*, *The Treasure of Heaven*, are characteristic works.

**Coriolanus, Caius Marcius,** the hero of one of Shakespeare's plays, who, after conquering Corolli, was condemned to exile by the Roman Senate, took refuge with the Volscians, and led their army against the Romans, but was prevailed upon to retire. He lived in the first half of the fifth century B.C.

**Corneille, Pierre** (1606–1684), the French tragic dramatist, whose "Cid," "Polyeucte," "Le Menteur," and other plays marked a new era in French dramatic production.

**Cornwall, Rt. Hon. Sir E. A.** (b. 1863), Deputy Chairman of Ways and Means, House of Commons, 1919–22. Comptroller of the Household, 1916–19. M.P. for N.E. Bethnal Green, 1906–22. Chairman of the L.C.C., 1905–6.

**Cornwallis, Marquis** (1738–1805), commander of the British forces which surrendered to the Americans at Yorktown in 1781, thus ending the War of Independence; was twice Governor-General of India.

**Corot, Jean Baptiste** (1796–1875), a French landscape painter of great repute.

**Correggio, Antonio Allegri da** (1494–1534), the great Italian painter of the Lombard School, whose "Ecce Homo" is in the British National Gallery.

**Cortes** (or **Cortez**), **Hernando** (1485–1547), a Spanish adventurer who earned great renown by capturing Mexico for Spain, and held that country in subjection for ten years.

**Cort, Henry** (1740–1800), was a native of Lancaster, and settled in Hampshire in 1775, and, by his invention of the "puddling" process for converting pig-iron into malleable metal, entirely revolutionised the iron manufacture. The Government took up his invention for the dockyards at Portsmouth, and it was expected that Cort would make a large fortune, but a Mr. Jellicoe ruined him by a series of frauds.

**Cosgrave, Wm. T.** (b. 1880), President of Executive Council, Irish Free State, 1922; re-elected, Sept., 1923; Minister for Finance, 1923; Minister for Defence, 1924.

**Costa, Sir Michael** (1810–1884), came from Italy to England in 1829, and thenceforward was a prominent member of the English musical world. As conductor of the Handel and other Festivals he was of great service, and his oratorios "Eli" and "Naaman" showed musicianal qualities without any special inspiration. He was knighted in 1869.

**Coué, Émile** (1857–1926), a famous French psychotherapeutist, an authority on auto-suggestion.

**Courtney, William Leonard** (1850–1928), an editor, author, and critic of eminence, whose books on philosophical and literary subjects are of great merit, was editor of the *Fortnightly Review* and on the staff of the *Daily Telegraph*.

**Cousin, Victor** (1792–1867), a French philosopher who founded what is called the Eclectic school of Modern Philosophy. His writings cover nearly the whole field of philosophy.

**Cousins, Samuel** (1801–1887), the greatest mezzotint engraver of his day, whose plates after Reynolds, Millais, Landseer, and Hogarth reach the highest point of this kind of art work. He was elected R.A. in 1855.

**Coverdale, Miles** (1488–1568), one of the early English Reformers, was born in Yorkshire, and afterwards became a monk of Norwich and later Bishop of Exeter. He collaborated with Tyndale in translating the Bible; the Psalms still used in the Prayer Book are taken from their translation.

**Coward, Noel** (b. 1899), a successful playwright and actor. Among his plays are "The Vortex," "Easy Virtue," and "Bitter Sweet" (an operetta).

**Cowdray, Viscount** (1856–1927), President of the Air Board 1917 (resigned), formerly Sir Weetman D. Pearson, was one of the most famous contractors, and president of S. Pearson and Son, Ltd., constructors of the Blackwall Tunnel, East River Tunnels, New York, National Harbour at Dover, and numerous other public works, railways, harbours, etc., in Great Britain, Mexico, and elsewhere. He represented Colchester in Parliament from 1895 to 1910, when he was raised to the peerage as Baron Cowdray, and made Viscount in 1917.

**Cowen, Sir Frederic H.** (b. 1852), an English composer with a very graceful turn for melody, who has contributed many cantatas, operettas, anthems, and ballads to the stock of English modern music.

**Cowen, Joseph** (1831–1900), was for a long time a prominent figure in English politics. He was a vigorous speaker, took an intense interest in movements for the good of the people, and was also an ardent disciple of Mazzini.

**Cowley, Abraham** (1618–1667), an English poet of the Charles I. and II. period, and a loyal supporter of the Stuarts.

**Cowper, William** (1731–1800), an English poet imbued with much piety of sentiment and a remarkable poetic talent. His "Task" is one of the great poems of the 18th century.

**Cox, David** (1783–1859), an eminent landscape painter—son of a Birmingham blacksmith—whose pictures are thoroughly English in spirit and treatment.

**Cox, Harold** (b. 1859), was for several years secretary of the Cobden Club, and has written largely on Free Trade and the economic side of political questions; was elected Liberal member for Preston in 1906, but lost his seat in 1910. Editor of the *Edinburgh Review*, 1912–29.

**Coxwell, Henry Tracy** (1819–1900), an enterprising aeronaut who made 700 balloon ascents, and in company with Mr. Glaisher, the astronomer, made the highest recorded ascent of 7 miles in 1862.

**Crabbe, George** (1754–1832), a poet of rural life and scenes, noted for his faithful pictures, characterisation and soundness of his sentiments.

**Craig, Edward Gordon** (b. 1872), the son of Ellen Terry; author of several books on stagecraft. Has produced many plays in England and on the Continent.

**Craigmyle, Lord** (**Thomas Shaw**, P.C., K.C.) (b. 1850), 1st Baron (cr. 1929); Baron Shaw of Dunfermline (cr. 1909); Thomas Shaw, P.C. (1905), K.C.; Lord Advocate for Scotland, 1905–9; M.P. Hawick, 1892–1909; a Lord of Appeal, 1909–29.

**Craik, Dinah Maria** (1826–1887), an English novelist who under her maiden name of Miss Mulock wrote *John Halifax, Gentleman*, *A Life for a Life*, and other novels, all distinguished by depth of feeling and clever characterisation.

**Cranbrook, Earl of** (1814–1906), as Mr. Gathorne Hardy, quickly made a name for himself as a Conservative politician and statesman.

**Crane, Walter** (1845–1915), first President of the Arts and Crafts Exhibition Society, and holder of the Albert Gold Medal. Painted many notable pictures, and his works on decorative art are of great value.

**Cranmer, Thomas** (1489–1556), Archbishop of Canterbury under Henry VIII. and Edward VI.; an ardent promoter of the Reformation, but on Mary's accession at first consented to return to the old faith, but when called upon to make public avowal of his recantation, refused, and was burnt at the stake.

**Crashaw, Richard** (*c.* 1612–1649), an English poet known chiefly by his "Steps to the Temple" and "Delights of the Muses."

**Crawford, Earl of,** K.T. (b. 1871), Chancellor of Manchester University, 1923. Succeeded his father in Jan., 1913. Chancellor Duchy of Lancaster, 1919–21. Was Pres. of the Board of Agriculture in the Coalition Govt., Lord Privy Seal, 1916–19. As Lord Balcarres won a considerable reputation in the House of Commons. First Commissioner of Works, 1921–22. Minister of Transport, 1922; Member of the Cabinet, 1916 and 1922.

**Crawford, F. Marion** (1854–1909), an American novelist who obtained considerable eminence by his stories of Italian life, including *A Roman Singer*, *Saracinesca*, and *Sant Ilario*.

**Cremer, Sir W. R.** (1838–1908), an ardent advocate of International Arbitration and founder of the Inter-Parliamentary Union. For over thirty years he was secretary of the International Arbitration Union; and in 1903 was awarded the Nobel Peace Prize, which he devoted to the furtherance of the cause with which his name was so long identified.

**Creswick, Thomas, R.A.** (1811–1869), was one of the most prominent landscape painters of his day, as well as a book illustrator. He is represented by several works in the National Gallery and South Kensington Museum.

**Crewe, Marquess of,** K.G. (b. 1858), was Lord President of the Council from 1905 to 1908, and in the latter year became Colonial Secretary, Lord Privy Seal and Liberal Leader in the House of Lords. Secretary for India in 1910, and in the Coalition Government of 1915 filled the positions of Lord President of the Council and President of the Board of Education. Lord Lieutenant of Ireland from 1892 to 1895; Brit. Ambassador, Paris, 1922–28.

**Crichton, James** (1560–1582), a Scotsman, who earned considerable renown for his gifts of learning and general accomplishments and was called "The Admirable Crichton." He was assassinated when only twenty-two years of age in Mantua.

**Crispi, Francesco** (1819–1901), a noted Italian statesman, who aided Garibaldi and was his supporter throughout. Was Premier for many

years, and achieved many reforms for his country.

**Crispin, St.**, a saint of the Roman Church and patron of shoemakers. In the 3rd century he and his brother, natives of Rome, settled in Soissons, France, and there preached Christianity, supporting themselves by shoemaking. Suffered martyrdom in 287, by being thrown into a cauldron of molten lead; commemorated on Oct. 25.

**Croce, Benedetto** (b. 1866), an Italian philosopher and critic.

**Crockett, S. R.** (1860–1914) was for a number of years a Scottish Free Church Minister at Penicuik, and in 1893 made a great success with his story *The Stickit Minister*. For many years he was one of the most prolific of the Scottish novelists, producing, among other stories, *The Lilac Sunbonnet* and *The Standard Bearer*.

**Cœsus**, the last King of Lydia, who reigned fourteen years, and acquired such immense wealth that his name has ever since been proverbial. He was a wise king, whose memory still survives in his wise sayings. Solon was his friend, and it was Solon's name that he uttered thrice while standing before the pyre on which Cyrus had condemned him to be burnt. This touched Cyrus, who spared his life and made him his companion. He succeeded his father Alyattes on the Lydian throne, 560 B.C.

**Croft, William** (1678–1727), a musician (born in Warwickshire) whose anthems and other sacred compositions are much esteemed. Was organist in Westminster Abbey, and was buried there.

**Crofts, Ernest**, R.A. (1847–1911), was keeper of the Royal Academy, and one of the most noted painters of battle pictures.

**Crome, John** (1769–1821), from being a humble house-painter became eminent as a painter of landscape.

**Cromer, Earl of** (1841–1917), a diplomatist who won celebrity in the post of British Comptroller-General in Egypt from 1883 to 1907. It was a stupendous task that he had imposed upon him, but he resolutely devoted himself to it, with the result that Egypt was lifted from financial difficulty and internal disorder to a condition of prosperity. He was Sir Evelyn Baring up to 1892, when he was made Baron Cromer, becoming Earl in 1901. Retiring in 1907 because of ill-health, he received a grant of £50,000. On Oct. 28, 1907, was presented with the Freedom of the City of London. In 1908 published *Modern Egypt* and *Ancient and Modern Imperialism* in 1910. An original member of the Order of Merit.

**Crompton, Samuel** (1753–1827), was a poor cotton worker at Bolton, and invented the spinning mule, which greatly increased the power of cotton production. Was awarded a Parliamentary grant of £5,000, but died in poverty.

**Cromwell, Oliver** (1599–1658), Lord Protector of England from 1653 to his death. At one time contemplated emigrating to America, but, entering Parliament and becoming enthusiastic in the popular cause, obtained recognition as one of the Parliamentary leaders, and ultimately, on the outbreak of the Civil War, became General of the Roundheads. How he gained battle after battle, and after the execution of Charles I. was installed at the head of the Commonwealth, is familiar history.

**Cromwell, Richard** (1626–1712), son of the foregoing, and his successor in the Protectorate, which he was only able to sustain for a few months.

**Crookes, Professor Sir William**, O.M. (1832–1919). President of the Royal Society, Nov., 1913, to 1916. An eminent British scientist, whose discoveries in chemistry and electricity have been of the greatest importance. Was a past president of the British Association, and the author of many books on chemical subjects. The discoverer of thallium and inventor of the radiometer.

**Crooks, Rt. Hon. Will** (1852–1921), a prominent labour-leader and Member for Woolwich, 1903; Mayor of Poplar, 1901; Privy Councillor, 1916.

**Cruden, Alexander** (1701–1770), was an eccentric Aberdonian who settled in London as a bookseller, and became the author of the famous *Concordance to the Holy Scriptures*.

**Cruickshank, George** (1792–1878), a celebrated book illustrator who was for a time associated with Charles Dickens, and later on illustrated numerous works of other novelists of his day, showing great humour and power of character-delineation.

**Cunard, Sir Samuel** (1787–1865), the founder of the Cunard Line of steamers, was a native of Nova Scotia. In 1840 he obtained a Government contract for the mail service between Liverpool and Halifax, Boston, and Quebec, and showed such ability of organisation that in a few years, aided by Mr. George Burns (afterwards Lord Inverclyde), he succeeded in establishing the first Atlantic steamship service.

**Cunliffe-Lister, Rt. Hon. Sir Philip**, G.B.E. (cr. 1929), M.P., K.B.E. (cr. 1920) (b. 1884), a prominent Conservative politician. Colonial Secretary, 1931.

**Cunningham, Sir Alexander** (1814–1893), an English military engineer and archæologist.

**Cunninghame-Graham, R. B.**, J.P. (b. 1852), a well-known author who has written numerous works on Spanish-American life.

**Curie, Prof. Pierre** (1859–1906) and **Madame Marie** (b. 1867) are names that have been deservedly prominent during recent years as those of the joint discoverers of Radium. M. Curie was a Frenchman, but his widow is a Pole; they have both been indefatigable scientific investigators.

**Curran, John Philpot** (1750–1817), an Irish barrister and orator, whose defence of Wolfe Tone brought him into fame, and thenceforward he became identified with the Irish popular cause and had a brilliant career.

**Currie, Gen. Sir Arthur**, G.C.M.G., K.C.B. (b. 1875), was Inspector-General in Canada, 1919–20, commanded the Canadian Corps in France, 1917–18. Principal of McGill University since 1920.

**Currie, Sir Donald**, G.C.M.G. (1825–1909), was the founder of the Castle Line of steamships, and became head of the combined Union-Castle Line. Was in Parliament from 1880 to 1900, and knighted in 1881. In 1904 gave £80,000 for a Medical School at University College, London, and £20,000 additional for a Nurses' Home to the London Hospital.

**Currie, Lord** (1834–1906), a distinguished diplomatist who, as Sir Philip Currie, carried out successively many important tasks and embassies in different capitals, and was raised to the peerage after 45 years in the public service at home and abroad.

**Curwen, John** (1816–1880), was a Nonconformist minister of musical gifts, who in 1841 introduced the Tonic-Solfa system, and devoted the best part of the remainder of his life to its advocacy. The system was widely adopted, and still has many adherents.

**Curzon of Kedleston, Marquess** (1859–1925). Lord President of Council November 1924 to March 1925, Governor-General of India 1899–1905 (reappointed 1904). Entered Parliament in 1886, and, having filled numerous minor offices with distinction, made a vigorous Imperial-minded Viceroy. In 1904 returned to England for a brief holiday. Lord Curzon retired from the Viceroyalty early in his second term of office; and having received the Prince and Princess of Wales (their present Majesties) on their tour in India, he and Lady Curzon returned home, and the latter shortly afterwards died. In March, 1907, elected Chancellor of Oxford University, and in 1908 elected an Irish representative peer; made earl in 1911. Was Lord Privy Seal in the Coalition Government of 1915–16, member of the War Council 1916, Lord President of the Council 1916–19, Leader of the House of Lords 1916, Foreign Secretary 1919, and Lord Pres. of Council Nov. 1924 to March 1925.

**Cushendun, Lord** (R. McNeil) (b. 1861), Financial Secretary to Treasury 1925; British representative League of Nations at Geneva. Chancellor of Duchy of Lancaster 1927, when he was raised to the Peerage.

**Cuthbert, St.** (635–687), a famous monk who became prior of Melrose, and afterwards of Lindisfarne. For a time he lived in seclusion on one of the Faroe Islands, but from 684 was Bishop of Hexham.

**Cuvier, Baron** (1769–1832), a French naturalist

who founded a system of classification in zoology, and originated the science of comparative anatomy. He was a voluminous and able writer.

**Cuyp, Albert** (1605–1691), a famous Dutch landscape painter, several of whose works are in our National Gallery.

**Cymbeline** was the father of Caractacus, and remembered chiefly as the central figure of one of Shakespeare's plays.

**Cyprian, St.**, was an eminent ecclesiastic of the 3rd century, who wrote several notable treatises on matters of Christian doctrine. He was beheaded in 258, at an advanced age, and the present English calendar commemorates him on Sept. 26.

**Cyrus the Great** founded the Persian monarchy in the 5th century B.C. and greatly distinguished himself by his conquests of Media, Assyria, Babylon, parts of India, Arabia, and Asia Minor, and was eventually slain in battle, it is believed, with the Messagetes on the river Jaxartes.

**Czerny, Karl** (1791–1857), an Austrian pianist and composer.

**D'Abernon, Lord E. V.** (b. 1857), British Ambassador to Germany 1920–26.

**Daguerre, Louis J. M.** (1789–1851), a French artist, who acquired fame as the inventor of the earliest photographic process, and then devoted himself to scene-painting, and became part proprietor of the Diorama in Paris. Daguerre's perfected process of obtaining permanent pictures by sun-action was communicated to the French Academy in 1839.

**Daimler, Gottlieb** (1834–1890), inventor with Otto of the Otto gas engine, and in his later years eminent as the inventor of the motor-car that is called after him.

**D'Alembert, J.** (1717–1783), a Parisian mathematician and philosopher who achieved great eminence by his numerous scientific works, including the *Theory of the Winds* and the *Precession of the Equinoxes*.

**Dalhousie, Marquis of** (1812–1860). The tenth Earl and first Marquis of Dalhousie was one of the most famous of India's Governors-General. He controlled the affairs of India during a period of great difficulty, and annexed the Punjab after the second Sikh War; later on also annexing Nagpur, Jhambi, Pegu and other States. He left India in 1856, and the following year the Mutiny broke out.

**Dalton, John** (1766–1844), a famous chemist and mathematician—son of a Cumberland weaver—who in 1810 published his *New System of Chemical Philosophy*, in which the "Atomic Theory" was first propounded.

**Damien, Father Joseph** (1840–1889), a Belgian missionary who, going out to Honolulu in 1864, and witnessing the terrible sufferings of the lepers confined on the Island of Molokai, obtained permission to take spiritual charge of the Government settlement, and remained there working nobly for this wretched community, until in 1889 he himself was stricken with leprosy and died.

**Damocles**, the flatterer and favourite of Dionysius of Syracuse. The legend related by Cicero concerning him is that one day after expressing envy of Dionysius, he was invited to a banquet, where he found himself sitting beneath a naked sword suspended by a single hair. Hence the familiar simile, "the sword of Damocles." The incident is referred to as of the first half of the 4th century B.C.

**Dandolo, Enrico** (*circa* 1108–1205), was elected Doge of Venice when seventy-seven, and ten years later, when almost blind, joined the Crusades, and succeeded in planting the standard of St. Mark on the walls of Constantinople.

**D'Annunzio, Gabriele** (b. 1864), the Italian poet, dramatist and novelist, and one of the most remarkable literary men in Europe. Served European War 1915–18 (wounded). In Sept. 1919 he led an unofficial raid on Fiume and seized the port and town. When the Treaty of Rapallo was signed in 1920, D'Annunzio refused to recognise the Treaty, and declared war against Italy. Fiume was attacked and D'Annunzio, after a short resistance, surrendered.

**Dante Alighieri** (1265–1321), the greatest of Italian poets, whose "La Divina Commedia" is world-famous, and has been translated repeatedly into all languages.

**Danton, Georges J.** (1759–1794), a famous member of the National Convention at the period of the first French Revolution. Was made President of the Committee of Public Safety, but Robespierre attacked and supplanted him, Danton being consigned to the guillotine shortly afterwards.

**D'Arblay, Madame** (1752–1840), made a great sensation while quite young and unmarried, under her name of Frances Burney, by her novel *Evelina*, which opened the doors of Society to her and gained her the friendship of Dr. Johnson.

**Darius** was the name borne by three Persian kings. The first reigned from 521 to 485 B.C., and was defeated by the Greeks at Marathon. The second was a natural son of Artaxerxes Longimanus, and having obtained the crown by the murder of his brother, reigned from 424 to 405 B.C. The third Darius was the last of the Persian kings, reigning only from 336 to 331 B.C., when Alexander the Great invaded his kingdom and defeated him in two great battles. Darius was soon afterwards assassinated.

**Darling, Lord**, P.C. (b. 1849), a noted judge of King's Bench Divsn., Q.C. 1885; was M.P. for Deptford, 1888–97. Retired in 1923; rewarded with a Barony, 1924.

**Darling, Grace** (1815–1842). By the performance of her heroic deed in putting off in a small boat from the lighthouse on one of the Farne Islands, of which her father was keeper, to the rescue of the shipwrecked crew of the *Forfarshire*, whose lives she saved, she made herself an enduring name. She was only 23 years of age at the time, and died four years later of consumption.

**Darnley, Earl of** (1545–1567), was married to Mary Queen of Scots—as her second husband—in 1565. Two years later, after Mary had entered into an intrigue with Bothwell, he was murdered.

**Darwin, Charles Robert** (1809–1882), the distinguished scientist, whose *Origin of Species* first clearly formulated and elaborated the theory of evolution. His first work (1837) described a five years' cruise in the *Beagle*, which the Government had sent out for scientific purposes. His *Origin of Species* appeared in 1859, and, though defended and supported by the scientific thought of the time generally, was much attacked by theologians. In 1871 Darwin issued his *Descent of Man*, a still further elaboration of the evolution theory. His other principal works were *The Expression of Emotion in Man and Animals* (1872), *Insectivorous Plants* (1875), *Different Forms of Flowers* (1877), and *Worms* (1881). He was buried in Westminster Abbey.

**Darwin, Erasmus** (1731–1802), grandfather of Charles Darwin, the Naturalist; was an English physician, practising at Derby, and a poet of considerable repute, whose "Loves of the Plants" was exceedingly popular.

**Darynton, Baron** (b. 1867), Unionist Whip, 1906–10; 1910–15; made Privy Councillor, June 1917. Assistant Postmaster-General, 1915–23. Barony, 1923.

**Daudet, Alphonse** (1840–1897), the celebrated French humorist and novelist, all of whose works have been translated into English.

**Davenant, Sir William** (1606–1668), a dramatist and poet of much note in his time, who filled the office of Poet Laureate in succession to Ben Jonson. He was buried in Westminster Abbey.

**David I.** (1084–1153) was King of Scotland and uncle of Matilda, daughter of Henry I.; he took up arms against Stephen on his repudiation of Matilda's claims to the English crown.

**David II.** (1324–1371), King of Scotland from 1330 to 1370. He was the son of Robert Bruce, and in conflict with the English Army at Neville's Cross, in 1346, was defeated and made prisoner by Queen Philippa.

**David, Jacques Louis** (1748–1825), a celebrated French painter of classic and historic subjects.

**David, St.**, whose festival falls on March 1st, lived in the 6th century in Wales, and founded various monasteries. Is the patron saint of the Principality.

**Davidson, John** (1857–1909), born at Barrhead. Went to London in 1890, and, after a course of journalism, began to attract attention by his verses, and published various volumes disclosing a marked poetic gift, together with the power of treating ordinary subjects in a vivid and illuminating manner. Much sensation was caused by his mysterious disappearance in 1909. His body was discovered some time afterwards, and he is supposed to have committed suicide in a fit of despondency.

**Davidson, Dr. Randall T.** (1848–1930), Archbishop of Canterbury, 1903–1928. Previously Dean of Windsor, 1883–1891; Bishop of Rochester, 1891–1895; and Bishop of Winchester, 1895–1903. Was for a long period Domestic Chaplain and Clerk of the Closet to Queen Victoria, and married in 1878 the daughter of Archbishop Tait. He resigned in 1928 and was created a Peer. Was succeeded by Dr. Lang (Archbishop of York).

**Davies, Sir H. Walford** (b. 1869), organist of St. George's Chapel, Windsor, Gresham professor of music, a celebrated conductor and composer.

**Da Vinci, Leonardo.** (*See* **Leonardo Da Vinci.**)

**Davis, Jefferson** (1808–1889), an American statesman, who on the breaking out of the Civil War, was made President of the Confederate States After the war he was a prisoner in the hands of the Federals, put on his trial for treason, and subjected to much indignity, but was ultimately discharged and wrote (1881) *The Rise and Fall of the Confederate Government.*

**Davis, John** (1550–1605), one of the great Elizabethan explorers and discoverer of Davis's Strait, the channel between the Atlantic and Arctic Oceans on the west of Greenland. Invented the backstaff, or Davis's quadrant.

**Davitt, Michael** (1846–1906), after a hard-working and precarious bringing up this ardent Irish Nationalist attracted much notice by the bitter speeches he made on behalf of the Fenian Brotherhood, and in 1870 was sentenced to fifteen years penal servitude for treason-felony, but was released on ticket of leave in 1877. Was one of the founders of the Irish Land League, 1879. In 1881 was sent back to penal servitude, but released again in the following year. Was elected to Parliament while a prisoner at Portland but disqualified. Succeeded in entering Parliament in 1892, and resigned in 1899.

**Davy, Sir Humphry** (1778–1829), the inventor of the safety-lamp. Was an eminent chemist whose researches and discoveries were of great scientific importance. Was the first to employ the electric current in chemical decomposition and discovered nitrous oxide or laughing gas.

**Dawes, Brig.-General Charles G.**, C.B. (b. 1865), United States Ambassador to Gt. Britain, 1929. Vice-President, United States, 1925. Originated the Dawes' Plan of Reparations, see p. 641. Member American Delegation to London Naval Conference, 1930.

**Dawson, Geoffrey** (b. 1874), editor of *The Times* 1912–19, and since 1923; educated at Eton and Oxford; was private secretary to Lord Milner in S. Africa, 1901–5, editor of the *Johannesburg Star*, 1905–10.

**Dawson, Rt. Hon Lord, of Penn**, G.C.V.O., K.C.B., K.C.M.G., became Physician-in-Ordinary to H.M. the King 1907 and to the Prince of Wales, 1923.

**Deakin, Alfred** (1856–1919), Attorney-General of the Commonwealth of Australia, 1901–3; Prime Minister, 1903–4, 1905–8, 1909–10; leader Federal Opposition, 1910–13. Was at Colonial Conference, 1907.

**Decamps, A. G.** (1803–1860), an eminent French painter, who produced numerous historical paintings.

**Decius**, Roman Emperor from 249 to 251, notorious for his cruel persecution of the Christians.

**Deeping, Warwick** (b. 1877), a novelist. Author of *Sorrell and Son*, etc.

**De Fleuriau, M.** Became the French Ambassador to Great Britain, 1924.

**Defoe, Daniel** (1661–1731), the son of a London butcher. He became a political writer and novelist, obtaining world-wide fame by his *Robinson Crusoe*, written when he was nearly sixty years of age. This was followed by several other novels, all of great merit.

**Delacroix, Ferdinand** (1799–1863), a French painter of great imaginative and dramatic force, and one of the chief ornaments of the romantic school.

**De La Mare, Walter** (b. 1873), an imaginative writer whose most popular works are *Henry Brocken*, *Memoirs of a Midget*, and *The Connoisseur*.

**Delane, J. T.** (1817–1879), the famous editor of *The Times*, who, though he did not write himself, made his paper the greatest journal in the world. He occupied the editorial position from 1841 to 1877.

**Delaroche, Paul (Hippolyte)** (1797–1856), an eminent French historical painter.

**Delcassé, Théophile** (1852–1923), an eminent French statesman, entered the Chamber in 1889, and in 1893 was Under-Secretary for the Colonies. In 1898 was appointed to the Foreign Office, which position he filled with great success. In 1903 he accompanied President Loubet on a visit to England. Resigned in 1905 on the Morocco difficulty. Ambassador to Russia, 1913, and in 1914–15 was Foreign Minister again.

**Delibes, C. P. L.** (1836–1891), a French composer of much graceful and refined music, including two or three operas, numerous operettas, and some exquisite ballet music of very delicate texture.

**Delius, Frederick, C.H.** (b. 1862), a prominent English composer.

**Deloime, J. L.** (1740–1806), a Swiss politician and author, who resided some years in England, and wrote a work on *The Constitution of England*, which was a leading legal text-book.

**Democritus** (460–357 B.C.), the Greek philosopher to whom the conception of the Atomic theory is attributed. His cheerful disposition led to his being styled "the laughing philosopher," and the tradition tells that he put out his eyes in order to prevent being distracted in his speculations.

**De Montmorency, Sir Geoffrey Fitzhervey, K.C.S.I.**, K.C.I.E., K.C.V.O., C.B.E. (b. 1876), became Governor of Puniab, 1928.

**De Morgan, Augustus** (1806–1871), a mathematician of great eminence, who held the position of Professor of Mathematics at University College, London, for over thirty years.

**De Morgan, William** (1839–1917), son of the preceding, was engaged in artistic pursuits until 1906, when he surprised the novel-reading world by a remarkably clever story of humour, character, and observation entitled *Joseph Vance*. His later novels include *Alice-for-Short* (1907), *Somehow Good* (1908), and *When Ghost Meets Ghost* (1914).

**Demosthenes** (385–322 B.C.), the famous Grecian orator, statesman and warrior. Sixty-one of his orations were preserved, and are regarded as perhaps the finest examples of their kind.

**Denham, Sir John** (1615–1669), a Royalist poet, whose descriptive poem "Cooper's Hill" achieved much popularity.

**Denis, St.**, the patron saint of France, over whose grave the abbey of St. Denis was erected. He lived in the 3rd century.

**Dentatus, M. Curius** (d. 270 B.C.), the Roman consul who, in 290 B.C., drove Pyrrhus out of Italy, and afterwards lived a simple life.

**De Quincey, Thomas** (1785–1859), an eminent essayist and critic, the friend of Coleridge, Wordsworth, and Southey. His *Confessions of an Opium-eater* is a British classic.

**Derby, Edward George Villiers Stanley, 17th Earl of,** K.G. (b. 1865), came into special prominence in 1915 as the head of the Recruiting movement. Chairman of the Air Committee, 1916. Under-Sec. for War and War Sec., 1916–18 and again 1922–24. Ambassador in Paris, 1918–20. As Lord Stanley was Postmaster-General, 1903–5, and Financial War Sec., 1900–3.

**Derby, Edward Stanley, 14th Earl of** (1799–1869), was an eminent statesman who served as Prime Minister in the Governments of 1852, 1858, and 1866.

**De Reszke, Jean** (1853–1925) and **De Reszke, Edouard** (1856–1917), Polish operatic singers, the first a tenor, the second a baritone, who achieved fame and immense fortunes by their singing.

**Derwentwater, Earl of** (1689–1716), the leader of the English Jacobite movement for placing the Pretender on the English throne. The rising took place in 1715, but was completely crushed by the Battle of Preston, and Derwentwater was beheaded.

**Descartes, René** (1596–1650), the famous French philosopher, mathematician, and author, whose Cartesian philosophy, the basis of which is summed up in the words "Cogito, ergo sum" ("I think, therefore I exist") is well known.

**Deschanel, Paul Eugene Louis** (1856–1922), President of the French Republic Jan.–Sept. 1920.

**Desmoulins, Camille** (1760–1794), was one of the fiercest of the French Revolutionary leaders, and from the destruction of the Bastille to the early days of the Terror was unflagging in his onslaughts upon the aristocrats and the priesthood. He fell under the displeasure of Robespierre, however, and was sent to the guillotine along with Danton.

**Detaille, Jean B. Edouard** (1848–1912), a French battle-painter.

**De Valera, Eamonn,** M.P. (b. New York, 1882), Sinn Fein President of Ireland until establishment of Irish Free State was confirmed by Dail Eireann, January 1922, when he was defeated. Leader of Opposition in Free State Parliament.

**Devonport, Viscount** (b. 1856), Food Controller Dec. 1916 to June, 1917, formerly Sir Hudson Kearley, M.P., Parliamentary Secretary of the Board of Trade, 1905–09, has been Chairman of the Port of London Authority (without salary), 1909–25; in 1912 in handling the Dockers' Strike showed great firmness.

**Devonshire, Spencer Compton Cavendish, 8th Duke of** (1833–1908). Entered Parliament in 1857, as the Marquis of Hartington, and speedily made a name as a Liberal politician, being Under-Secretary for War in 1863. War Secretary in 1866. Postmaster-General in 1868. Chief Secretary for Ireland, 1871. Secretary for India, 1880. War Secretary, 1882. Separated from Mr. Gladstone on the Home Rule question, and in 1895 entered Lord Salisbury's third Ministry as President of the Council, which position he held up to the time of Mr. Chamberlain's Declaration of Fiscal Policy in 1903, when he declared himself a Free Trader. He succeeded his father as Duke of Devonshire in 1891.

**Devonshire, Victor Christian W Cavendish, 9th Duke of,** K.G., G.C.M.G., G.C.V.O. (b. 1868), Sec. of State for Colonies, 1922–24, was M.P. for Derbyshire W. 1891–1908, and succeeded the Duke of Connaught as Governor-General of Canada 1916–20.

**Dewar, Professor Sir James** (1842–1923), a prominent chemist, and a native of Kincardine. In 1877 was appointed Fullerian Professor of Chemistry at the Royal Institution, and in 1888, jointly with Sir Frederick Abel, invented cordite. He attracted great notice by his experiments with gases, and in 1891 succeeded in obtaining liquid oxygen. Introduced thermos flasks into science and industry.

**Dewar, Lord** (1864–1930), Chairman of A. & F. Pears, Ltd., until 1925, and Managing Director of John Dewar & Sons, Ltd., he filled important public positions, writing entertainingly about his "Rambles around the Globe," and suggestively on Prohibition and on the Gothenburg system. Was a member of the London County Council, 1892–1895; M.P. for St. George's Tower Hamlets, 1900–1906, and Sheriff of London, 1897–1898.

**Dewey, Admiral George** (1837–1917), was a comparatively unknown American naval commander until his opportunity came in 1898 during the Spanish-American War, when he captured and destroyed the Spanish fleet in Manila Bay.

**Dibdin, Charles** (1745–1814), actor, dramatist, and popular entertainer; gained great popularity by his sea songs.

**Dick, Thomas,** LL.D. (1774–1857), a Scotch minister and scientist, whose astronomical writings, intended to support Christian teaching, were greatly read.

**Dickens, Charles** (1812–1870), the most popular novelist of the 19th century, who from very humble beginnings worked himself up to the highest position in the world of letters. His literary output was enormous. From the time of the publication of the *Pickwick Papers* down to his death in 1870, covering a period of 33 years, he produced novel after novel, all possessing the original Dickensian characteristics, yet each wonderfully different from the rest, and his popularity continues undiminished. He did so much for the cultivation of the true sentiment of Christmas that, whenever that season comes round, his name is recalled with honour and homage, and in several issues of *Pears' Annual* his Christmas writings have been revived, with the addition of pictorial contributions by eminent later artists. As a public reader of his own works Dickens evinced a marvellous dramatic gift. He was buried in Westminster Abbey.

**Dicksee, Sir Frank** (1853–1928), well known as the painter of numerous pictures, including "Harmony," "Romeo and Juliet," and "The Funeral of a Viking." R.A. in 1891; P.R.A. 1924; knighted, 1925.

**Diderot, Denis** (1713–1784), the famous French philosopher and editor of the *Dictionnaire Encyclopedique*, which occupied him thirty years.

**Dilke, Rt. Hon. Sir Charles W.** (1843–1911), was a prominent member of the Liberal Party. Was one of the best-informed men in the House on Army and Navy matters and Foreign Affairs. Wrote numerous books, and was the proprietor of the *Athenæum*.

**Dinwiddie, Robert** (1692–1770), a Scotch diplomatist who from 1752 to 1758 was Governor of Virginia.

**Diocletian** (A.D. 245–313), Roman Emperor from 284 to 305. Inaugurated the system of partnership Emperors, dividing the Empire into four sections, administered by himself in the East, Maximian in Italy and Africa, Constantius in Britain, Gaul, etc., and Gallerius in Illyricum. Abdicated in 305. Was a great persecutor of the Christians.

**Diogenes** (412–322 B.C.), the celebrated Greek cynic philosopher who is said to have lived in a tub, wearing the coarsest clothing and living on the plainest food. Many of his sayings have been preserved.

**Dionysius.** Two of the tyrants of Syracuse bore this name. The first was a great soldier and statesman as well as a poet and philosopher, and lived from *c.* 430–367 B.C. The second Dionysius was his son and successor, but was of such a cruel disposition that he was driven from the throne and died in obscurity in 343.

**Disraeli, Benjamin.** (*See* **Beaconsfield.**)

**D'Israeli, Isaac** (1766–1848), the father of Benjamin Disraeli. Was an interesting worker in a special literary field, and produced some exceedingly interesting volumes dealing with authors and their writings. His best known work is his *Curiosities of Literature*.

**Dixon, W. Hepworth** (1821–1879), was editor of the *Athenæum* for many years and wrote several historical works and books of travel.

**Dobell, Sydney** (1824–1874), an English poet, who, between 1850 and 1860, published three volumes of verse—"The Roman," "Balder," and "England in Time of War."

**Dobson, Henry Austin,** LL.D. (1840–1921), was in the Civil Service from 1860 to 1901, and was the author of several dainty volumes of Society verse and some equally dainty prose works, dealing chiefly with the 18th century.

**Dodd, Dr. William** (1729–1777), a clergyman who attracted much notice by a volume entitled *Beauties of Shakespeare*, and won unfortunate notoriety later by being condemned and executed for forging the signature of the Earl of Chesterfield, his former pupil, to a bond for £4,200.

**Doddridge, Philip** (1702–1751), a popular Nonconformist preacher and writer, now best remembered by many beautiful hymns.

**Dodgson, C. L.** (1832–1898), a writer and Professor of Mathematics at Oxford, who, under the pseudonym of Lewis Carroll, achieved lasting fame by his *Alice's Adventures in Wonderland*, one of the most delightful books for children ever written.

**Dolci, Carlo** (1616–1686), the famous Florentine painter, examples of whose Madonnas and

Saints are to be found in most National collections.

**Dominic, St.** (1170–1221), founder of the Order of Dominicans, or Black Friars, who devoted much energy to the conversion of the Albigenses, but meeting with small success, instituted a policy of persecution after the manner of the later Inquisition.

**Domitian** (52–96), a Roman emperor who, after many cruel and tyrannical acts, aroused the enmity of the people and was finally assassinated.

**Donald, Sir Robert,** G.B.E. (b. 1861); a journalist, who is one of the ablest of London editors, an authority on municipal work, trusts, and London life and labour. Was for many years editor of the *Daily Chronicle*, *Lloyd's Newspaper*, and the *Municipal Year Book*.

**Donatello** (1386–1466), the famous Italian sculptor, whose works are to be seen chiefly at Florence, though several examples are at South Kensington.

**Donizetti, G.** (1798–1848), the Italian composer to whom we owe the operas of "Lucia di Lammermoor," "La Fille du Régiment," "La Favorita," and others.

**Donne, John** (1573–1631), a clergyman and religious writer whose poems are still held in esteem.

**Donoghue, Stephen** (b. 1886), a most popular British jockey in the field. Has ridden the Derby Race winner several times.

**Doré, Gustave** (1833–1883), the well-known French artist, famous for his colossal scriptural paintings and his powerful illustrations to the works of Dante, Milton, and Tennyson.

**D'Orsay, Count Alfred** (1801–1852), a Society dandy who married into the Blessington family, and later on, at Kensington Gore, with Lady Blessington, formed a literary coterie of great influence. The Count was a versatile man, but of such extravagant habits that he ultimately became bankrupt and retired to Paris, where Louis Napoleon helped him.

**Dostoyevsky, Feodor** (1821–1881), one of Russia's greatest novelists. Author of *Crime and Punishment*, *Brothers Karamazov*, etc., all of which have been translated into English.

**Douglas, Archibald** (1449–1514), ancestor of Lord Darnley, husband of Mary Queen of Scots. He retired to a monastery at Galloway, and died there.

**Douglas, Sir James** (1286–1330), known as Black Douglas, was a noted Scottish raider, and held a commander's post at the Battle of Bannockburn. Travelling through Spain to Palestine to deposit Bruce's heart at Jerusalem, he was attacked and killed.

**Doulton, Sir Henry** (1820–1897), the inventor of Doulton ware, and one of the leading potters of modern times.

**Doumer, Paul** (b. 1857), President of French Republic, 1931.

**Doumergue, Gaston** (b. 1863), President of French Republic, 1924–1931.

**Dow, Gerard** (1613–1675), a great Dutch painter, follower and pupil of Rembrandt.

**Dowden, Edward,** M.A. (1843–1913). Well known for his critical and other writings, mainly dealing with the lives and works of the poets. Was Professor of Literature at Trinity College, Dublin, for 37 years.

**Doyle, Sir A. Conan** (1859–1930), the novelist who reached the point of highest popularity in his present-day detective sketches, in which "Sherlock Holmes" is the central figure. Served as Senior Physician of the Langman Field Hospital in the South African War, of which campaign he wrote a history. Also wrote a history of the Great War. Was an advocate of Spiritualism.

**Doyle, Richard** (1824–1883), an artist of much humour and fancy, who was exceedingly popular while on the staff of *Punch*, from 1841 to 1850. The familiar cover of *Punch* is his work.

**Drake, Sir Francis** (1540–1596), the great admiral of Queen Elizabeth's time, who made many adventurous voyages, bent partly on discovery and partly on plunder. He was a leading figure—under Lord Howard—in the attack on and destruction of the Spanish Armada in 1588.

**Drayton, Michael** (1563–1631), author of *Polyolbion*, a poetic description of various parts of England. He was Poet Laureate, and was buried in Westminster Abbey.

**Dreyfus, Major Alfred,** a French officer, condemned by a military secret tribunal on a charge of divulging secrets in 1894 to a foreign power, and condemned to imprisonment for life on Devil's Island in French Guiana. At a sensational new trial in 1899 he was again found guilty, and sentenced to a mitigated term of incarceration for ten years; but strenuous efforts on his behalf secured a pardon later. In 1906 he was entirely exonerated and reinstated in the army, with the rank of Major, and made a Chevalier of the Legion of Honour.

**Drinkwater, John** (b. 1882), a well-known dramatist and poet. His plays "Abraham Lincoln" and "Oliver Cromwell" have had great praise and success.

**Drummond, Hon. Sir Eric,** K.C.M.G. (1916), C.B. (1914), (b. 1876), became Secretary-General to the League of Nations, 1919.

**Drummond, Henry** (1851–1897), a Scottish religious writer, author of *Natural Law in the Spiritual World* and *The Ascent of Man*. Although no formidable antagonist to Darwinism, his writings possess great charm.

**Drummond, William** (1585–1649), a Scottish poet—laird of Hawthornden—whose works dealt largely with political matters, but revealed considerable poetic power. Ben Jonson walked from London to Scotland to pay him his respects.

**Dryden, John** (1631–1700), one of the most vigorous and prolific of English poets and writers, and a popular dramatist. He excelled in satire, and drew some powerful pictures of the statesmen of his day. His translation of Virgil ranks with Pope's translation of the *Iliad*. He was buried in Westminster Abbey. Originally a Parliamentarian he went over to the Royalists, and was laureate and historiographer-royal, 1670–88.

**Du Barry, Countess** (1741–1793), the favourite of Louis XV., who exercised great influence over the King, but after his death, and the breaking out of the Revolution, took refuge in England for a time. Being tempted to return to Paris in 1793 she was arrested and guillotined.

**Du Chaillu, Paul** (1835–1903), a noted African traveller who was chief of General Gordon's staff in 1874, and wrote many valuable books of travels, his studies of the gorilla being especially interesting.

**Dudley, Earl of,** G.C.B., G.C.M.G., G.C.V.O. (b. 1867), Governor-General of the Australian Commonwealth, 1908–11, was Lord-Lieutenant of Ireland, 1902–6, in which position he showed a tactful sympathy which made him highly popular. Previously he had been for a short period Parliamentary Secretary to the Board of Trade. Commanded 1/1st Worcester Yeomanry in Egypt and Gallipoli, 1915; attached H.Q. Staff, 40th Div., 1916.

**Dufferin and Ava, Marquis of** (1826–1902), was a diplomatist of great experience, a writer of brilliance, and filled many high offices with distinction and success, including those of Governor-General of Canada, Viceroy of India, and Ambassador to France, Russia and Turkey.

**Dugdale, Sir William** (1605–1686), the English antiquary famed for his *Monasticon Anglicanum*.

**Dumas, Alexandre** (1802–1870), the famous French novelist, and dramatist, who published more volumes than any man of his time, the greater part of them of high merit. In the field of historical romance he showed wonderful power and resource, and his thrilling story *Monte Cristo* is one of the great novels of the nineteenth century.

**Dumas, Alexandre, Fils** (1824–1895), was the son of the last-named, and attained almost equal fame with his father, both as novelist and dramatist. His *La Dame aux Camélias* was his most famous novel.

**Du Maurier, George** (1834–1896), one of the best known of the *Punch* artists during a long period, and author of the novels of *Peter Ibbetson*, *Trilby*, and *The Martian*.

**Du Maurier, Sir Gerald,** Kt. (cr. 1922), (b. 1873), a well-known actor-manager.

**Dunbar, William** (1460–1525), a distinguished Scottish poet, author of "The Thistle and the Rose," and many other poetic pieces.

**Duncan, Sir Andrew,** Kt. (cr. 1921), M.A., LL.B., LL.D. (b. 1884), Chairman of the Central Electricity Board, a Director of the Bank of England and a member of the Economic Advisory Council.

**Dundonald, Thomas Cochrane, 10th Earl of** (1775–1860), a British admiral who was aspersed and disgraced on a charge of fraudulently disseminating false reports, and subsequently commanded the Chilian, Brazilian, and Greek navies in turn. After being under a cloud for eighteen years, he was exonerated from all allegations made against him, and restored to his former rank and honours.

**Dundonald, Douglas Mackinnon Baillie Hamilton Cochrane,** 12th Earl of, K.C.B., K.C.V.O. (b. 1852), a distinguished English general who served in the Nile Expedition of 1884–1885, and in the Relief of Khartoum; also held a cavalry command in the South African War, and was afterwards in command of the Canadian Militia.

**Dunn, J. Nicol** (1856–1919), London editor of the *Glasgow News* since 1914. Was editor of *Black and White*, 1895–1897. Subsequently edited the *Morning Post*, later the *Manchester Courier*, and in 1911 edited the *Johannesburg Star*.

**Dunne, F. P.** (b. 1867), an American humorist who has gained a wide reputation for his "Mr. Dooley" papers, which have been appearing for several years and contain much shrewd comment on the topics of the time. "Mr Dooley" is an Irish-American saloon-keeper, who retails his views in conversation with "Mr. Hennessy," his customer and compatriot.

**Duns Scotus, J.** (*circa* 1265–1308), a famous scholastic, who was, according to tradition, born at Duns, in Berwickshire, and became a Franciscan friar and theological professor at Oxford. Later he was, it seems, regent of the University of Paris. He was the great doctrinal opponent of Thomas Aquinas.

**Dunstan, St.** (924–988), the famous Abbot of Glastonbury and Archbishop of Canterbury, who lived through the reign of five kings, and exercised great political influence.

**Dupleix, Joseph François** (1697–1763), was governor of the French East Indian possessions at the time when Clive was guiding the fortunes of the East India Company, and after Clive's victory at Plassy Dupleix's day was over. He returned to France, and fell into disgrace and poverty.

**Durham, John George Lambton, Earl of** (1792–1840), a statesman who did great public service by undertaking the readjustment of administrative grievances in Canada in 1838, his wise suggestions served for the foundation of the self-governing principle in the Dominion.

**Dürer, Albert** (1471–1528), the great German painter and engraver, and friend of Luther. Many of his engravings are in the British Museum. Of Nuremberg birth, he may be regarded as the founder of the German school and the inventor of etching.

**Düse, Elenora** (1861–1924), an Italian tragedienne of world-wide reputation.

**Duval, Claude** (1643–1670), a notorious highwayman who, coming to England from Normandy in the Duchess of Richmond's service, took to "the road," and for a few years successfully evaded capture. He was hanged at Tyburn.

**Dvořák, Antonin** (1841–1904), the eminent Czech composer. Combined with a striking originality, his compositions show fine musical qualities. Made himself popular in this country by his "Stabat Mater" in 1880.

**Dyson, Sir F. W.,** F.R.S. (b. 1868), Astronomer Royal since 1910. Was previously (1905–10) Astronomer Royal for Scotland.

## E

**Eadmer** was the name of an English monk and historian, who lived in the latter part of the 11th century and commencement of the 12th.

**East, Sir Alfred,** A.R.A. (1849–1913), a landscape painter.

**Eastlake, Sir Charles L.** (1793–1865), an eminent English painter whose works were mostly of a religious character.

**Ebbisham, Lord (George Rowland Blades),** G.B.E. (cr. 1927), 1st Bt. (cr. 1922), Kt. (cr. 1918), (b. 1868), Director of the Phœnix Insurance Co. and the Southern Railway; Chairman of Blades, East and Blades, Ltd.

**Ebers, Georg M.** (1837–1898), a German novelist and Egyptologist.

**Eck, Johann von** (1486–1543), was one of the most vigorous opponents of the Reformation in Germany.

**Eddington, Prof. Sir Arthur S.,** F.R.S., Kt. (cr. 1930), (b. 1882), became Plumian Professor of Astronomy, Cambridge, 1913; Director of the Cambridge Observatory since 1914. Author of *The Nature of the Physical World* (1928) and many scientific works.

**Eddy, Mrs. Mary Baker** (1821–1910), discoverer and founder of the religion (theology and practice) which she named Christian Science, and founder of the Church of Christ, Scientist. Author of the Christian Science text-book, *Science and Health with Key to the Scriptures*, published in 1875.

**Edgar,** King of England from 959 to 975, was a monarch of enlightened ideas, who under the influence of Dunstan was able to carry out many useful reforms.

**Edgar Atheling,** as grandson of Edmund Ironside, was the lawful heir of Edward the Confessor, but in the confusion of the Norman invasion he was unable to maintain his claim.

**Edgeworth, Maria** (1767–1849), a well-known authoress, whose stories of Irish life, *Castle Rackrent*, *The Absentee*, etc., were remarkable for their rich humour and tenderness. She also wrote, in collaboration with her father, Richard Lovell Edgeworth, on educational subjects, and, independently, a number of books for children.

**Edison, Thomas Alva** (1847–1931), an American inventor, who after an adventurous boyhood became a telegraph operator, and had his attention directed to electrical problems. Established himself in New York in 1869, and invented an improved printing telegraph. In 1876 set up an elaborate laboratory and factory at Menlo Park, New Jersey, from which place he sent out many clever and some startling inventions, including a system of duplex telegraphy, afterwards improved into quadruplex and sextuplex transmission, the phonograph, a method of preparing carbon filaments for the electric lamp and the microphone; patented over 1300 inventions.

**Edmund Ironside** (989–1016), the son of Ethelred after years of contention with the Danes, made a compact with Canute to divide England between them, but dying shortly afterwards the kingdom was settled on Canute.

**Edmund,** Martyr and Saint, the last king of the East Angles, who began to reign in 855, and was killed by the Danes in 870.

**Edmund, St.** (*circa* 1170–1240), Archbishop of Canterbury, championed the English Church against Papal encroachment; died in France; canonised, 1247.

**Edward the Confessor** (*c.* 1004–1066), the Anglo-Saxon king who immediately preceded—save for the brief reign of Harold of less than a year—the Norman Conquest, and founded Westminster Abbey, where a smaller church, then dilapidated, had previously for a period had a precarious existence. He was a religious-minded mystic, and was canonised in 1161, and given the shrine in the Abbey of his origination, which yet remains fairly intact, despite the ravages of Time and disturbing hands.

**Edward the Elder** was the son of Alfred, and succeeded him as King of the West Saxons in 901. He was successful in overcoming the Danes, and became overlord of the Northern counties.

**Edward the Martyr** (963–979) became king in succession to Edgar, but, although supported by Dunstan, was not able to prevail against his stepmother Elfrida, who had him murdered.

**Edward I.** (1239–1307) was king of England from 1272 to 1307. Took part in the Crusades, completed the conquest of Wales, overcame Scottish opposition—executing Wallace and receiving the submission of Bruce, and promulgated many wise laws. He was nicknamed "Longshanks."

**Edward II.** (1284–1327), the son of Edward I., suc-

ceeded his father when the latter died at Burgh-over-Sands in 1307. Suffered defeat at the hands of the Scotch at Bannockburn, and on account of his arbitrary disposition, cruelty, and lavish concessions to favourites, was deposed in 1327, and afterwards murdered at Berkeley Castle.

**Edward III.** (1312–1377) was one of the ablest of English monarchs who, although much taken up with long and bitter wars with France and Scotland, did much for the commercial interests of the nation, and was the means of introducing large numbers of Flemings into the country, who laid the foundation of the English textile manufactures. He married Philippa of Hainault, and was the father of Edward the Black Prince.

**Edward IV.** (1442–1483) attempted unsuccessfully to regain the lost English possessions in France, and resorted to many despotic expedients for obtaining supplies, but it stands to his credit that he entered into trading treaties with the commercial merchants of the Continent which were of benefit to his people.

**Edward V.** (1470–1483)—son of Edward IV. and Elizabeth Woodville—was the unfortunate king who was put to death in the Tower of London, and succeeded by Richard III., his unscrupulous uncle who had made himself "Protector" and assumed the Crown a little more than two months after the death of Edward IV., publishing the demise of the young King and his brother the Duke of York as having occurred in prison. The bones of the murdered boys were many years afterwards taken to Westminster Abbey for final burial.

**Edward VI.** (1537–1553) succeeded his father, Henry VIII., when in his tenth year and died in his sixteenth year. The Reformation under the Regency of Somerset first, and then of Northumberland, made considerable progress during his brief reign. He was induced during his last illness to name Lady Jane Grey his successor, with results disastrous to that unfortunate personage and many others concerned.

**Edward VII.** (1841–1910). King Edward VII was privately educated; afterwards passed through a course in succession at Edinburgh, Oxford, and Cambridge; travelled in Italy and Spain in 1859, visited the United States and Canada in 1860, and made a tour of the Holy Land in 1862. Was married to Princess Alexandra of Denmark in 1863. Undertook a tour in Egypt in 1869. Suffered from a severe attack of typhoid in 1871. Visited India in 1875, and from that time onward was constantly in the public eye, taking part in all kinds of functions. Succeeded to the throne on the death of Queen Victoria, Jan. 22, 1901. His Civil List was fixed at £470,000 a year. The Coronation, which had been planned for June 26, 1902, had to be postponed in consequence of the King's sudden illness, but eventually took place on August 9 in the same year. The incidents of the King's nine years' reign are too familiar to need repetition. His Majesty was a powerful factor in the preservation of the peace of Europe, his friendly intercourse with the heads of the French, German, and other nations earning for him the title of "Edward the Peacemaker."

**Edwards, John Passmore** (1823–1911), was for many years proprietor of the *Echo* and other London papers, and after acquiring a fortune devoted himself to public affairs and philanthropy. He was M.P. for Salisbury from 1880 to 1885. In the founding and development of free libraries and art galleries, and in many other charitable directions, he performed great and substantial service.

**Edwards, Jonathan** (1703–1758), was an American metaphysician who obtained a high reputation by his *Treatise on the Freedom of the Will*.

**Edwin,** King of Northumbria, killed in battle at Hatfield Chase, Yorkshire, in 634. He was baptised into the Christian faith at York in 627, and built a church there. He was canonised later.

**Edwy** was an Anglo-Saxon king, son of Edmund I. He succeeded his uncle Edred in 955, and died in 958, when under twenty years of age, after having undergone considerable cruelty at the hands of ecclesiastics who resented his wedding with a relative, Elgiva, who was put to death.

**Egbert** was a descendant of Cerdic, king of the West Saxons, and reigned from 802 to 839 in Wessex; in his later years became the first king of all England. In 835 he had to drive the Northmen away from Cornwall.

**Einstein, Prof. Albert** (b. 1879), prominent for his Theory of Relativity.

**Elagabalus** was Emperor of Rome from 218 to 222, and after a despicably wicked reign of less than four years was put to death by his soldiers.

**Eleanor,** Queen of Edward I. (d. 1290), was a woman of great piety and devotion. After her death the king had memorial crosses erected at the twelve places where her body rested on its way from Grantham to Westminster.

**Elgar, Sir Edward** (Bart.), O.M., P.C., K.C.V.O. (b. 1857), studied music, and settled at Malvern as teacher and composer. Since 1892 has composed many notable cantatas and other works, which have been performed at various festivals, achieving a high reputation by his "Caractacus," given at Leeds in 1898, "The Dream of Gerontius," produced in 1901, "The Apostles," performed at Birmingham in 1904, and "The Kingdom," given at the Birmingham Festival of 1906. In March, 1904, he was honoured with a three days' festival at Covent Garden, and was knighted in that year. Master of the King's Musick, 1924. K.C.V.O. 1928.

**Elgin, James Bruce, 8th Earl of** (1811–1863), a prominent English statesman.

**Elgin, Thomas Bruce, 7th Earl of** (1766–1841), a British diplomatist who brought to England from Athens the famous "Elgin marbles," now in the British Museum.

**Eliot, Rt. Hon. Sir Charles,** G.C.M.G., K.C.M.G., C.B. (1864–1931), was appointed in 1886 third Secretary to the British Embassy at St. Petersburg, and later served at Tangier, Constantinople and Belgrade. In 1898 he was transferred to Washington. British High Commissioner Samoa, 1899. More recently was Consul-General for the East Africa Protectorate. First Principal of the University of Hong-Kong, 1912, and British Ambassador to Japan 1919–1926.

**Eliot, George** (1819–1880), the pen name of Marian Evans, who produced some of the most memorable novels of the 19th century, including *Adam Bede*, *The Mill on the Floss*, *Silas Marner*, *Middlemarch*, and *Daniel Deronda*.

**Elizabeth, Queen** (1533–1603), came to the throne in 1558 at the age of twenty-five, and reigned forty-five years. Was a fervid Protestant, a sincere lover of her country, a masterful and enlightened ruler—fickle as far as her favourites were concerned—and added distinction to a distinguished period. The defeat of the Spanish Armada, the execution of Mary Stuart, the naval supremacy of England, the extension of her colonies, and the glory of a great new literature of which Shakespeare was the brightest ornament, are features associated with her reign.

**Elizabeth, St., of Hungary** (1207–1231), was daughter of Andrew II. of Hungary, and wife of Louis IV., Landgrave of Thuringia. Becoming a widow, she forsook the pomp of courts, and lived in retirement and poverty, dying at twenty-four, and afterwards being canonised.

**Elizabeth Stuart, Queen of Bohemia** (1596–1662), daughter of James I., and mother of the Prince Rupert and Princess Sophia (mother of George I.). She died a widow in London.

**Elizabeth Woodville** (1437–1492), Queen of Edward IV. of England, and mother of Edward V., to which ill-fated Prince she gave birth whilst within the shelter of sanctuary at Westminster.

**Ellis, Henry Havelock** (b. 1859), was a teacher in New South Wales, 1875–79. Came to England, qualified as a doctor, but turned to literary and scientific work. Author of many works concerning the psychology of sex.

**Elman, Mischa** (b. 1891), a celebrated violinist.

**Elphinstone, Mountstuart** (1779–1859), an Indian Administrator of great ability, who from 1819–1829 was Governor of Bombay. One of the chief founders of our Anglo-Indian Empire.

**Emerson, Ralph Waldo** (1803–1882), the American

essayist and philosopher. His *Conduct of Life*, *Representative Men*, and *Essays*, are among the most brilliant literary productions of America.

**Emin Pasha** (1840–1892), a noted African explorer of Jewish parentage and German birth. Was associated with Gordon Pasha in the pacification of the Soudan and showed marked ability in the government of the equatorial provinces. He was menaced by the Mahdi and cut off from Egypt in 1883, but relieved by Stanley in 1889. Returning to Africa in 1890, he was eventually murdered by Arabs.

**Emmet, Robert** (1778–1803), the enthusiastic youth who led the rebellion in Ireland in 1803 and was tried and executed in the same year for high treason. He is one of Ireland's patriot heroes.

**Ennius, Quintus** (239–169 B.C.), the Roman epic poet and friend of Scipio Africanus the Elder

**Epictetus of Hierapolis**, the Stoic philosopher, who lived in the 1st century, and was a moral teacher of great repute and influence.

**Epicurus** (342–270 B.C.), the founder of the Epicurean philosophy, which taught that Virtue should be followed because it leads to happiness.

**Epstein, Jacob**, a prominent sculptor, was born in New York in 1880 of Russian-Polish parents. His work includes the Hudson memorial ("Rima") in Hyde Park, "Day" and "Night" on the building of the Underground Headquarters, and "Genesis," exhibited in London in 1931.

**Erasmus Desiderius** (1466–1536), the great Dutch philosopher and scholar, of whom it was said that he "laid the egg which Luther hatched."

**Erastus, Thomas** (1524–1583), was a German theologian who proclaimed a policy of Church restriction, which developed into what is known as Erastianism.

**Ericsson, John** (1803–1889), a distinguished Swedish engineer who entered into competition with George Stevenson in the first famous trial of locomotives. Later he settled in the United States, and devoted himself with much success to marine engineering.

**Ernle, 1st Baron** (cr. 1919), (**R. E. Prothero**), President of the Bd. of Agriculture, 1916–19 (b. 1852), M.P. for Oxford University, 1914–19. A leading authority on agriculture.

**Erskine, Rt. Hon. Sir W. A. F.**, G.C.M.G. (b. 1871), became British Ambassador to Poland, 1929; H.B.M. Minister to Poland, 1928–29.

**Essex, Robert Devereux, 2nd Earl of** (1567–1601), became Queen Elizabeth's favourite after the death of Leicester, but, offending the Queen by certain acts in Ireland, was committed to prison. Later on being liberated, he was implicated in a rebellious movement, for which he suffered death on Tower Hill.

**Ethelbert**, King of Kent at the close of the 6th century and commencement of the 7th. Famous for having accepted Christianity on the entreaty of St. Augustine. Published the first code of written laws in English. Ethelbert was afterwards canonised.

**Ethelred I.** was the Anglo-Saxon king who reigned from 866–871, and defeated the Danes at Ashdown.

**Ethelred II.**, King of England from 979–1016; received the surname of "the Unready," because of his slowness to take action against the Danes, with whom he was more or less in conflict during the whole period of his reign.

**Ethelwulf** was the Anglo-Saxon sovereign who succeeded his father Egbert in 837. Died in 857, and was buried at Winchester.

**Etty, William** (1787–1849), a famous English R.A., who contributed to the Royal Academy some of its most admired pictures between 1820 and 1849.

**Eucken, Dr. Rudolph**, a famous German philosopher and theologian.

**Euclid**, the famous Greek mathematician, who lived in the 3rd century B.C., and whose Elements of Geometry are as sure of immortality as the *Iliad*.

**Eugenie, ex-Empress of the French** (1826–1920), was the daughter of Count Montijo of Granada, and on the mother's side of Scottish descent. She married Napoleon III. in 1853, and for many years kept a brilliant court. On the outbreak of the Franco-Prussian War her husband and only son proceeded to the seat of war with great flourish of trumpets, but after Sedan the Empress had to make her escape from Paris in disguise, and took up her abode in England, where she was subsequently joined by Louis Napoleon. They resided at Chislehurst for a time, and there her husband died. Her son went out to the Zulu War in 1879, and was killed by a party of Zulus. When in England the Empress resided at Farnborough Hill, Hants.

**Euripides** (480–406 B.C.) was the greatest of Greek tragic poets. He wrote seventy-five plays, eighteen of which have been preserved, the most famous being "Alcestis," "Medea," "Iphigenia," and "Orestes."

**Eusebius** (264–340), an ecclesiastical historian of rare industry, whose works are still held in great esteem. His *Chronicon* is a history of the world down to his own time, while his *Ecclesiastical History* traces the chief events of the Christian Church.

**Evans, Sir Arthur**, Knighted in 1911 (b. 1851), D.Litt., LL.D., M.A., Ph.D., F.R.S., a distinguished excavator and archæologist.

**Eve, the Hon. Mr. Justice (Hon. Sir Harry Trelawny)**, Kt. (cr. 1907), (b. 1856), became Judge of Chancery Division, High Court, 1907.

**Evelyn, John** (1620–1706), an English gentleman who wrote several scientific works, but is best known by his *Diary*, which covers a good part of the reigns of Charles I., Charles II., and James II.

**Eversley, Rt. Hon. G. J. Shaw-Lefevre, 1st Baron** (1832–1928). Served in turn as Civil Lord of the Admiralty, Secretary to the Board of Trade, Under-Secretary Home Department, Secretary to the Admiralty, First Commissioner of Works, Postmaster-General, and President of the Local Government Board. Author of several notable works of a historical and political nature including (1917) *The Turkish Empire*.

**Ewing, Juliana Horatia** (1841–1885), was a native of Ecclesfield, Yorkshire, and made a name as a writer of children's stories which won wide popularity, among them *The Land of Lost Toys*.

**Eyck, Jan Van** (1389–1440), a famous Flemish painter whose works are distinguished for their brilliance of colour and finish.

**Eyres-Monsell, Rt. Hon. Sir Bolton**, G.B.E., M.P., became Chief Conservative Whip, 1923. First Lord of the Admiralty 1931.

## F

**Faber, Frederick William** (1814–1863), the hymn-writer and oratorian. Under the influence of Cardinal Newman went over to the Church of Rome, and founded the Wilfridian Brotherhood at Birmingham, subsequently taking them over to the Brompton Oratory.

**Fabius Maximus** (d. 203 B.C.), the Roman Consul and Dictator, saved Rome from conquest by Hannibal by deliberate and well-planned strategic evasion of battle. The term "Fabian Policy" is derived from Fabius's tactics.

**Faed, Thomas**, R.A. (1826–1900), one of the most successful of Victorian painters, won a great reputation for his Scottish subjects.

**Fahrenheit, G. D.** (1686–1736), a Dutch scientist, who introduced quicksilver in the construction of thermometers, and laid down the Fahrenheit thermometric scale still used.

**Fairbairn, Dr. Andrew M.** (1838–1912), a famous theologian and member of the Welsh Church Commission. Head of Mansfield College, Oxford, from its foundation in 1886 to his retirement in 1908. Wrote and lectured extensively in Britain and America, and actively interested himself in educational legislation. Was Chairman of the Congregational Union in 1883.

**Fairbairn, Sir William** (1789–1874), mechanical engineer and inventor. By the first utilisation of iron in shipbuilding, became eminent and wealthy, and was made a baronet in 1869.

**Fairfax, Edward** (1580–1635), son of a Yorkshire baronet, and translator of Tasso.

**Fairfax, Thomas, 3rd Lord** (1612–1671), a prominent leader of the Parliamentary army during the Civil War, who greatly distinguished himself at Marston Moor and Naseby.

**Falconer, William** (1732–1769), a Scottish poet born in Edinburgh, who wrote the "Shipwreck."

**Fallières, Clement Armand** (1841–1931) President of France, 1906–1913. At the time of his election to succeed M. Loubet as the head of the Republic M. Fallières, who was a barrister of Gascon birth, was President of the Senate, a difficult position which he had sustained with dignity for some years. For a brief period in 1883 he was Premier, and in political leaning favoured the Republican Party.

**Faraday Michael** (1791–1867), the eminent chemist, who was Professor of Chemistry in the Royal Institution, and acquired deserved fame for his brilliant experiments in connection with electricity, and his able and clearly-written scientific books. He was originally a bookbinder.

**Farrar, Frederic William** (1831–1903), Dean of Canterbury; a divine and author some of whose writings attained a large circulation, and exercised a considerable influence. His most popular publications were *The Life of Christ* *The Life and Works of St. Paul*, and *Early Days of Christianity*.

**Faure, François F.** (1841–1899), was a successful shipowner at Havre. Elected to the Chamber of Deputies in 1881, he was chosen President of the French Republic in 1895 which position he held at the time of his death.

**Fawcett, Henry** (1833–1884). The son of a farmer, he was educated at Cambridge and entered for the Bar. In 1858 he had the misfortune to be blinded by a stray shot from his father's gun, and to most men this would have been a block to a career, but Fawcett stuck resolutely to his first aim. Made himself known as an earnest publicist by producing a *Manual of Political Economy* in 1863; after which he was appointed Professor of Political Economy at Cambridge. In 1865 he entered Parliament, and became one of Gladstone's most trusted lieutenants, devoting himself largely to Indian finance, and economical questions generally. Was made Postmaster-General in 1880, and was the means of introducing the Parcel Post, Postal Orders, and sixpenny telegrams.

**Fawcett, Dame Millicent Garrett** (1847–1930), widow of the foregoing; a woman's suffragist and educational reformer, and a very capable writer on political economy. Was hon. LL.D. of St. Andrews University, and was one of the commission of ladies who went out to South Africa during the war to examine the concentration camps. G.B.E. (1925).

**Fawkes, Guy** (1570–1606), a Yorkshire Catholic, who with Catesby and other conspirators planned the Gunpowder Plot. Although warned of the discovery of the plot, Fawkes persisted and was captured in the cellar of the Parliament House and hanged. (*See* **Gunpowder Plot**, General Information section.)

**Feisal, King of Iraq**, Hon. G.C.M.G., son of the late King of the Hedjaz; became King of Iraq, 1921

**Fenelon** (1651–1715), Archbishop of Cambray and a writer of great distinction. His *Telemachus* is a French classic.

**Ferdinand V.** of Castile (1452–1516), who married Isabella of Spain, and with her reigned over that country during a period of great events. He saw the Moors expelled from Spain, equipped Columbus for the discoveries which led to Spain's vast colonial possessions, and instituted the Inquisition.

**Ferguson, James** (1710–1776), a Banffshire man of great ability and inventiveness, who, from being a shepherd-boy, educated himself in astronomy, mathematics, and portrait painting, so that he was able to support his parents, and became eminent as a scientific lecturer. He was made a Fellow of the Royal Society, and had a pension granted to him by the Government.

**Fergusson, Sir William** (1808–1877), President of the Royal College of Surgeons, and for thirty years Professor of Surgery at King's College (1840–1870). Was not only eminent as a surgeon but as a writer on surgery and an inventor of surgical appliances.

**Ferrer, Francisco** (1859–1909), who was executed as the chief author of the Barcelona insurrection of 1909, won much acceptance for his system of "Scientific and Rationalist education," and was responsible with Haeckel for the International League which extended the system to other lands. By many he is regarded as a martyr.

**Ferrers, Earl** (1720–1760), condemned by the House of Lords for killing his steward, and hanged.

**Fichte, Johann G.** (1762–1814); was Professor of Philosophy, first at Jena and then at Erlangen, and later Rector of the University of Berlin. His works had great influence upon the thought of his time, the idealist philosophy he taught being marked by much purity of conception. His chief works are *The Destination of Man* and *The Way to the Blessed Life*.

**Field, Cyrus W.** (1819–1892), an American who took a prominent part in the development of submarine cables. In 1856 he connected the United States with Newfoundland by cable, subsequently organising the company which established the first successful Atlantic cable in 1866.

**Fielding, Henry** (1707–1754), a celebrated English novelist, author of *Tom Jones*, *Joseph Andrews*, and *Amelia*, as well as many plays.

**Fife, Duke of** (1849–1912), husband of the Princess Royal (eldest daughter of King Edward VII.). Was vice-chairman of the Chartered Company of South Africa, but retired after the Jameson Raid.

**Fildes, Sir Luke**, R.A. (1844–1927), first attracted notice as a black-and-white artist, and illustrated Dickens' *Edwin Drood*. Exhibited at the Royal Academy in 1872, and at successive exhibitions was represented by many important works. Elected R.A. in 1887, and knighted in 1906.

**Finsen, Prof. Niels Ryberg** (1861–1904), a Danish medical scientist whose light cure for lupus obtained the approval of Queen Alexandra and the aid of many philanthropists. He established an institute for his system at Copenhagen.

**Firdausi, Abul K. M.** (941–1020), was the great epic poet of Persia. His *Book of Kings* contains 60,000 verses, and professes to relate the history of Persia from the beginning of things.

**Firth, Mark** (1819–1880), a great Sheffield steelmaker, who was at the head of the Norfolk Ordnance Works, and was celebrated for his benefactions.

**Fisher, Rt. Hon. Herbert A. L.** (b. 1865). President of the Board of Education, 1916–22; Vice-Chancellor of Sheffield University, 1912–17. Became Warden of New College, Oxford, 1925.

**Fisher of Kilverstone, Admiral of the Fleet, Lord**, G.C.B., O.M., G.C.V.O. (1841–1920). Served most posts of honour in connection with the Navy and Naval Administration, and was appointed Senior Naval Lord of the Admiralty in 1904. First Sea Lord 1904–10. Created peer in 1909. Was on the Special Naval Committee of 1912. In 1914 again First Sea Lord. Resigned May, 1915. Chairman of Inventions Board, 1915–20.

**Fitzalan, Viscount** (b. 1855), K.G., P.C., G.C.V.O., D.S.O., Deputy Earl Marshal, 1917; Viceroy of Ireland, 1921–22.

**Fitzmaurice, Lord** (b. 1846), was Under-Secretary for Foreign Affairs, an office which he accepted for a second time (with his peerage) from Sir H. Campbell-Bannerman, from 1905 to 1908, when he was appointed Chancellor of the Duchy of Lancaster, but resigned in 1900. Is brother to Lord Lansdowne.

**Fitzroy, Capt. Rt. Hon. Edward A.**, P.C. (b. 1869), became Speaker of House of Commons 1928.

**Fitzroy, Robert, Vice-Admiral** (1805–1865). Attained celebrity as a meteorologist, and in 1854 was made superintendent of the Meteorological Department, and was the introducer of the system of storm warnings.

**Flamsteed, John** (1646–1719), was the first English Astronomer Royal, and a close friend of Sir Isaac Newton, whom he aided in many of his experiments.

**Flaxman, John** (1755–1826), a great English sculptor who was born at York, and at twenty was employed as Modeller by Wedgwood; showing great ability as a sculptor he went to

Italy and studied there seven years. On his return was made an R.A. and Professor of Sculpture, and thenceforward his career was one of unqualified success.

**Fletcher, John** (1579–1625), the famous collaborator with Beaumont in numerous plays which were popular in their day and take high position in the dramatic literature of the country.

**Flinders, Matthew** (1774–1814), an explorer and navigator, who made important discoveries in and around Australia. He sailed through Bass Strait, so called in honour of his surgeon.

**Flotow, Frederick von** (1812–1883), a composer of opera whose "Stradella" and "Martha" l much popularity.

l **Ferdinand**, O.M. (1851–1929), ef of the Allied Armies in France during the last year of the war, previously Commander-in-Chief of the French Northern Armies. Marshal of France, 1918. Field-Marshal (Brit.), 1919.

**Foley, John Henry** (1818–1874), born in Dublin; studied at the Royal Academy, and attained high rank as a sculptor, becoming R.A. in 1858.

**Foote, Samuel** (1720–1777), a clever actor and mimic, the author of numerous comedies, including the "Mayor of Garrett."

**Forbes-Robertson, Sir Johnston** (b. 1853), actor-manager, trained as an artist, but studied under Phelps, and went on the stage, and became a leading player with the Bancroft and Hare companies, and then successfully entered upon management. Farewell season at Drury Lane in 1913.

**Ford, Henry** (b. 1863), President of Ford Motor Co., U.S.A., and probably the richest man in the world in 1925.

**Ford, John** (1586–1640), an English dramatist of considerable power, who wrote sixteen plays, of which "Perkin Warbeck" was perhaps the greatest.

**Forster, Rt. Hon. Lord H. W.** P.C., G.C.M.G., Gov.-Gen. of Australia, 1920–25; M.P. (C) for Sevenoaks, 1892–1918 and for Bromley, 1918. Financial Sec. to the War Office, 1915 (b. 1866). Was a Lord Commissioner for the Treasury, 1902–5. Member of Army Council.

**Fortuny, M. J.** (1838–1874), a celebrated Spanish painter. His "Choosing a Model," "The Snake Charmers," and "Moors playing with the Vulture" show great technical resource.

**Foscari, Francesco**, Doge of Venice from 1423 to 1457. A great historical character, who governed Venice with a firm hand and increased her renown.

**Foscolo, Ugo** (1778–1827), a well-known Italian author, who for his political opinions had to leave the University of Pavia, and went to London and there employed his time in literary work. He produced many admirable translations, but ultimately died in poverty at Turnham Green. His remains were taken to Florence in 1871, and buried in the Church of Santa Croce with great honour.

**Foster, John** (1770–1843), an eminent essayist and lecturer.

**Fourier, François Chas.** (1772–1837), the famous French Socialist, who propounded a system of associative enterprise for giving everyone ample means on a system of communal industry. He made some attempts to carry out his Utopian ideas, but they did not succeed. He is best known by his *Traité de l'Association Domestique*

r, **Sir John** (1817–1898), an eminent civil engineer, son of a Sheffield land surveyor. With Sir Benjamin Baker he was the engineer of the Forth Bridge and of the Metropolitan Railway.

**Fox, Charles James** (1749–1806) was the second son of the first Lord Holland. Entered Parliament at nineteen, and became a Lord of the Admiralty in the following year. His opposition to the Royal Marriage Bill drew down upon him the displeasure of George III. Through the whole of Pitt's Premiership he was that statesman's most formidable opponent. He favoured American Independence; opposed the war with France; was one of the impeachers of Warren Hastings; denounced the Slave Trade and advocated Parliamentary Reform. After the death of Pitt in 1806 he was made Foreign Secretary, but died a few months later, and was buried in Westminster Abbey.

**Fox, George** (1624–1691), was the founder of the Society of Friends.

**Foxe, John** (1516–1587), the English martyrologist, whose "Acts and Monuments" (*Book of Martyrs*) is one of the best-known books in the language. Born at Boston in Lincolnshire, he later became a clergyman of the Anglican Church and died in London.

**Frampton, Sir George**, R.A. (1860–1928), an eminent sculptor.

**France, Anatole (Jacques Thibault)**, (1844–1924), one of France's notable writers of fiction, showing a great mastery of character portrayal and satire. Most of his works are translated into English.

**Francis I.** (1494–1547), was King of France from 1515 to his death. He was involved in many wars and was taken prisoner by Charles V, of Germany at the Battle of Pavia. After friendly relations had been established between Francis and Henry VIII., the two met on the 'Field of the Cloth of Gold."

**Francis of Assisi, St** (1182–1226), founded the Franciscan Order of Monks and devoted himself to a holy life. He is a saint of the Roman Church, having been canonised by Pope Gregory IX., and is commemorated on October 4th.

**Francis, Sir Philip** (1740–1818), an English statesman of repute, author of the famous *Letters of Junius*.

**Franklin, Benjamin** (1706–1790), the famous American statesman and philosopher, who after serving an apprenticeship as a printer attracted public attention by publishing his *Poor Richard's Almanac*. He then began a series of scientific experiments, inventing amongst other things the lightning conductor. He was for ten years a member of the General Assembly; then lived in Britain as agent for his State for eighteen years; returning to America he took part in framing the Constitution of the United States.

**Franklin, Sir John** (1786–1847), the famous Arctic explorer, whose final expedition in command of the *Erebus* and *Terror* ended disastrously, all the members of the expedition perishing. Many attempts were made to discover Franklin, but without obtaining anything save very fragmentary knowledge concerning his fate. He was born at Spilsby.

**Frazer, Sir James G.**, O.M., LL.D., F.R.S., cr. Kt. 1914 (b. 1854). An eminent British anthropologist; author of *The Golden Bough* and numerous other works on his subject.

**Frederick II.** (1712–1786), usually called Frederick the Great, was King of Prussia from 1740 to the time of his death, and by his masterful government and military successes greatly increased the power of his country. He was a scholarly potentate, and his published works extend to thirty volumes.

**Fremont, Colonel John Charles** (1813–1890), was an indefatigable explorer of the Far West, and especially of the Rocky Mountain regions.

**French (Field-Marshal Sir John Denton Pinkstone), 1st Earl of Ypres** (and of High Lake), (1852–1925), entered the Navy as a youth, afterwards passed into the Army, and in the Egyptian campaign of 1884 made his mark as a cavalry officer; served in the South African War with splendid success, and later had Chief Command at Aldershot. Inspector-General, 1907 to 1911. Chief of Imperial Staff from 1911 to 1914. Commander-in-Chief of the British Forces in France, 1914 to 1915. Commander of the Home Forces, 1915 to 1918. Viceroy of Ireland, 1918 to 1921.

**Freud, Sigmund**, M.D., LL.D. (b. 1856); became Professor of Neurology, Vienna University, 1902. An eminent psychoanalyst; author of many books on his subject.

**Frith, W. P.**, R.A. (1819–1910), an English painter. Among his large pictures, which were immensely popular when produced, may be mentioned the "Derby Day" and the "Railway Station."

**Frobisher, Sir Martin** (1535–1594), was the earliest of British navigators to attempt to find the North-West passage to India, and his name is commemorated in Frobisher's Strait to the south of Baffin Land. For his services in connection with the defeat of the Spanish Armada he was knighted.

**Froebel, Friedrich Wilhelm** (1782–1852), was the founder of the Kindergarten system of education, the object of which is "to give children employment in harmony with their nature, to strengthen their bodies, to exercise their senses and lead them up to the original ground of all life, to the idea of unity with themselves."

**Froissart, Jean** (1337–1410), a celebrated French writer who visited England and Scotland, and was the author of the famous *Chronicles*, which tell us so much of the achievements of the barons of old.

**Froude, James Anthony** (1818–1894), the celebrated historian and biographer of Carlyle.

**Fry, C. B.** (b. 1872), a well-known cricketer and athlete, editor, novelist, and writer on athletics.

**Fry, Elizabeth** (1780–1845), a Norwich lady who devoted much of her life to the promotion of prison reform, and achieved considerable reputation as a preacher. She belonged to the Society of Friends.

**Fry, Miss Margery**, J.P., M.A. (b. 1874); became Principal of Somerville College, Oxford, 1926.

**Fuad I., King Ahmed** (b. 1868), Sultan of Egypt Oct. 1917, son of Ismail Pasha. Educated in Italy and served in the Italian Army. King, 1922.

**Fuller, The Hon. Sir George Warburton**, K.C.M.G. (b. 1861); became Agent-General in London for New South Wales, 1928.

**Fuller, Thomas** (1608–1661), the author of *Worthies of England* and a *Church History of Britain*, two well-known and valuable works.

**Fulton, Robert** (1765–1815), an inventive American engineer who distinguished himself by experiments in the application of steam to navigation, and finally in 1807, launched the *Clermont* on the Hudson.

**Furnivall, Frederick James** (1825–1910), a lifelong student of, and writer upon, literature and founder of the Early English Text, Chaucer Ballad, Browning, and Shelley Societies.

## G

**Gainford, Baron (the Rt. Hon. J. A. Pease)** (b. 1860), Postmaster-General, 1916. M.P. for Tynemouth, 1892–1900; for Saffron Walden, 1901–1910; and 1910–16, for the Rotherham Division. For thirteen years a Liberal Whip. Was Chancellor of the Duchy of Lancaster 1910–1911, and from 1911 to 1915 President of the Board of Education.

**Gainsborough, Thomas** (1727–1788), English landscape and portrait-painter, whose works are remarkable for their grace and refinement. His "Duchess of Devonshire" was stolen when exhibited in 1876 and recovered in America some years later.

**Galen, Claudius** (130–200 A.D.), a famous physician, born at Pergamum; practised with great success in Rome, being medical adviser to the Emperor, Marcus Aurelius, and his colleague, Lucius Verus.

**Galileo** (b. at Pisa 1564, d. 1642), the great Italian astronomer, who while still a youth discovered the law of pendulum vibration by seeing a lamp swinging from the roof of the cathedral in Pisa. He also constructed the first telescope with which he made numerous astronomical studies.

**Gall, Franz Joseph** (1758–1828), the German physician who founded the science of phrenology.

**Gallienus, Publius Licinius**, was Roman Emperor from 260 to 268, but exercised his power with cruelty and revolting excess, and was at last slain by his own soldiers.

**Galsworthy, John**, O.M. (b. 1867); a British novelist and dramatist of force and originality.

**Galt, John** (1779–1839), an admired Scottish novelist best known by his *Annals of the Parish*.

**Galton, Sir Francis** (1822–1911), an eminent scientist and traveller, whose studies in hereditary transmission have been of great service, and whose expositions in regard to the markings of finger-tips resulted in the adoption of what is known as finger-print identification in police cases. Originated the study of "Eugenics," and bequeathed £45,000 to the London University for the endowment of a professorship of Eugenics. In 1908 published *Memoirs of My Life*.

**Galvani, Luigi** (1737–1798), a distinguished Italian scientist, whose experiments during a course of lectures on anatomy at Bologna discovered the principle of animal electricity; hence the term Galvanism.

**Gama, Vasco da** (c. 1460–1524), the adventurous Portuguese navigator who discovered the sea route to India in 1498 by doubling the Cape of Good Hope.

**Gambetta, Leon M.** (1838–1882), a French statesman who came into great prominence during the Siege of Paris in 1870–71.

**Gandhi, Mohandas Karamchand** (b. 1869), the prominent Hindu nationalist leader.

**Gapon, Father** (1870–1905), the Russian priest who led the strikers in their attempt to obtain an interview with the Czar in January, 1905. Escaped to France and England after the massacre, but later was murdered for betraying the cause.

**Garcia, Manuel** (1805–1906), a Spanish musician and singing-master, brother of Mmes. Malibran and Viardot, and tutor of many celebrities from Jenny Lind downwards. He published books on singing, and invented the laryngoscope.

**Gardiner, Alfred G.**, editor of the *Daily News* 1902–1919. Author of *Prophets, Priests and Kings Pillars of Society*, and *War Lords*; an incisive writer of character sketches.

**Gardiner, Bishop** (1483–1555), was Bishop of Winchester in 1531, and Lord Chancellor under Queen Mary in 1553. He was a bitter opponent of the Reformation. He was buried at Winchester.

**Garfield, James A.** (1831–1881), was President of the United States from March 1881, to September of the same year, when he died from the effects of a shot received in the preceding July from a man named Guiteau. He had had a distinguished career as a Republican politician. Rose from a very humble position, and was a man of sterling qualities.

**Garibaldi, Giuseppe** (1807–1882), the famous Italian soldier and patriot. In 1834 he was condemned to death for being concerned in a plot to seize a Government vessel, but escaped to South America, and for some years was engaged in various conflicts for liberty in that hotbed of revolution. Returning to Italy in 1848, he joined the Roman Republican movement, but was ultimately compelled to fly for his life, and emigrated to New York. In 1854 he returned to Italy, and on the outbreak of war in 1859 had a command given to him, and scored several victories against the Austrians. The next year found him at the head of a great volunteer army, intent upon liberating Italy. This tremendous task he successfully carried through, earning the admiration of the world for his generalship and patriotism.

**Garrick, David** (1717–1779), the leading tragic actor of his time and a highly successful manager. Was buried in Westminster Abbey.

**Garrison, William Lloyd** (1805–1879), an eminent anti slavery leader of America.

**Garvin, J. L.** (b. 1868), editor of the *Observer*, and formerly editor of the *Pall Mall Gazette* and *The Outlook*.

**Gaskell, Mrs. E. C.** (1810–1865), an English novelist of acknowledged power, whose *Mary Barton, Ruth, Cranford*, and other stories—dealing largely with Lancashire life achieved great popularity. Her *Life of Charlotte Brontë* was also a remarkable book.

**Gassendi, Pierre** (1592–1655), a distinguished French philosopher and mathematician. Best known by his epicurean treatises and biographies of astronomers.

**Gauss, Karl Friedrich** (1777–1855), a famous German mathematician and astronomer.

**Gautier, Theophile** (1811–1872), was an eminent French critic and novelist who at one time filled the position of secretary to Balzac. His romance, *Mademoiselle de Maupin*, caused a great sensation. He was also a poet of considerable power.

**Gay, John** (1685–1732), the English poet who penned *The Beggar's Opera* and the well-known collection of poetic fables. He was a writer of great wit and fancy, and much patronised by Society.

**——, ——, J. L.** (1788–1850), a great French chemist, whose experiments in connection with gases and vapours were of much scientific importance.

**Geber,** the famous Arabian alchemist, lived in the 8th century, and is believed to have made numerous discoveries valuable to chemical science.

**Ged, William** (1690–1749), was one of the inventors of the process of stereotyping. He was a goldsmith and a native of Edinburgh.

**Geddes, Rt. Hon. Sir Auckland,** G.C.M.G., K.C.B. (b. 1879), Brit. Ambassador in Washington 1920–1923, Pres. of the Bd. of Trade, 1919–20; M.P. for Basingstoke Division, 1917–20; Minister of National Service, Aug. 1917 to Jan. 1919; was Prof. of Anatomy in the McGill University, Canada. Introduced the measure against profiteering in Aug. 1919.

**Geddes, Rt. Hon. Sir Eric,** G.C.B., G.B.E. (b. 1875), Pres. of Fed. of British Industries, 1923–25; Minister of Transport, 1919–21; First Lord of the Admiralty, 1917–19; was born in India, of Scottish parents. In early manhood went to America and gained much experience in railway working. In 1903 became deputy manager of the North Eastern Railway Co.; in 1915 was Deputy Director General, later served in France as Deputy General of Military Railways: and in May 1917 became Controller of the Navy.

**Geddes, Jenny,** an Edinburgh vegetable-stall keeper who in 1637, after Laud's introduction of a new service book in St. Giles' Church, hurled her stool at the Dean's head.

**Geddes, Prof. Patrick** (b. 1854), an eminent educationalist, is an enthusiast for original ideas in social economy and regularly holds Vacation courses during the Summer months. Late Professor of Sociology, University of Bombay.

**Geikie, Sir Archibald,** O.M., K.C.B., F.R.S. (1835–1924), one of the most noted geologists of our time. President of the Royal Society, 1908–13.

**Geikie, Professor James** (1839–1915), brother of the foregoing, and his successor in the Chair of Geology at Edinburgh University in 1882. His work on *The Great Ice Age* is a notable one.

**Geneviève, St.,** born at Nanterre, near Paris, in the 5th century, and devoted her life to conventual work. She is the patron saint of Paris, and is reputed to have saved the city from Attila by her prayers in 451.

**Genseric,** Vandal King of Spain in 419, after being driven into Africa by the Visigoths, subdued the Roman provinces of North Africa, and afterwards crossed to Italy and sacked and pillaged Rome, doing irreparable damage to public monuments and sculptures. Hence the term "Vandalism."

**Geoffrey of Anjou** (1158–1186), founder of the Angevin dynasty of England, was son-in-law of Henry I. and father of Henry II., the first Angevin or Plantagenet king.

**Geoffrey of Monmouth** (1100–1154) was the author of the famous Old English chronicle which bears his name. He was born at Monmouth, and became Bishop of St. Asaph in 1152. His *Chronicon* is a compilation from older authors, and is notable for having contained the stories of King Arthur, King Lear, and Cymbeline.

**George I.** (1660–1727) was King of Great Britain from 1714 to his death, ascending the throne as direct descendant of James I. His reign saw many memorable events, including the Jacobite Rebellion, but the monarch himself, who could not speak English, cut no very dignified figure.

**George II.** (1683–1760), son of the last-named, was King of Great Britain from 1727 to 1760. His reign covered a prosperous period in spite of wars and rebellions, and saw the Empire extended in India and North America, but the King was personally a man of limited power and achievement.

**George III.** (1738–1820), was the grandson of George II., and reigned from 1760 to 1820. He was a popular monarch for the most part, possessing all the domestic virtues, and of simple tastes. The war with America lasted from 1775 to 1782, when the American States gained their Independence, and from 1793 to 1815 the war with France was kept up with but little interruption. On the other hand, the Empire in India was strengthened and enlarged, and the power of Great Britain on land and sea was splendidly shown.

**George IV.** (1762–1830) reigned from 1820 to his death, but filled the position of Prince Regent for some years previously. The King's personal character, in spite of the fact that he was called "The First Gentleman in Europe," showed such a want of dignity, and such an abandonment to licentiousness and frivolity, that he became very unpopular with the people.

**George V.,** his present Majesty (b. 1865), is the second son of Edward VII. and Queen Alexandra. Entered the Navy as a cadet in 1877, and spent two years on the training ship *Britannia*, later making a three years' voyage round the world on the *Bacchante*. On the death of the Duke of Clarence in 1892 he became heir to the throne. Was married to Princess Mary of Teck in 1893. On the accession of his father he became Duke of Cornwall and later Prince of Wales. In 1901 made the tour of the Colonies with the Princess; in 1905 they visited India. Succeeded to the throne in May, 1910, and was crowned with great ceremonial in 1911, his Majesty and Queen Mary visiting India in December of that year, when at a Durbar at Delhi another splendid ceremony of crowning was gone through. Visited Berlin in 1913, with Queen Mary, for the marriage of Princess Victoria Luise, and visited Paris in April, 1914. After war broke out the King entered heart and soul into the country's cause, and in furthering the military, naval, and charitable needs of the time displayed the utmost energy and solicitude. He also visited headquarters in France, and inspected the Fleet on active service, and in the financial crisis of 1931 sacrificed £50,000 per annum from the Civil List.

**George, Henry** (1839–1897), the American political economist who attained a great reputation by his *Progress and Poverty*, published in 1879. He advocated public ownership of land, with retention of the present landlord system; but all land to be taxed upon its rent, with the idea of ultimately bringing about the abolition of all other taxes. Nothing made by man was to be taxed at all.

**George, Saint,** the tutelary saint of England, adopted by Edward III. He is believed to have been a native of Cappadocia and a vigorous champion of Christianity in the days of Diocletian, and to have suffered martyrdom at Nicomedia, 303 A.D. The dragon which he is said to have slain symbolises the powers of evil over which he triumphed.

**Gerard, Hon. J. W.,** G.C.B. (b. 1867), U.S. Ambassador to Germany, 1913–17. His book *My Four Years in Germany*, containing remarkable revelations concerning the German Emperor, was one of the literary sensations of 1917.

**Gérome, Jean Léon** (1824–1904), a famous French painter. Among his best-known paintings are "The Duel after the Ball" and "The Age of Augustus."

**Gervase of Tilbury** was an English historical writer who flourished in the 13th century.

**Gervinus, Georg G.** (1805–1871), was a noted German historian and professor.

**Gesner, Konrad von** (1516–1565), a scholarly Swiss naturalist, and the father of the science of zoology.

**Gibbon, Edward** (1737–1794), the celebrated historian of the *Decline and Fall of the Roman Empire*.

**Gibbons, Grinling** (1648–1720), an eminent sculptor and wood-carver, who came from Holland to England, and was patronised by Charles II.

**Gibbons, Orlando** (1583–1625), a noted English composer of Church music who was organist of the Chapel Royal.

**Gibson, John** (1790–1866), a prominent English sculptor who studied under Canova and Thorwaldsen, and lived the greater part of his life at Rome.

**Gibson, Thomas Milner** (1806–1884), was one of the prominent leaders of the Anti-Corn Law movement, and served as President of the Board of Trade under Lord Palmerston.

**Giffen, Sir Robert** (1837–1910), a prominent political economist and statistician.

**Gilbert, Alfred, M.V.O., R.A.** (b. 1854), one of our leading sculptors, and a clever designer of gold and silver objects. Among his best known sculptures are "Perseus arming Icarus," the Shaftesbury Memorial, and the Duke of Clarence Memorial at Windsor.

**Gilbert, Sir Humphrey** (1539–1583), was knighted by Queen Elizabeth for his bravery in Ireland, and later on made voyages of discovery, and added Newfoundland to the British possessions. He was the step-brother of Sir Walter Raleigh, and was drowned eventually off the Azores, his memorable last words being, "We are as near to heaven by sea as on land."

**Gilbert, Sir John** (1817–1897), a brilliant artist, who was successful alike with pencil, water-colour, and oils, and one of the most prolific artists of his time. His black-and-white work was prodigious in quantity and excellent in quality. His illustrations to Staunton's edition of Shakespeare are remarkable for their picturesqueness and dramatic power. He was knighted in 1871, and made R.A. in 1876.

**Gilbert, Sir William Schwenk** (1836–1911), in 1861 began to contribute "Bab Ballads" to *Fun*, and a few years later commenced to write for the stage, producing a number of light burlesques of the pattern then in vogue. He struck out a more original vein with certain fairy plays later, and also wrote a number of strongly conceived dramas and comedies. About this time also he began to collaborate with the late Sir Arthur Sullivan, starting with such slight essays as "Trial by Jury," and gradually extending to the famous Savoy series of operas, which for many years provided England and America with some of their brightest and best entertainments. "H.M.S. Pinafore," "Patience," "Iolanthe," "The Mikado," and the rest are unique, and almost beyond praise. Was knighted in 1907.

**Giles, St.**, the hermit saint of the 7th century—believed to have been a Greek who emigrated to France, and met with considerable honour in Great Britain. At Edinburgh is a castle dedicated to him; in Oxford, Cambridge and London churches bear his name; while throughout the country one may find some hundred others consecrated to this patron of all such as are in sickness and sorrow.

**Gillray, James** (1757–1815), the eminent caricaturist of the time of George III., who produced upwards of a thousand political cartoons, some of which were highly popular, and aroused much sensation.

**Giotto di Bondone** (1276–1336), the famous Italian painter, sculptor, and architect, whose beautiful tower at Florence and his many works of art in various churches there, as well as the churches themselves, form splendid monuments to his memory.

**Girardin, Emile de** (1806–1881), the brilliant French journalist and politician, who exercised great influence upon public opinion, both as a Republican in 1848 and as a supporter of Napoleon III.

**Girouard, Colonel Sir E. P. C**, K.C.M.G., D.S.O., High Commissioner and Commander of the East Africa Protectorate from 1909 to 1912. Director of Soudan Railways, 1896–98, and Railway Commissioner for the Transvaal, 1902–4. Director-Gen. of Munitions Supply, 1915.

**Giulio Romano** (1492–1546) was a pupil of Raphael, and himself a distinguished painter and architect.

**Gladstone, Viscount, of Hawarden** (Herbert John Gladstone), G.C.B., G.C.M.G., G.B.E. (1854–1930), youngest son of the Liberal Prime Minister; entered Parliament as member for Leeds in 1880, and became his father's private secretary. Made a Lord of the Treasury, 1881; Financial Secretary at the War Office, 1886; Under-Secretary, Home Office, 1892; First Commissioner of Works, 1894; and Home Secretary in 1905–10. In 1910 appointed Gov.-Gen., of South Africa and raised to the Peerage. Took firm stand in Rand Labour Troubles of 1913. Resigned in 1914.

**Gladstone, William Ewart** (1809–1898), the great Liberal statesman of the latter part of the 19th century. The son of a Liverpool merchant, he studied at Eton and Oxford. Was elected as a Tory, member for Newark in 1832. In 1834 was made a Lord of the Treasury under Peel, and in the following year became Under-Secretary for the Colonies. In 1841 Peel made him Vice-President of the Board of Trade, and in 1843 full President with Cabinet rank. In 1852 he was Chancellor of the Exchequer, having severed his connection with the Peel Party and become a member of the Coalition Ministry. In 1859 he was Lord Palmerston's Chancellor of the Exchequer, and on that nobleman's death became leader of the House of Commons under Earl Russell. In 1868 he was appointed Premier, for the first time. Passed the Irish Church Disestablishment Measure in 1869, the Irish Land Act in 1870, and the Ballot Act in 1872. After 1874 he was in temporary retirement for a short period, but, stirred to indignation by the "Bulgarian Atrocities," he commenced a campaign of denunciation in which he carried the country with him, and in 1880, at the general election, he was returned to power with an overwhelming majority. He then became Prime Minister for the second time. In 1885 he was out of office again, but returned to power in 1886 and became Prime Minister for the third time. It was then that he introduced his first "Home Rule" Bill, on which he was defeated and resigned, and at the general election following, the Conservatives had a majority, and it was not until 1892 that Mr. Gladstone was again in power. In 1893 he brought in his second Home Rule Bill, which passed the House of Commons but was defeated in the Lords. After that he resigned and took no further part in Parliamentary life. He died on the 19th May, 1898, and was buried in Westminster Abbey, his great political opponent, Lord Salisbury, being one of the pall-bearers. His body lay in state in Westminster Hall for two days and was viewed by no less than 250,000 people, who passed it in unbroken succession.

**Glendower, Owen** (1359–1415), a famous Welsh chieftain who proved a formidable opponent to Henry IV., and gathered around him a great following of Welshman, whom he led with much bravery, though finally defeated in 1405.

**Glenesk, Lord** (1830–1908), was an active politician and proprietor of the *Morning Post*, which, under his able direction, became one of the great successes of London journalism. He represented South Kensington in Parliament from 1885 to 1895. Was knighted (as Sir Algernon Borthwick) in 1880, created a baronet in 1887, and raised to the peerage in 1895. As President of the Newspaper Press Fund, and as one of the founders of the Primrose League, he did excellent service to his profession and his Party.

**Gluck, C. W.** (1714–1787), one of the most eminent composers of opera of the 18th century. His "Orfeo" and "Iphigénie" are his best-known works.

**Godfrey of Bouillon** (c. 1061–1100) was the leader of the First Crusade, and after the conquest of Jerusalem, exchanged the title of King for that of "Protector of the Holy Sepulchre." He liberated the Holy Land, and was buried on Mount Calvary.

**Godiva, Lady** (1040–1080), was the pious and beautiful wife of Leofric, Earl of Chester and Lord of Coventry. Having appealed to her lord to remit certain impositions from the inhabitants, he promised to grant her request if she would ride naked through the town. This she did, having first passed the word to have blinds and shutters drawn at the appointed hour, and so obtained the people's ransom.

**Godolphin, Earl of** (1645–1712), was a page of honour to Charles II., and became First Lord of the Treasury under William III., during whose reign he kept up a secret correspondence with James II. in his exile at St. Germain's. Godolphin was again Premier under Queen Anne, but was dismissed in 1710 at the fall of the Marlboroughs.

**Godwin, Earl of the West Saxons** (990–1053), was one of the most influential noblemen of his time, and gave his daughter in marriage to Edward the Confessor, against whom he was afterwards in rebellion. Godwin's son, Harold, claimed the throne after Edward's death, but was killed at Hastings.

**Godwin, William** (1756–1836), a notable political writer and novelist of very advanced ideas, is now best remembered by his novel *Caleb Williams*. His first wife was Mary Wollstonecraft, who wrote ably on the "Rights of Woman."

**Goethals, Maj.-Gen.** (b. 1859), after making a considerable success as a military engineer in the United States army was in 1907 appointed Governor-in-charge of the Panama Canal, in the carrying out of which he has shown a remarkable administrative capacity and a genius for constructional enterprise.

**Goethe, Johann Wolfgang von** (1749–1832), the most distinguished of German poets and writers. After producing the "Sorrows of Werther," and various poetical plays, he settled down at Weimar, received a Ministerial appointment, and began his famous dramatic poem "Faust," which is one of the world's greatest literary works.

**Goldsmith, Oliver** (1728–1774), the celebrated author of *The Vicar of Wakefield*, *The Deserted Village*, and "She Stoops to Conquer." The son of a poor Irish curate, he found his way to London in 1756, subsequently devoting himself entirely to literature, being befriended by Dr. Johnson and held in great esteem by Reynolds, Burke, and other eminent men of the time. He was buried in the churchyard of the Temple.

**Gooch, Sir Daniel** (1816–1889), a mechanical engineer, who in 1837 was made locomotive superintendent to the Great Western Railway. In 1864 he took up the problem of laying a telegraph cable across the Atlantic, in which, after one failure, he succeeded and was made a baronet. In 1866 he accepted the chairmanship of the Great Western Railway Company, which position he held with success up to the year of his death.

**Goodall, Frederick**, R.A. (1822–1904), was one of the most successful of English painters during the greater portion of his life, and achieved special eminence as a painter of Eastern subjects.

**Goodyear, Charles** (1800–1860), an American, discoverer of the art of vulcanising rubber, by which the utility of the material was greatly extended.

**Goossens, Eugene** (b. 1893), a well-known composer and operatic conductor.

**Gordon, Adam Lindsay** (1833–1870), an Australian poet who wrote many stirring ballads and poems, his "Bush Ballads and Galloping Rhymes" being a great success. As a settler, however, he failed, and, after numerous unfortunate experiments with sheep and cattle and other things, committed suicide.

**Gordon, Charles George, Major-General** (1833–1885), a distinguished soldier, administrator, and earnest Christian, who had a most adventurous, useful, and self-sacrificing career. He saw active service in the Crimea, China, and India, and in 1873 was made Governor of the Equatorial provinces of Egypt. In 1877 he went out to the Soudan for the Egyptian Government, and in 1884 again proceeded thither on behalf of the English Government to deal once more with the difficulties which had arisen consequent on the Mahdi Rebellion While holding Khartoum he was captured and killed.

**Gordon, Lord George** (1751–1793), was tried for treason as the instigator of the Anti-Popery riots of 1780, but acquitted on the ground that he had no treasonable intention. Some years later he was committed to Newgate for libelling Marie Antoinette and died there of fever.

**Gore, Mrs. Catherine** (1799–1861), a very prolific novelist and playwright, whose books were in great vogue.

**Gore, Rt. Rev. Charles**, M.A., D.D., Bishop of Oxford, 1911–1919 (1853–1932), was educated at Oxford; Canon of Westminster, 1894–1902; Hon. Chaplain to Queen Victoria, 1898–1900; Chaplain in Ordinary to King Edward VII., 1901; Bishop of Worcester, 1902–1904; Bishop of Birmingham, 1905–1911; author of numerous theological books, including *Spiritual Efficiency* (1904).

**Gorky, Maxim** (b. 1868), Russian novelist and writer whose works are remarkable for their realistic power. Was in turn shoemaker's apprentice, gardener, watchman, scullion on a packet boat and baker's apprentice. In 1892 his first story was published, and he found his vocation. Many of his works have been translated into English.

**Gortschakoff, Prince** (1798–1883), was the most prominent Russian statesman of his time, and Foreign Minister during the Crimean War. In later years he became Chancellor of the Empire, and achieved many diplomatic victories. He resigned in 1882 and died the following year.

**Goschen, Viscount** (1831–1907). Educated at Rugby and Oxford. Entered Parliament in 1863 as Liberal Member for the City of London and for a number of years held various offices under Mr. Gladstone, from whom he separated on the Home Rule question. In 1886 he accepted office under Lord Salisbury and became Chancellor of the Exchequer, a post which he held from 1886–1892. Was First Lord of the Admiralty from 1895–1900, in which latter year he was raised to the Peerage. Was a Free Trader and a statesman of strong personality.

**Gosse, Sir Edmund** (1849–1928), a distinguished poet and critic who wrote lives of Gray, Congreve, and Dr. Donne, and his *History of 18th Century Literature* and *History of Modern English Literature* show great critical power and appreciation. Dr. Gosse was appointed librarian to the House of Lords in 1904, and wrote a book on French literary men and a life of Sir Thomas Browne. In 1907 he published *Father and Son*, being recollections of his father, the late Philip Gosse, and of his own early career. His Collected Essays (5 vols.) were issued in 1913. In 1917 edited *Posthumous Poems of Swinburne*. Knighted, 1925.

**Gough, Viscount** (1779–1869), a British general who had a brilliant career, first in China, and later in India.

**Gould, Sir Francis Carruthers** (1844–1925). Perhaps the cleverest political caricaturist of the day, and did also considerable journalistic work as assistant editor of the *Westminster Gazette*.

**Gould, Jay** (1836–1892), a well-known American financier and railway magnate, who acquired an enormous fortune and considerable notoriety in Wall Street speculations.

**Gounod, Charles F.** (1818–1893), the eminent French composer, who won a position of the first rank by his "Faust," produced in 1859, one of the most successful operas of the 19th century. Other famous operas of his are "Roméo et Juliette" and "Le Médecin malgré lui." He also composed much sacred music of an intensely spiritual character, including his oratorio, "The Redemption."

**Gower, John** (1325–1408), an English poet of the time of Chaucer, who wrote many elegant ballads and devotional poems. His "Confessio Amantis" was printed by Caxton in 1432.

**Grace, Dr. William Gilbert** (1848–1915), the most famous cricketer of his time, was born at Downend in Gloucestershire, educated for the medical profession, and for the long period of forty years held his supremacy as an exponent of the national summer game. In 1879 he was presented with £1,400 as a testimonial; and in 1895, on completing his "century of centuries" in first-class cricket, received a much larger financial recognition.

**Graham, Sir James** (1792–1861), a prominent Whig statesman who filled several important Cabinet positions between 1830 and 1855.

**Graham, John, of Claverhouse, Viscount Dundee** (1643–1689). Renowned for his sturdy adherence to the Stuarts, and headed a rebellion in Scotland against William and Mary, but was killed at the Battle of Killiecrankie.

**Graham, Rt. Hon. Wm.**, M.A., LL.B., P.C. (1887–1932). Became President of the Board of Trade in Labour Government, 1929–31.

**Grahame, Rt. Hon. Sir George D.**, G.C.M.G. (b. 1873), became British Ambassador to Spain, 1928.

**Granard, Earl of, Rt. Hon. Bernard Arthur William Patrick Hastings Forbes**, K.P., G.C.V.O. (b. 1874), Asst. Postmaster-General, 1906–9; Master of the Horse, 1907–15. In 1911 was

Ambassador to announce to European Courts King George V.'s accession. A Senator of Irish Free State, 1922.

**Grant, James** (1802–1879), was a military novelist. Wrote in all more than fifty historical novels, many of them concerned with Scottish subjects.

**Grant, Sir James Hope** (1808–1875), a distinguished *British general, who saw much active service* and won distinction in China and India, playing a prominent part in the crushing of the Indian Mutiny.

**Grant, General Ulysses** (1822–1885), the most distinguished American general of the Civil War. Became President of the United States from 1868, and was re-elected to that office in 1872.

**Granville, Earl** (Granville George Leveson-Gower), (1815–1891), 2nd Earl (son of the 1st Earl, a distinguished diplomatist in his time), was a prominent Liberal statesman, who held many high Government positions between 1851 and 1886. He first entered Parliament in 1836, and was Colonial Secretary in Gladstone's first Ministry and Foreign Minister from 1870 to 1874 in succession to Lord Clarendon, again from 1880 to 1885 under Gladstone.

**Granville, Rt. Hon. Earl,** P.C., G.C.V.O. (b. 1872), became British Ambassador to Belgium, 1928.

**Grattan, Henry** (1746–1820), an Irish orator and statesman who, first in the Irish Parliament and afterwards in the Imperial Parliament, did memorable work for the cause of his country, and was presented with £50,000 by the Irish people for his services to the Irish cause.

**Gray, Thomas** (1716–1771), the English poet, whose "Elegy written in a Country Churchyard" is one of the most beautiful in the language. His other poems were not numerous, but included a fine "Ode on a Distant Prospect of Eton College" and a notable "Ode to Adversity."

**Greece, King George II.** (b. 1890), succeeded to the Throne on second abdication of his father Constantine Sept. 1922. His younger brother Alexander was made King on the first abdication of Constantine in 1917, but Alexander dying in 1920, Constantine was again proclaimed King. George II. himself was forced to abdicate in 1924 when Greece was made a republic.

**Greeley, Horace** (1811–1872), founder of the *New York Tribune* and a poetical writer of great power and influence. Was an unsuccessful candidate for the United States Presidency in 1872.

**Green, John Richard** (1837–1883), an eminent English historian.

**Greenaway, Kate** (1846–1901), a gifted book illustrator and water-colour artist, whose drawings of children were full of charm and delicacy and gained her great popularity and the warm approval of no less a critic than Ruskin.

**Greene, Robert** (1560–1592), an English poet and dramatist who preceded Shakespeare and is mainly remembered by his "Orlando Furioso."

**Greenwood, Rt. Hon. Arthur,** M.P., P.C. (1929), became Minister of Health, 1929. Prominent in educational and labour work.

**Greenwood of Llanbister, 1st Baron** (cr. 1929), **Hamar Greenwood, Bt.** (cr. 1915), K.C. (b. 1870), born and educated in Canada. Chief Sec. for Ireland, 1920–22; M.P. Sunderland, 1910–22; Under-Sec. Home Affairs, 1919–20; Served in European War, 1914–16; made D.A.A.G., on Lord Derby's Staff, War Office, 1916; M.P. E. Walthamstow, 1924–29.

**Greenwood, Frederick** (1835–1909), first editor of the *Pall Mall Gazette* and subsequently founder of the *St. James's Gazette*. A journalist and writer of distinction and influence, whose action led to Britain obtaining the controlling interest in the Suez Canal.

**Gregory, St.** (257–336), was founder of the Armenian Church, and spent his last years in a cave at the foot of Mount Sebuh.

**Gregory the Great** (540–604), first of the sixteen popes of that name, and, next to Leo I., greatest of the ancient Bishops of Rome. He was pope from 590 to his death. He arranged the Gregorian mode of chanting. Pope Gregory XIII. (1502–1585) introduced the Gregorian calendar.

**Grenfell, Sir Wilfrid T.,** K.C.M.G., M.D., M.R.C.S., L.R.C.P. (b. 1865). Since 1892 has been working among the deep-sea fishermen of Labrador, where he has built hospitals, nursing stations and fitted out hospital ships. Author of several books on his work in Labrador.

**Grenville, Sir Richard** (1541–1591), the Elizabethan sea-captain, who with his one ship *engaged a fleet of Spanish war-vessels off Flores, in 1591, for fourteen hours*, and died in surrendering, an exploit celebrated in Tennyson's noble ballad, "The Revenge."

**Gresham, Sir Thomas** (1519–1579), was the wealthiest London merchant and financier of his time. He built the first Royal Exchange and founded Gresham College. The son of Sir Richard Gresham (Lord Mayor of London), he succeeded his father as King's Agent at Antwerp, and proved an astute money-finder for the Court in four successive reigns, ending as Queen Elizabeth's "Royal Merchant."

**Greuze, Jean Baptiste** (1725–1805), a French painter whose works display much delicacy and beauty of handling, especially his studies of girls.

**Greville, Charles** (1794–1865), author of a celebrated book of *Memoirs*, affording much insight into the political, court, and social life of the long period during which he filled the position of the Clerk of the Council (1821–1860).

**Grey, Charles, 2nd Earl** (1764–1845), a great English Whig statesman under whose Premiership were passed the Reform Bill of 1832, the Bill abolishing slavery throughout the British Empire (1833), and the Poor Law Amendment Act of 1834.

**Grey, Lady Jane** (1537–1554), was the daughter of the Duke of Suffolk and great-granddaughter of Henry VII. On the death of Edward VI. she was proclaimed Queen, but only reigned for ten days, Queen Mary ousting her and maintaining the Tudor succession. Six months later Lady Jane and her husband, Lord Guildford Dudley, were executed.

**Grey, Viscount of Fallodon, Rt. Hon. Edward** (Grey, K.G. (b. 1862). Foreign Minister from 1905 to Dec. 1916. Was Under-Secretary for Foreign Affairs, 1892. He won high approval for his handling of the Balkan difficulties of 1912–1913, and all through the difficult strain which preceded Germany's rush into war acquitted himself with force and dignity. Resigned in Dec. 1916. Raised to the Peerage in July, 1916. Temp. Ambassador to the United States, 1919. Leader of Liberal Party in House of Lords until Aug. 1924. Became Chancellor of Oxford Univ., 1928.

**Grieg, Edvard** (1843–1907), a Norwegian musical composer, who presented the characteristics of his country's music with strong accentuation in numerous compositions of great melodic beauty.

**Grierson, Sir George A.,** O.M., K.C.I.E., Ph.D., LL.D. (b. 1851), an eminent philologist and linguist in charge of the Linguistic Survey of India.

**Griffin, Gerald** (1803–1840), a novelist and poet of Limerick birth, whose stories are remarkable for their pictures of Irish life.

**Griffith-Boscawen, Lt.-Col. the Rt. Hon. Sir Arthur** (b. 1865), Minister of Health, 1922–23; Minister of Agriculture, 1921; M.P. for Dudley, 1910–21; Parly. Sec. Board of Agriculture, 1919–1921.

**Grigg, Lt.-Col. Sir Edward W. M.,** K.C.M.G., K.C.V.O., D.S.O., M.C. (b. 1879), became Governor and Commander-in-Chief of Kenya Colony and Protectorate, 1925.

**Grimthorpe (Edmund Beckett), Baron** (1816–1905), was long known as Sir Edmund Beckett, Bt. Raised to the peerage in 1866. Was a great authority on horology, and, with Professor Airy, designed "Big Ben." He restored St. Albans Cathedral at his own cost.

**Grossmith, George** (1847–1912), the well-known actor and entertainer. His father, George Grossmith the elder, was also a popular entertainer and lecturer, his brother, Weedon Grossmith, was an actor and artist of considerable attainments, and his son, George Grossmith, Junr., is a successful comedian.

**Grouchy, Marshal** (1766–1847), a famous Napoleonic general who, at Hohenlinden, Wagram, and in the Moscow retreat rendered signal

After Waterloo he led the defeated army back to Paris.

**Grove, Sir George** (1820–1900), was a engineer and bridge and ——————, but better known as an enth—— lover of music, the study and performance of which in England he did much to promote. He was for a number of years Secretary to the Crystal Palace, making that institution famous for its high-class musical performances. He was the first Director of the Royal College of Music, and was knighted while holding that position. His *Dictionary of Music and Musicians* is the leading work of its kind, and has recently been brought up to date and republished.

**Guido, Reni** (1575–1642), was one of the eminent Italian painters of the Bolognese school. His "Michael Vanquishing Satan," "Magdalene," and "The Massacre of the Innocents" are among the world's great pictures.

**Guizot, F.** (1787–1874), a French statesman and historian, who held important appointments under Louis-Philippe.

**Gull, Sir William** (1816–1890), one of the most eminent physicians of his time.

**Gustaf V.**, became King of Sweden, Dec. 1907 (b. 1858).

**Guy, Thomas** (1644–1724), founder of Guy's Hospital, was a dealer in Bibles, speculator and money-lender, who, after making a large fortune, bequeathed £300,000 for the erection and endowment of the famous hospital.

**Gwynne, Nell** (1650–1687), was originally, it is said, an orange girl of provincial birth, and afterwards a sprightly London dancer and actress, who became mistress to Charles II. Her eldest son was made Duke of St. Albans.

**Haab, Robert,** became President of Switzerland, 1929.

**Haakon VII.** (b. 1872), became King of Norway, Nov. 1905.

**Hadrian** (76–138) was Emperor of Rome in succession to his uncle Trajan, and one of the greatest of Roman rulers. He visited Britain, and in A.D. 121 built the wall between Newcastle and Carlisle for protection of his dominions against the Picts and Scots.

**Haeckel, Professor Ernst** (1833–1919), an eminent German scientist and philosopher, and Professor of Zoology at Jena University. An earnest supporter of the Evolution theory, and his writings became popular throughout Europe.

**Haeli Sellasie I.**, became Emperor of Abyssinia, April 1930 (b. 1891).

**Haggard, Sir H. Rider,** K.B.E. (1856–1925), spent several years in South Africa in official positions in the 'seventies, and returning to England began to write novels. After one or two failures made a brilliant success with *King Solomon's Mines* in 1886. This was followed by *She*, *Jess*, and others. Was deeply interested in agricultural subjects, on which he has written very ably. Knighted, 1912.

**Ha——an, S. C.** (1755–1843), the German physician who founded the system of Homœopathy.

**Haig of Bemersyde, Field-Marshal Earl,** K.T., G.C.B., O.M., G.C.V.O., K.C.I.E. (1861–1928), succeeded Viscount French as Commander of the British Forces in France, Dec. 1915. Before the war was Commander-in-Chief at Aldershot, and had distinguished himself in the Soudan, South Africa, and India. Commander-in-Chief of the Forces in Gt. Britain in 1919.

**Hailsham, Viscount** (cr. 1929) (**Douglas McGarel Hogg**) (b. 1872), P.C. 1922; Lord Chancellor, 1928–29; M.P. (C.) St. Marylebone, 1922–28; Attorney-General, Oct. 1912 and Nov. 1924. Secretary for War, 1931.

**Hakluyt, Richard** (1553–1616), the first of English naval historians. By his *Divers Voyages touching the Discovery of America*, and *Principal Navigations, Voyages, and Discoveries of the English Nation*, did much to help forward the colonising spirit.

**Haldane, Viscount** (1856–1928), sat for Haddingtonshire, 1885–1911. In 1901 was Vice-President of the Liberal Imperialist League, and at the close of 1905 was made War Minister and organised the Territorial Force. Lord Chancellor, 1912–15. Again in first Labour Government, 1924.

**Halévy, Ludovic** (1834–1903), a brilliant French writer who supplied Offenbach with libretti for some of his most famous comic operas; among them "La Belle Hélène," "La Grande Duchesse," and "Barbe Bleue." In conjunction with Meilhac he wrote several notable plays, of which "Frou-frou" was perhaps the most successful.

**Haliburton, Thomas Chandler** (1796–1865), while judge in Nova Scotia, published a series of books of American humour under the pseudonym of "Sam Slick." Slick was portrayed as a clockmaker of a shrewd philosophy that admirably exploited some of the early 19th-century Yankee's characteristics.

**Halifax, Earl** of (1661–1715), was an eminent statesman, who filled the office of Chancellor of the Exchequer in 1694, and established the Bank of England.

**Halifax, Viscount** (b. 1839), President of the English Church Union until 1919, and a strenuous worker for bridging the gulf between the Anglican and Catholic bodies of Christendom.

**Hall, Marie** (b. 1884), was born in Newcastle-on-Tyne, and studied the violin under several eminent teachers, including Sevcik of Prague, and on appearing in public in London in 1903 at once took up a position among the leading violinists of the time.

**Hallam, Henry** (1777–1859), a graceful and scholarly historian who contributed several important works. His *View of the State of Europe during the Middle Ages*, *Constitutional History of England*, and *Introduction to the Literature of Europe* are distinguished for their clearness of style and correctness of judgment.

**Hallé, Sir Charles** (1819–1895), a distinguished pianist and conductor who was born in Westphalia. Went to Paris to study music in 1836, and in 1848 settled in London, where he soon became known as a piano-player of the first rank. He organised an orchestra of high-class talent, and for many years conducted it in London and the provinces. He married Madame Norman Neruda (d. 1911), the celebrated violinist, in 1888, and was knighted the same year.

**Halley, Edmund** (1656–1742), English Astronomer Royal from 1720 to his death. Discovered what is known as Halley's comet.

**Hals, Franz** (1584–1666), a famous painter of the Dutch School, who is represented in the leading galleries of Europe.

**Halsbury, Hardinge Stanley Giffard, 1st Earl of** (1823–1921), was a barrister in lucrative practice from 1850–1875, when he was appointed Solicitor-General. In 1885 was raised to the Peerage and became Lord Chancellor. Made earl in 1898, and occupied the Woolsack, 1886–1892 and 1895–1905.

**Hamerton, Phillip G.** (1834–1894), an able and original painter and critic, who first attracted notice by his book *A Painter's Camp in the Highlands*.

**Hamilton, Emma Lyon, Lady** (1761–1815), was a woman of humble birth and great personal beauty who attained prominent notice by her association with Sir William Hamilton, British Ambassador at Naples, who married her, and afterwards with Lord Nelson, who conceived an infatuation for her.

**Hamilton, Gen. Sir Ian,** G.C.B., D.S.O. (b. 1853), was one of the successful generals of the Boer War, and had previously had experience of active service in the Soudan and Burma. In 1903–1904 was Quartermaster-General, G. O. C.-in-Chief Southern Command, 1905–1909, appointed Commander-in-Chief in the Mediterranean, 1910, and took command of the attack on the Dardanelles in the early part of 1915, resigning in October of that year, retiring from the army in 1920.

**Hamilton, Patrick** (1504–1528), one of the Scottish Reformer martyrs, who, spending some time with Luther in Germany, returned to his native country, and was arrested and burnt at the stake as a heretic.

**(1594–1643), the English patriot**

who opposed Charles I.'s "Ship Money" tax, and by his resistance and eloquent advocacy of the wish of the people helped the Parliamentary cause.

**Hamsun, Knut** (b. 1859), a well-known Norwegian author, who received no education, and has been in turn farmer, clerk, street car conductor and village schoolmaster. Nobel Prize winner. His works, *Shallow Soil*, *Growth of the Soil*, and others can be read in English translations.

**Handel, George Frederick** (1685–1759), a German musical composer of great eminence, who passed most of his life in England, composing operas and musical compositions of many kinds, and ultimately achieving world-wide fame by his great series of oratorios, including "Esther," "Deborah," "Saul," "Israel in Egypt," "The Messiah," "Samson," and "Judas Maccabeus." Undoubtedly the greatest oratorio writer the world has produced. Was buried in Westminster Abbey.

**Hannay, The Rev. J. O.**, M.A., Canon of St. Patrick's Cathedral, 1912 (b. 1865), is best known as "George A. Birmingham," under which pseudonym he has published several notable novels, including *The Seething Pot* and *Spanish Gold*, and some plays.

**Hanway, Jonas** (1712–1786), a well-known traveller and philanthropist, whose book on his travels in Persia and Russia was much read. His efforts for poor London children resulted in great good.

**Hannibal** (247–183 B.C.), the renowned Carthaginian general, who led an army against Rome, and achieved many notable victories over superior numbers. Was defeated by Scipio at the Battle of Zama, and afterwards suffered exile, and poisoned himself.

**Hannington, James** (1847–1885), Bishop of Equatorial East Africa, was not only a successful missionary but an ardent explorer, and it was while attempting to find a new route to Lake Victoria Nyanza that he was made prisoner by Mwanga and put to death.

**Hansard, Luke** (1752–1828), an English printer who for many years printed the Parliamentary reports which still bear his name.

**Hansom, Joseph** (1803–1882), a native of York and educated for an architect, but turning his attention to the question of an improved road vehicle, invented the cab which was called after him, now in its turn superseded by the taxi-cab.

**Harcourt, Sir William Vernon** (1827–1904), barrister, author and Liberal statesman. An enthusiastic supporter of Mr. Gladstone.

**Harden, Maximilian** (1861–1927), a German journalist whose paper, *Die Zukunft*, went as near to the expression of independent opinion as was possible in Germany during the Kaiser's reign.

**Hardicanute** (1019–1042), son of Canute the Great, was King of England from 1040–1042, and imposed the tax called Danegelt. He was the last Danish sovereign of this country.

**Hardie, J. Keir**, M.P. (1856–1915), a Radical politician and Labour representative who acted as editor of the *Miner* and the *Labour Leader* from 1887–1904. During his early life he worked in a Scottish coal pit, but in 1882 became a journalist, and entered Parliament as member for West Ham in 1892. Founded the Independent Labour Party, and later sat for Merthyr Tydvil from 1900 till his death.

**Harding, Warren G.** (1865–1923). President U.S. America, 1921–1923; member U.S. Senate, 1915–1921; author of the Washington Conference for Limitation of Armaments and for peaceably settling disputes of nations, specially as regards the Pacific and Far Eastern questions, died in office August, 1923.

**Hardinge of Penshurst, Lord**, K.G., G.C.B., G.C.S.I., G.C.M.G., G.C.I.E., G.C.V.O., I.S.O., formerly Sir Charles Hardinge (b. 1858), filled many important diplomatic appointments between 1880 and 1906—at Constantinople, Berlin, Washington, and Petrograd. Permanent Under-Secretary of State for Foreign Affairs, 1906–10 and 1916–20. From 1910–16 was Viceroy of India. On Dec. 23, 1912, his assassination was attempted by the throwing of a bomb as he was making his state entry into Delhi, but he was only slightly wounded. Ambassador in Paris, 1920–1922.

**Hardinge, Viscount** (1785–1856), was Governor-General of India from 1844 to 1847.

**Hardy, Thomas**, O.M. (1840–1928), was educated as an architect, and practised for some time, but became known as a promising novelist in 1871 with his story *Desperate Remedies*. In 1874 his *Far from the Madding Crowd* was published, which at once made him a name. Following that, at short intervals, came a long series of powerful novels from his pen. Perhaps the most notable of his stories are *The Trumpet Major*, *The Mayor of Casterbridge*, *Tess of the D'Urbervilles*, and *Jude the Obscure*. In 1908 he completed a dramatic poem entitled "The Dynasts," whose central figure is Napoleon.

**Hare, Sir John** (1844–1921), a well-known comedian.

**Harewood, 6th Earl of (Henry George Charles Lascelles)**, K.G., D.S.O. (b. 1882), late Captain Grenadier Guards; late Major Yorkshire Hussars; served in the Great War (wounded three times); married H.R.H. Princess Mary, 28th Feb., 1922. Has 2 sons. Lord-Lieut. and Custos Rotulorum of West Riding, Yorkshire, since 1927; became Royal Trustee of the British Museum, 1930.

**Hargreaves, James** (1720–1778), was a poor Lancashire-born mechanic who invented the spinning jenny, one of the revolutionising labour-saving contrivances of the latter half of the 18th century. It met with much opposition, however, and kept him poor, though the community afterwards reaped the advantage in a greatly improved industry.

**Harley, Robert, Earl of Oxford** (1661–1724), a distinguished Tory statesman—originally, however, a Whig—of the Queen Anne period, who fell into disgrace after that Sovereign's death in consequence of being suspected of intriguing with the Stuarts. He served at different times as Speaker of the House of Commons, Chancellor of the Exchequer, and Lord Treasurer. "The Harleian Collection" in the British Museum is a reminder of his cultured literary tastes.

**Harold II.** (1022–1066), the last of the Saxon Sovereigns of England, and the son of Earl Godwin, was crowned King in succession to Edward the Confessor in 1066. The coming of William the Conqueror, with his great army, soon, however, put an end to the hopes of Harold and his followers; and the Battle of Hastings terminated at once his life and Saxon sway in this country.

**Haroun-Al-Raschid**, the famous Caliph of Bagdad (786–809), familiar to all by the references to him in the *Arabian Nights*—a wise and powerful ruler.

**Harraden, Beatrice** (b. 1864), a novelist best known by her *Ships that Pass in the Night*, published in 1893.

**Harris, George Robt. Canning, 4th Baron** (b. 1851), has served his country at home as Under-Secretary for India (1885–1886) and Under-Secretary for War (1886–1889), and abroad as Governor of Bombay (1890–1895), and with the Imperial Yeomanry in South Africa in 1901. His lordship has also won considerable fame as a keen cricketer, in connection with the Kent County Club particularly.

**Harrison, Frederic** (1831–1923), as leader of the English Positivists, filled a prominent part in philosophical discussions during the last quarter of the 19th century. In 1907 he published *The Creed of a Layman* and *The Philosophy of Common Sense*, and in 1908 *Realities and Ideals*.

**Harrison, John** (1693–1778), the inventor of the chronometer, for which he received the Government grant of £20,000, was a mechanician of great ingenuity, who effected many important improvements in clocks, watches, and other

**Hart, Sir Robert** (1835–1911), was Director of Chinese Imperial Maritime Customs at Pekin, and for over half a century in the Consular and Customs service in the Celestial Empire, during which he became the most trusted Englishman in China. Retired, 1908.

**Harte, Francis Bret** (1839–1902), the American poet and author, who leapt into popularity in the late 'sixties by his clever stories of Californian mining life.

**Hartshorn, Rt. Hon. Vernon,** O.B.E., P.C. (1872–1931); Lord Privy Seal, 1930; Postmaster-General in First Labour Government, 1924. M.P., Ogmore Vale, 1918–31.

**Harty, Sir Hamilton** (b. 1880), cr. Kt., 1925; Mus. Doc. A well-known British composer and conductor.

**Harvey, William** (1578–1657), an English doctor and scientist who rose to great eminence both as an anatomist and physiologist, and became Physician Extraordinary to James I. He immortalised himself by discovering the circulation of the blood in 1616.

**Hastings, Sir Patrick,** K.C. (b. 1880), cr. Kt. 1924; barrister-at-law; Middle Temple; Bencher, 1924; Attorney-General, Jan.–Nov., 1924.

**Hastings, Warren** (1732–1818), at seventeen years old went out to Bengal and took a position as writer in the East India Company's service. Subsequently volunteered under Clive, and a year or two later became a Member of the Council at Calcutta. Manifesting great ability, he was advanced from post to post, and in 1773 became the first Governor-General of India. After twelve years of Governor-Generalship he returned to England, and was impeached on charges of excessive cruelty and corruption. The trial lasted seven years, and cost Hastings £76,000. He was ultimately acquitted, and the East India Company settled an annuity of £4,000 upon him, and he lived to see his plans for the security of British rule in the Orient publicly applauded.

**Hatto** (*c.* 850–913) Archbishop of Mayence, a powerful but cruel prelate, who according to tradition was cast into the Mouse Tower still standing at Burgen on the Rhine, and there was worried to death by rats, as set forth in Southey's well-known ballad.

**Hatton, Sir Christopher** (1540–1591), an English statesman who first attracted the attention of Queen Elizabeth by his dancing at a Court masque, and was by her appointed Lord Chancellor in 1587.

**Hatton, J. L.** (1809–1886), an English musical composer, who made a great name as a composer of songs, cantatas and glees. His "Simon the Cellarer" is perhaps his best remembered song.

**Hauptmann, Gerhart** (b. 1862), one of the leading dramatic poets of Europe. A native of Silesia, he devoted himself first to agriculture, then to art, and subsequently to the drama, and has lived in Rome, Berlin, Switzerland, and the United States. Since 1885 he has produced many plays, including "The Weavers." Winner of the Nobel Prize for Literature, 1912.

**Havelock, Sir Henry** (1795–1857), one of the heroes of the Indian Mutiny, who led the troops to the relief of Cawnpore and Lucknow. He was a great soldier.

**Havergal, Frances Ridley** (1836–1879), a writer of hymns to be found in most hymnals.

**Hawke, Edward, 1st Baron** (1705–1781), one of the great admirals of the 18th century. He won a brilliant victory over the French fleet at Quiberon in 1759 in a tremendous storm.

**Hawke, The Hon. Mr. Justice (Sir John Hawke),** (b. 1869), cr. Kt., 1928; became Judge of the King's Bench Division, 1928; Middle Temple Bencher.

**Hawke, Martin Bladen, 7th Baron** (b. 1860), the popular peer who has since his college days devoted so much enthusiastic energy to the interests of Yorkshire and English cricket.

**Hawkins, Sir Anthony Hope** (b. 1863), a popular novelist and playwright. Amongst his best-known works are *The Prisoner of Zenda*, *The Dolly Dialogues*, and *Rupert of Henitzau*.

**Hawkins, Sir John** (1532–1595), a brilliant naval officer of the Elizabethan period, who did much see fighting in many climes, and served as vice-admiral in the expedition against the Spanish Armada, for which he was knighted.

**Hawthorne, Nathaniel** (1804–1864), one of the most distinguished novelists which America has produced. His *Scarlet Letter* and *The Blithedale Romance* are works of genius. From 1853 to 1857 he was American Consul at Liverpool.

**Hay, Colonel John** (1838–1905), an American statesman and author who filled many high Government positions. Was Ambassador to England in 1897, when he was called home to take the post of Secretary of State, which he held through the McKinley *régime*, and also continued the office under President Roosevelt. As an author he gained no inconsiderable fame by his *Pike County Ballads* and the ten-volume *Biography of Lincoln* upon which he collaborated with John George Nicolay.

**"Hay, Ian" (Major John Hay Beith,** C.B.E., M.C.), a well-known novelist and playwright; author of *The First Hundred Thousand*, *Carrying On*, *A Safety Match*, etc.

**Hayashi, Count** (1850–1913), an able and enlightened Japanese statesman and diplomatist, who came as Envoy Extraordinary and Minister of Japan to the Court of St. James's in 1900, and made many friends by his urbanity and broad-mindedness, retiring amid much expression of regret after six years' residence in London. Minister for Foreign Affairs, 1906–8.

**Haydn, Joseph** (1732–1809), an Austrian musical composer whose oratorio "The Creation" ranks with the "Messiah" of Handel. It was composed in his 64th year, and two years later still he composed "The Seasons," perhaps the most characteristic of all his works. He was for thirty years chapel-master to Prince Esterhazy, and wrote 125 Orchestral Symphonies.

**Haydon, Benjamin Robert** (1786–1846), an ambitious historical painter and lecturer on art, who produced a number of paintings of sacred subjects, which were too large in scope for the popular appreciation, and eventually in a fit of disappointment he committed suicide.

**Hazlitt, William** (1778–1830), one of the most admired of our essayists and critics. His *Characters of Shakespeare's Plays* and his published lectures on the poets and dramatists, besides his *Table Talks*, are still widely read. His son William (1811–1893) was also of literary tastes, though he became Senior Registrar in the Bankruptcy Court; and the son of the latter, William Carew Hazlitt (b. 1834), though originally a civil engineer, entered largely into journalism and authorship, and acquired celebrity as a bibliographer and numismatist, writing and editing many books.

**Healy, Timothy M.,** K.C. (1855–1931), Governor-General, Irish Free State, Dec. 1922–28, a prominent Irish M.P. from 1880, and sat successively for Wexford, Monaghan, Londonderry, Longford, Louth and Cork. Lost his seat in Dec. 1910; was elected for N.E. Cork in 1911, resigned 1918. Was a prominent Land Leaguer and was imprisoned for a fiery speech in 1882.

**Heaton, Sir J. Henniker** (1848–1914), a persistent and successful postal reformer, having carried the Imperial penny postage scheme of 1898, and Anglo-American penny postage, 1907. M.P. for Canterbury (C.), for over 20 years.

**Heber, Reginald** (1783–1826), a noted divine who became Bishop of Calcutta and wrote a number of hymns, including the familiar "From Greenland's Icy Mountains."

**Hedin, Dr. Sven,** Hon. K.C.I.E. (b. 1865), a Swedish traveller who has made discoveries in Central Asia, and has written extensively thereon.

**Hegel, G. W. F.** (1770–1831), a famous German philosopher and professor who propounded a system of his own, in which he claimed that whatever is real is rational, and whatever is rational is real.

**Heine, Heinrich** (1799–1856), the German lyric poet, who lived for the best part of his life in Paris, and produced from time to time poems of profound beauty and subtlety of thought. Cynical, satirical, and often bitter, many of his writings excited great conflict of opinion, and showed intense emotional power.

**Héloïse,** daughter of Canon Fulbert of Notre Dame. Famed for her romantic attachment for Abelard. (See **Abelard.**)

**Hely-Hutchinson, Rt. Hon. Sir W. F.** (1849–1913), an experienced Colonial Administrator who was in charge in Natal when the Boer War broke out, and was Governor of Cape Colony, 1901–10.

**Hemans, Felicia Dorothea** (1793–1835), a poetess who wrote many songs and poems.

**Henderson, Rt. Hon. Arthur** (b. 1863), Foreign Secretary, 1929–31; Home Secretary, 1924. Labour member of War Cabinet from December, 1916, to August, 1917. President, Board of Education, 1915–16. M.P. for Barnard Castle,

1903–18; Widnes, 1919–22; Newcastle, 1923; Burnley, 1924–31; Chairman of Parliamentary Labour Party 1908–10 and 1914–17. Chief Whip, Labour Party, 1914, 1921–24, 1925–27.

**Hengist**, a famous chief of the Jutes, who, for the part he took with his brother Horsa against the Picts, was made King of Kent in the 5th century.

**Henrietta Maria** (1609–1669), the daughter of Henry IV. of France and wife of Charles I.

**Henry, Sir Edward R.**, G.C.V.O., K.C.B., C.S.I., Commissioner of the Metropolitan Police, 1903–18 (b. 1850). In the Indian Civil Service, 1873–90; Inspector-General of Police for Bengal, 1891–99; in 1901 organised the town police force for the Transvaal.

**Henry I.** (1068–1135) was the youngest son of William the Conqueror, and reigned from 1100 to 1135. He came to the throne during the absence of his elder brother Robert on a Crusade, and had to fight and imprison the latter later; but on the whole the first Henry gave the country peace and prosperity.

**Henry II.** (1133–1189) was King of England from 1154 to 1189. He had serious conflicts with the Church, which were not rendered less acute by the assassination of Thomas à Becket. The story of "Fair Rosamond" is connected with this monarch.

**Henry III.** (1207–1272), King of England from 1216 to 1272. Was at war with his barons for the greater part of his reign, and incurred much unpopularity by his reckless living and patronage of foreign favourites.

**Henry IV.** (1367–1413), reigned from 1399–1413. The son of John o' Gaunt, he succeeded his father in the Duchy of Lancaster in 1399, and later captured and imprisoned Richard II., who was deposed by Parliament and the crown given to Bolingbroke, as the grandson of Edward III. Henry IV. thus became the first of England's Lancastrian Kings.

**Henry IV. of France** (Henry of Navarre) (1553–1610), prior to becoming king was the leader of the French Huguenots, and although going over to the Catholics on being crowned, remained in sympathy with the Protestants and protected them by the famous Edict of Nantes. Ravaillac, a religious fanatic, assassinated Henry.

**Henry V.** (1387–1422), reigned from 1413 to 1422, and distinguished himself in the wars with France, the Battle of Agincourt being his greatest triumph. Is said to have been wild and dissolute in his youth, but made an able, energetic and undoubtedly courageous king.

**Henry VI.** (1421–1471), King of England from 1422 to 1461. Succeeding to the throne under a protectorship as a baby nine months old, he had a troubled reign, including a long war with France and loss of French possessions, the Jack Cade insurrection, and the beginning of the Wars of the Roses, which led to his deposition and the enthronement of Edward IV. by the triumphant Yorkists. Was imprisoned in the Tower, and there found dead one day in 1471.

**Henry VII.** (1457–1509), the first of the Tudor line, reigned from 1485 to 1509, succeeding Richard III., after defeating and killing him on Bosworth Field. Was very avaricious, yet able, and accumulated vast treasure. He built the Gothic Lady Chapel of Westminster Abbey, and is there buried.

**Henry VIII.** (1491–1547), reigned from 1509 to 1547. A luxury-loving monarch of great diplomatic gifts, and unscrupulous to a degree when his own personal desires were concerned. His quarrels with the Church resulted in the acceptance of the Reformation. His half-dozen matrimonial exploits, his deposition of Wolsey and his suppression of the monasteries, are familiar incidents of history.

**Henry, Patrick** (1736–1799), a Virginian of Scottish descent who was a prominent figure in the American Independence movement, and the most famous orator among the Republican leaders.

**Henry "the Navigator"** (1395–1460), a Portuguese Prince, son of John I. He discovered Madeira and the Azores, and was the chief instrument of the national impetus for navigation.

**Heraclitus** (*circa* 535–475 B.C.) was a famous Greek philosopher, who wrote numerous works on religion and politics. He was born and died at Ephesus.

**Herbert, George** (1593–1633), the most purely devotional of English poets.

**Hereford, Bishop of (Rt. Rev. Martin Linton Smith,** D.S.O., D.D.), 1920–30 (b. 1869).

**Hereward the Wake**, the last of the Saxon nobles to hold out against the Normans. Taking refuge in the Fen country, he long defied the Conqueror's forces, but was at last betrayed into the enemy's hands by monks. William afterwards honoured him with a place at Court.

**Herkomer, Professor Sir Hubert von**, a Bavarian (1849–1914). Came to England while young. Studied painting, and rapidly rose to distinction; was made R.A. in 1890.

**Herod the Great** was the tyrannical King of Judæa, whose reign dates from 40 B.C., and it was during his reign that Christ was born.

**Herodotus** (*circa* 484–424 B.C.), the great Greek historian, the "Father of History."

**Herrick, Robert** (1591–1674), one of the sweetest of lyrical poets. Author of "Gather ye Rose Buds," "Cherry Ripe," "Oberon's Feast," etc.

**Herring, George** (1841–1906), philanthropist, a London financier who gave a large sum to King Edward's Hospital Fund, and to the Salvation Army.

**Herring, John Frederick** (1795–1865), an English animal painter who, from being a stage-coach driver, rose to be the best painter of horses of his time.

**Herschel, Sir John F. W.** (1792–1871), a celebrated astronomer who did much to extend the power of the telescope.

**Herschel, Sir William** (1738–1822), born in Hanover. This great astronomer—father of the last-named—discovered the planet Uranus. His sister, Caroline Lucretia (1750–1848), was a zealous participator in his studies.

**Hertling, Count Georg von** (1843–1919), German Imperial Chancellor 1917–18, was a Bavarian and a devoted Catholic. In 1880 was appointed to a professorship at the Bonn University, having previously become a member of the Reichstag, where in later years he became leader of the Central Party. From 1912 to 1917 was Minister President of Bavaria.

**Hertz, the Very Rev. J. Herman**, Chief Rabbi of the British Empire 1913 (b. in Hungary 1872). Was Rabbi at Johannesburg from 1898 to 1911, and from 1911 to 1913 Rabbi in New York.

**Hertzog, General, the Hon. J. B. M.**, B.A., LL.D., K.C., (b. 1866), Prime Minister 1924, and Minister of External Affairs of the Union of South Africa 1929.

**Herzl, Theodor** (1860–1904), founded modern political Zionism.

**Hesiod** flourished in Greece about 735 B.C. His *Works and Days* and *Theogony* are remarkable.

**Hewlett, Maurice** (1862–1923), a writer of romance. His novel, *The Stooping Lady*, was issued in 1907; *Mrs. Lancelot*, 1912; *Bendish*, 1913; *A Lover's Tale*, 1915.

**Hicks, Seymour** (b. 1871), a popular London light comedian and dramatic author who married Miss Ellaline Terriss, and has played in association with her in many charming productions.

**Hicks Pasha** (1830–1883), a gallant British general employed in the Egyptian army. Entrusted with the command of a force of 16,000 men against the Mahdi, he gave battle at El Obeid, when, overwhelmed by numbers, his army was cut to pieces and himself killed.

**Hiero or Hieron I.** was Tyrant of Syracuse in 478 B.C.; during his reign he made his court the home of Æschylus, Pindar, and other men of learning. He died 467 B.C.

**Higgins, General Edward John**, C.B.E., General of the Salvation Army from 1929; succeeded W. Bramwell Booth in 1929.

**Hilda, Saint** (614–680), first abbess of Whitby, was of royal parentage, and of great learning and piety. Her life was devoted to good deeds and spiritual ministrations.

**Hill, George Francis**, C.B., M.A., D.Litt., LL.D., F.B.A., F.S.A. (b. 1867). Became British Museum Director and Principal Librarian 1931; Keeper of the Dept. of Coins and Medals in the British Museum 1912–1931.

**Hill, Sir Maurice**, K.C. (b. 1862), cr. Kt. 1916; a judge of the Probate, Divorce and Admiralty Division from 1917 to 1930.

**Hill, Sir Rowland** (1795–1879), the first propounder of the idea of the penny postal system, and

secretary to the Postmaster-General from 1846 to 1854, after which he was Chief Secretary to the Post Office until 1864. Buried in Westminster Abbey.

**Hindenburg, President Marshal Paul von** (b. 1847). Became President of the German Reich 1925. He played an important part in the Great War and was Chief of the General Staff 1916–18.

**Hinkler, Sqd. Leader Harold** ("**Bert**"), A.F.C. (b. 1894), an aviator who flew in 1928 from Croydon to Port Darwin in 15½ days.

**Hippocrates** (460–357 B.C.), the Father of Medicine. Was a native of Thessaly, and practised and taught in Athens.

**Hirohito, Emperor** of Japan (b. 1901), acceded to the throne Dec. 1926.

**Hirsch, Baron Maurice de** (1831–1896), a financier of remarkable success who amassed an immense fortune, the greater part of which he devoted to philanthropic objects, expending as much as £3,000,000 in 1891. Founded the Jewish Colonisation Association with a capital of £2,000,000, and a later endowment of £7,000,000 enabled colonies to be established in South Africa, Canada, and Asia Minor.

**Hobbes, John Oliver** (1867–1906). Born in Boston, U.S., this lady, whose real name was Mrs. Pearl Mary Teresa Craigie, first attracted notice by her clever story *Some Emotions and a Moral*.

**Hobbes, Thomas** (1588–1679). His philosophical works caused considerable comment.

**Hobbs, John Berry** (b. 1883), a well known cricketer, the world's greatest batsman.

**Hobhouse, Rt. Hon. Sir Charles Ed. Henry** (b. 1862). Postmaster-General 1914–15; P.C.; Chancellor of the Duchy of Lancaster 1911–14; M.P. for East Bristol 1900–18. Parly. Under-Sec. for India 1907–8; Financial Secretary to the Treasury 1908–11.

**Hocking, Silas K.** (b. 1850), a popular novelist, formerly in the Nonconformist ministry; author of countless fascinating stories.

**Hodson, Arnold W.**, C.M.G. (b. 1881), became Governor of the Falkland Islands and Dependencies 1926.

**Hofer, Andreas** (1767–1810), a Tyrolese patriot who led an insurrectionary movement against the French and Bavarians, but was betrayed and shot by order of Napoleon I. at Mantua.

**Hogarth, William** (1697–1764), the celebrated engraver and painter who satirised the follies of his time in a series of engravings instinct with character, humour and power. His "Harlot's Progress," of six engravings, was published in 1734, and gained him immediate fame. In 1735 he produced his equally celebrated "Rake's Progress," a series of eight engravings. These were followed by numerous others, including "Marriage à la Mode," "Industry and Idleness," and "The March to Finchley."

**Hogg, James** (1770–1835), a Scottish poet of force and originality.

**Hogg, Quintin** (1845–1903), was an educationist and philanthropist who, purchasing the old Polytechnic Institution in 1882, turned it into a popular college, providing efficient instruction in every department of education at moderate rates.

**Holbein, Hans** (1497–1543), was born at Augsburg, and settled in London in 1530, where he won the favour of Henry VIII., for whom he painted many portraits, and produced the famous "Dance of Death."

**Holbrooke, Josef C.** (b. 1878), composer of operas, orchestral works, and a successful conductor and

**Holden, Sir Isaac** (1807–1897), an inventor and manufacturer who achieved fame and fortune in connection with wool-combing inventions. He was in Parliament from 1865 almost to the time of his death, and was made a baronet in 1893. Succeeded by his son, Sir Angus Holden (1833–1912), who was M.P. for the Buckrose division of Yorkshire for several years and became Lord Holden in 1908.

**Holinshed, R.** (died *circa* 1580), was the author of *The Chronicles of England, Scotland, and Ireland*, published in 1577.

**Holl, Frank** (1845–1888), a noted English painter and R.A. Among his best-known works are "No Tidings from the Sea," "Leaving Home," "Deserted," and "Ordered to the Front."

**Holmes, Oliver Wendell** (1809–1894), an American doctor and author of great humour and geniality, his *Autocrat of the Breakfast Table*, *The Professor at the Breakfast Table*, and *The Poet at the Breakfast Table* are works of infinite humour and quaintness. He was also the author of three novels.

**Holroyd, Sir Charles** (1860–1917), Director of the National Gallery 1906–16 and former Keeper of the Tate Collection. Himself an able artist and etcher, and writer on Italian painters.

**Holst, Gustav** (b. 1874), a British composer, Professor of music at St. Paul's Girls' School, London.

**Holyoake, George Jacob** (1817–1906), an eminent secularist lecturer and author, who was identified with many popular movements, especially Co-operation, of which he was the historian.

**Home, Rev. John** (1722–1808), a Scottish clergyman and dramatist, whose tragedy "Douglas" attained great popularity, but cost him his benefice. A pension of £300 a year, however, atoned for this.

**Homer**, the most famous of all epic poets. Is supposed to have been a Greek who lived about 850 B.C., probably at Chios or Smyrna, and has generally been regarded as the author of the "Iliad" and the "Odyssey," though tradition rather than ascertained fact connects his name with those great poems.

**Honey, de Symons M. G.**, C.M.G. (b. 1872), became Governor and Commander-in-Chief of the Seychelles 1928.

**Hood, Admiral** (1724–1816), a successful British naval commander, who in 1793 was in command of the Mediterranean fleet, and showed great capacity in that post, taking and occupying Toulon, and capturing Corsica among other exploits.

**Hood, Thomas** (1799–1845), an English poet, who as a prolific writer of serious as well as humorous poems, stands in his own line unique. Of his serious verse, "The Song of the Shirt," "The Dream of Eugene Aram," and "The Bridge of Sighs," may be cited as the best examples, while his comic poems, notably those of the punning order, are unequalled.

**Hook, Theodore Edward** (1788–1841), an English humorist, whose breezy novels, *Gilbert Gurney* and *Jack Brag*, secured him a great reputation.

**Hooker, Sir Joseph Dalton**, O.M., G.C.S.I., C.B., (1817–1911), an eminent naturalist and from 1865–1885, when he retired, was Director of the Royal Gardens, Kew.

**Hooker, Richard** (1554–1600) was Master of the Temple from 1585–1591, and afterwards Rector of Boscombe. Is famed for his great book on *Ecclesiastical Polity*, and, because of his exquisite choice of words, was known as "Judicious Hooker."

**Hoover, Herbert Clark** (b. 1874), became U.S. President 1929; Director of Relief Administration in Europe in the period immediately following the war.

**Horace**, or more properly **Flaccus Quintus Horatius** (65–8 B.C.), the famous Roman satirist and poet, who was the friend of Virgil, and attained immortal fame by his "Satires," "Epodes," and "Odes."

**Horne, Rt. Hon. Sir Robert**, G.B.E., K.C. (b. 1871). Became M.P. Hillhead Div., Glasgow 1918; President of the Board of Trade 1920–21; Minister of Labour 1919–1920; Chancellor of Exchequer 1921–22. Vice-chairman of Baldwin's Ltd., 1922–24, and director of several companies.

**Horne, General Lord**, G.C.B., K.C.M.G. (1861–1929), commanded Artillery 1st Corps, 1914, Second Division 1915, 15th Corps 1916, 1st Army in France 1916; G.O.C.-in-Chief Eastern Command 1919–23.

**Horsley, Samuel** (1733–1806), a renowned English bishop and scholarly writer on Theology.

**Horsley, Sir Victor** (1857–1916). Achieved much distinction as a pathologist. Supported temperance reform and woman suffrage.

**Horthy, Admiral Nicholas**, was elected Regent of Hungary in 1920.

**Horton, Rev. R. F.** (b. 1855), one of the most prominent of living Congregational ministers, and a thoughtful and able writer. Held a pastorate at Hampstead 1880–1930. A past President of the Congregational Union. Is M.A. and D.D. In 1917 issued his Autobiography.

**Houdin, Jean Eugène** (1805–1871), the most famous French "illusionist" and sleight-of-hand performer, who frequently appeared in this country.

**Houghton, Lord** (1809–1885), an English politician and poet. As Richard Monckton Milnes published a number of volumes of verse of great delicacy of thought. Was an active Liberal politician, and the friend of Tennyson, Hallam, and Thackeray.

**House, Col. E. M.**, confidential adviser of Pres. Wilson (b. 1858), and head of the U.S. mission to Entente countries in Nov. 1917, to determine the best means of co-operation in prosecuting the war. Was frequently in England and France in 1918–19, and rendered good service at the Peace Conference.

**Howard, John** (1726–1790), earned celebrity for his philanthropic efforts on behalf of prison reform, the pursuit of which eventually exposed him to a fatal fever attack in Russia.

**Howard of Effingham, Lord**, commander of the fleet which defeated the Spanish Armada, 1588, and took part in the capture of Cadiz, 1596.

**Howe, Elias** (1819–1867), an ingenious American who was the inventor of the first sewing machine, by which he made a great fortune.

**Howe, Richard, Earl** (1726–1799), the British admiral who in 1758 destroyed Cherbourg, and in 1794 won the famous victory over the French off Brest.

**Howells, William Dean** (1837–1920), an eminent modern American novelist and author. His best-known works are *A Modern Instance*, *The Rise of Silas Lapham*, *The Landlord at the Lion's Head*, *April Hopes*, and (for English readers) *Certain Delightful English Towns*, published in 1907. U.S. Consul at Venice, 1861–1865.

**Hubert, St.**, is the patron saint of huntsmen, and was himself an inveterate hunter, until a chance encounter with a stag bearing a crucifix converted him to a religious life. He died in 727 at Liège. His festival falls on November 3rd.

**Hudson, Henry** (*c.* 1550–1611), was a famous English navigator who discovered the Hudson River, Hudson Strait and Bay, and his two books describing his voyages are of the greatest interest.

**Hudson, Sir Geoffrey** (1619–1682), a court dwarf who was knighted by Charles I., and was only 20 inches in height when thirty years of age.

**Huggins, Sir William** (1824–1910), one of the most eminent of modern astronomers. President of the Royal Astronomical Society 1876–1878, of the British Association in 1891 and of the Royal Society in 1900.

**Hughes, Thomas** (1822–1896), educated at Rugby and at Oxford; practised at the Bar, and became a County Court Judge in 1882. His best-known work is *Tom Brown's Schooldays*.

**Hughes, Rt. Hon. W. M.**, Premier of Australia 1915–23 (b. in Wales 1864, settled in Australia 1884), visited this country in 1916, and by his bold utterances on vital topics achieved much fame. M.P. for N. Sydney in Federal Parliament of Australia. Has had a prominent political career as Labour Leader. Attended the Peace Conference of 1919.

**Hugo, Victor** (1802–1885), the great poet, dramatist and novelist who headed the Romantic movement in France in the early part of the 19th century and made himself a name of the first eminence by his various writings. His dramas of "Hernani," "Lucrèce Borgia," "Ruy Blas," and "Le Roy s'amuse" were in every sense great triumphs. Among his novels, *Notre Dame*, which belongs to his early period, and *Les Misérables*, *Les Travailleurs de la mer*, and *L'Homme qui rit*, belonging to his later life and written while he was living in exile, are all works of splendid genius.

**Hullah, John** (1812–1884), an English musical educationist who devoted his life to the spread of musical knowledge, establishing singing classes at Exeter Hall, and in many other ways popularising the art.

**Humbert I.** (1844–1900) was King of Italy from 1878, when he succeeded his father, Victor Emanuel. He was assassinated in July, 1900.

**Humboldt, Baron Friedrich Heinrich Alexander von** (1769–1859), the great German traveller and naturalist; his books describing his travels and his various scientific discoveries—especially in geology and natural history—are most attractive.

**Hume, David** (1711–1776), the celebrated historian and philosopher whose *History of England* is a fascinating and comprehensive study, and long held the chief place in English historical literature. Hume's philosophical writings were no less famous and widened the sphere of philosophical thought.

**Hunt, Henry** (1773–1835), a demagogue politician who was known as "Orator Hunt."

**Hunt, Leigh** (1784–1859), an English poet, politician and essayist. In 1813 he was fined £500, and sentenced to two years' imprisonment for libelling the Prince Regent, and while in prison wrote one of his daintiest poems, "The Story of Rimini," and other works. In later life he was a constant contributor to literature, and from 1847 enjoyed a pension of £200 a year from the Civil List.

**Hunt, Wm. Holman** (1827–1910), one of the three founders of the Pre-Raphaelite movement, and an artist who achieved distinction by several remarkable paintings, the chief of which is, perhaps, "The Light of the World," an allegorical work.

**Hunter, John** (1728–1793), one of the greatest surgical operators of his day, and Chief Surgeon at St. George's Hospital. His surgical museum bequeathed to the nation is of great value, and forms part of the Museum of the Royal College of Surgeons.

**Huntingdon, Countess of** (1707–1791), a rich and pious lady who was so impressed with Whitefield's preaching that she devoted much of her fortune to establishing chapels and colleges for the promotion of the doctrines he expounded.

**Huskisson, William** (1770–1830), an English statesman who held office for many years and in 1828 was Secretary for Foreign Affairs. He was accidentally killed at Eccles at the opening of the Liverpool and Manchester Railway.

**Huss, John** (1369–1415), the celebrated Reformer, was a native of Bohemia, and a steadfast advocate of the new religion. Sentenced to death or recantation he suffered martyrdom on June 7th, 1415. His death caused a civil war which lasted for many years.

**Hussein, Kamil**, Sultan of Egypt (1853–1917). On declaration of British protectorate over Egypt and deposition of Khedive, Abbas II., on December 18th, 1914, Prince Hussein was appointed to succeed and given the title of Sultan.

**Hutton, Richard Holt** (1826–1897), an English writer who exerted considerable influence in the spheres of politics and religion. For some years he was a Unitarian minister, but afterwards connected himself with the Church of England, and from 1863 edited the *Spectator* with remarkable ability.

**Huxley, Aldous** (b. 1894), a writer; author of *Crome Yellow*, *Jesting Pilate*, *Point Counter Point*, etc.

**Huxley, Julian**, M.A. (b. 1887), grandson of T. H. Huxley, son of Leonard Huxley; editor of the *Cornhill Magazine*, and brother of above. A biologist and writer.

**Huxley, Thomas Henry** (1825–1895), an eminent scientist and author of numerous works covering a great range of research. After the publication of Darwin's *Origin of Species*, Huxley became an ardent evolutionist. His biological work, *Man's Place in Nature*, and his numerous essays, were marked by great vigour and clearness of thought, and gave him a leading position. He held numerous important appointments, was President of the Royal Society in 1883, made Privy Councillor in 1892, and belonged to many learned societies.

**Hypatia**, who lived in the 4th century, was daughter of Theon of Alexandria, and attained great eminence by her lectures on philosophy. She excited the enmity of the monks, who raised an agitation against her, and she was put to death.

**Hyndman, H. M.** (1842–1921), the founder of the Social Democratic Federation, 1881, and of the newspaper *Justice*, was an active propagandist and worker in the socialistic cause in I lands. Was the friend of Mazzini and ( In 1911 published his *Record of an Life*.

**Ibanez, Vicente Blasco**, a Spanish man of letters who wrote *The Four Horsemen of the Apocalypse* and other novels which made him world-famous.

**Ibrahim Pasha** (1789–1848), an able Egyptian statesman, general, and viceroy, who, adopted by Mohammed Ali as his son, contributed largely to the success of Egyptian policy during the quarter of a century or more of his influence. His conquest of Syria was a notable feat of generalship. He died a few months after being appointed Viceroy.

**Ibsen, Henrik** (1828–1906), the Norwegian dramatist, whose works excited a considerable amount of interest in this country. They outraged convention at every point, and occasionally their realism became exceedingly repulsive to English taste, yet there was a certain greatness about them that could not be denied. His chief works were *Peer Gynt*, *The Master Builder*, *A Doll's House*, and *Hedda Gabler*.

**Ictinus**, the architect of the Parthenon at Athens, and the temple of Apollo (*circa* 433 B.C.).

**Iddesleigh, Earl of** (1818–1887), a Conservative statesman of great dignity of character and political sincerity. He was in the House of Commons from 1855 to 1885, when he was raised to the peerage. He was one of the most successful of Tory Chancellors of the Exchequer, and was Foreign Secretary from 1886 to the time of his death.

**Ignatius, St.**, Bishop of Antioch, who suffered martyrdom at the hands of Trajan A.D 107, being condemned to be eaten by wild beasts in the arena.

**Illingworth, Rt. Hon, Lord A. H.**, Postmaster-General 1916–1921. M.P. (L.) for Heywood Radcliffe Div. (b. 1865), was on the Advisory Committee of the Ministry of Munitions.

**Ina**, a warrior king of Wessex who reigned in the 8th century and made many wise laws.

**Inchcape, Earl** (b. 1852), Chairman P. & O. and British India Steam Nav. Co. Prominent on many Government Commissions and Committees.

**Inge, the Very Rev. W. Ralph**, Dean of St. Paul's since 1911 (b. 1860). Ed. Eton and King's Coll., Camb. Assistant Master at Eton, 1884–1888. Lady Margaret Prof. Camb., 1907–11. Has published some profound studies in Mysticism.

**Ingelow, Jean** (1820–97), was an English poetess of great gifts; she was frequently before the public with poems, novels and fairy tales.

**Inglis, Sir John** (1814–62), was a native of Nova Scotia, and a distinguished English general.

**Ingram, Rt. Rev. Arthur Foley Winnington**, D.D., Bishop of London since 1901 (b. 1858). Educated at Marlborough College and Oxford; was private chaplain to the Bishop of Lichfield from 1885 to 1889; Rector of Bethnal Green 1895, and Canon of St. Paul's 1897–1901. Among his published works are *Work in Great Cities* and *Christ and His Friends*.

**Ingres, Jean A. D.** (1780–1867), a great French historical painter who was elected to the Institute in 1824, and at his death was a Senator of France.

**Inouye, Marquis**, Japanese Ambassador to the Court of St. James's, 1913–16 (b. 1861). Educated at University College, London. Was Ambassador at Berlin 1906–8.

**Innocent III., Pope** (1161–1216), was one of the most powerful of the long line of Popes, and succeeded in bringing all the monarchs of Christendom under his sway, including our own King John.

**Irving, Edward** (1792–1834), a Scottish divine who from 1822 to the time of his death was one of the most notable preachers in London. Many of his views were in advance of those of his co-religionists.

**Irving, Sir Henry** (1838–1905), a great English actor. His first appearance in London was made in 1866, and his first distinct success was his Digby Grand in "The Two Roses." From 1871 he was connected with the Lyceum Theatre first with Mr. Bateman, and from 1878 under his own management. His record at this theatre covered a brilliant series of productions. "The Bells" was the first triumph, then followed "Charles I," and "Eugene Aram," and later a number of Shakespearean impersonations, in some of which, notably Shylock and Hamlet, Irving was really great. Among the original productions credited to him may be mentioned Tennyson's "Queen Mary" and "Becket," "Ravenswood," "Olivia," "King Arthur," and "Robespierre."

**Irving, Washington** (1783–1859), a writer of charming stories and miscellaneous works which won wide and well-deserved favour on both sides of the Atlantic. Among his biographical books may be mentioned Lives of Goldsmith, Columbus, Mohammed, and Washington.

**Irwin of Kirby Underdale, Baron**, K.G. Title taken by Rt. Hon. E. F. L. Wood (b. 1881) on appointment as Viceroy of India (1926–31). Minister of Agriculture 1924.

**Isabella of Castille** (1451–1504), reigned jointly with Ferdinand V., her husband. During their thirty years' sway Spain was united as a single monarchy, and achieved the height of its greatness, the discovery of America, the Conquest of Granada, and the expulsion of the Moors from Spain being among the events of her reign.

**Islip, Simon** (d. 1366), a noted ecclesiastic of his day, who was Archbishop of Canterbury from 1349 to the time of his death.

**Islington, Lord**, G.C.M.G., D.S.O., Under-Secretary for India 1915–18, formerly Sir John Dickson-Poynder (b. 1866), Governor of New Zealand 1910–12. M.P. for Chippenham Division 1902–10. Under Sec. of State for the Colonies 1914–15. Chairman of National Savings Committee 1920–26.

**Ismail Pasha** (1830–95), grandson of Mohammed Ali, was a man of modern ideas and great public spirit, whose policy rendered Egypt practically independent of Turkey, the Sultan confirming him in the position and title of Khedive in 1873. It was his adoption of the idea of the Suez Canal that enabled that work to be successfully carried out. By reckless extravagance he involved himself in difficulties, entailing the sale of his Suez Canal shares to England, the establishment of the dual control of England and France, and his own abdication in 1879, when his son Tewfik succeeded.

**Ismay, Thomas Henry** (1837–1899), was an eminent Liverpool shipowner, and founder of the White Star Line.

**Ito, Prince** (1841–1909), one of the most enlightened statesmen of Japan. The unparalleled social metamorphosis which Japan underwent in the latter half of the nineteenth century owed much to his guidance and influence. Was four times Premier.

**Ivan the Great** (1440–1505), the first Czar of Russia, succeeded in bringing the scattered provinces of Muscovy under one supreme governmental control, and put an end to Tartar rule. There was a good deal of the barbarian in Ivan's composition, but he had views in advance of his time.

**Iveagh, 1st Earl of Edward Cecil Guinness**, K.P., G.C.V.O., F.R.S. (1847–1927), a member of the well-known Guinness family of Dublin brewers. Celebrated the visit of King Edward to Ireland in 1903 by giving £50,000 to Irish hospitals. Chancellor Dublin University, 1908. Left Ken Wood House collection of works of art to the nation.

**Ives, John** (1751–1776), a young numismatist who published a useful work entitled *Remarks on English Coins*.

**Ivory, James** (1765–1842), a clever Scottish mathematician who won considerable fame in his day.

## J

**Jacks, Lawrence P.** (b. 1860). Principal of Manchester College, Oxford, 1915–31 and Professor of Philosophy in that College 1903. Entered ministry in 1887 as assistant to the Rev. Stopford Brooke. Editor of the *Hibbert Journal* 1902 and author of several books of religious studies.

**Jackson, Andrew** (1767–1845), an American general who was twice President of the United States, and one of the most astute holders of that position.

**Jackson, Admiral of the Fleet Sir Henry B.**, G.C.B., G.C.V.O. (1855–1929). First Sea Lord

1915–16; eminent in design and construction of warships.

**Jackson, T. J.** (1824–1863), popularly known as "Stonewall Jackson," was the most brilliant general on the Southern side in the American Civil War. Was accidentally killed at the Battle of Chancellorsville. The term "Stonewall" refers to his dogged resistance at the first Battle of Bull Run.

**Jacobs, W. W.** (b. 1863), a novelist of quaint and peculiar humour, whose stories and sketches of East End riverside life are inimitable.

**Jacquard, Joseph Marie** (1752–1834), a French mechanic whose Jacquard loom provided a new and effective method of weaving designs in textile fabrics, and was an invention of the very first rank.

**James I. of England** (1566–1625) was the son of Mary Stuart. He succeeded to the English throne in 1603 on the death of Elizabeth. Numerous plots were formed against him, including the Gunpowder Plot of 1605. He persecuted the Puritans, granted many monopolies, and saw the Authorised Version of the Bible published.

**James II.** (1633–1701) was King of England from 1685–1688, succeeding his brother Charles II. His reign was short, but his mistakes many. The Declaration of Indulgence, the Persecution of the Bishops, and other high-handed proceedings disgusted his people, and he ignominiously severed his connection with England by flight to France in December, 1688, making way for William III. and his more vigorous rule.

**James, George P. R.** (1799–1860), one of the most prolific novelists of his time. Some of his works enjoyed a good deal of popularity, but they contain little real vitality, being modelled partly on Scott and partly on Dumas, without the strength of either. His *Richelieu* was the first and also the best of his over 200 stories. He was appointed historiographer royal by William IV. and was British Consul in Venice at the time of his death.

**James, Henry,** O.M. (1843-1916), an American novelist who produced a number of notable stories, remarkable for their intellectual subtlety and careful characterisations. For the last thirty years of his life he resided mostly in London. His best-known novels are *The American*, *Daisy Miller*, *The Bostonian*, *The Portrait of a Lady* and *What Maisie Saw*. In 1906 he revisited his native land, and wrote *The American Scene* (1907). Later he published *Finer Grain*. Became a British subject 1915.

**Jameson, Anna** (1794–1860), a writer on art subjects whose works were held in high esteem and showed an acute perception of artistic details. She wrote, among other works, *Sacred and Legendary Art*, *Lives of the Early Italian Painters*, and *Legends of the Madonna*.

**Jameson, Sir Leander Starr** (1853–1917) was for many years one of the notable men connected with South Africa, and was the close friend of Cecil Rhodes. It was he who led the famous raid on the Transvaal in December 1895, and for that escapade suffered ten months' imprisonment in London. Previous to that was Administrator of Rhodesia. In 1904 was elected Premier of the Cape Parliament, but resigned in 1908. Was present at the Imperial Conference in 1907 in London. Retired from political life in 1912.

**Januarius, Saint,** was Bishop of Benevento in the 3rd century and suffered martyrdom under Diocletian, A.D. 305. His anniversary was September 19th, on which day two phials of his blood, preserved in the Cathedral of Naples, are supposed to possess the miraculous power of liquefaction and are carried in procession.

**Jaurès, Jean** (1859–1914), the leader of the French Socialists in the Chamber of Deputies, of which he was a member from 1885. Edited a History of Socialism. Was assassinated by a fanatic.

**Jeans, Sir James** (b. 1877), cr. Kt. 1928, M.A., D.Sc., LL.D., a brilliant mathematician and astronomer; 1904 Lecturer in Mathematics, Cambridge; 1905–9 Professor of Applied Maths., Princeton University; 1910–12 Stokes Lecturer in Applied Maths., Cambridge; 1919–29 Sec. Royal Society, and 1923 Research Associate Mt. Wilson Observatory. Author of *The Universe Around Us*, *The Mysterious Universe*, etc.

**Jefferies, Richard** (1848–1887), an English naturalist, who, between 1873 and the time of his death, wrote some of the most beautiful descriptions of natural scenery and the customs and habits of the rural world that we possess. His *Gamekeeper at Home* and *The Life of the Fields* are books of great power and sympathy.

**Jefferson, Joseph** (1829–1905), an American comedian who, from 1858 to the time of his retirement a short period prior to his demise, stood in his own line of parts unrivalled. In 1859 he produced *Rip Van Winkle*, a play in which he made well over 5,000 appearances, and which beat all stage records by earning a round million pounds.

**Jefferson, President Thomas** (1773–1826), took part in the American Revolution, and drew up the Declaration of Independence. Twice U.S. Pres.

**Jeffrey, Francis, Lord** (1773–1850), first editor of the *Edinburgh Review*. A writer of great culture and a lawyer of eminence, at one time in Parliament and became a Lord Justice of the Court of Session.

**Jeffreys, Judge** (1648–1689), won for himself unenviable notoriety by his harsh and cruel judgments, when he held what is known as the "Bloody Assize." He was made Lord Chancellor, but after the fall of James II. was sent to the Tower and there died.

**Jellicoe of Scapa, Admi. of the Fleet, Earl,** G.C.B., O.M., G.C.V.O., Commander-in-Chief of British Fleet, August 1914, to Nov. 1916; and First Sea Lord, Nov. 1916, to Dec. 1917 (b. 1859). Entered Navy, 1872. Commanded Naval Brigade for relief of Peking Legations, 1900; Director of Naval Ordnance, 1905–7; Rear-Admiral, 1907; successively 3rd and 2nd Sea Lord. Commanded expedition of inspection to various ports and harbours, 1919–20. Gov.-Gen. of New Zealand, 1920–24.

**Jenghiz Khan** (1162–1227), the famous Mogul ruler who twice conquered China, and forced the Turks within European confines.

**Jenkins, Robert,** an adventurous captain of a West Indian merchantman, whose report of an alleged attack upon his ship by Spaniards and their depriving him of his ears, which he produced in proof, led to the war against Spain in 1739.

**Jenkinson, Anthony,** a great Elizabethan trader and traveller, whose various expeditions to the Levant, Khiva, Bokhara, and Russia led to the formation of the English Muscovy Company.

**Jenner, Edward** (1749–1823), an English physician who became celebrated by his discovery of the vaccination system of alleviating smallpox, which has been of such incalculable benefit to mankind. Parliament made him grants amounting to £30,000.

**Jenner, Sir William** (1815–1898), for many years Physician in Ordinary to Queen Victoria, attended Prince Albert in his fatal illness in 1861, and King Edward when Prince of Wales during his attack of typhoid in 1871. Baronet in 1868, and was President of the Royal College of Physicians, 1881–8.

**Jerome, J. K.** (1859–1927), a clever journalist and writer, who made his first success with his humorous book, *Three Men in a Boat*. He founded *The Idler*.

**Jerome, St.** (340–420), a noted theologian of the 5th century, whose Latin translation of the Scriptures ("the Vulgate") made him famous. He died at Bethlehem.

**Jerrold, Blanchard** (1826–1884), a journalist and author who wrote a *Life of Napoleon III.*, and a number of plays, and succeeded his father, Douglas Jerrold, in the editorship of *Lloyd's Newspaper*.

**Jerrold, Douglas** (1803–1857), dramatist and humorist, who enjoyed a long career of success by his contributions to *Punch* (including "Mrs. Caudle's Curtain Lectures"); his novels of which *St. Giles and St. James* was his best; and his plays, of which "Black-Ey'd Susan" was the most popular. Edited *Lloyd's Newspaper* for five years prior to his death.

**Joachim, Dr. Joseph** (1831–1907), a German violinist and composer, who came to England in 1844 and became prominent in musical circles.

**Joan of Arc** (1412–1431), the girl whose heroism

inspired the French to drive the English out of Orleans, and enabled Charles to be proclaimed King at Rheims. She was burned as a heretic at Rouen. Canonised in 1920.

**Joffre, Marshal Joseph**, G.C.B., Hon. O.M. (1852–1931). Commander-in-Chief of the French Armies, 1911–1917. His handling of his troops during the War was eminently successful. Entered the Army in 1870, and commanded a battery during the siege of Paris.

**John, Augustus**, R.A., a prominent British painter. President of the National Portrait Society.

**John, St., the Baptist** (executed A.D. 28), the forerunner of Christ.

**John, St., the Evangelist**, the son of Zebedee, retired to Patmos after the Crucifixion, but returned from exile to Ephesus later, and there died at a great age, probably *circa* A.D. 99.

**John**, surnamed "Lackland" (1167–1216), King of England from 1199 to his death at Newark after deposition by the Barons in 1216. One of the most detested of English monarchs, but whose reign stands out large in history because of his having granted, under compulsion, the Magna Carta, England's great bulwark of liberty.

**John of Gaunt** (1340–1399), Duke of Lancaster, son of Edward III. and father of Henry IV., was one of the most powerful English nobles, and was more or less concerned in the leading events of his time. In Wat Tyler's rebellion he had his palace in the Savoy destroyed and was long held in popular hatred.

**Johnson, Amy**, C.B.E., B.A. (b. 1909), the first woman aviator to fly alone from England to Australia, when she made a record flight to India (6 days to Karachi).

**Johnson, Dr. Samuel** (1709–1784), the great lexicographer and writer, who for a number of years was the most prominent literary man in England. His *Dictionary* was published in 1755, before which he had attained eminence by several works, including the *Vanity of Human Wishes*. His *Rasselas* appeared in 1759, and for two years he published *The Idler*, a collection of essays after the style of the *Spectator*. His *Lives of the Poets* appeared in 1781. He was greatly honoured during his life, enjoyed a pension of £300 a year from 1762, at his death was buried in Westminster Abbey, and had the best biography in the language written upon him by James Boswell.

**Johnston, Sir Harry H.** (1858–1927), was a daring and successful explorer, and founded the British South African Protectorate in 1889. Was Commander-in-Chief for the Uganda Protectorate and led scientific expeditions into the interior of Africa. Author of many valuable works of travel and observation. Published in 1910 a History of the British Empire in Africa.

**Johnston, Thomas**, M.P. (b. 1890), Lord Privy Seal, 1931; Under Secretary of State for Scotland, 1929; member for West Stirlingshire, 1922.

**Jokai, Maurus** (1825–1904), a distinguished Hungarian novelist, many of whose works have been translated into English, among them *A Modern Midas* and *Black Diamonds*.

**Jones, Henry Arthur** (1851–1929), was in commercial life for some years and then took to play-writing, achieving his first distinct success in "The Silver King."

**Jones, Inigo** (1573–1652), a noted architect who became known as "the English Palladio," and built, among other famous structures, the Banqueting Hall at Whitehall and the gateway of St. Mary's at Oxford. He was a Royalist, and suffered severely in the Civil War.

**Jones, Paul** (1747–1792), was a Scotsman, who early in life took to the sea, and during the American War of Independence commanded various ships on behalf of the Colonists, and was most daring in his onslaughts upon British vessels. He died in Paris.

**Jonson, Ben** (1573–1637), a friend of Shakespeare and one of the great poets and dramatists of his age. Was Poet Laureate from 1619. His best plays are "Every Man in his Humour," and "The Alchemist." He was buried in Westminster Abbey.

**Josephine, Empress** (1763–1814), was the wife of Napoleon I. until he divorced her in 1809 and married Maria Louisa. Josephine had previously been married to Vicomte Alexandre Beauharnais, by whom she had two children.

**Josephus Flavius** (37–*circa* 95), a Jewish historian whose *History of the Jewish War* and *Antiquities of the Jews* contained much valuable historical evidence bearing upon Biblical history.

**Joubert, Petrus Jacobus** (1834–1900), the Boer statesman and general.

**Jowett, Rev. J. H.** (1864–1923), succeeded Dr. Dale at Carr's Lane Chapel, Birmingham, in 1895, and was there until 1911, when he accepted the ministry of the Fifth Avenue Presbyterian Church, New York, returning to England in 1917.

**Jowitt, Sir Wm.**, K.C., M.P. (b. 1885), cr. Kt. 1929, Attorney-General, 1929–1932.

**Julian** (331–363) was Roman Emperor for the last two years of his life, during which period he was an avowed Pagan, though previously he had professedly been a Christian. Hence his title of "Julian the Apostate." He was slain by an arrow during an expedition against Persia.

**Julius Cæsar.** (*See* Cæsar, Julius.)

**Junot, Androche, Duc d'Abrantès** (1771–1813), was one of Napoleon's great generals and was brilliantly successful until defeated by Wellington at Vimiera.

**Justinian I.** (483–565) was the Roman Emperor of the East whose fame rests chiefly on his laws. His *Corpus Juris Civilis* remained the accepted text-book of Roman Law to the end of the 9th century, and is still the most important of all monuments of jurisprudence. He reigned from 527 to 565.

**Juvenal** (60–140), the famous Roman poet and rhetorician of the age of Trajan. His sixteen celebrated "Satires" are the finest in classical literature.

## K

**Kahn, Otto Hermann** (b. 1867), a well-known financier.

**Kant, Immanuel** (1724–1804), German scientist and philosopher, whose *Critique of Pure Reason*, published in 1781, was the subject of fierce discussion, and involved him in trouble with the Prussian Government as to his religious belief. His speculations and the transcendental theories he worked out revealed a marvellous capacity of mind, and his works were of immense influence in shaping the philosophical thought of the 18th and 19th centuries.

**Katsura, Marquis** (1849–1913), Japanese statesman and general, very successful in a march through Corea to Manchuria, was under Oyama Vice-Minister of War, and Prime Minister, 1901–6 and in 1908. Achieved solid reforms in the Japanese army.

**Kaulbach** (1805–1874), an eminent German painter.

**Kay-Shuttleworth, Sir James** (1804–1877), a distinguished promoter of popular education. He was the first Secretary of the Committee of Council on Education (1839–1849), and devoted his life to the improvement of the condition of the people.

**Kean, Charles John** (1811–1868), an English actor-manager, son of the tragedian, Edmund Kean. Charles Kean married Ellen Tree, and in the 'fifties played with her in a remarkable series of spectacular revivals at the Princess's Theatre in London.

**Kean, Edmund** (1787–1833), one of the greatest tragic actors in the history of the British stage.

**Keats, John** (1795–1821), the great English poet who, though dying at the early age of twenty-five, produced a number of poems which in richness of imagination and beauty of thought are not excelled by anything in the language. His "Odes," his two poems, "Isabella," and "The Eve of St. Agnes," are exquisite in form and expression.

**Keble, John** (1792–1866), an English clergyman and poet, whose "Christian Year," published in 1827, is one of the most notable works of its class. Keble College at Oxford is a memorial to him.

**Keene, Charles** (1823–1891), one of the most talented of the *Punch* artists.

**Keith, Sir Arthur,** F.R.S., M.D., F.R.C.S., LL.D., D.Sc. (b. 1866), knighted in 1921. An eminent anthropologist.

**Kellaway, Rt. Hon. F. G.,** Joint Parly. Sec. of Munitions Board Dec. 1916; Deputy Minister, 1919; Postmaster-General, 1921–22; M.P. (L.) for Bedford, 1910–22 (b. 1870); became Vice-Chairman and Managing Director of Marconi's Wireless Co., 1924.

**Kellogg, Hon. Frank B.,** LL.D. (b. 1856), a Judge of the Permanent Court of International Justice, The Hague, 1930. American Ambassador to the Court of St. James, 1923–25.

**Kelvin, William Thomson, Lord** (1824–1908), the famous scientist and inventor, introduced the dynamical theory of heat. Shortly afterwards he interested himself in submarine telegraphy, and invented numerous important improvements, also doing splendid work in the direction of electrical invention; he covered a vast field and earned a world-wide reputation.

**Kemal, Mustapha** (b. 1881), the Turkish Nationalist Leader, drove the Greek Army out of Asia Minor, Sept. 1922, and assumed virtual dictatorship. Elected first Turkish President, 1923.

**Kemble, Fanny** (1809–1893), was a noted actress in the early part of the 19th century. She was the daughter of Charles Kemble (1775–1854), who was also a celebrated actor, associated in many appearances with his brother John Philip Kemble and their talented sister, Mrs. Siddons.

**Kemble, John Philip** (1757–1823), was a famous tragedian, and for many years manager of Drury Lane Theatre in London. He was brother to Mrs. Siddons, who first played with—and overshadowed—him in 1783.

**Kempenfelt, Admiral Richard** (1718–1782), an English naval officer who saw distinguished service, and sank with his ship the *Royal George* off Spithead, through a shifting of the guns when refitting, which caused the vessel to capsize. Some six hundred of the ship's company perished with their admiral.

**Kempis, Thomas à** (1380–1471), a monk of the St. Augustine order, whose life was mainly spent at a monastery near Zwolle. He was the author of *The Imitation of Christ*, a work which has been translated into all languages, and forms a devotional course which is highly valued.

**Kendall, Dame Madge,** G.C.B.E., D.B.E. (b. 1849), noted actress; debut as Ophelia, 1865.

**Kent, Edward Augustus, Duke of** (1767–1820), was the fourth son of George III. and father of Queen Victoria.

**Kenworthy, Commander the Hon. J. M.,** M.P. (b. 1886), M.P. Labour, Central Division, Hull, 1926.

**Kenyon, Sir Frederick G.,** G.B.E., K.C.B., C.B., T.D. (b. 1863), 1909–30 Director and Principal Librarian, British Museum.

**Kepler, Johann** (1571–1630), a renowned German astronomer, who made numerous discoveries in regard to the motions of planets. The system he formulated is known as "Kepler's Laws."

**Keppel, Augustus, Viscount** (1725–1786), an English admiral, Commander of the Fleet at the abortive battle with the French in the Channel in 1778, for which he was tried, but acquitted.

**Kerensky, Alexandre** (b. 1882), a Russian revolutionary leader. Prime Minister from July to Nov., 1917, when he was ousted by the Bolshevists.

**Keyes, Vice-Admi Sir Roger, Bart.,** G.C.B., C.M.G., K.C.V.O., D.S.O. (b. 1872). Commodore of the Submarine service during war; and commanded operations against Zeebrugge in 1918. Commanding Battle Cruiser Squadron, Atlantic Fleet, 1919–1921; Deputy Chief of Naval Staff, 1921–25; Com.-in-Chief Mediterranean Station, 1925–28.

**Keynes, J. M.,** M.A., C.B., F.B.A. (b. 1883), a brilliant economist; Bursar and Fellow of King's College, Cambridge; became Editor of *Economic Journal*, 1912.

**Kidd, Benjamin** (1858–1916), a prominent writer on social philosophy.

**Kidd, Captain William** (d. 1701), was a famous pirate who, taking advantage of an appointment to the captaincy of a British ship, engaged in numerous piratical expeditions under cover of the English flag. He was hanged at Execution Dock in London after a sensational trial at the Old Bailey.

**Kingsley, Charles** (1819–1875), an English clergyman and novelist, who gained much popularity by his numerous novels, including *Hypatia*, *Westward Ho!* and *Hereward the Wake*. He was an influential leader of Christian socialism, a poet of some ability.

**Kingsley, Mary** (1862–1900), niece of Charles Kingsley, was an observant traveller who wrote some notable books relating her experiences in West Africa, when that region was little known.

**Kipling, Rudyard** (b. 1865), poet, novelist, and miscellaneous writer. Made himself celebrated while yet a youth by some exceedingly clever and characteristic sketches of Indian life written for the most part while performing journalistic duties in India. He subsequently settled in London and produced a remarkable succession of stories, sketches, ballads, and poems, all marked by intense vigour. In 1907 was awarded the Nobel prize.

**Kitchener of Khartoum, Earl** (1850–1916), entered the army in 1871, and had a brilliant career in nearly all parts where British soldiers have signalised themselves in recent years. In Cyprus, Egypt, India, and South Africa he did memorable work, and from 1902 to 1909 was Commander-in-Chief in India. He was raised to the peerage in 1898 and accorded a grant of £30,000; and for his vigorous work during the campaign against the Boers received his viscounty and a further grant of £50,000. In 1911 he succeeded Sir Eldon Gorst as Consul-General in Egypt. On the outbreak of war with Germany (Aug. 1914) was made Secretary for War, and his splendid work in building up the army won universal admiration. Drowned June 5, 1916, by the torpedoing of the *Hampshire* while on his way to Russia.

**Kittermaster, Sir H. B.,** K.B.E., C.M.G. (b. 1879), became Governor and Commander-in-Chief of the Somaliland Protectorate, 1926.

**Kneller, Sir Godfrey** (1646–1723), the most celebrated portrait painter of his day in England, who enjoyed the patronage in succession of Charles II., James II., William III., Anne, and George I. He painted the portraits of the members of the Kit-Cat Club, and was buried in Westminster Abbey.

**Knight, Charles** (1791–1873), was one of the most active spirits in the popularising of literature in the first half of the 19th century.

**Knight, Dame Laura,** A.R.A., a prominent British painter.

**Knowles, Sheridan** (1784–1862), was a British dramatist whose plays were at one time in great vogue. The best known are "The Hunchback," "The Love Chase," and "Virginius."

**Knox, John** (1505–1572), the famous divine and Reformer, who stirred Scotland to mighty religious impulses in the reign of Mary Queen of Scots.

**Knox, Rt. Rev. Edmund Arbuthnot,** D.D., Bishop of Manchester, 1903–21 (b. 1847). Educated at St. Paul's School and Oxford; Fellow of Merton College, 1869; vicar of Aston, 1891; later hon. Canon of Worcester and Bishop Suffragan of Coventry, and Archdeacon of Birmingham.

**Koch, Robert** (1843–1910), the most noted bacteriologist of the time, whose discoveries in connection with the bacillus of tuberculosis have borne such good fruit. He also closely studied the causes of Asiatic cholera and of bubonic plague.

**Komura, Count Jutaro** (1855–1911), the astute diplomatist who advised the Japanese Generalissimo during the war with China and was Governor of Manchuria during the first Japanese occupation. He acted with great shrewdness through the war with Russia, and came as Ambassador to Britain at the termination of Viscount Hayashi's term of office in 1906–1908.

**Kosciusko, Thaddeus** (1756–1817), a Polish general and patriot who achieved great distinction in 1794 by his gallant leading of the Polish revolutionary forces against Russia.

**Kossuth, Louis** (1802–1894), a Hungarian patriot and leader, who in the struggle for his country's

freedom in 1849 was for a time successful, but ultimately had to acknowledge defeat, and fled first to Turkey and afterwards to England, where he lived for some years.

**Kotzebue, A. F. F. von** (1761–1819), was a popular German dramatist, many of whose plays were translated into English and performed in this country with success, amongst them "The Stranger." He was in the diplomatic service, and long resided in Russia. After a varied career, he was assassinated by a German student at Mannheim as "a betrayer of the Fatherland." He wrote nearly 300 plays.

**Kreisler, Fritz** (b. 1875), a famous Austrian violinist.

**Kropotkin, Prince Peter** (1842–1921), anarchist, geographer and explorer, who, after a distinguished career in Russia, his native country, was imprisoned for favouring the political action of a working-men's association, but escaped to England. He wrote many important books on socialistic and geographical subjects. Returned to Russia in 1917.

**Krüger, Paul** (1825–1904), President of the Transvaal Republic from 1881–1900. Filled a conspicuous place in South African history. In the various disputes with England he showed both obstinacy and want of perception. After Majuba he altogether under-estimated Great Britain's real strength, and came to believe that in a contest with England the Transvaal would, either by itself or with assistance on which he counted, defeat Great Britain. The penalty for this mistake had to be paid. The Transvaal became a British colony along with the Orange Free State. Mr. Krüger ended his days in Holland. Permission was given to transfer his remains to Pretoria and he was buried there.

**Krupp, Alfred** (1812–1887), the famous German engineer, founded the great gun factories at Essen, which were the largest in the world. By his introduction of the Bessemer plan of casting steel and the steam hammer into Germany, he brought about an important development in heavy breech-loading guns, and built up factories which employed at the time of his death 20,000 workmen.

**Kubelik, Jan** (b. 1880), Austrian violinist—son of a gardener at Michle, near Prague—who at the age of twelve played in public, and is one of the most renowned instrumentalists of the day.

**Kublai Khan** (1216–1294), a famous Mogul emperor and grandson of Jenghiz Khan. He greatly extended the Mogul empire by conquest, and lived in unparalleled splendour.

**Kühlmann, R. von** (b. 1873), German Foreign Minister in 1917. Was Councillor at the German Embassy in London, 1908–1914, and later represented the Kaiser at Stockholm and the Hague.

**Kuropatkin, General** (1848–1921), Commander of the Forces of the Czar before and during the Russo-Japanese War.

# L

**Lablache, Luigi** (1794–1858), a famous bass singer and actor, especially popular in London. He for some time held the position of singing tutor to Queen Victoria.

**La Chaise, François de** (1624–1709), a Jesuit who was the favourite and Confessor of Louis XIV., and it was after him that the famous Père Lachaise cemetery in Paris was named.

**Lafayette, Marquis de** (1757–1834), a celebrated soldier and patriot who fought on the side of the Colonists in the American War of Independence, and, afterwards returning to France, was made Commander-in-Chief of the National Guard, and during the Revolution was very active, helping later in placing Louis Philippe on the throne.

**La Fontaine, Jean de** (1621–1695), the celebrated French poet and fabulist. His fables have been translated into all languages, and are unique.

**Lagerlöf, Selma, Ph.D.** (b. 1858), a famous Swedish novelist who was awarded in 1909 the Nobel Prize for literature. Many of her works have been translated into English.

**Lagrange, Joseph L., Comte** (1736–1813), was a noted French astronomer and mathematician.

**Lalande, Joseph G. L. de** (1732–1807), was a famous French astronomer and director of the Paris Observatory. He founded the Lalande yearly prize for the best astronomical work or observation and wrote a well-known treatise on astronomy.

**Lamarck, Chevalier de** (1744–1829). A French naturalist. His chief work was the *Histoire Naturelle des Animaux sans Vertèbres*.

**Lamartine, Alphonse** (1790–1869), a French writer and statesman who was prominent in the Revolution of 1848, and was a member of the provisional government. He was an unsuccessful candidate for the Presidency in 1851 and after that took little part in political affairs. He was a prolific writer, his best-known works being a *History of the Revolution of 1848* and a *History of the Girondins*.

**Lamb, Charles** (1775–1834), one of the most delightful of our essayists. His *Essays of Elia* are characterised by great felicity of expression, much genial humour and an ardent love both of rural life and London life. He was a clerk in the office of the East India Company for thirty-five years. In some of his writings he was assisted by his sister, Mary Lamb, to whom he was greatly devoted.

**Lambert, General** (1619–83), one of the ablest of Cromwell's generals. He did distinguished service at Marston Moor, Dunbar, and Worcester.

**Lancaster, Joseph** (1778–1838), a zealous promoter of popular education, whose system of utilising monitors was widely adopted.

**Lander, Richard Lemon** (1804–1834), a native of Truro, was an adventurous and promiseful explorer, the first to trace and describe the course of the Niger. His career was cut short by a wound inflicted by natives.

**Landon, Letitia Elizabeth** (1802–38), an English poetess, whose verses, written above the signature "L. E. L.," were in great favour while she lived.

**Landor, Arnold Henry Savage** (born at Florence and died 1924), an enterprising traveller and explorer. The story of his capture, imprisonment and torture in Tibet is one of the most thrilling travel-books of modern times. His *In the Forbidden Land*, *Alone with the Hairy Ainu*, and *Tibet and Nepaul* are full of adventure and information.

**Landor, Walter Savage** (1775–1864), a writer and poet of genius, best known by his "Imaginary Conversations."

**Landseer, Sir Edwin** (1802–1873), the most celebrated English animal painter of his time. He designed the lions for the base of the Nelson Monument in Trafalgar Square.

**Lane, E. W.** (1801–76), an English writer to whom we owe the most popular translation of the *Arabian Nights*. He was also the author of a number of books dealing with ancient Egyptian and Arabic subjects, and was one of the most prominent Orientalists of the 19th century.

**Lane, Sir (William) Arbuthnot, Bart.** (b. 1856), a distinguished surgeon and writer on medical subjects.

**Lanfranc** (1005–1089), an ecclesiastic who came to England with William the Conqueror, who made him his chief counsellor. Lanfranc was successively Prior of Bec, Abbot of Caen, and Archbishop of Canterbury, and rebuilt the Cathedral.

**Lang, Andrew** (1844–1912), one of the most versatile of modern authors. A graceful writer of Society verse, a brilliant essayist, an entertaining novelist, a successful historian, an author of numerous fairy tales, and a delightful handler of folk-lore and ancient superstitions, he covered a vast extent of literary ground. In 1907 he finished his *History of Scotland*.

**Lang, Most Rev. Cosmo Gordon, D. D.** (b. 1864). Archbishop of Canterbury, Nov. 1928, succeeding Dr. Davidson; was Archbishop of York from 1908–1928. Educated at Glasgow University and Oxford, Fellow of All Souls', Oxford, since 1888; Vicar of Portsea, 1896–1901; Canon of St. Paul's, 1901; Bishop of Stepney, 1901–1908.

**Langland, or Langley, Robert** (*circa* 1330–1400), author of *The Vision of Piers Plowman*.

**Langton, Stephen** (1151–1228), was Archbishop of Canterbury from 1213, and one of the chief instruments in forcing the Magna Carta from John.

**Lankester, Professor Sir Edwin Ray** (1847–1929), one of the most learned of scientists. He founded in 1884 the Marine Biological Association, and was Director of the Natural History Departments of the British Museum; he was President of the British Association.

**Lansbury, Rt. Hon. George** (b. 1859), P.C., First Commr. of Works 1929. Prominent member of Independent Labour Party. M.P., Bow and Bromley.

**Lansdowne, Henry, 5th Marquis of** (1845–1927), Secretary for War, 1895 to 1900, and Secretary for Foreign Affairs from 1900 to 1905. Governor-General of Canada from 1883 to 1888, and from 1888 to 1893 Viceroy of India. Leader of the Opposition in the House of Lords after 1906, and in the Coalition Government of 1915–1916 held office as Minister without portfolio.

**Lansing, Robert,** U.S. Secretary of State, June 1915 to Feb. 1920, whose forceful work in helping forward the cause of the Allies against Germany was of great service. Was previously Adviser on International Law to his Government.

**Lao-Tze,** one of the ancient philosophers of China, who flourished about 600 B.C. The work upon which his fame rests was entitled *The Path to Virtue.*

**Laplace, Marquis de** (1749–1827), a celebrated French astronomer and the author of the nebular hypothesis.

**Lardner, Dionysius** (1793–1859), was for a number of years Professor of Natural Philosophy and Astronomy at University College, London, and published a *Cabinet Cyclopædia of the Arts and Sciences,* which extended to over 130 volumes.

**La Rochefoucauld, F., Duc de** (1613–1680), a renowned French statesman and writer of the Louis XIV. period. His *Reflections and Moral Maxims* is a classic.

**Lasker, Emmanuel,** Ph.D. (b. 1868), world's chess champion from 1894–1920.

**Latimer, Hugh** (*circa* 1485–1555), the English Reformer who became Bishop of Worcester under Henry VIII., but when Mary came to the throne was condemned as a heretic, and burned at the stake.

**Laud, William** (1573–1645), an eminent ecclesiastic, who, after filling three minor bishoprics, was made Archbishop of Canterbury in 1633. He did much to direct the policy of Charles I., and when trouble followed, he was impeached by the Long Parliament and committed to the Tower. Was tried for treason and beheaded.

**Lauderdale, Duke of** (1616–1682), the son of the first Earl of Lauderdale, was one of the famous "Cabal" Ministry.

**Laurier, Sir Wilfrid** (1841–1919), Premier of Canada from 1896 to 1911, and the only French-Canadian who has held that position. An ardent Liberal Imperialist.

**Lauder, Sir Harry (MacLennan)** (b. 1870). Famous singer of Scottish songs and ballads. Composes own songs and writes own music. Knighted 1919 for services in raising money for war purposes.

**Lavery, Sir John,** R.A. (b. 1856). Eminent portrait painter.

**Lavoisier, Antoine Laurent** (1743–1794), often called the "father of modern chemistry," was born in Paris, and was the first to establish the fact that combustion is a form of chemical action.

**Law, Rt. Hon. A. Bonar** (1858–1923), was M.P. (Central Division, Glasgow), Prime Minister, Oct. 1922 to May 1923, when ill-health compelled him to resign; Lord Privy Seal, 1919–1921; Leader of the House of Commons, 1916. In 1902–6 was Parliamentary Secretary to the Board of Trade. In Nov. 1911 succeeded Mr. Balfour as leader of the Unionist Party. Secretary for the Colonies in the Coalition Government of 1915; Chancellor of the Exchequer, 1916–18; Plenipotentiary Peace Conference; buried in Westminster Abbey.

**Law, John** (1671–1729), a Scottish financier, who, having vainly proposed a paper currency to his own countrymen, crossed to France and succeeded in getting the French Government to take it up.

**Lawrence, Sir Alfred Tristram** (b. 1843), Judge of the High Court, was educated at Trinity Hall, Cambridge, called to the Bar at the Middle Temple in 1869, subsequently appointed Recorder of Windsor, and in 1882 became Junior Counsel to the Admiralty. He was elevated to the Bench, 1904, and received a knighthood. Lord Chief Justice, 1921–2, and raised to the Peerage as Baron Trevethin.

**Lawrence, D. H.** (1885–1930), one of the most powerful modern novelists. Author of *The White Peacock, Sons and Lovers, The Plumed Serpent,* etc.

**Lawrence, Col. T. E.** (b. 1888), changed name to Shaw by Deed Poll, 1927. A specialist on Arab affairs; has published two books of importance, *The Seven Pillars of Wisdom* and *Revolt in the Desert.*

**Lawrence, Sir Thomas** (1769–1830), one of the fashionable portrait painters of his day, and among the most successful in his own line of all time.

**Lawson, Sir Wilfrid** (1829–1906), a popular Liberal politician and champion of the Temperance cause; a witty and eloquent speaker, and a man of much personal attractiveness.

**Leacock, Stephen,** Head of the Dept. of Political Economy, McGill University, but best known throughout the world as a humorous writer.

**Leader, Benjamin Williams,** R.A. (1831–1923), one of the leading British landscape painters.

**Lecky, Rt. Hon. W. E. Hartpole** (1838–1903), an eminent historian. His best-known works are *The History of Rationalism* and *The History of European Morals.*

**Lee, Lord, of Fareham,** G.C.S.I., G.B.E., K.C.B., K.C.S.I., First Lord of the Admiralty 1921–22. Minister of Agriculture 1919–21, having previously acted as Director-Gen. of Food Production (b. 1868). M.P. for Fareham Div. of Hants, 1900–18. Presented Chequers Court to the nation as a residence for British Premiers, 1917. Viscount 1922.

**Lee, Nathaniel** (*circa* 1650–1692), an English dramatist, whose tragedies, "The Rival Queens," "Theodosius," and "Nero," were all plays of mark.

**Lee, Robert Edward** (1807–70), was one of the ablest of the Confederate generals in the American Civil War, and Commander-in-Chief when the final surrender was made at Appomattox in 1865.

**Lee, Sir Sidney** (1859–1926), the great authority on Shakespeare, and joint editor with Sir Leslie Stephen of the *Dictionary of National Biography,* exercising undivided control over the completion of that monumental work during the last ten years of its publication. His article on King Edward VII., in a supplementary volume published in 1912, caused some sensation by a freedom of comment unusual in dealing with illustrious personages recently dead.

**Leech, John** (1817–1864), perhaps the most popular of all the *Punch* artists, whose sketches and cartoons were the life and soul of the paper for many years.

**Leibnitz, Gottfried W. von** (1646–1716), the German writer and philosopher who propounded a new system of philosophy, in which he maintained that the ultimate elements of the universe are individual centres of force or monads.

**Leicester, Robert Dudley, Earl of** (1531–1588), was the famous favourite of Queen Elizabeth, and was appointed to the command of the Land forces when the Armada threatened.

**Leichardt, Friedrich** (b. 1813), was a native of Berlin, who gained renown by his Australian explorations, more particularly in Northern Queensland. He was never heard of after April, 1848, and is supposed to have lost his life on the Cape York Peninsula.

**Leighton, Lord** (1830–1896), a successful English painter and sculptor who chiefly adhered to classical subjects and was renowned for his extreme delicacy of finish and splendour of colour. Among his more famous paintings are "Venus Disrobing." "Clytemnestra," and "The Garden of the Hesperides." He was made R.A. in 1869, and from 1878 to his death was P.R.A., being raised to the peerage only a few months before his death.

**Leighton, Robert** (1611–1684), a noted Scottish divine. His *Rules for a Holy Life* is a work of remarkable purity of thought.

**Lely, Sir Peter** (1618–1680), the famous painter to whom we owe so many of the portraits of the beauties of the Court of Charles II. He was a German, whose proper name was Van der Faes.

**Lenin, Vladimir Ilyich Ul'yanov** (1870–1924), an active worker for the Russian Revolution from 1893–1917 both "underground" in Russia and abroad. It was in this period that the revolutionary Social-Democratic party was formed. An uncompromising revolutionary group, known as the Bolsheviks, developed within this party and Lenin was its leading spirit. In April 1917 Lenin returned to Russia. In the 1917 October Revolution the Provisional Government was overthrown by the Bolsheviks and Lenin became President of the new Government, the Council of People's Commissars—the Sovnarkom. From 1917 to his death in 1924 Lenin remained the active head of the Russian Soviet Government.

**Leonardo da Vinci** (1452–1519), one of the greatest all-round geniuses the world has known. Famed as the painter of "The Last Supper," "The Head of Medusa," and other great works.

**Leonidas** was king of Sparta at the time of the invasion of Greece by Xerxes, 480 B.C., and led the defence of the Pass of Thermopylæ, where he fell.

**Le Sage, Alain René** (1668–1747), author of the famous stories *Gil Blas* and *Le Diable Boiteux*, also a dramatist of note. He died at Boulogne.

**Leslie, Charles Robert** (1794–1859), an eminent British painter and Academician; produced many notable pictures, including "The Play-Scene from Hamlet," "Sancho Panza and the Duchess," etc.

**Leslie, David** (d. 1682), a Scottish general who fought under Cromwell at Marston Moor, but, later, went over to the Royalists.

**Lesseps, Vicomte Ferdinand de** (1805–1894), an engineer of large ideas who, while Vice-Consul at Alexandria, conceived the plan of the Suez Canal, which work was completed in 1869. He afterwards projected the original Panama Canal, which failed.

**Lessing, Gotthold Ephraim** (1729–1781), a noted German critic and dramatic poet, whose most celebrated work was his "Laocoon."

**Lever, Charles** (1806–1872), a novelist of force and humour, who met with great success in his depiction of Irish life and character.

**Leverhulme, 1st Viscount of the Western Isles** (cr. 1922) (**W. H. Lever**) (1851–1925). Chairman and founder of Lever Brothers, Ltd., Port Sunlight, was for many years prominent as a business pioneer and man of affairs and one of the most practical exponents of the industrial partnership movement. Presented the lease of Stafford House (now Lancaster House) to the nation for the purposes of the London Museum (*q.v.*).

**Leverhulme, 2nd Viscount of the Western Isles**, William Hulme Lever, b. Bolton, Mar. 25, 1888; M.A. Trinity College, Cambridge. Governor of Lever Brothers Ltd. and Unilever Limited; Chairman of A. & F. Pears Ltd.

**Leverrier, Urbain** (1811–1877), the French astronomer, co-discoverer with John Couch Adams of the planet Neptune.

**Lewis, Matthew Gregory** (1775–1818), a writer, of London birth, who caused a great sensation in 1795 by publishing his novel *The Monk*, a strange mixture of mystery, horror and indelicacy. It made him famous.

**Lewis, Sinclair** (b. 1885), an American author awarded the Nobel Prize in 1931.

**Liebig, Justus Baron von** (1803–73), a German chemist and professor, who attained world-wide celebrity for his many discoveries in connection with applied chemistry. Among other things, he invented a famous extract of meat.

**Li Hung Chang** (1823–1901), an astute and enlightened Chinese statesman, who by sheer ability rose from a humble position to be Chief Minister, and exercised almost supreme control for a number of years over the affairs of his native Empire.

**Lilly, William** (1602–81), a noted astrologist and prophetic almanac concocter.

**Linacre, Thomas** (*circa* 1460–1524), was an eminent doctor, and the founder of the College of Physicians. In later life he became a divine, and also published translations of Galen's works.

**Lincoln, Abraham** (1809–65), was a native of Kentucky; in early life he became a lawyer, and was returned to Congress in 1846 from Springfield, Illinois, and in 1861 was elected 16th President of the United States, when he delivered his famous anti-slavery pronouncement, which led to the Civil War of 1861–1865. In 1864 he was re-elected, and in the following year was assassinated by John Wilkes Booth.

**Lind, Jenny** (1820–87), a famous prima donna, who made a great sensation by her wonderful voice for some seasons in London and in America, from 1847 onward. She was a native of Stockholm, and as a girl had sung in the streets. She married Mr. Otto Goldschmidt, the composer.

**Lindbergh, Colonel Charles A.** (b. 1902), aviator, famous for his solo flight across the Atlantic from N. York to Paris in 1927 (33½ hours).

**Linlithgow, Marquess of,** K.T., G.C.I.E., D.L., T.D. (b. 1887), Lord Lieutenant of West Lothian. Royal Commissioner on Indian Agriculture, 1926–28; Civil Lord of the Admiralty, 1922–24.

**Linnæus, Carl von** (1707–78), a tireless Swedish doctor and scientist who became one of the most distinguished of naturalists, and the founder of modern botany. His *Systema Naturæ* was published in 1735, and other monumental works followed. He was the first to expound the true principles for defining genera and species.

**Lipton, Sir Thomas J.,** Bart., K.C.V.O. (1850–1931), after an adventurous early career in America, started shopkeeping in his native Glasgow, and in course of a few years became the largest shopkeeper in the world. Is renowned for his charities, and his attempts to win the America Yachting Cup. Was knighted in 1898, and created a baronet in 1902.

**Lister, Lord** (1827–1912), achieved renown for his discovery of the antiseptic treatment which has accomplished so much on behalf of surgery.

**Liszt, Franz** (1811–86), a pianist and composer of splendid powers. As a pianist he was unequalled for many years. His best known compositions are his "Hungarian Rhapsodies."

**Liverpool, Chas. Jenkinson, 1st Earl of** (1770–1828), Prime Minister for nearly 15 years (1812–1827).

**Livingstone, David** (1813–1873), the explorer and missionary, whose discoveries in Africa greatly advanced geographical knowledge.

**Llewellyn, Sir William** (b. 1863), President of the Royal Academy since 1928, a portrait painter of many notable sitters.

**Lloyd George, Rt. Hon. D.,** O.M., M.P. (b. 1863), became Chairman of the Liberal Party, 1924. Prime Minister, Dec. 1916–1922, has represented Carnarvon since 1890. In 1905 was made President of the Board of Trade. Chancellor of the Exchequer, from 1908 to 1915. Introduced the National Insurance Bill in 1911. In financing the war up to June, 1915, he showed great capacity. On the formation of the Coalition Government he became Minister of Munitions, and on the death of Lord Kitchener Secretary for War. As a War Premier he displayed activity, resourcefulness, and driving power which proved a tremendous influence in bringing about the defeat of Germany; and at the Peace Conference, in conjunction with Clemenceau and President Wilson, he was a master spirit.

**Lloyd, Rt. Hon. Lord,** G.C.I.E., K.C.S.I., D.S.O., High Commissioner in Egypt, succeeding Lord Allenby, 1925. Student of Eastern politics.

**Locke, W. J.** (1863–1930), novelist and dramatist, was one of the most prolific of our modern story-writers. *Stella Maris*, *The Fortunate Youth*, and *The Beloved Vagabond* are among his best-known works. Was Secretary of the Royal Institute of British Architects from 1897 to 1907.

**Lockhart, J. G.** (1794–1854), son-in-law of Sir Walter Scott, whose life he wrote.

**Lockyer, Sir Norman,** K.C.B., F.R.S. (1836–1920), a distinguished scientist and astronomer.

**Lodge, Sir Oliver Joseph** (b. 1851), Principal of

**Birmingham University, 1900–1919. A great scientist interested in psychical research. President, British Association, 1912. Author of *Faith and Science*, etc.**

**London, Bishop of.** (*See* **Ingram.**)

**Londonderry, Chas. Stewart Vane-Tempest, 6th Marquis of** (1852–1914), Conservative statesman. A prominent figure in the Ulster anti-Home Rule campaign, 1904–14.

**Longfellow, H. W.** (1807–82), an American poet who produced a number of volumes of poetry of great purity of thought and beauty of language.

**Lonsdale, Earl of,** K.G., G.C.V.O. (b. 1857), a keen sportsman and race-horse owner; owns *c.* 175 thousand acres.

**Lotze, Rudolph Hermann** (1817–81), a renowned German psychologist.

**Loubet, Emile** (b. 1838), ex-President of France, was the son of a poor farmer, studied for the law, became a successful advocate, and was returned to the National Assembly in 1876. Was made Senator in 1895, filled the office of Premier in 1892, was President of the Senate in 1895, and in 1899, on the sudden death of President Faure, became President of the Republic, an exalted position which he filled with great distinction until 1906.

**Louis XIV.** (1638–1715) reigned over France from 1643 to his death. He was responsible for corrupting Charles II., for the persecution of the Huguenots, the repeal of the edict of Nantes, and for the war of the Spanish Succession. He was a sensual, luxury-loving king, but encouraged arts and literature.

**Louis XV.** (1710–74), called the Well-Beloved. Was the most licentious of his race, and an inveterate hater of England.

**Louis XVI.** (1754–93), was the apathetic and unfortunate French king who married Marie Antoinette, allowed his country to be swayed by first one statesman and then another, until at last he saw himself divested of every shred of power by the Revolutionists. How he and his Queen were subsequently imprisoned and sent to the guillotine all students of French history know.

**Lover, Samuel** (1797–1868), an Irish song-writer and novelist. His *Handy Andy* is a most humorous story of Irish life and character.

**Low, David** (b. 1891), the well-known caricaturist and cartoonist. Joined the staff of the *Evening Standard*, 1927.

**Lowell, James Russell** (1819–1891), an American writer and poet of singular power and humour.

**Lowther, J. W.** (b. 1855), Speaker of the House of Commons, 1905–1921. Chairman of Ways and Means from 1895 to 1905. M.P. for Penrith, 1886–1911. Created Viscount Ullswater, 1921.

**Loyola, Ignatius de** (1491–1556), was the founder of the order of Jesuits.

**Lucretius, Titus Carius** (95–52 B.C.), the Roman poet whose "De Rerum Natura" is noted for its exposition of the atomic theory of Leucippus.

**Lugard, Lord,** G.C.M.G., C.B., D.S.O. (b. 1858), has a brilliant record for services in Africa and India. Afghan War of 1879; Soudan, 1885; Burma, 1886–1887; Uganda, 1889–1892. First High Commissioner Northern Nigeria, 1900–1906; Governor of Hong Kong, 1907–12; Governor of Nigeria, 1912–13; Governor-Gen. of Nigeria, 1914–19. Became British Member of League of Nations Permanent Mandates Commission, 1922.

**Luther, Martin** (1483–1546), the great German Reformer. Was ordained a priest in 1507. Became Professor of Theology at the University of Wittenberg and until 1517 was an orthodox Roman Catholic. His first idea of revolt occurred when he saw indulgences being sold, a practice which he openly condemned. For this he was excommunicated, and summoned before the Diet at Worms, where he made a memorable defence. He then separated himself from the Roman Catholics, and began to preach the Reformed Religion, his doctrine being formulated in the confession of Augsburg. He lived to see the principles of the Reformation widely established.

**Lutyens, Sir Edwin,** K.C.I.E., R.A. (b. 1869), Knighted in 1918; a famous architect; designer of the Cenotaph, the New Delhi, New British Embassy, Washington, etc.

**Lycurgus,** the Spartan legislator, who flourished about 844 B.C., he drew up a series of laws which endured for 700 years.

**Lyell, Sir Charles** (1797–1875), a distinguished geologist whose researches shed great light upon geological science, and whose *Principles of Geology* placed that science on an improved basis. He was a supporter of the Darwinian theory.

**Lytton, Edward Bulwer, 1st Lord** (1803–73), a prolific novelist and dramatist, whose romantic stories made him famous, and included *Pelham*, *The Last Days of Pompeii*, and *The Caxtons*.

## M

**Maartens, Maarten** (1858–1915) (real name J. M. W. Van der Poorten-Schwartz), a Dutch novelist who wrote in English.

**Macadam, John Loudon** (1756–1836), was a Scottish engineer who invented the process of road-repairing which bears his name, and consists of covering the highway with small pieces of hard stone of small and regular size, and forming a bed of them by heavy uniform pressure. His method was widely adopted.

**Macaulay, Thomas Babington, Lord** (1800–59), the most brilliant historian of the Victorian era. His fame was assured by his *Essays* and *Lays of Ancient Rome*, and his *History* did more than confirm it. He was a son of Zachary Macaulay (1768–1838), the anti-slavery agitator, and sat in Parliament as member for Calne for some years, also serving for five years as a member of the Supreme Council of Calcutta. On his home-coming, he again entered Parliament as member for Edinburgh, and gained a new celebrity by his speeches. He at different times filled the offices of Paymaster-General and Secretary for War, and was raised to the peerage in 1857. Both Lord Macaulay and his father lie buried in Westminster Abbey.

**Macbeth,** according to Holinshed's *Chronicle*, was the usurping Scottish king who succeeded Duncan, whom he murdered. Macbeth was slain by Duncan's son Malcolm in 1056, after a reign of seventeen years. His history forms the subject of Shakespeare's celebrated tragedy.

**McCarthy, Justin** (1830–1912), Irish politician, novelist, and historian, from 1879 to 1896 was a prominent member of the Irish Party in Parliament, succeeding Mr. Parnell in 1890 in the leadership of the party.

**Macdonald, Flora** (1720–90), attracted much romantic interest by her bravery in conducting Prince "Charlie" to the Isle of Skye, when he was pursued. She afterwards married and settled in America, but ended her days in Skye.

**MacDonald, Rt. Hon. J. Ramsay,** P.C., 1924, F.R.S., 1930 (b. 1866), of humble Scottish birth, he rose to be Prime Minister, First Lord of the Treasury and Sec. of State for Foreign Affairs in the first British Labour Government, Jan. to Nov. 1924. Prime Minister and First Lord of the Treasury 1929 and again in 1931. Labour member for Leicester 1906–18, Aberavon 1922–29, Seaham Division of Durham 1929–31, and Nationalist Labour Member for Seaham Division of Durham 1931. Chairman of the Independent Labour Party 1906–1909, Secretary of the Labour Party 1909–11, Leader of the Labour Party 1911–14 and again 1922–31. Leader of Nationalist Government, 1931.

**Macfarren, Sir George** (1813–87), was a distinguished English composer of both sacred and secular music.

**Machiavelli, Nicolo** (1469–1527), a Florentine diplomatist and historian, whose book, *Il Principe*, has maintained its celebrity as a masterly exposition of the method of governing by artifice.

**McKenna, Rt. Hon. Reginald** (b. 1863), became Chairman of the Midland Bank, 1919; has represented North Monmouthshire, 1895–1918. Was Financial Secretary to the Treasury in 1905, and President of the Board of Education in 1907 and introduced the Education Bill of 1908. In 1908 became First Lord of the Admiralty, in 1911 Home Secretary, and was Chancellor of the Exchequer from 1915 to Dec. 1916.

**Mackensen, Field-Marshal A. von** (b. 1849), a leading German general. Entered Army in 1870, and served in the Franco-Prussian War. A great organiser and military authority; responsible for the conduct of the campaign against the Russians in 1915.

**Mackenzie, Sir A. C.,** Mus. Doc. (b. 1847), Principal of R.A. of Music, 1888–1924, a British composer who has gained fame by the operas of "Colomba," "The Troubadour," and "His Majesty." Among his numerous cantatas, "The Bride," "The Rose of Sharon," and "The Dream of Jubal" take high rank.

**Maclagan, E. R. D.,** C.B.E., F.S.A. (b. 1879), became Director and Secretary of the Victoria and Albert Museum, 1924.

**Maclay, Baron Joseph P.,** Shipping Controller Dec. 1916 (b. 1857). One of the Clyde Trustees, and a noted shipowner. Raised to the Peerage October 1922.

**M'Clintock, Admiral Sir Francis** (1819–1907), Arctic explorer, noted for his expeditions in search of Sir John Franklin, discovering numerous relics.

**Maclise, Daniel** (1806–70), a distinguished painter and R.A.

**Macmillan, Rt. Hon. Lord,** K.C. (b. 1873), a Lord of Appeal. In 1924 was Lord Advocate for Scotland.

**Macnamara, Rt. Hon. Dr. T. J.,** P.C. (1861–1931), Minister of Labour, 1920–22; a prominent Liberal politician, formerly teacher and the editor of *The Schoolmaster*. Secretary to the Local Government Board, 1907–08.

**McNeill, James** (b. 1869), Governor-General of Irish Free State, 1927; had successful career in India; was a supporter of Sinn Fein in early stages; High Commissioner of I.F.S. in London, 1923.

**Macpherson, Rt. Hon. Ian,** M.P. (b. 1880), Minister of Pensions, 1920–22. Chief Sec. for Ireland, 1919–20; was Under-Sec. for War Dec. 1916 to Jan. 1919. Has represented Ross and Cromarty from 1911. Made a Privy Councillor in 1918. K.C. 1919.

**Macready, Gen. Rt. Hon. Sir Nevil, Bart.,** G.C.M.G., K.C.B. (b. 1862). Commander-in-Chief Irish Forces, 1920–22. Commissioner of Met. Police, 1918–20. Served Egypt, S. Africa, European War; member of Army Council, 1918. Retired from Army, 1923.

**Macready, W. C.** (1793–1873), a famous tragedian.

**McCurdy, Rt. Hon. Charles A.,** K.C. (b. 1870), M.P. Northampton, 1910–1923; Minister of Food, 1900–1922; previously Parliamentary Sec. Ministry of Food.

**Madden, Admiral of the Fleet, Sir Charles, Bt.,** G.C.B., G.C.V.O., K.C.M.G., 1st Sea Lord, July, 1927–30; was Commander-in-Chief Atlantic Fleet, 1919–22. First and Principal A.D.C. to the King, 1922–24.

**Maeterlinck, Maurice** (b. 1862), the distinguished Belgian poet and critical writer. His principal works are *La Princesse Maleine, Pelleas et Mélisande, La Sagesse et la Destinée*, and *The Double Garden*.

**Magellan, Ferdinand** (1470–1521), a famous Portuguese navigator, and commander of the first expedition (1519) to sail round the world.

**Maintenon, Mme. de** (1635–1719), after being the wife of the poet Scarron, drifted into Court circles, and so fascinated Louis XIV. that he ultimately married her. At his death she retired to a convent.

**Malibran, Maria** (1808–36), was one of the most famous operatic singers of her time.

**Malory, Sir Thomas** (*circa* 1430–70), compiled the *Morte d'Arthur*, which was printed by Caxton in 1485.

**Malthus, Thomas R.** (1766–1834), was an English clergyman and political economist who in his essay on *The Principle of Population* proposed to limit the increase of population by discouraging marriage and otherwise.

**Mandeville, Sir John** (*circa* 1300–72). *The Voiyage and Travaile of Sir John Mandeville*, the first book of travels published in England, and probably fuller of romance than reality.

**Manning, Henry Edward, Cardinal** (1808–1892), Cardinal Archbishop of Westminster, was a prominent Anglican Churchman up to 1851, when he joined the Church of Rome and in 1865 succeeded Cardinal Wiseman at Westminster.

**Marat, Jean Paul** (1743–93), one of the leading actors in the French Reign of Terror. Killed by Charlotte Corday.

**Marco Polo** (1256–1323), the famous Venetian traveller and explorer, who made journeys through China, India, and other eastern countries, and published the record of his various wanderings, recounting the many wonders and marvels he had seen—a record which seemed for the most part beyond credence to his contemporaries, but now largely confirmed.

**Marconi, Marchese** (cr. 1929), **Guglielmo Marconi** (b. 1874), an ingenious Italian electrician who was educated at Leghorn and Bologna. Coming to England, he studied with Sir William Preece, and in 1896 brought forward an apparatus by which he succeeded in sending wireless messages. In 1902 succeeded in transmitting transoceanic messages. Established a public wireless telegraph service across the Atlantic in 1907. Awarded Nobel Prize for Physics, 1909. Entered into an important contract with the British Government in 1912 for establishing wireless stations at different points throughout the Empire—a contract which was revised considerably in the following year after the sittings of the Marconi Committee of Inquiry. Lost the sight of an eye in a motor accident in 1912. Made hon. G.C.V.O., July 1914. Is a Senator of Italy. Since 1930, President of Reale Accademia d'Italia.

**Margaret,** "The Maid of Norway," as she was called, was the daughter of Eric II., King of Norway, and became direct heir to the Scottish throne on the death of her grandfather, Alexander III. of Scotland, but died on her way to Scotland.

**Margaret, St.** (1047–93), wife of Malcolm Canmore, and Queen of Scotland. She was a devout Christian, and zealous in her efforts to convert her husband's people, her good deeds being held in such profound remembrance that she was canonised in 1250.

**Maria, Louisa** (1791–1847), daughter of Francis I. of Austria, became wife of Napoleon in 1810, and bore him a son. (*See* **Napoleon II.**)

**Maria Theresa** (1717–80) was a woman of remarkable strength of character and ability, and succeeded her father, Charles VI., as Empress of Germany.

**Marie Antoinette** (1755–93) was daughter of the Emperor Francis I. of Austria, and became wife of Louis XVI. of France. She entered with spirit into the gaiety of French Court life, and drew down upon herself much popular hatred in consequence. In the terrible events which followed the outbreak of the Revolution she was one of the chief sufferers, but bore her fate with dignity and resignation, and met her death on the scaffold with unflinching courage.

**Marius, Caius** (B.C. 155–86), was one of the most distinguished Roman generals, a tribune of the people, prætor, and six times Consul. He was Proprætor of Spain in 114 B.C.

**Mark Antony.** (*See* Antony.)

**Markham, Sir Clements** (1830–1916), President of the Royal Geographical Society, and one of the most eminent of modern explorers. He served in the Arctic Expedition of 1850–51, and was geographer to the Abyssinian Expedition in 1867. He was the introducer of the quinine-yielding cinchona-tree from Peru to British India.

**Marlborough, Duke of** (1650–1722), the celebrated English general of the Queen Anne and William III. period.

**Marlowe, Christopher** (1564–93), one of the greatest of the Elizabethan dramatists. His principal plays are "Dr. Faustus," "Tamburlaine the Great," "Edward II.," and "The Jew of Malta." He was killed in a tavern brawl at Deptford.

**Marmont, Marshal** (1774–1852), was one of Napoleon's most famous generals.

**Marochetti, Baron Carlo** (1805–67), an Italian sculptor who lived in England for many years.

**Marryat, Captain Frederick** (1792–1848), an exceedingly popular writer of sea stories. Author of *Peter Simple, The King's Own, Jacob Faithful*, etc.

**Martial** (43–104) was born at Bilbilis in Spain, but spent the greater part of his life in Rome, where he acquired much fame as a poet and epigrammatist.

**Martin-Harvey, Sir John** (b. 1863), Knighted in 1921; a famous British actor.

**Martin, St.** (316–400), a French monk who founded the convent of Poictiers, and later was made Bishop of Tours.

**Marvell, Andrew** (1620–78), poet and diplomatist, friend of Milton.

**Marx, Karl** (1818–83), an active Socialist, who was expelled from France, and from 1845 lived mainly in England, where he identified himself with the cause of the labouring classes and was a most earnest worker. His work *Das Kapital*, is a powerful fragment, only one volume being published.

**Mary I.** (1516–58), daughter of Henry VIII. Was Queen of England from 1553 to her death. She was a strenuous Roman Catholic, and entirely reversed the religious order of things during her brief reign, persecuting, imprisoning, and burning at the stake many of the Protestant reformers, nearly three hundred persons being put to death during her short reign as heretics. She was married to Philip of Spain in 1554.

**Mary II.** (1662–94), daughter of James II. Came to the English throne in 1689, having been married to her cousin, William of Orange, fifteen months previously. They reigned jointly, after assenting to the "Declaration of Rights," until her demise.

**Mary, Queen of Scots** (1542–87), was a daughter of James V. of Scotland, and was married to the Dauphin of France at sixteen years of age, and lived at the French Court. On the death of her husband in 1560 she returned to Scotland, and for a time was the acknowledged Queen of the Scots. In 1565 she married Lord Darnley, and thenceforward from one cause and another her entanglements increased. Jealous of Rizzio, the Queen's Italian secretary, Darnley had him murdered in Holyrood Palace, in the presence of the Queen, and twelve months later Darnley himself was murdered by Bothwell, who married Mary three months afterwards. The Scottish nobles, angered by these various acts, rebelled against Mary, and she was made prisoner and confined in Loch Leven Castle, compelled to abandon Bothwell and to sign an Act of Abdication in favour of her son. Escaping to England, she sought the protection of Elizabeth, but that monarch refused to give her her freedom, and imprisoned her for the next nineteen years in various castles, and ultimately had her beheaded on a charge of conspiracy. She was buried in Peterborough Cathedral, but after her son James I. of England ascended the throne her remains were removed to Westminster Abbey.

**Mascagni, Pietro** (b. 1863), the Italian composer, attained sudden celebrity by his "Cavalleria Rusticana" in 1890, and has since produced a number of operas of a more ambitious character, but perhaps not up to the level of his first effort.

**Masefield, John,** appointed Poet Laureate in 1930. A prolific writer of notable poems as well as numerous plays.

**Massinger, Philip** (1583–1640), a dramatist of exceptional power. His cleverest play was "A New Way to Pay Old Debts."

**Matsys, Quintin** (1466–1530), a distinguished Flemish painter, who was originally a blacksmith. He excelled in Scriptural subjects.

**Maude, General Sir Stanley,** K.C.B., Commander-in-Chief of the British Forces in Mesopotamia, 1916–17 (1864–1917). The capture of Kut and Baghdad in 1917 afforded high testimony to his generalship. Died from cholera.

**Maughan, W. S.** (b. 1874), a well-known playwright and novelist.

**Maurice, Frederick Denison** (1805–72), a leader of religious thought and social reform, his *Theological Essays* being characterised by ideas then regarded as very advanced.

**Mawson, Sir Douglas** (b. 1882), commander of the Australian Antarctic expedition of 1911; previously a member of the Shackleton expedition. His party endured terrible sufferings in 1912; all died except himself. In 1913 he established a scientific station on the Macquarie Islands. Knighted 1914.

**Maxim, Sir Hiram** (1840–1916), the inventor of the famous automatic quick-firing gun.

**Maxwell, James Clerk** (1831–1879), the eminent scientist and mathematician, was born at Edinburgh and educated at Edinburgh University and at Cambridge. As a writer on heat, light, electricity, and kindred subjects he displayed rare gifts.

**Maxwell, Sir James Crawford,** M.D., K.B.E., C.M.G. (b. 1869); became Governor of Northern Rhodesia, 1927.

**Mazarin, Jules** (1602–61), an Italian Cardinal who became chief Minister of State under Louis XIV., and was for a number of years the practical ruler of France. He succeeded Richelieu.

**Mazeppa, Ivan** (1644–1709), the hero of Byron's poem, was a real personage, and a Pole, and was tied naked on the back of a wild horse, and so sent out across the Russian desert, for an intrigue with a noble's wife. He was liberated by Cossacks and afterwards attained an honourable position.

**Mazzini, Giuseppe** (1805–72), an Italian patriot, who, in his endeavours to secure the independence of Italy, incurred the disfavour of the authorities, and was compelled to leave the country. He started a newspaper called *Young Italy* at Marseilles, and in 1837 came to London, and kept up his attacks upon existing governments. In 1848 he was back in Rome, and was elected dictator of the Roman Republic. He was not allowed to hold this position long, however, for the French occupied Rome and Mazzini was driven to England again. The unification of Italy was accomplished in other ways than those advocated by Mazzini, but he lived to see Victor Emmanuel King of United Italy.

**Mechnikov, Ilya** (1845–1916), an eminent Russian biologist; awarded Nobel Prize for Medicine 1908.

**Meissonier, J. L.** (1815–91), an eminent French modern painter.

**Melba, Dame Nellie, G.B.E.** (1865–1931), the celebrated *prima donna*, was born in Melbourne—her father being a Scotsman named Mitchell, and her mother of Spanish descent—and made her *début* in 1887 at Brussels, since which time her career was one of unbroken success.

**Melbourne, Viscount** (1779–1848), Queen Victoria's first premier, holding office over six years, and identified with many important Liberal measures.

**Melchett, Lord.** Title taken by Sir Alfred Mond (*q.v.*).

**Mendelssohn-Bartholdy, Felix** (1809–47), the celebrated German composer, whose works are of delicate spirituality, full of melodic beauty, and in the highest sense artistic. He was the grandson of Moses Mendelssohn, the philosopher, whose writings gained for him the title of "the Socrates of the Jews," and who died in Berlin in 1786. The younger Mendelssohn was Director of Concerts in Leipsic for a time, lived in Italy several years, and was a frequent visitor to England. His two oratorios, "St. Paul" and "Elijah," are magnificent compositions.

**Menelik II.** (1842–1913), Emperor of Abyssinia, succeeded to the throne in 1889, and proved a vigorous ruler.

**Mercator, Gerhard** (1512–94), the Flemish geographer who invented a celestial and a terrestrial globe, by which he introduced his famous projection, in which meridians and parallels of latitude cross each other at right angles, both being indicated by straight lines. This greatly simplified steering.

**Meredith, George** (1828–1909), the most artistic of modern English novelists, and a poet of much originality. In 1859 he published his *Ordeal of Richard Feverel*, which was a brilliant and successful effort. Among his other great novels are *Evan Harrington*, *Rhoda Fleming*, *The Egoist*, *Diana of the Crossways*, and *The Amazing Marriage*.

**Merry del Val, Cardinal** (1865–1930), was Pontifical Secretary of State, educated in England during the time that his father was secretary to the Spanish Embassy in London. Had strong ultramontane leanings and exercised great influence upon the papal policy.

**Meshtrovich, Ivan** (b. 1883), a Dalmatian sculptor, recognised as one of the leading European sculptors of the present time. The Tate

Gallery and the Victoria and Albert Museum have examples of his work.

**Mesmer, Friedrich Anton** (1733–1815), was a German doctor who founded the system of mesmerism or animal magnetism.

**Methuen, Field-Marshal Lord,** G.C.B., G.C.V.O., G.C.M.G., became Governor and Constable of the Tower, 1920. A distinguished soldier.

**Metternich, Prince von** (1773–1859), Austrian statesman and diplomatist, who was a powerful factor in the late career of Napoleon.

**Meyerbeer, Giacomo** (1794–1864), was born in Germany, but spent most of his life in Paris, where he produced all his great operas, which include "Robert le Diable," "Les Hugenots," "Le Prophéte," and several others.

**Michael Angelo Buonarroti** (1474–1564), the renowned Italian painter, sculptor, and architect, whose genius was such a power in beautifying the churches of Rome and Florence. Was the last and in some respects the greatest of the Italian sculptors; while his large paintings, particularly "The Last Judgment," in the Sistine Chapel, are no less famous.

**Michaelis, Dr. Georg** (b. 1857), Imperial Chancellor of Germany from July to Oct., 1917. Had previously held several Ministerial appointments, but made an ineffective successor to Bethmann-Hollweg, and was superseded by Count Hertling.

**Michel, Louise** (1830–1905), a French anarchist.

**Michelet, Jules** (1798–1874), a noted French historian and author, who, in addition to writing numerous popular general histories, produced some remarkably clever studies of natural history.

**Midleton, Earl of** (b. 1856), St. John Brodrick, entered Parliament in 1883, was Financial Secretary to the War Office in 1886, Under-Secretary for War in 1895, Secretary for War in 1900, and Secretary for India in 1903. M.P. for the Guildford Division from 1882 to 1906. Succeeded to title in 1907. Alderman, L.C.C. 1907–13; service on Irish Convention 1917–18.

**Milford Haven, Admiral Louis Alexander Mountbatten, 1st Marquess of,** G.C.B., G.C.V.O., K.C.M.G. (1854–1921), up to June, 1917, known as Prince Louis of Battenberg, son of Prince Alexander of Hesse, and married to his cousin, Princess Victoria, daughter of Princess Alice of England and the Grand Duke of Hesse. Had a successful career in the British Navy, which he entered in 1868. Appointed to the command of the Second Cruiser Squadron in 1904; commander-in-chief Atlantic Fleet, 1908. First Sea Lord, 1912–14.

**Mill, John Stuart** (1806–73), achieved high reputation by his numerous works on philosophical questions, and wrote, amongst other books, *Principles of Political Economy, Essay on Liberty,* and *Utilitarianism.*

**Millais, Sir John Everett** (1829–96), was at one time the most prominent of the English Pre-Raphaelites, but soon cast himself free from their mannerisms, and began the production of a long series of famous pictures. His paintings were amongst the most sought after in the Royal Academy Exhibition through a long period, and he did some very excellent black-and-white work. Was made R.A. in 1863. Among his numerous works we have only room to mention "The Eve of St. Agnes," "Autumn Leaves," "The Order of Release," "Effie Deans," "Chill October," and "Bubbles," the last picture being purchased by Messrs. A. and F. Pears, who accorded it the honour of the highest artistic reproduction that the skill of the poster-printer was capable of, and spread it over the world, with the approbation of the painter. Created a baronet in 1885, and was P.R.A. at his death.

**Miller, Hugh** (1802–56), a famous geologist, who in his youth was a quarry-worker.

**Millet, Jean François** (1814–75), one of the greatest of French painters of pastoral subjects; his celebrated work "The Angelus" is universally known by its numerous reproductions.

**Milne, Gen. Sir George F.,** K.C.B., G.C.M.G. (b. 1866), Chief of Imperial General Staff 1925. Commanded 27th Division and 16th Army Corps in Great War.

**Milner, Viscount,** K.G., G.C.B., G.C.M.G. (1854–1925), Sec. for the Colonies 1919, resigned 1921. Minister without Portfolio and Member of War Council 1916–18. Under-Secretary for Finance in Egypt 1889–92, and Chairman of the Board of Inland Revenue 1892–97; was Governor of Cape Colony 1897–1901; and created High Commissioner for South Africa in 1897. Secretary of State for War 1918–1919. Raised to the peerage in 1901, made a Viscount the year following.

**Miltiades** (d. 489 B.C.), one of the leaders of the Athenian army against the Persians at Marathon.

**Milton, John** (1608–1674), England's chief epic poet, whose "Paradise Lost" is the greatest poem of the kind in the language. In 1652 he became totally blind, and at his death was buried in St. Giles's Church, Cripplegate, London, a monument being erected to his memory in Westminster Abbey.

**Ministry.**—The principal Ministers in the National Government elected October 1931:—

Prime Minister—Mr. J. Ramsay Macdonald.
Foreign Secretary—Sir John Simon.
Lord Privy Seal—Viscount Snowden.
Lord President of Council—Mr. Stanley Baldwin.
Lord Chancellor—Lord Sankey.
Chancellor of Exchequer—Mr. Neville Chamberlain.
Home Secretary—Sir Herbert Samuel.
Colonial ,, —Sir Philip Cunliffe-Lister.
War ,, —Lord Hailsham.
Indian ,, —Sir Samuel Hoare.
Secretary for Scotland—Sir Archibald Sinclair.
First Lord of Admiralty—Sir Bolton Eyres-Monsell.
President of Board of Trade—Mr. Walter Runciman.
Minister of Health—Sir E. Hilton Young.
,, ,, Agriculture—Sir John Gilmour.
,, ,, Education—Sir Donald Maclean.
,, ,, Labour—Sir Henry Betterton.
Air Minister—Marquess of Londonderry.
First Commissioner of Works—Mr. W. Ormsby-Gore.
Secretary for the Dominions—Mr. J. H. Thomas.
(*The above form the Cabinet.*)
Attorney-General—Sir W. Jowitt.
Chancellor Duchy of Lancaster—Mr. J. C. C. Davidson.
Pensions Minister—Major G. C. Tryon.
Solicitor-General—Sir Thomas Inskip.
Postmaster-General—Sir H. Kingsley Wood.
Ministry of Transport—Mr. P. J. Pybus.
Under-Secretaries:—
Home Affairs—Hon. Oliver Stanley.
Foreign ,, —Capt. R. A. Eden.
Colonies—Sir Robert Hamilton.
War—Earl Stanhope.
India—Marquess of Lothian.
Civil Lord—Capt. David Euan Wallace.
Secretary for Mines—Mr. Isaac Foot.
Solicitor-General for Scotland—Mr. W. G. Normand.
Fin. Sec., War Office—Mr. A. Duff Cooper.
,, ,, Admiralty—Lord Stanley.
,, ,, Treasury—Major Walter E. Elliott.
Parly. Sec., Overseas Trade—Major D. J. Colville.
,, ,, Board of Trade—Mr. Leslie Hore-Belisha.
,, ,, Health—Mr. Ernest Brown.
,, ,, Agriculture—Earl de la Warr.
,, ,, Treasury—Capt. H. D. Margesson.
,, ,, Labour—Mr. R. S. Hudson.
,, ,, Dominion Affairs—Mr. Malcolm Macdonald.
,, ,, Air—Sir Philip Sassoon.
,, ,, Education—Mr. H. Ramsbotham.
,, ,, Pensions—Lieut.-Col. Cuthbert M. Headlam.

**Mirabeau, Gabriel, Comte de** (1749–91), one of the prominent figures of the French Revolution, and a famous orator.

**Mirsky, Prince D. S.,** the son of General Prince Mirsky, Russian Minister of the Interior, 1905. Lecturer in Russian Literature, King's College, London, 1922. Author of *A History of Russian Literature, A Social History of Russia, Lenin,* etc.

**Mitford, Mary Russell** (1787–1855), made a name for herself by her sketches of rural life entitled

*Our Village*, a book which achieved immense popularity.

**Mithridates** (*circa* 132–63 B.C.), was King of Pontus from 120–63 B.C., and showed great capacity as a commander, conquering a great part of Asia Minor and Greece.

**Modjeska, Madame Helena** (1844–1908), a Polish actress of the highest ability in English tragedy.

**Moffat, Robert** (1795–1883), a famous missionary whose work was chiefly confined to South Africa.

**Mohammed** (570–632), the founder of the Mohammedan religion, fled from Mecca to Medina in 622, from which date the Mohammedan era opens. By his constant preaching and proclaiming of the one God he gathered round him a vast number of followers and was able to return to Mecca eight years later, an acknowledged conqueror. His world-famous "Koran"—though presented by him as an original revelation from the Angel Gabriel—may be traced to Biblical and Rabbinical sources in the main.

**Mohammed V.** (1844–1918), Sultan of Turkey, 3rd son of Sultan Abd-ul-Medjid, succeeded his elder brother, Abd-ul-Hamid II., in 1909.

**Mohammed VI.** (Yahid-ed-Din) (b. 1861), succeeded his brother as Sultan in 1918; was deposed by the Nationalist Movement in 1922, and compelled to seek safety on board a British battleship; retired to Malta in Nov. 1922. The Caliphate passed at the same time to Prince Abdul Medjid, son of the Sultan Abdul Aziz.

**Molière, Jean E.** (1622–73), the greatest of French comic dramatists, who, from being a poor strolling player, became the leading dramatist of his time. His greatest comedies are "Le Tartuffe," "Le Misanthrope," "Le Malade Imaginaire" and "Le Médecin malgré lui."

**Moltke, Field-Marshal Count Hellmuth von** (1800–91), reorganised the Prussian Army before the Franco-German War, and Chief of the Staff in that war.

**Mond, Rt. Hon. Sir Alfred, Bart.**, P.C. (1868–1931), managing director of Brunner, Mond, & Co., and prominently associated with other industrial enterprises. M.P. for Chester, 1906–10, for Swansea, 1910, and for Carmarthen, 1924. Raised to Peerage as Lord Melchett in 1928. Minister of Health 1921–22. Wrote on industrial and economic questions.

**Monk, General George, Duke of Albemarle** (1608–1670), was one of the most prominent men of the Cromwellian and Restoration periods.

**Montagu, The Rt. Hon. E. S.** (1870–1924), Sec. for India, 1917–1922; M.P. for Chesterton Div. of Camb. 1906–18, and for Cambridgeshire 1918–22. Visited India, 1917–18.

**Montagu, Lady Mary Wortley** (1689–1762), was a strong-minded woman of literary tastes.

**Montaigne, M. de** (1533–92), a French essayist of world-wide celebrity.

**Montcalm, General** (1712–59), commander of the French army in Canada in the final struggle for the possession of Canada between the French and English in 1756–59.

**Montefiore, Sir Moses** (1784–1885), a Jewish financier and philanthropist who devoted most of his long life to movements for the amelioration of the condition of his poorer Jewish brethren, and gave large sums. He was made a baronet in 1846.

**Montesquieu, Baron de** (1689–1755), a famous French philosopher and author.

**Montessori, Maria**, M.D., D. Litt., a brilliant educationalist. The "Montessori" method she invented for infant education has had wide recognition.

**Montezuma** (1466–1520) was Emperor of Mexico when Cortes invaded that country.

**Montfort, Simon de, Earl of Leicester** (1206–65), was a powerful baron, with liberal views, and a hatred of kingly tyranny. It was his bold action that forced Henry III., his brother-in-law, to grant the first English Parliament. He met his death at the Battle of Evesham.

**Montgolfier, Joseph Michael and Jacques Etienne**, two French brothers who, during the last twenty years of the 18th century, demonstrated the practicability of a balloon inflated by heated air, making many ascents, and may be said to be the father of modern aeronautics.

**Moody, Dwight L.** (1837–99), the American revivalist preacher, associated for many years in mission work on both sides of the Atlantic with Ira D. Sankey, the "American Singing Pilgrim."

**Moore, George**, a well-known Irish novelist; author of *Confessions of a Young Man, Esther Waters, Evelyn Innes*, etc.

**Moore, Sir John** (1761–1809), a British general who served in Holland, Egypt, and in the Peninsula.

**Moore, Thomas** (1779–1852), Ireland's greatest poet, the author of "Irish Melodies," "Lalla Rookh," "The Epicurean," and many other works. He enjoyed immense popularity both in England and Ireland. Was the friend and biographer of Lord Byron.

**More, Hannah** (1745–1833), was the authoress of many stories and essays, mostly of a religious character, but highly successful.

**More, Sir Thomas** (1478–1535), succeeded Wolsey as Lord Chancellor under Henry VIII., but fell into disgrace by refusing to take the oath of Supremacy, and was ultimately executed. His *Utopia* is one of the world's most noted books.

**Morgan, J. Pierpont** (1837–1913), one of the great financiers of his time. Among the gigantic undertakings which he controlled were the Steel Trust and the Atlantic Steamship Combine. He bought many famous pictures (including Gainsborough's "Duchess of Devonshire"), and was a devoted Churchman and a man of noble charity.

**Morland, George** (1763–1804), a painter of English rural life.

**Morley, Viscount, of Blackburn** (1838–1923), Lord President of the Council, 1910–14; Secretary for India from 1905 to 1910, when he resigned, author and statesman; in 1868 edited the *Morning Star*; from 1867 to 1883 edited the *Fortnightly Review*; was editor of the *Pall Mall Gazette*, 1880–1883, and in the last-named year entered Parliament, and was at once appointed Chief Secretary for Ireland with a seat in the Cabinet. His chief, Mr. Gladstone, was defeated in 1886, but returned to power in 1892, when Lord Morley again accepted the Irish Secretaryship. After 1895 he and his party remained out of office, but the political loss was the public's gain. He was appointed a member of the Order of Merit in 1902, but in 1903 his *Life of Gladstone* was the chief book of the year. His other works include monographs on Voltaire (1872), Rousseau (1873), Diderot and the Encyclopædists (1878), Burke (1879), Walpole (1888), Cromwell (1900) and *The Life of Cobden* (1881). Mr. Carnegie presented the late Lord Acton's Library to Lord Morley, who gave it to Cambridge University. Lord Morley visited the United States in 1904, and on the Liberals coming into power the year following, he became Secretary for India. Piloted the Lords Veto Bill through the Upper House in 1911. His Autobiography published in 1917.

**Morris, William** (1834–96), the poet of the "Earthly Paradise." Was also a Socialist and an art designer who did much for the improvement of domestic decoration.

**Morrison, Herbert S.** (b. 1888), Minister of Transport, 1929; M.P. Labour, South Hackney, 1929.

**Morse, Samuel Finley B.** (1791–1872), an American artist and designer, who became the inventor of the Morse system of electric telegraphs, and of the Morse Code of Signals.

**Mosley, Sir Oswald, Bart.** (b. 1896), Chancellor of the Duchy of Lancaster, 1929–30. A prominent young politician, M.P. Labour, Smethwick, 1926.

**Moynihan, Lord, of Leeds, K.C.M.G., F.R.C.S.**, (b. 1865), an eminent surgeon. President of the Royal College of Surgeons.

**Mozart, Wolfgang Amadeus** (1756–91), the celebrated Austrian composer. Showed musical talent while very young, and performed in various capitals of Europe when only eight years of age. At twenty-five he accepted the position of musical composer to the Imperial Court of Vienna, and then began to write operas, producing in succession the "Nozze di Figaro," "Don Giovanni," and "Die Zauberflöte." He also wrote some beautiful Masses and a Requiem of unsurpassed beauty.

**Mudie, Charles Edward** (1818–90), the founder, in 1842, of Mudie's Library, which revolutionised the reading opportunities of the middle classes.

**Mulcahy, Richard J.** Succeeded Michael Collins

as Commander-in-Chief Irish Free State Army 1922. Minister for Local Government and Public Health 1927; Minister of Defence, Irish Free State 1922–24.

**Müller, Friedrich Maximilian** (1823–1900), usually known as Max Müller, came to England from Germany in 1846, and became Professor of Modern Languages at Oxford. He was a chief authority on Oriental manuscripts, and his books on philological subjects are standard works.

**Müller, George** (1805–98), was born in Prussia and removed to London in 1829, associating himself with Mission work; ultimately settling in Bristol.

**Mulready, William** (1786–1863). An English R.A. painter of homely subjects.

**Munkacsy, Michael von** (1844–1900), a celebrated Hungarian painter of historical subjects.

**Munnings, Alfred, J.**, R.A. (b. 1878), a distinguished British painter whose country scenes and pictures of horses have gained him world-wide fame.

**Munro-Ferguson, Ronald C. (Viscount Novar)**, K.T. 1926, G.C.M.G., Secretary for Scotland, 1922–24 (b. 1860), Governor-General of the Commonwealth of Australia 1914–20. Was M.P. for Ross and Cromarty, 1884–5, and for Leith Burghs from 1886–1914. Chairman of Political Honours Review Committee 1925.

**Murat, Joachim** (1771–1815), one of Napoleon's most famous marshals.

**Murchison, Sir Roderick** (1792–1871), an eminent geologist, whose researches and writings did much to popularise the science.

**Murdock, William** (1754–1839), was a distinguished engineer and inventor. He was one of the first to introduce gas lighting.

**Murillo, Bartolome Esteban** (1617–82), one of the greatest Spanish painters. His chief works are altar-pieces and religious subjects.

**Murray, Prof. Gilbert** (b. 1866), Regius Professor of Greek, Oxford University 1908. Chairman of the League of Nations Union. Is noted for his translations from the Greek.

**Murray, Dr. Sir James Augustus** (1837–1915), the distinguished philologist, and editor of the New English Dictionary, the most exhaustive work of the kind hitherto issued.

**Musset, Louis Alfred de** (1810–57), a French writer of distinction.

**Mussolini, Signor Benito** (b. 1881), Chief of Fascisti Movement. Italian Premier since 1922.

## N

**Nansen, Fridtjof** (1861–1930), the Norwegian explorer who, after two or three expeditions across Greenland, in 1893 started out on his famous North Polar expedition, on which he was away three years, reaching the highest altitude thereto attained—86 deg. 14 min. N.—a feat since eclipsed by the Duke of the Abruzzi and by Peary. He published a fascinating narrative of his exploration under the title of *Farthest North*. Active in Russian famine relief 1921. Awarded Nobel Prize for Peace, 1922.

**Napier, Sir Charles James** (1782–1853), a British general who distinguished himself in the Peninsular War, and in India.

**Napoleon I.** (1769–1821) was born at Ajaccio in Corsica. Sent to France to receive a military education and was a captain at the age of twenty. In 1794 served in Italy with such distinction that he won a generalship, and next year was appointed Commander-in-Chief. A series of most brilliant successes followed. He defeated the Austrian forces in 1797, conducted an expedition to Syria and Egypt in 1798, returned in 1799 to find himself the most popular man in France, and in November of that year he proclaimed himself First Consul. In 1800 he was again in Italy and once more victorious. In 1804 he was made Emperor, and the following year was in the field against England, Russia and Austria, achieving a splendid series of victories at Austerlitz and elsewhere, and practically became Dictator of Europe, distributing kingships amongst his brothers in the most profuse manner, Joseph becoming King of Naples, Louis King of Holland, and Jerome King of Westphalia. In 1809, after divorcing his first wife, Josephine, he married Maria Louisa of Austria. Subsequently he made serious blunders. His invasion of Russia was disastrous, the Peninsular War went against him, and in 1814 the Allies entered Paris and forced him to abdicate. He was sent to Elba, but made his escape in the following year, gathered his old army about him and went forth to meet the English and Prussian armies. He was finally completely defeated at Waterloo on the 18th June, 1815, and exiled to St. Helena, where he died six years later. His remains were removed to Paris in 1840, and rest in a magnificent tomb.

**Napoleon II.** (1811–32) was the son of Napoleon I. and Maria Louisa. Was born in Paris and proclaimed King of Rome, but died of consumption when only twenty-one, being known at the time of his demise as the Duke of Reichstadt.

**Napoleon III.** (1808–73) was the son of Louis Bonaparte, King of Holland, and of Hortense, daughter of the Empress Josephine. According to the Napoleonic idea he became the heir to the throne of France on the death of the Duke of Reichstadt. Made an attempt to create a popular movement in his favour in 1836 at Strasburg, but was taken prisoner and deported to the United States. In 1840 he made a second attempt at Boulogne. Was again captured and sentenced to imprisonment for life in the Castle of Ham. Six years later he escaped, disguised as a workman, and lived in London until the Revolution of 1848, when he was elected to the National Assembly and a few months later became President of the Republic. In 1851 by his famous *coup d'état* he obtained complete control of the Government and restored the Empire in 1852, becoming Napoleon III. Married Eugénie de Montijo in 1853. In 1854 there was the Crimean War, when France and England were allies. In 1859 followed the war with Austria. In 1863 the occupation of Mexico came, and in 1870 the Franco-Prussian War, which carried the Second Empire down, and compelled Louis Napoleon to take refuge once more in England. He died at Chislehurst in Kent.

**Nash, John** (1752–1835), was a successful London architect of the Regency days, the designer of Regent Street, Buckingham Palace, and of Regent's Park and the commanding terraces that border it.

**Nash, Richard** (1674–1762) was a man of fashion who as "Beau Nash" held great sway at Bath for many years, being "master of the ceremonies" there and social dictator.

**Nasmyth, James** (1808–90), the inventor of the steam-hammer, was a native of Edinburgh, but in early manhood settled in Manchester, and there brought out his famous new tool, which became indispensable in all large iron and engineering works.

**Nathan, Lt.-Col. Sir Matthew**, G.C.M.G., Permanent Sec. Ministry of Pensions Dec. 1916–19 (b. 1862), served with distinction in the Nile, Lushai, and other expeditions as an officer of the Royal Engineers. Governor of the Gold Coast, 1900–3, Governor of Hong-Kong, 1903–7, Governor of Natal, 1907–9, Secretary General Post Office, 1909–11, Chairman of the Board of Inland Revenue, 1911–14, and Under-Secretary for Ireland 1914–16. Governor of Queensland, 1920–25. Member of special Commission on the Constitution of Ceylon, 1927–28.

**Nelson, Horatio, Viscount** (1758–1805), the great English naval commander; son of a Norfolk clergyman. Went to sea at twelve years of age, and was post-captain at twenty-one. In 1793 he was captain of the *Agamemnon*, and proved his capacity and daring against the French. He lost his right eye at the siege of Calvi in 1794, and his right arm at the siege of Santa Crux in 1797. In 1798 he achieved a great victory over the French in Aboukir Bay, in recognition of which he was created a Baron and granted a pension of £2,000 a year. He was victorious at Copenhagen in 1801, after which he was promoted to the rank of Viscount. In 1805 occurred the famous Battle of Trafalgar, in which the French fleet was destroyed and Nelson was killed. He was buried in St. Paul's Cathedral, and having no son to succeed him the peerage was transferred to his brother, who became Earl Nelson, with a perpetual pension of £3,500 a year and a gift of £100,000 for the purchase of

an estate. A *Life of Nelson*, by Lord Charles Beresford, formed the issue of *Pears' Annual* for 1905.

**Nero, Claudius Cæsar** (A.D. 37–68), the notorious Roman Emperor, whose reign of fourteen years was rendered infamous by his cruelty and licentiousness.

**Neville, Sir Ralph** (1848–1918), one of the Judges of the Chancery Division, was in Parliament from 1887 to 1895, was Chairman of the Garden City Association.

**Newbolt, Sir H. J.**, M.A., D.Litt. (b. 1862), Professor of Poetry and Member of Academic Committee; knighted 1915; author of some of the best sea poems of recent times and especially successful in his poems on the War. Official Naval Historian, 1923

**Newcomen, Thomas** (1663–1729), was one of the first to put a steam-engine into practical operation, and in 1705 patented his invention, which was the pumping-engine used in Cornish mines down to the adoption of Watt's engine.

**Newman, Cardinal** (1801–90). Educated at Oxford, he was incumbent of St. Mary's there from 1828 to 1843, taking an active part in the religious discussions of the time, gradually showing a tendency to adopt Roman Catholic views, and ultimately allying himself with the Romanists, resigning his living and settling at Edgbaston, Birmingham, as the head of a community of the Order of St. Philip Neri. Here he remained for the rest of his career, devoting himself to an almost monastic life, but from time to time employing his pen in the production of religious works, displaying great controversial power, beauty of thought, and charm of style. In his *Apologia pro Vita Sua* he described the development of his religious thought, and in other writings attained considerable distinction. He wrote the beautiful hymn "Lead, kindly Light," and the "Dream of Gerontius."

**Newnes, Sir George, Bart.** (1851–1910), a well-known publisher and periodical proprietor; founder of *Tit Bits*, the *Strand Magazine*, and many other monthlies; also of the *Westminster Gazette*. Was in Parliament from 1885 to 1895 and from 1900 to 1910.

**Newton, Sir Isaac** (1642–1727), the great mathematician and philosopher. His discoveries include the law of gravitation and the method of fluxions.

**Newton, Lord** (b. 1857), Paymaster-Genl., 1915–16, Assis. Under-Sec. for Foreign Affairs, 1916. Controller of Prisoners of War Dept. 1916–19. As T. Wodehouse Leigh was M.P for Newton, Lancs. 1886–1899.

**Ney, Marshal Michel** (1769–1815), was one of Napoleon's most noteworthy generals.

**Nicholas I., Czar of Russia** (1796–1855). The son of the Emperor Paul, he succeeded to the throne in 1825, and was a vigorous ruler and man of great ability. He was generally friendly towards England, until the Crimean War made him a bitter enemy.

**Nicholas II., Ex-Czar of Russia** (1868–1918), son of the Emperor Alexander III. Came to the throne in 1894, and had a reign full of trouble, being unable to handle the difficulties by which he was beset. He avowed full harmony with the British and French in the war which opened in 1914, but the acts of the Empress and Court belied these pretensions, and a Revolution resulted in March, 1917, which overthrew the Romanoffs. Nicholas was detained a prisoner together with the Czarina and his children: all were probably shot on July 16, 1918.

**Nicholas, St.**, Bishop of Myra and patron saint of Russia, flourished in the 4th century, and is popularly associated with Christmas under the corrupted name of Santa Claus.

**Nicolson, Rt.Hon. Sir Arthur.** (*See* **Carnock, Baron.**)

**Nietzsche, Friedrich Wilhelm** (1844–1900), an original German philosopher who has had a great influence. Author of *Thus Spake Zarathustra, Beyond Good and Evil*, etc. His works have been translated into English.

**Nightingale, Florence** (1820–1910), was a noted figure in the Crimean War, where she organised a band of nurses which did great service in relieving the sufferings of the soldiers. Her system was adopted and developed in all parts of the world, and she was honoured with a testimonial of £50,000, which she applied to the founding of the Nightingale Home for Nurses.

**Nilsson, Christine** (1843–1922), the famous Swedish prima donna.

**Nobel, Dr. Alfred B.** (1833–96), the inventor of dynamite, was a Swedish engineer and chemist who amassed a large fortune, a great portion of which at his death in 1896 he set apart as a fund for annual prizes to such persons as during each year shall have contributed most materially to the benefit of mankind. There are five of these prizes, each worth about £8,000, and they are given in the following departments: physics, chemistry, physiology or medicine, literature, and peace promotion.

**Noel-Buxton, 1st Baron** (cr. 1930) of **Aylsham**, Minister of Agriculture, 1924 and 1929–30. M.P., Whitby, 1905–6; N. Norfolk, 1910–18 and 1923.

**Nogi, General Count** (1849–1912), a Japanese soldier who achieved great distinction by his able and successful conduct of the siege of Port Arthur.

**Nordau, Max** (1849–1923), an author and physician who was a native of Budapest and settled in Paris in 1880, where he afterwards resided and was an active literary force. His best-known works are *Degeneration* and *The Drones Must Die*.

**Nordenfeldt** (b. 1844) was born in Sweden, and as the inventor of the Nordenfeldt machine gun, the submarine boat, and certain improved torpedoes has achieved a wide reputation.

**Norman, Rt. Hon. Sir Henry, Bart.** (b. 1858). Educated at Harvard and Leipzic. Was active journalist for many years, connected at different times with the *Pall Mall Gazette*, the *Daily Chronicle*, and other papers, and in 1902 founded the *World's Work*. He represented Wolverhampton South in Parliament from 1900 to 1910, and sat for Blackburn, 1910–23. Knighted, 1906. Baronetcy, 1915. Director of several colliery companies.

**Norman, Rt. Hon. Montague**, D.S.O. (b. 1871), became Governor of the Bank of England, 1920. Member of the Privy Council since 1923.

**Northcliffe, Alfred C. Harmsworth, Viscount** (1865–1922) was one of the most prominent men in modern journalism, and owner of a controlling interest in *The Times*. Started *Answers* in 1888 with his brother, Cecil Harmsworth. In 1894 the Harmsworths purchased the *Evening News*, and in 1896 they started the *Daily Mail*. Lord Northcliffe, as the head of the publishing company which runs the various Harmsworth publications, showed immense business aptitude. Received a baronetcy in 1904; made a baron in 1905; and a viscount in 1917. In 1917 was special British representative in the United States. In February, 1918, he was appointed director of propaganda in foreign countries.

**Norwood, Dr. Cyril** (b. 1875), became Headmaster of Harrow School, 1926.

**Nostradamus, Michel de** (1503–66), a notorious astrologer and physician, who attracted French Society by his many predictions, and enriched himself by trading upon popular credulity.

**Novalis** (1772–1801), a Saxon poet and novelist.

**Numa Pompilius** was, according to tradition, the second King of Rome and the founder of Roman Ceremonial Law.

**Nuthall, Miss Betty** (b. 1911), a British lawn tennis champion; won U.S.A. Singles, 1930.

**Oates, Titus** (1649–1705), a notorious informer against Roman Catholics in the reign of Charles II.

**O'Brien, William** (1852–1928). For years a prominent Irish Nationalist leader.

**O'Brien, William Smith** (1803–64), was a noted Irish political agitator.

**Ockham, William of** (1270–1349), an English scholar and philosopher who espoused the cause of Nominalism with sufficient success to create a philosophical school.

**O'Connell, Daniel** (1775–1847), the Irish "Liberator," as he was called, was a famous orator and politician and a highly successful barrister. In Parliament he advocated the cause of Ireland with courage and audacity.

**O'Connor, T. P., Rt. Hon., P.C., M.P.** (1848–1929), of the most successful journalists and ..ors of recent years. Entered newspaper ; in 1867, and after some strenuous struggling ployment in London in 1870 on the *...ayraph*. Entered Parliament as an Irish Nationalist in 1880, and was "Father of the House." Sat for the Scotland Div. of Liverpool. Founded and edited successfully the *Star*, *Sun*, *Weekly Sun*, *M.A.P.*, and other papers. An eloquent speaker and brilliant writer, with broad sympathies and a knowledge of the world which he turned to good account. Visited United States in 1918. Became Editor of *T.P.'s* and *Cassell's Weekly*, 1923. P.C., 1924.

**Oersted, Hans C.** (1777–1851), the Danish philosopher and scientist, whose discoveries in electrical research did much to help forward the invention of the electric telegraph.

**Offa** was King of Mercia from *circa* 757 to 796, and had a war-like career; he built an embankment from the Dee to the Wye, 100 miles long, which was called Offa's Dyke. He imposed "Peter's Pence" as a gift to the Pope for absolution.

**Offenbach, Jacques** (1819–80), an accomplished conductor and composer, and for a time was exceedingly popular.

**Ohm, George Simon** (1787–1854), was the discoverer of the unit of electrical resistance which is known as Ohm's law. He was a native of Bavaria, and gained much fame as a physicist and mathematician.

**Okuma, Prince Shigenobu** (1838–1923), Japanese Prime Minister, 1914–15. One of the founders of the new government. He filled many important posts; was a great Progressive leader.

**Olaf, St.** (995–1030), the first Christian King and patron saint of Norway.

**Oliphant, Laurence** (1829–88), was educated for the Bar, but drifted into authorship and journalism, and wrote several notable books. Sat in Parliament from 1865 to 1868. In 1870 published *Piccadilly*, a brilliant satirical novel. Was Correspondent to *The Times* during the Franco-German War, and afterwards; and, coming under the influence of Thomas Lake Harris, the American spiritualist, he became lost to the world of letters and subsequently took up the scheme for the colonisation of Palestine for the Jews, dying—after a residence for some time near Mount Carmel—at Twickenham.

**Oliphant, Mrs. Margaret** (1828–97), a remarkably prolific novelist and writer.

**Olivier, Lord** (1924), K.C.M.G. (b. 1859), Secretary for India in first Labour Govt., 1924; Governor of Jamaica, 1907–13; Sec. of Board of Agriculture, 1913–17; Asst.-Comptroller of Exchequer, 1917.

**Omar I.** (581–644) was second Caliph of the Mohammedans, and the first to be designated the Commander of the Faithful. He conquered Syria, Mesopotamia, Persia, Egypt, and Palestine, reigned from 634–644, and died at the hands of a slave.

**Omar Khayyám** flourished in the 11th and 12th centuries. Was the great Persian Poet whose "Rubaiyat" was made known to English readers by Edward Fitzgerald in 1859.

**Opie, John** (1761–1807), a celebrated English painter whose historical pictures were highly valued in his day.

**Orchardson, Sir Wm. Q.** (1835–1910), an eminent R.A. (knighted 1907), whose subject pictures and portraits gained him a high reputation. Among his best-known works are "Napoleon I. on board H.M.S. *Bellerophon*" (purchased for the nation, under the Chantrey bequest).

**Orléans, Duc d'** (b. 1869), is the chief of the Bourbon-Orleans family, and eldest son of the late Comte de Paris. He was married to the Archduchess Marie Dorothea of Austria in 1896. In 1886 he was exiled from France, and a subsequent visit to Paris subjected him to second expulsion. He has served as a soldier in India, and has a house at Wood Norton.

**Orpen, Sir William, R.A.** (1878–1931), an eminent British portrait-painter; many of his celebrated war pictures were presented to the nation.

**Osman Digna** (1836–1927), a Soudanese rebel general who for many years commanded the army of the Mahdi, and showed bravery and tactical skill in opposing the Egyptian and British forces. After the defeat at Omdurman his career was at an end, and he was a military prisoner at Haifa until his death.

**Osman, Pasha** (1832–1900) was a famous Turkish general who achieved renown in the war with Servia in 1876, and in 1877 conducted the splendid defence of Plevna against the Russians.

**Oswald, St.,** King of Northumbria from 625 to 642, established Christianity amongst his subjects.

**Ottley, Rear-Admiral Sir Charles L.,** R.N., M.V.O. (b. 1858), served with distinction in the Navy, in the many seas and numerous engagements; from 1899 to 1903 was Naval Attaché to the Maritime Courts and served in that capacity in Japan, Russia, Italy and the United States. Was Secretary of the Committee of Imperial Defence, and acted as British Naval Representative at the Hague Conference of 1907.

**Otway, Thomas** (1652–85), an eminent English dramatist whose tragedy "Venice Preserved" is still occasionally performed. He died in destitution.

**"Ouida"** (Mlle. Maria Louise de la Ramé), an English novelist (1839–1908), born at Bury St. Edmunds of French extraction, whose works have been highly popular.

**Ouseley, Rev. Sir Frederick Gore** (1825–89), was a well-known organist and composer of music, mostly for the Church. He was also the author of several technical books on music.

**Outram, Sir James** (1803–63), a famous British General, who served with splendid distinction in India for the greater part of his life.

**Ovid** (43 B.C.–A.D. 18), the famous Latin poet (Publius Ovidius Naso), whose "Metamorphoses" and "Art of Love" are among the best-known examples of Roman literature of the lighter kind.

**Owen, Sir Richard** (1804–92), was reckoned by many the greatest palæontologist since Cuvier.

**Owen, Robert** (1771–1858), Socialist and philanthropist, devoted his life and fortune to the carrying out of his theories, and established socialistic colonies in Lanarkshire, Hampshire and America.

**Oxford & Asquith, Earl of.** Title assumed by Mr. Asquith on being raised to the peerage in 1925. (*See under* Asquith.)

**Oxford & Asquith, Countess of,** widow of the late Earl Oxford & Asquith. Her autobiography, published in 1922, created a stir in literary and social circles.

## P

**Paderewski, Sir Ignace Jan** (b. 1860), the celebrated pianist and composer who was born in Russian Poland. Took an active part in advocating the cause of Poland during the war. Premier from Jan. to Dec. 1919. First delegate of Poland to League of Nations, 1920. It was not until 1890 that he made his first appearance in London. G.B.E., 1925.

**Paganini, Niccolo** (1784–1840), a famous violinist and one of the most expert performers on that instrument who ever lived.

**Page, Dr. Walter H.** (1855–1919), United States Ambassador to Great Britain, 1913–18.

**Paget, Rt. Rev. H. L.,** D.D., Bishop of Chester since June 1919 (b. 1853). Formerly Vicar of St. Pancras; Bishop of Ipswich, 1906–9; Bishop of Stepney, 1909–19.

**Painleve, Paul** (b. 1863). Prime Minister of France, 1917 and again 1925. Member of the Academy and Professor of Science. Minister of Instruction in the Briand Cabinet, and member of the Ribot Ministry.

**Palestrina, Giovanni** (1525–94), a distinguished Italian musical composer, chiefly of Church music.

**Palgrave, Sir Francis** (1788–1861), a much-esteemed historian, who wrote *The Rise and Progress of the English Commonwealth*, *A History of Normandy*, and *A History of the Anglo-Saxons*. He was knighted in 1832. His son, Francis Turner Palgrave (1824–97), was a poet of devotional instincts, who was Professor of Poetry at Oxford, and edited the much-e... ...ed *Golden Treasury*.

son, **William Gifford Palgrave** (1826–88), was a traveller, diplomatist, and prose writer of considerable ability.

**Palissy, Bernard** (*circa* 1510–89), a distinguished French potter, who after years of struggle and self-denial discovered the art of producing white enamel, after which he became famous and set up a porcelain factory in Paris, which was patronised by Royalty.

**Palladio, Andrea** (1518–80), the great Italian architect, who introduced the style of architecture known as Palladian.

**Pallas, Peter Simon** (1741–1811), a German traveller and naturalist.

**Palliser, Sir William** (1830–82), inventor of the Palliser gun introduced about 1870, and Palliser shot.

**Palmer, Sir C. M.,** M.P. (1822–1907), was the founder of the great shipbuilding works at Jarrow which bear his name. The firm's works cover over 100 acres, and they now construct the heaviest class of battleships.

**Palmer, John** (1742–1818), originator of the mail-coach postal service in 1782.

**Palmerston, Viscount** (1784–1865), was a distinguished English statesman, who entered Parliament in 1807 and sat almost continuously, for one constituency or another, until his death. Before the passing of the Reform Bill he was a Conservative, but afterwards joined the Liberals, and was for the best part of his career in office. In 1807 he was a Junior Lord of the Admiralty; from 1809 to 1828 was Secretary for War. After that served many years as Foreign Secretary, became Home Secretary in 1852, and First Lord of the Treasury in 1855. In 1859, after being defeated the previous year, he was again Prime Minister and remained in that office until his death. He was buried in Westminster Abbey.

**Pancras, St.,** the patron saint of children, was the son of a Roman noble, and came to Britain in the reign of Diocletian, where he was put to death at the age of fourteen for refusing to renounce Christianity.

**Panizzi, Sir Antony** (1797–1879), an Italian political exile, who in 1831 was appointed to the Assistant Librarianship and Keepership of the Printed Books of the British Museum. In 1856 he became Principal Librarian, retiring in 1866, after which he was made K.C.B. The great Reading Room was constructed from his designs.

**Pankhurst, Emmeline** (d. 1928), was a prominent and indefatigable worker for women's suffrage together with her daughters Christabel and Sylvia.

**Papin, Denis** (1647–1714), a French mathematician and scientist who settled in England. He invented the condensing pump, and was the first to use a safety valve. His discoveries in connection with steam-power entitle him to be reckoned amongst the first to put that power to any practical test.

**Paracelsus, Philippus A.** (1493–1541), was a famous Swiss mystic and alchemist. He made numerous important discoveries, being the first to employ laudanum and antimony in pharmacy.

**Pares, Prof. Sir Bernard,** K.B.E. (cr. 1919), (b. 1867), became Professor of Russian, University of London, 1917. Director of the School of Slavonic Studies; one of the editors of the *Slavonic Review*. Prof. of Russian, University of Liverpool, 1907–17. Attached to the Russian army, 1914–17. Author of *Day by Day with the Russian Army*, *A History of Russia*, etc.

**Park, Mungo** (1771–1806), a famous British traveller who in 1799 published an account of his *Travels in the Interior of Africa*, a work which caused a considerable sensation and was highly popular.

**Parker, Rt. Hon. Gilbert, Bt.** (b. 1862), a Canadian-born novelist who, after a journalistic career in Australia and elsewhere, went to London and soon acquired a considerable reputation as a writer of skilful stories. His earlier novels deal with French-Canadian life in a telling and picturesque manner. In later years he has changed the scene of his stories somewhat. He was knighted in 1902, and created baronet in 1915. M.P. Gravesend, 1900–18.

**Parker, Joseph** (1830–1902), a popular Nonconformist preacher and author who built the City Temple, and ministered there up to the time of his death.

**Parmoor, Lord** (b. 1852), P.C., K.C.V.O., K.C., M.P., Stroud, 1895–1900; Stretford, 1901–6; Wycombe (Unionist), 1910–14; Lord President of Council in Labour Government, 1924 and 1929.

**Parnell, Charles Stewart** (1846–91), a distinguished Irish Nationalist politician, who for ten years, from 1880, was leader of his Party, and made it more powerful than it had ever been before. He succeeded in winning Mr. Gladstone's confidence, and so was largely responsible for the Home Rule policy which that statesman adopted towards the end of his Parliamentary career. Parnell suffered imprisonment more than once, and his supposed complicity in Irish political crimes led to the famous charge made against him by *The Times*, which became the subject of a memorable Royal Commission the result of which was that Parnell was exonerated. He afterwards obtained £5000 damages from *The Times*. This was in 1890, and was quickly followed by a divorce trial which resulted in his being deposed from the leadership of his Party. He never recovered his lost ground, and died in 1891 a broken and disheartened man.

**Parnell, Thomas** (1679–1718), an Irish ecclesiastic and poet. His chief poem was "The Hermit."

**Parr, Thomas** (1483–1635), the most famous of English reputed centenarians, known as "Old Parr."

**Parry, Sir Edward,** knighted in 1927, a famous County Court Judge; has written among many publications delightful books for children, including *Katawampus*, and several plays.

**Parry, Sir Hubert Hastings, Bart.** (1848–1918). A prolific composer of numerous odes, cantatas, and other musical works, and a writer on musical subjects.

**Parry, Rear-Admiral Sir William Edward** (1790–1855), an Arctic explorer and naval commander of great distinction, who undertook several expeditions to the Polar regions and made numerous important discoveries.

**Parsons, Hon. Sir C. A.,** K.C.B., F.R.S., O.M. (1854–1931) was head of the electrical and engineering works of C. A. Parsons and Co., and of the Parsons Marine Steam Turbine Co., Ltd., Newcastle-on-Tyne, and inventor of the steam turbine which has effected a remarkable improvement in the propulsion of war and mercantile vessels.

**Partridge, Sir Bernard** (b. 1861), educated at Stonyhurst and began life as a stained glass designer, afterwards working at book illustrations; for a time was on the stage; since 1891 has been one of the chief artists on the staff of *Punch*. Knighted 1925.

**Pascal, Blaise** (1623–62), a noted French philosopher whose *Provincial Letters* exhibit remarkable wit and genius. He was a distinguished mathematician, and invented an ingenious arithmetical machine, besides making many brilliant experiments in hydrostatics and pneumatics.

**Passfield, Lord.** (*See* **Webb, Sidney.**)

**Passfield, Lady** (**Mrs. Sidney Webb**), (b. 1858), joint author with her husband of many works relating to social conditions and industrial affairs of England.

**Pasteur, Louis** (1822–95), an eminent French chemist and scientist, whose researches in connection with hydrophobia, bacteriology, and the specific germs of cholera and other diseases, have been of immense benefit to human kind. He was elected a member of the Academy of France in 1882, and in his later years the Pasteur Institute founded by him in Paris attained universal celebrity.

**Paterson, William** (1658–1719), a Scottish financier who founded the Bank of England, and originated the famous Darien scheme, which resulted disastrously.

**Patmore, Coventry** (1823–1896), was a appreciated poet of the Victorian era.

**Paton, Sir Noel** (1821–1901), sculptor, historical artist, archæologist, and poet.

**Patrick, St.** (*circa* 373–463), the patron saint of Ireland, concerning whom many

stories are related, such as his reputed extermination of serpents from the island. St. Patrick's Day is March 17th.

**Patti, Adelina (Baroness Cederström)** (1843–1919), was born in Madrid. Her marvellous voice and brilliant execution made her immediately famous. For many years was the most popular prima donna.

**Pattison, Dorothy Windlow** (1832–78), devoted a great part of her life to hospital work in Walsall, where she was known as "Sister Dora," and was revered for her saintly life and devotion to the sick poor.

**Paul I.** (1754–1801) was Emperor of Russia for the last five years of his life. His overbearing temper and despotic acts caused him to be hated by the nobles, who put him to death by strangling.

**Pavlov, Prof. I. P.** (b. 1849), an eminent Russian physiologist; Director of the Physiological Institute. Foreign member of the Royal Society and Nobel Prize-winner.

**Pavlova, Anna** (d. 1931), a Russian ballet dancer, who by her genius became world-renowned.

**Peabody, George** (1795–1869), an American merchant who lived for the greater part of his life in London, and, acquiring a large fortune, bequeathed immense sums for philanthropic purposes in England and the United States.

**Pearson, Sir Cyril Arthur, Bart.** (1866–1921), managing director of C. Arthur Pearson, Ltd., and *Pearson's Weekly*, *Pearson's Magazine*, and other well-known publications. President of the National Institute for the Blind and the Fresh Air Fund. "St. Dunstan's" owes much to his efforts.

**Peary, Rear-Admiral Robert Edwin** (1854–1920), an American Arctic explorer who, in 1891–92, conducted a sledging expedition towards the Pole. In 1893, 1895, and 1898 was again in the Arctic regions; and in 1900–02 reached the highest latitude hitherto attained. In the spring of 1906 he touched 87 degs. 6 min. N. latitude. On April 6th, 1909, however, he succeeded in actually reaching the Pole, and visited England in May, 1910.

**Peel, Sir Robert** (1788–1850), a prominent British statesman who entered Parliament at twenty-one years of age, and immediately exhibited great capacity, being appointed Under-Secretary for the Colonies in the following year. From 1812 to 1818 he was Secretary for Ireland; and in 1822 he became Home Secretary, introducing, whilst fulfilling that office, the new police service associated with his name. In 1834, Peel was for four months Prime Minister, and in 1841 again occupied the same exalted position. It was then that the Anti-Corn Law agitation became formidable, and Peel abandoned his former Protectionist attitude, and carried his Repeal measure eventually in 1846. He was thrown from his horse in Hyde Park on June 25th, 1850, and succumbed to his injuries three days later.

**Peel, 2nd Viscount,** P.C., G.B.E. (b. 1867), Secretary of State for India 1922 and again 1928. First Commr. of Works, Nov. 1924; Chancellor Duchy of Lancaster, 1921; Chairman, L.C.C. 1914; Minister of Transport, 1921–22.

**Pelagius,** a monk of the 5th century, believed to be a native of Britain, who introduced a doctrine that the human will could turn to God without being impelled by Divine Grace, which came to be known as Pelaginism, and was denounced by St. Augustine.

**Pellico, Silvio** (1788–1854), an Italian poet and revolutionist.

**Pemberton, Sir Max** (b. 1863), a well-known journalist and novelist. Knighted in 1928.

**Penda,** pagan King of Mercia, d. A.D. 655.

**Penn, William** (1644–1718), became a Quaker, and wrote some powerful pamphlets supporting his new faith. He devoted himself to good works, and in 1682, having obtained a special grant from King Charles II., went to America, and founded Pennsylvania.

**Pepin** (714–68), surnamed "le Bref," *i.e.* "the Short," was the first Carlovingian king of France, and father of Charlemagne.

**Pepys, Samuel** (1633–1703), chief claim to remembrance is his famous *Diary*.

**Perceval, Spencer** (1762–1812), was Prime Minister from 1809 to 1812 after having filled other prominent posts in previous Tory Ministries. He was assassinated in the Lobby of the House of Commons by a man named Bellingham. Perceval was an opposer of Catholic emancipation.

**Percy, Bishop Thomas** (1729–1811), was an English divine and antiquary, who enriched our literature by an accidental discovery of a large folio of MS. of ballads, which, with considerable additions, were afterwards published as "Reliques of Ancient English Poetry." He was himself the author of several ballads which became popular, including "The Hermit of Warkworth."

**Periander** was Tyrant of Corinth from 625–585 B.C. and one of the Seven Sages of Greece.

**Pericles** (490–429 B.C.), the distinguished Athenian statesman, general, and orator, who raised Athens to the point of its fullest prosperity.

**Perkin, Sir W. H.** (1837–1907), discoverer of the mauve dye-stuff, and founder of the industry in coal-tar colours.

**Perks, Sir Robert William** (b. 1849), represented the Louth Division, 1892–1910. Is one of the most prominent Wesleyan layman of the time, and a leading promoter of Methodist movements. A great contractor, connected with many large undertakings, yet withal an active politician.

**Perpetua, St.,** an African Christian martyr who suffered death at Carthage, refusing to renounce her faith although entreated to do so by her father, who appealed to her at her trial holding in his arms her own child.

**Pershing, Gen. J. J.,** G.C.B. (b. 1860), Commander-in-Chief of the United States Expeditionary Force in Europe from June, 1917, to the end of the War. Chief of Staff, U.S.A., 1921–24.

**Persius Flaccus** (A.D. 34–62), a famous Stoic philosopher.

**Perugino, Pietro** (1446–1524), a great Italian artist, excelling in religious subjects, and the painter of numerous fine frescoes including some in the Sistine Chapel at Rome. Raphael was his pupil.

**Pestalozzi, Johann H.** (1746–1827), was a rich Swiss reformer and writer, who devoted his fortune to benevolent works, especially in connection with the education of poor children.

**Peter the Great** (1672–1725), sole Czar of Russia in 1696, and showed great ability and energy of character, devoting himself largely to the reorganisation of his army and navy. He spent some months at Deptford studying shipbuilding. He founded St. Petersburg in 1703, and conquered Livonia, Finland, Pomerania, etc. Among the prisoners taken by him at the Battle of Pultowa was Catherine, the wife of a Swedish soldier who had been killed. Peter took her to St. Petersburg, and ultimately made her his wife, and by her cleverness she did much to strengthen his power.

**Peter, the Hermit** (*circa* 1050–1115), was the main instrument of the agitation which brought about the first Crusade. He was a French monk, of great eloquence and earnestness, and lived to see Jerusalem in the hands of the Christians.

**Petrarch, Francesco** (1304–74), the famous Italian poet, whose odes and sonnets "To Laura" are of marvellous beauty and fervour, and have been translated into all languages.

**Petrie, Sir W. M. Flinders,** D.C.L., Litt.D., LL.D., F.R.S. (b. 1853). Famous for excavations in Egypt. Many publications on his discoveries in Ancient Egypt.

**Phelps, Samuel** (1804–78), a Shakespearean actor and manager of celebrity.

**Phidias,** the famous Greek sculptor, flourished from about 490 to 432 B.C.; nothing now remains to attest his genius except the sculptures in the British Museum, widely known as the "Elgin Marbles."

**Philip II. of France** (1180–1223), was a prominent figure in the third Crusade in which, for a time, he associated himself with our Richard I.

**Philip II. of Macedonia,** trained in military arts in Greece, when he came to the throne instilled martial ideas into his subjects, and entered upon a career of conquest that did not end until he had become master of Greece.

**Philip II. of Spain** (1527–98) succeeded his father the Emperor Charles V., and was engaged in numerous wars, including his famous attempt to invade England with the Spanish Armada. He was four times married, his second wife being Queen Mary of England. After her death he was the consistent enemy of this country.

**Philip V. of Spain** (1683–1746) founded the Bourbon dynasty in Spain, and was the son of the Dauphin of Louis XIV. and Maria Theresa of Spain. His uncle, Charles II. of Spain, bequeathed the kingdom to him, and this led to the war of the Spanish Succession, which ultimately confirmed him in his kingship.

**Phillips, Stephen** (1849–1915), dramatist and poet of distinction. His "Paolo and Francesca," "Herod," and "Ulysses," were welcomed as containing work of a high order, and his "Nero" confirmed the verdict.

**Piazzi, Giuseppe** (1746–1826), an Italian astronomer. He was the discoverer of the planet Ceres, the first known of the asteroids.

**Pickford, Mary** (b. 1893), *née* Gladys Smith, is a world-famous cinema star.

**Pindar** (522–442 B.C.), the eminent lyric poet of ancient Greece.

**Pinero, Sir Arthur Wing** (b. 1855), an able English dramatist and former actor, of Portuguese descent.

**Pirandello, Luigi** (b. 1867), a prominent Italian dramatist and novelist, many of whose works have been translated into English.

**Pitman, Sir Isaac** (1813–97), founded the Pitman system of phonographic shorthand.

**Pitt, William** (1759–1806), was the second son of the Earl of Chatham. Entered Parliament at twenty-one, and by his brilliant oratory captivated the House of Commons. In 1782, when only twenty-three, he became Chancellor of the Exchequer, and in the following year was made Premier, and held that office for seventeen years, through the trying period of the French Revolution, when war with France was almost continuous. He was undoubtedly one of the most brilliant statesman that England has produced, and his death at the early age of forty-six was a great loss to the country. He was buried in Westminster Abbey. (*See also* Chatham.)

**Pius XI.** (Cardinal Ratti, Archbishop of Milan). Born at Desio near Milan, at sixty-five elected Pope Feb. 1922 on death of Benedict XV.

**Pizarro, Francisco** (1475–1541), was an adventurous Spaniard who, after Columbus's discoveries in the New World, set out for South America, conquering Peru for the Emperor Charles V. Pizarro's career in Peru was characterised by excessive cruelty, and in the end he was killed by his own soldiers.

**Plato** (429–347 B.C.), the renowned Greek philosopher who taught at Athens, and greatly distinguished himself by his lectures and writings. His *Dialogues* and his *Republic* are among the greatest works of the ancients, and embody a philosophical system which has served for admiration and discussion in all succeeding ages. His real name was Aristocles. He was Socrates's disciple and Aristotle's teacher.

**Plautus, Titus M.** (254–184 B.C.), the Roman comic poet and comedy-writer.

**Pleyel, Ignaz** (1757–1831), was an Austrian who became eminent as a composer and spent the last years of his life in Paris, where he established a pianoforte manufactory, which became highly successful.

**Plimsoll, Samuel** (1824–98), was a native of Bristol, and while M.P. for Derby got up an agitation on behalf of merchant sailors, procuring the passing of the Merchant Shipping Act of 1876, which by defining a line above which no ship must sink in the water when loaded has ever since made the overloading of ships illegal. The line is known as the Plimsoll Mark.

**Pliny**; Pliny the elder was a naturalist of high reputation; Pliny the younger, his nephew, achieved renown by a series of historical *Letters*, and died A.D. 113.

**Plumer, 1st Viscount,** G.C.B., G.C.M.G., G.C.V.O. (b. 1857). Field-Marshal, 1919. Commanded 5th Army Corps, 1915; 2nd Army B.E.F., 1915–17; Army of the Rhine, 1918; High Com. for Palestine, 1925.

**Plunkett, Rt. Hon. Sir Horace** (1854–1932), Senator, Irish Free State, 1922–23; ex-Vice-President of the Department of Agriculture and Technical Instruction for Ireland. Has done good work for the reform of farming conditions in Ireland. In Parliament from 1892 to 1900. Chairman of Irish Convention, 1917.

**Plutarch** (*circa* 50–120) was the famous writer of biography. His *Lives* form one of the world's most famous literary productions.

**Pobiedonostzeff, Constantine** (1827–1907), Procurator of the Holy Synod in Russia, and a statesman whose strenuous efforts to strengthen autocracy made him one of the most notable personages for many years in the Czar's domain.

**Poe, Edgar Allan** (1809–49), was an American poet of unique genius, author of "The Raven," "The Bells," and other poems of haunting melody and dainty fancy. Poe's "Tales of Mystery" are thrilling examples of their class.

**Poincaré, Raymond** (b. 1860), President of the French Republic, 1913–20. Was previously Premier and Foreign Minister. A statesman of distinction and a capable orator. Won the confidence and admiration of the French people and the Allies by his fine services during the War. Premier again, Jan. 1922–24; Minister of Finance, 1926–28; Prime Minister, 1926–29.

**Pollock, Rt. Hon. Sir Frederick,** P.C. (b. 1845), educated at Cambridge, and called to the Bar 1871. Judge of Admiralty Court of Cinque Ports in 1914. In 1882–83 was Professor of Jurisprudence at University College, London, and from 1884 to 1890 Professor of Common Law in the Inns of Court. Is the author of many books on legal subjects.

**Polybius** (204–122 B.C.), the Greek historian, who wrote a history in over forty books; but only the first five and certain fragments of the rest have come down to us.

**Polycletus** (452–412 B.C.) was a Greek architect and sculptor and the friend and fellow-pupil of Phidias.

**Pompadour, Madame Jeanne** (1721–64) was for a long time the favourite of Louis XV. of France, over whom she exercised great influence.

**Pompey the Great** (106–48 B.C.), distinguished himself as a general while young, and ultimately became, with Cæsar and Crassus, triumvir.

**Ponsonby, Rt. Hon. Sir Frederick** (b. 1867), G.C.B. (1926), G.C.V.O. (1921), K.C.B. (1918); in 1928 became Lieut.-Gov. of Windsor Castle and Deputy Constable; Treasurer to the King, 1920; Keeper of the Privy Purse, 1914.

**Pope, Alexander** (1688–1744), the celebrated 18th century poet and translator of "Homer."

**Potter, Paulus** (1625–54), a Dutch painter of animal pictures.

**Pounds, John** (1766–1839), a shoemaker of Portsmouth, who, witnessing the deplorable condition of so many of the poorest class of children, started a school in his own neighbourhood where such children were taught, fed, and clothed. From this effort sprang the Ragged School Union, which wrought great good in London and other large cities, and was liberally supported by Lord Shaftesbury and other philanthropists.

**Poussin, Gaspar** (1613–75), a French landscape painter.

**Poussin, Nicolas** (1594–1665), an eminent French painter patronised by Louis XIII.

**Poynter, Sir E. J.,** Bart., G.C.V.O. (1836–1919), President of the Royal Academy, 1896. Had a highly successful career as a painter. At first his work was mainly of a decorative character, but gradually he developed exceptional talent as a painter of classical subjects. His "Perseus and Andromeda," "Atalanta's Race," "Nausicaa and Her Maidens," are all great pictures. Made A.R.A. in 1869, and R.A. in 1876. Was Director of the National Gallery from 1894 to 1905.

**Praed, W. M.** (1802–39), a writer of Society verse.

**Praxiteles,** a great Greek sculptor who lived in the 4th century B.C.

**Preece, Sir William Henry** (1834–1913), was connected with the Electric Telegraph Service from 1853, and conspicuously engaged in con-

nection with all the developments in telegraphy which have since taken place. He was associated with Marconi in his wireless-telegraphic schemes and introduced the block system into England.

**Prescott, William Hickling** (1796–1859), one of the best known of American historians.

**Prestwich, Sir Joseph** (1812–96), a geologist whose *Antiquity of Man* is a very important contribution to science.

**Priestley, John B., M.A.** (b. 1894), a prominent British novelist whose work has received great praise. His novel *The Good Companions* has had a great success, nearly a quarter of a million copies being sold.

**Priestley, Joseph** (1733–1804) was the discoverer of oxygen and other gases, and wrote *A History of Electricity*. He was also a great advocate of freedom and progress.

**Prior, Matthew** (1664–1721), a well-known poet and wit who acquired celebrity by writing "The City Mouse and Country Mouse."

**Probus, Marcus Aurelius,** Roman Emperor 276–282.

**Proctor, Richard Anthony** (1837–88), an assiduous astronomer, and voluminous writer and popular lecturer on the subject.

**Propertius, Sextus,** the Roman elegiac poet, who flourished in the 1st century B.C.

**Protagoras,** a Greek philosopher, who at the beginning of the 4th century B.C. incurred much enmity by denying the story of the "Gods."

**Proudhon, Pierre Joseph** (1809–65), a French political economist.

**Proust, Marcel** (1871–1922), a prominent modern French psychological novelist; author of a series of 15 novels known under the title of "À la recherche du Temps perdu." Proust's works have been admirably translated into English by the late C. K. Scott Moncrieff.

**Prudhon, Pierre Paul** (1758–1823), a French historical and portrait painter.

**Prynne, William** (1600–69), was a violent pamphleteer of the days of Charles I. and Cromwell.

**Ptolemy, Claudius Ptolemæus,** a famous astronomer of Alexandria, who flourished between 139 and 161. He founded the Ptolemaic system, which taught that the earth was stationary and the heavenly bodies revolved around it.

**Puccini, Giacomo** (1858–1924), a composer of light operas, notably *La Bohème*, *Madame Butterfly*, and *Manon Lescaut*.

**Pugin, Augustus** (1769–1832), a French architect who settled in London and wrote several able text-books on architecture.

**Purcell, Henry** (1658–95), was a celebrated organist and composer, who did much to improve the musical service of the Church. Was organist of Westminster Abbey, and the most famous member of a family of notable musicians.

**Pusey, Edward Bouverie** (1800–82), a famous Anglican cleric; he published *Tracts for the Times*, which inaugurated the Tractarian movement that developed into what became known as Puseyism.

**Pym, John** (1584–1643), a prominent statesman in the reign of Charles I.

**Pythagoras** (*circa* 582–500 B.C.), a great Greek philosopher, who taught the doctrine of the transmigration of souls, and also a system of astronomy similar to that of Copernicus.

## Q

**Quain, Sir Richard** (1816–98), a physician of great eminence, and an able writer on pathological subjects.

**Quaritch, Bernard** (1819–99), a famous dealer in rare books, who was a native of Germany but settled in London, and became naturalised in 1847. His knowledge of scarce and valuable books was unique. His shop in Piccadilly was a storehouse of literary treasures.

**Quiller-Couch, Sir A. T.** (b. 1863), a well-known novelist and essayist, who as "Q" has published many delightful stories, including *Dead Man's Rock*, *Troy Town*, and *The Splendid Spur*. Appointed Professor of Poetry at Oxford in 1912.

**Quin, James** (1693–1766), the immediate predecessor of Garrick as the leading English actor.

## R

**Rabelais, François** (c. 1495–1553), the great French satirist, first adopted the career of a monk, then studied medicine, and settled at Lyons as a doctor, and it was there that he published his *Gargantua and Pantagruel*, one of the wittiest and withal the coarsest books in any language.

**Rachel, Madame** (1821–58), the most famous French actress of her time.

**Racine, Jean** (1639–99), a distinguished French tragic dramatist, best known by his "Andromaque," "Phèdre," and "Athalie."

**Radcliffe, Mrs. Ann** (1764–1823), was a celebrated author of highly sensational novels. Her best-known work is *The Mysteries of Udolpho*.

**Radcliffe, John** (1650–1714), a famous physician who attended three English monarchs—William III., Queen Mary, and Queen Anne; £40,000 of his fortune he devoted to the founding of the Radcliffe Library in Oxford.

**Radetzky, Count** (1766–1858), a famous Austrian Field-Marshal.

**Rae, John** (1813–93), an arctic explorer, who was a member of the Franklin Search Expedition of 1848, and in 1854 made the discovery that King William's Land was an island. In later years he directed an expedition for surveying proposed submarine telegraph lines between England and America by way of Iceland and Greenland.

**Raeburn, Sir Henry** (1756–1823), was a famous Scottish portrait painter, and friend and pupil of Sir Joshua Reynolds.

**Raffles, Sir Thomas Stamford** (1781–1826), an eminent naturalist. He was the founder and first President of the Zoological Society of London. Knighted in 1818.

**Raglan, Field-Marshal Lord** (1788–1855), was a great soldier and the son of the 5th Duke of Beaufort, and served in the Peninsular War, losing his right arm at Waterloo. Made a peer in 1852, and in 1854 was Commander-in-Chief of the British forces in the Crimea. He died before Sebastopol.

**Raikes, Robert** (1735–1811), a practical propounder of the Sunday School system.

**Raisuli** (d. 1914), a notable Moorish brigand, who exercised great power over the people, and on their behalf sometimes exacted concessions from the Sultan. In 1907 he captured Kaid Maclean, and held him to ransom until Feb., 1908, when a large sum was paid for his liberation.

**Raleigh, Sir Walter** (1552–1618), a scholar, courier, soldier, sailor, and statesman. In 1584 Queen Elizabeth granted him a patent for the discovery and settlement of unknown countries in the far West. The colonisation of Virginia followed. He is said to have introduced into this country both the potato plant and tobacco. At one time he was in great favour at Court, but quarrelled with the Queen, and suffered in fortune in consequence. When James I. came to the throne, Raleigh was supposed to be implicated in a conspiracy against that monarch, and was sentenced to death. After that he was a prisoner in the Tower of London for twelve years, and there he wrote his *History of the World*, and other works. In 1615 James set him at liberty in order to head an expedition to Guiana in the hope of finding gold, but being unsuccessful he was again imprisoned on his return, and finally beheaded in Old Palace Yard.

**Raleigh, Sir Walter, M.A.** (1861–1922), Professor of English Literature at Oxford, and author of many volumes on eminent men of letters, including books on Milton, Wordsworth, and others. His work on Shakespeare, 1907, is his highest achievement.

**Ramsay, Allan** (1686–1758), the Scottish pastoral poet, who wrote *The Gentle Shepherd*.

**Ramsay, Sir William** (1852–1916). In conjunction with Lord Rayleigh he discovered argon, thereto an unknown constituent of the air, and later detected other new atmospheric gases, which he called neon, krypton, and xenon. Helium, a constituent of certain minerals, was also discovered and explained by him. Nobel prize in chemistry in 1904. President of the British Association, 1911.

**Ramusio, Giovanni B.** (1485–1557), a geographer and editor of *Voyages and Travels*.

**Ranjit Singh**, or **Ranjeet Singh** (1780–1839), a prominent Sikh chief who for many years was the dominating power in the Punjab, retaining friendly relations with the British. At his death the Sikhs rushed into conflict with the English, with the result that the Punjab was ultimately annexed.

**Ranjitsinhji, Sir Kumar Shri** (b. 1872) (**H.H. Maharaja, Jam Saheb of Nawanagar**, G.B.E., G.C.S.I.,) spent many years in this country before succeeding to the title, and was a popular cricketer and attained exceptional success as a batsman in the 'nineties.

**Ranke, Leopold von** (1795–1886), a renowned German historian.

**Rankine, R. S. D.**, C.M.G., became British Resident, Zanzibar Protectorate, 1929.

**Raphael, Sanzio** (1483–1520), the distinguished Italian painter whose works excel all others in their beauty of expression and inspired treatment. He lived a considerable period in Rome, where he painted his famous frescoes for the Vatican and St. Peter's and also the celebrated cartoons designed for the tapestries of the Papal chapel, which afterwards were brought to England, and are now at the Victoria and Albert Museum. His last painting was "The Transfiguration." Examples of his work are to be found in most of the great European collections, including our own National Gallery.

**Ravenscroft, Edward** (1671–97), an English dramatist of the 17th century.

**Ravenscroft, Thomas** (1592–1640), was one of the earliest English composers of psalm tunes.

**Rawlinson, Sir Henry** (1810–95), diplomatist, soldier and Orientalist. For a number of years he superintended explorations in Assyria and Babylon, accumulating a valuable collection of antiquities, now in the British Museum.

**Rawlinson, General Lord** (1864–1925), Commander-in-Chief Army in India, 1920. Commanded 4th Corps and 4th Army in European war. Com.-in-Chief in India, 1920–25.

**Ray, John** (1628–1705), an English naturalist.

**Rayleigh, Baron**, O.M. (1842–1919), one of the most eminent of British physicists; an authority on sound vibrations, and the co-discoverer with Sir William Ramsay of argon. In 1904 was awarded the Nobel prize for physics.

**Reade, Charles** (1814–84), holds high rank amongst the Victorian novelists. His first story, *Peg Woffington*, was published in 1852. *It's Never too Late to Mend*, *Griffith Gaunt*, and *The Cloister and the Hearth*, are his best-known novels.

**Reading, Rufus Daniel Isaacs, 1st Marquess of**, G.C.B., K.C.V.O., Viceroy of India, 1921–26. Lord Chief Justice, 1913–21 (b. 1860); British High Commissioner in the United States, 1918–19. Q.C. in 1898, and was M.P. for Reading from 1904–13. Solicitor-General, 1910. Attorney-General, 1910–13. Visited the United States in 1916 and 1917 on special missions relating to the war. Viscount, 1916. Earl, 1917. Marquess, 1926.

**Reaumur, René A. F. de** (1683–1757), an eminent French chemist, who invented the thermometer which bears his name.

**Récamier, Madame** (1777–1849), a noted society woman of the days of Napoleon.

**Reeves, Sims** (1818–1900), was the most celebrated English tenor of his time.

**Regnault, Henri Victor** (1810–78), a French scientist who made highly successful experiments in regard to the physical properties of bodies and their relation to heat.

**Regnault, Jean Baptiste, Baron** (1754–1829), a talented French genre painter.

**Regulus, Marcus Atilius**, was a famous Roman who was twice Consul (267–256 B.C.), and led the Roman armies against the Carthaginians.

**Reid, Captain Mayne** (1818–83), was a novelist of power in writing stories of adventure.

**Reid, Thomas** (1710–96), an eminent Aberdeen professor, who wrote several books on Metaphysical subjects, including *Essays on the Intellectual Powers of Man*, and *An Inquiry into the Human Mind on the Principle of Common Sense*.

**Reid, Sir T. Wemyss** (1842–1905), was connected with journalism for many years. Edited the *Leeds Mercury* from 1870 to 1887, when he became General Manager in the publishing house of Cassell and Company, and was knighted in 1894. Wrote two novels, *Gladys Fane* and *Manleverer's Millions* and the lives of W. E. Forster and Lord Houghton.

**Rembrandt, Van Rhyn** (1606–69), one of the greatest of the Dutch school of painters who produced many remarkably successful portraits, as well as numerous figure subjects, all of them distinguished by their masterly qualities. He was an etcher of high ability also, and a number of his works are in the British national collections.

**Renan, Ernest** (1823–92), a noted French author who wrote much upon religious subjects, and won special fame by his *Life of Jesus*, published in 1863.

**Rennie, John** (1761–1821), a Scottish civil engineer. He was the constructor of the Waterloo and Southwark and new London bridges over the Thames, the London Docks, the East and West India Docks, the Plymouth breakwater, and many other works at Liverpool, Leith, Dublin, Hull, and elsewhere.

**Reuter, Baron P. J. de** (1821–99), was the pioneer of telegraphic press services.

**Reynolds, Sir Joshua** (1723–92), was the first President of the Royal Academy and the most eminent English portrait painter of his time.

**Rhodes, Rt. Hon. Cecil John** (1852–1902), *b.* at Bishop's Stortford. Went to South Africa in 1871, entered upon a diamond-mining enterprise at Kimberley, and acquired a considerable fortune. Was a member of the Cape Legislature in 1881, and became Premier in 890. He was at the head of the British South Africa Chartered Company, for which a vast amount of territory was annexed, the holding obtaining the name of Rhodesia. Mr. Rhodes was Cape Premier again in 1896; then followed the Jameson Raid and his retirement from political life. During the Boer War he was detained in Kimberley, and did not live to see the campaign closed. He left the bulk of his fortune for the founding of scholarships at Oxford.

**Ribot, Alexandre** (1842–1923), four times Prime Minister of France.

**Ricardo, David** (1772–1823), a celebrated English political economist of Hebrew descent, whose *Principles of Political Economy* gained him a high place among the exponents of the science.

**Richard I.** (1157–99) was King of England from 1189 to his death. He laid heavy burdens upon the people in order to equip an army for the third Crusade. At first he was victorious, and did such valiant deeds that he received the name of "Cœur de Lion." Being ultimately defeated, he signed a truce with Saladin, and on his way back to England was shipwrecked. Disguised as a pilgrim, he was identified in Austria, and handed over to the Emperor of Germany, who imprisoned him in a remote castle. A large sum was demanded and paid for his ransom, and after over a year of durance he returned to England, and was crowned at Winchester. Later he was engaged in a war with France, and was mortally wounded by a bolt from a crossbow while besieging the Castle of Chaluz in Normandy.

**Richard II.** (1367–1400), son of the "Black Prince," succeeded his grandfather, Edward III., in 1377, when but ten years old, a Regency being appointed during his minority. In the Wat Tyler rising of 1381 the King confronted the rioters and promised them redress, an undertaking which he did not fulfil. For a time he was greatly under the influence of his uncle, Thomas, Duke of Gloucester, but on coming of age dismissed him, and ruled with some approach to dignity for the next seven years. After 1396 he developed a highly tyrannical disposition and banished or put to death many of the leading statesmen, practically freeing himself from Parliamentary control. The opposition against him came to a head in 1399, when Bolingbroke defeated him, and he was made prisoner and died—probably by violence—in Pontefract Castle.

**Richard III.** (1452–85), made himself King of England in 1483 by a succession of wicked acts

and intrigues, removing obstacles from his path by murder without compunction whenever he deemed such a course desirable. He was not, however, permitted to have peaceful possession of the throne; a strong party in favour of Henry Tudor, Earl of Richmond, springing up. In the battle between the rival forces at Bosworth Field he was slain.

**Richards, Henry Brinley** (1819–85), a Welsh composer and musician of note.

**Richardson, Sir Benjamin** (1828–96), was an eminent physician and writer on health, and a zealous champion of temperance. He invented a protective mask for workers who ran risks from inhaling dust of various kinds and also introduced the lethal chamber for the painless destruction of dogs.

**Richardson, Samuel** (1689–1761), was a successful London printer, who, when over fifty years of age, published his first novel *Pamela*, which achieved such a success that four editions of it were sold in the first year. His *Clarissa Harlowe* appeared in 1749, and was followed by *Sir Charles Grandison* in 1753. All these works, though somewhat prolix and tame as to incident, were conceived in a noble spirit, and gave to their author merited celebrity.

**Richelieu, Cardinal Duc de** (1585–1642), the eminent French ecclesiast and statesman, who was Minister to Louis XIII. for eighteen years. He was practically Master of France during the best part of his Cardinalate.

**Richter, Jean Paul** (1763–1825), a German author, who produced numerous books of romance, essays, and other writings, which Carlyle did much to popularise in this country.

**Riddell, Lord**, a well-known and active force in the newspaper world (b. 1865). Among his many journalistic directorships may be mentioned those of The News of the World, Ltd., George Newnes, Ltd., and C. Arthur Pearson, Ltd.

**Ridge, W. Pett** (1860–1930), a humorous writer and prolific novelist who mostly used for his subjects the poorer quarters of London.

**Ridley, Nicholas** (1500–55), was Bishop of Rochester in 1547 and Bishop of London in 1550. He took an active part in the Reformation. He was burned at the stake along with Latimer.

**Rienzi, Cola di** (1313–54), a Roman patriot of humble birth who inflamed the people against their rulers, and aroused such enthusiasm that they proclaimed him "Tribune." During the seven months that he was permitted to exercise supreme power, he proved himself the true friend of the poor. Ultimately, however, his enemies proved too strong for him, and he was imprisoned for three years at Avignon. Returning to Rome after gaining his freedom he was murdered in the Capitol.

**Rimsky-Korsakov, Nicholas Andreevich** (1844–1908), an eminent nationalist Russian composer whose works include "Le Coq d'Or" (1910), "Scheherazade" and many orchestral suites, overtures, songs and piano pieces.

**Ritter, Karl** (1779–1859), the celebrated German geographer, was for many years Professor of History at Frankfort, and later Professor of Geography at Berlin.

**Riviere, Briton**, R.A. (1840–1920), a famous painter of animal subjects.

**Riza Khan Pahlevi.** After the overthrow of the Shah Sultan Ahmed in Oct. 1925, the Constituent Assembly elected Riza Khan Pahlevi as Shah of Persia. He was crowned in April 1926. His eldest son, Shahpur Mohammed Riza, is the Crown Prince (Valiahd) of Persia.

**Rizzio, David** (*c.* 1540–66), was the Italian secretary of Mary Queen of Scots and an accomplished musician. Suspected of a too great attachment to Mary, he was murdered by Darnley and his friends in the Queen's presence in the Palace of Holyrood.

**Robbia, Luca Della** (1400–1482), a famous Florentine sculptor. He was the introducer of enamelled terra-cotta work.

**Robert of Gloucester**, a celebrated rhyming chronicler of the second half of the 13th century, who wrote a history of England based on the older work of Geoffrey of Monmouth.

**Roberts, Rt. Hon. F. O.** (b. 1876), became Minister of Pensions, 1929. Was a compositor in early life; entered Parliament as M.P. for West Bromwich in 1918.

**Roberts, Rt. Hon. G. H.** (b. 1869), Food Controller, 1919–20; Minister of Labour, 1917–19; represented Norwich in the Labour interest, 1906.

**Roberts, Field-Marshal Earl** (1832–1914). Was born in India. In the Indian Mutiny he proved his capacity on many occasions. Was at the relief of Lucknow. Again saw active service with the Abyssinian Expedition of 1867–68, and with that to Lushai of 1871–72. In 1878–79 was entrusted with the command of the Kuram Field Force, and made his historic march from Kabul to Kandahar in 1880. In 1886 had command of the army in Burma. In 1892 was raised to the peerage as Baron Roberts of Kandahar. In 1895 he was appointed to succeed Lord Wolseley in the Irish command. In 1900, after the many disasters which befell the English forces in South Africa, he was despatched as Commander-in-Chief; in the course of a few months he entirely changed the aspect of affairs, and handed over the command to Lord Kitchener, returning to England to succeed Lord Wolseley as Commander-in-Chief. He received a grant of £100,000. Died in France during early part of War.

**Robertson, Sir Robert,** K.B.E., D.Sc., F.R.S. (b. 1869), became Government Chemist, 1921.

**Robertson, T. W.** (1829–71), was a successful dramatist who produced a series of Society plays.

**Robertson, Field-Marshal Sir William,** G.C.B., G.C.M.G., G.C.V.O., K.C.V.O., D.S.O., Chief of Imperial Gen. Staff, 1915–18 (b. 1860), has been engaged in practical military service since 1888. Was Staff Captain at Simla, 1892–96; with the Chitral Relief force, 1895, and won his D.S.O.; Quartermaster-Gen. B.E.F., 1914, and Commanded 1st Infantry Division. C.-in-Chief, Army of the Rhine, 1919–20.

**Robespierre, Maximilien** (1758–94), was a country advocate until the outbreak of the French Revolution, when he went to Paris, became an enthusiastic leader of the Jacobin Party, and was made a Member of the Assembly. In the Reign of Terror as President of the Committee of Public Safety he sent vast numbers to the guillotine. Then a counter-movement was set on foot and he was denounced in the Assembly, and, trying to escape, was shot and subsequently guillotined while in a dying state.

**Robey, George,** C.B.E. (b. 1869), a famous comedian.

**Robins, Elizabeth** (**Mrs. G. R. Parks**), actress and novelist, born in America. Has attained success as an interpreter of Ibsen, and her stories have covered a wide range and achieved considerable popularity. She has also written plays.

**Robinson, Geoffrey.** (*See* Dawson, Geoffrey.)

**Rob Roy** (1671–1734), a noted Highland outlaw who levied blackmail on the farmers and rich people of the country-side in return for certain protective services. He belonged to the clan McGregor.

**Robsart, Amy,** daughter of Sir John Robsart, and wife of Robert Dudley, afterwards Earl of Leicester. While living in seclusion at Cumnor Place under the charge of Anthony Forster, she met her death either by accident or foul play, by the latter according to common belief, Elizabeth's favourite having reason to wish her out of the way. She was discovered dead at the bottom of an old staircase.

**Rochester, Earl of** (1647–80). Poet, wit, and profligate.

**Rockefeller, John D.** (b. 1839), said to be the richest man in the world, was born on a small farm in New York State, and there worked until sixteen. Migrated to Cleveland, and found employment in an office for a few years. About this time the oil trade was in a disorganised condition, owing to the reckless trading and crude methods of refining. Rockefeller saw what was wrong, and resolved upon trying to remedy it. Later he began oil-refining, and entered into the business with such vigour of purpose, and made so many improvements, that he became a millionaire in a very few years. From the exertions of himself and associates grew the Standard Oil Trust, beginning with a capital of £200,000 in 1870, and increasing and extending at such a

rate that in 1892 the capital had reached twenty-two millions sterling. Has given up to 1922 more than 500 million dollars to education and charity.

**Rockingham, Marquis of** (1730–82), a Whig statesman who was English Prime Minister in 1765.

**Rodin, Auguste** (1841–1917), the most celebrated French sculptor of recent days, who possessed a bold and original genius. His numerous statues and his fine historic monuments, especially that for Calais commemorating the bravery of Eustache de Saint-Pierre, brought Rodin well-deserved fame.

**Roebuck, John Arthur** (1802–79), a Radical politician. He obtained the sobriquet of "Tear 'em."

**Roland, Madame** (1754–93), was one of the leading figures of the French Revolution. Her husband, Jean Marie Roland de la Platière (1734–93), who was one of the Ministers during the Girondist period, escaped from Paris on the disruption of his Party, but his wife remained behind, and was sent to the guillotine. During her incarceration she wrote an *Appeal to Posterity*, remarkable for its beauty of sentiment and patriotic enthusiasm. Her husband committed suicide on receiving the news of her execution.

**Romilly, Sir Samuel** (1757–1818), a famous English lawyer who was Solicitor-General in 1806 and for many years had a distinguished career both in Parliament and at the Bar. He effected many improvements in the Criminal Law.

**Romney, George** (1734–1802), was born in North Lancashire, studied portrait painting with a Kendal artist, and for a few years obtained a living by local portrait painting. Going to London in 1762, his talent gained him speedy recognition; and after studying for a couple of years in Rome, he set up as a portrait-painter in Cavendish Square, and became highly successful. His portraits are among the finest examples of that kind of art that England has produced, and to-day realise large prices.

**Ronald, Sir Landon** (b. 1873). Principal Guildhall School of Music. Noted composer and conductor.

**Ronsard, Pierre de** (1524–85), a famous French poet.

**Röntgen, Professor Conrad William** (1845–1923), the eminent German scientist who discovered the Rontgen rays in 1895. He made other important laboratory investigations, resulting in the solution of difficult chemical problems.

**Roosevelt, Theodore** (1858–1919), President of the United States of America from the death of Mr. McKinley in 1901 until 1909. Was educated at Harvard, and after some years in the Far West hunting and shooting he returned to New York and became a Member of the State Legislature in 1881. In 1889 was made a Member of the National Civil Service Commission, a position which he held for six years. In 1895 became one of the Police Commissioners in New York, and in 1897 was appointed Assistant Secretary of the Navy, a position which he resigned on the outbreak of the war with Spain, organised a regiment of Rough Riders, and commanded that body in Cuba. After the war was elected Governor of New York State, and in 1900, when McKinley was elected President, he was carried as Vice-President. On the assassination of McKinley he succeeded to the Presidency, and in 1904 was re-elected to the position. For his efforts in promoting peace was awarded the Nobel Prize in 1906. In 1909 went on a big game shooting expedition to South Africa; returning in 1910 he made the tour of the chief capitals of Europe, making vigorous speeches. In 1912 became candidate for the presidency in opposition to Taft and Woodrow Wilson, as an Independent Progressive candidate. A political fanatic attempted to assassinate him on October 14 at Milwaukee, and with the bullet in his breast he made a speech of over an hour. In 1914 explored the wilderness of Brazil and discovered a large river.

**Root, Hon. Elihu** (b. 1845), prominent American statesman. Secretary of War, 1899–1904; Secretary of State, 1905–1909. Since held many important positions. Prominent at Washington Congress. Awarded Nobel Peace Prize, 1912.

**Rosas, Don Juan Manuel** (1793–1877), was the first President of the Argentine Republic.

**Roscoe, Rt. Hon. Sir Henry Enfield** (1833–1915), a great modern chemist.

**Rosebery, Earl of,** K.G., K.T. (1847–1929), Prominent Liberal politician and statesman.

**Ross, Sir Denison** (b. 1871), knighted 1918. Director of the School of Oriental Studies, and Professor of Persian, University of London, 1916.

**Ross, Sir James** (1800–62), achieved distinction as an Arctic explorer, accompanying his uncle, Sir John Ross, and Captain Parry on their expeditions. He was commander of the expedition of 1839–43, and discovered the North Magnetic Pole in 1831.

**Ross, Sir John** (1777–1856), the eminent explorer who made several voyages to the Polar regions.

**Ross, Colonel Sir Ronald,** K.C.B., K.C.M.G., F.R.S. (b. 1857), professor of tropical sanitation and a leading authority on tropical diseases generally, was for many years in the Indian Medical Service, and was awarded the Nobel Prize for Medicine in 1902.

**Rosse, William Parsons, 3rd Earl of** (1800–67), was an astronomer of considerable note who contributed greatly to the advancement of science by erecting in his Irish park at Birr Castle, King's County, the largest telescope that had up to that time been constructed. It cost £30,000, and afforded the means of discovering and defining the spiral nebulæ. From 1848 to 1854 he was president of the Royal Society.

**Rossetti, Dante G.** (1828–82), was the son of Gabriele Rossetti (1783–1852), an exiled Italian author who settled in London in 1824. Dante showed great talent as a painter from boyhood, and became one of the Pre-Raphaelite Brotherhood, formed in 1848. From about 1850 he produced a great number of pictures remarkable for their extreme beauty of drawing, splendour of colouring, and poetic force. Among his best-known paintings are his "Ecce Ancilla Domini," "Song of Solomon," "Beatrix," "Lilith," and "Dante's Dream." He also distinguished himself as a poet; his two volumes, published in 1870 and 1881 respectively, reflect many of the characteristics of his paintings.

**Rossini, Gioacchino Antonio** (1792–1868), one of the most brilliant of modern Italian composers, who devoted his genius principally to opera. His first opera, "Tancredi," was produced at Venice when he was twenty-one. It was followed after a short interval by "Il Barbiere di Seviglia," "La Cenerentola," "Otello," "Mosè in Egitto"—this latter an oratorio—"La Donna del Lago," "Semiramide," and "Guillaume Tell." All these appeared between 1816 and 1820. He also wrote a "Stabat Mater" in 1842, and a "Messe Solonnelle" in 1864.

**Rostand, Edmond** (1868–1918), dramatist and member of the French Academy, jumped into fame by his *Cerano de Bergerac*, 1898.

**Rothermere, Lord (Harold Sidney Harmsworth)** (b. 1868). Air Minister, 1917–18. Chief proprietor of the *Sunday Pictorial* and various other newspapers and publications; and a younger brother of the Late Lord Northcliffe. Viscount, 1919.

**Rothschild, Lord,** P.C. (1840–1915), was in Parliament—as Baron (of the Austrian Empire) Rothschild—from 1865 to 1885, representing Aylesbury. In the last-named year he was raised to the British peerage. He was the head of the famous Rothschild banking house in England.

**Rothschild, Alfred Charles de** (1840–1917), a member of the Rothschild firm; was a director of the Bank of England, a Trustee of the National Gallery and of the Wallace Collection. Also a well-known art connoisseur and sportsman.

**Rothschild, Anselm Meyer** (1743–1812), the founder of the family, was born at Frankfort-on-the-Main, and, after some experience in a bank as clerk, set up for himself first as a moneylender, then as a banker. By his splendid genius for finance he acquired a large fortune. His son, Nathan Meyer Rothschild (1777–1836), took charge of the London house,

and conducted its affairs with great success, and was made an Austrian Baron in 1822. He was succeeded by his eldest son, Baron Lionel de Rothschild (1808–1879), who was the first Jewish member of the House of Commons. Of this latter, Lord Rothschild and Mr. Alfred Rothschild are sons.

**Roubiliac, L. F.** (1695–1763), a French sculptor who contributed many monuments to Westminster Abbey.

**Rousseau, Jean-Jacques** (1712–78), was born at Geneva, and after a hard and wandering life made the acquaintance of Madame D. Warens, with whom he resided for ten years as secretary and companion. In 1745 he proceeded to Paris, where, after a time, he made the acquaintance of Diderot, and wrote under his encouragement. Meanwhile Rousseau had been studying social questions with great ardour, and in 1759 published his romance, *Joulie, ou la Nouvelle Héloise*, which was followed in 1762 by *Emile*. These two works contained so much that was at variance with convention, and so opposed to all ideas of moral restraint, that they called forth the condemnation of the orthodox, and Rousseau was obliged to leave France for a time. It was while in England that he wrote his remarkable *Confessions*, and his celebrated *Le Contrat Social*. He gave to France a new field of thought, and laid down principles of government and conduct which bore fruit in the French Revolution.

**Rowe, Nicholas** (1673–1718), was a prominent dramatist who became Poet Laureate.

**Royden, Agnes Maude,** C.H. (b. 1876). Noted woman preacher. Educated Cheltenham and Lady Margaret Hall, Oxford.

**Rôse, Madame Marie,** an eminent prima donna who established an academy for the teaching of singing in Paris and London.

**Rubens, Sir Peter Paul** (1577–1640), one of the most notable of Flemish painters. In 1629 he painted for Charles I, who knighted him.

**Rubinstein, Anton E.** (1830–1894), a famous Russian pianist and composer.

**Rumbold, Rt. Hon. Sir Horace,** Bart., G.C.M.G., M.V.O. (b. 1869), became British Ambassador at Berlin, 1928. Has held many diplomatic posts.

**Rumford, Sir Benjamin Thompson, Count von** (1753–1814), was an American natural philosopher and statesman.

**Runciman, Rt. Hon. Walter,** P.C., a prominent Liberal, President of the Board of Trade 1914–16 (b. 1870), a son of Sir Walter Runciman, of Newcastle. An active Liberal, who represented Oldham in Parliament in 1899–1900, and has sat for Dewsbury 1906–18. Was Parliamentary Secretary to the Local Government Board, 1905; Financial Secretary to the Treasury, 1907; President of the Board of Education, 1908–11; President of the Board of Agriculture, 1911–14; and President of the Board of Trade, 1931.

**Ruskin, John** (1819–1900), art critic and philosopher, was the son of a wealthy London wine merchant. His *Modern Painters* exhibited a masterly perception of the principles of art and a boundless gift of literary expression. Other volumes appeared at intervals until 1860. Meanwhile he had published *The Seven Lamps of Architecture* and *The Stones of Venice*, two memorable works which considerably enhanced the author's fame. Always taking a deep interest in economic questions, Ruskin delivered and published numerous lectures on a wide range of subjects—art, pleasure, religion, war, work, and so forth; and he was acknowledged to be one of the greatest thinkers of the time. Often his views were impracticable and even eccentric, but behind them there was always evident a sincere desire to promote the well-being of the people.

**Russell, Hon. Bertrand,** F.R.S., M.A. (b. 1872), British author and philosopher.

**Russell, John, 1st Earl** (1792–1878), was the third son of the 6th Duke of Bedford. Entered Parliament as Lord John Russell on attaining his majority, and, ranging himself on the Liberal side, showed great capacity for affairs. He it was who introduced the first great measure of Reform, which was passed in 1832. He was leader of the House of Commons and Home Secretary under Lord Melbourne from 1835 until 1839; in which latter year he was appointed Secretary for the Colonies. Then from 1841 to 1846 he was in Opposition; but, on the defeat of Peel on the Corn Law question, was made Prime Minister, remaining in power until 1852. In Lord Aberdeen's Ministry he was Foreign Secretary, and afterwards Lord President of the Council. When Palmerston took up the reins of Government in 1855, Lord John Russell became Colonial Secretary and later on Foreign Secretary. In 1861 he was raised to the peerage, and from 1865 to 1866 was once more Prime Minister. He also wrote lives of Thomas Moore and Charles James Fox.

**Rutherford, Sir Ernest,** O.M., b. in New Zealand, 1871. Pres. British Association, 1923. Many honours. Nobel prize for chemistry, 1908.

**Rutland, John Manners, 7th Duke of** (1818–1906), a great figure in Conservative politics in his day, and known in the House of Commons as Lord John Manners until 1888.

**Ruysdael, Jacob,** a famed Dutch landscape painter of the 17th century.

**Ruyter, Admiral** (1607–76), the Dutch admiral who in 1667 invaded England with a fleet of Dutch war vessels, advancing up the Thames and Medway and setting fire to considerable shipping. He soon saw fit to retreat, and more serious trouble was averted.

**Rykoff, Alexei Ivanovich,** President of U.S.S.R., 1924.

**Rymer, Thomas** (*circa* 1639–1713), a famous antiquary who for some years filled the position of Historiographer-Royal.

## S

**Sachs, Hans** (1494–1576), the German shoemaker-poet of Reformation times, was an earnest worker in the Protestant cause, and wrote over 5,000 different pieces, poetry and prose.

**Sackville, Charles, 6th Earl of Dorset** (1637–1705), was a poet and wit who held a place of favour under the last two Stuart kings and William III.

**Sackville, Thomas, 1st Earl** (1536–1608), was a poet and courtier high in the good graces of Queen Elizabeth.

**Sadi,** or **Saadi,** the Persian poet who flourished in the 13th century, and won national fame by his poems "The Garden of Roses" and "The Orchard."

**Saint-Just, Antoine** (1767–94), one of the later leaders of the French Revolution closely associated with Robespierre.

**St. Pierre, Bernardin de** (1737–1814), a French author; the romancist who attained fame by his powerful story, *Paul and Virginia*.

**Saint-Saëns, Charles Camille** (1835–1921), a distinguished French composer whose works include the operas of "Samson et Delilah" and "Henri VIII."

**Saint-Simon, Claude, Comte de** (1760–1825), a French scientist and Socialist who had great influence upon the thought of his time.

**Sainte-Beuve, Charles Augustin** (1804–69), was a French critic of considerable power and influence.

**Saintsbury, George Edward Bateman** (b. 1845), Professor of Rhetoric and English Literature, Edinburgh University, 1895–1915. Author of numerous critical works on literary subjects on which he is a leading authority.

**Saladin** (*circa* 1137–93) was Sultan of Egypt, a conquering general, and a deadly foe of Christianity. He swept over Syria and Macedonia, and captured Jerusalem after a great victory at Tiberias. It was against Saladin that the Third Crusade was undertaken, and after his defeat by Richard I. in 1191 his power was shattered.

**Saleeby, C. W.,** M.D., F.R.S.E., F.Z.S. (b. 1878), founder and chairman of the Sunlight League. An indefatigable worker for improving the health of the nation.

**Salisbury, Robert Arthur Talbot Gascoyne Cecil, 3rd Marquis of** (1830–1903), son of the 2nd Marquis. After completing his education at Oxford, and travelling for a time at the Antipodes, he entered Parliament in 1853, being then Lord Robert Cecil. He became Lord Cranborne by the death of his elder brother in

1865, and in the following year joined Lord Derby's Ministry as Secretary for India. He succeeded to the Marquisate in 1868, and in 1874 was once more Secretary for India. In 1878 he became Foreign Secretary, and attended the Berlin Congress with Lord Beaconsfield. From 1881 he led his Party in the House of Lords, and vigorously opposed the majority of Mr. Gladstone's measures; and when in 1885 the Liberals were defeated he became Prime Minister. Mr. Gladstone again held sway in the following year, but upon his being defeated on the Home Rule question, Lord Salisbury was for the second time made Premier. In 1892 the Liberals were in power again, but in 1895 Lord Salisbury was once more Prime Minister. He continued in office until 1902, finally retiring from political life after peace was proclaimed in South Africa. He was a thoroughly representative Englishman of the fine old type, his death being a great loss to his Party and the nation.

**Salisbury, James E. H. Gascoyne Cecil, 4th Marquis of,** K.G., G.C.V.O. (b. 1861), Lord Privy Seal 1924–29, Lord Pres. of the Council and Dep. Leader, H. of Lords, 1925–29; the eldest son of the Conservative Premier, and was known in the House of Commons as Viscount Cranborne, serving the office of Under-Secretary of Foreign Affairs. On becoming a peer he was in turn Lord Privy Seal and President of the Board of Trade, and went out to the Boer War and fought with distinction. An active churchman.

**Sallust** (86–34 B.C.), a Roman historian, was in turn quæstor and tribune.

**Salvator Rosa** (1615–73), a great Italian painter, who first attracted notice by selling pictures in the streets of Naples. Being encouraged by Lanfranco, he went from Naples to Rome, and quickly became one of the most noted artists of his time. His pictures were chiefly landscapes and battle-pieces.

**Samuel, Rt. Hon. Sir Herbert L.,** P.C., G.B.E. (b. 1870), High Commissioner for Palestine, 1920–25; Postmaster-General, 1910–14; President of the Local Govt. Board, 1914–15; Home Secretary, 1916. From May to Dec., 1915, was again Postmaster-General. M.P. for Cleveland Division (N. Riding, Yorks), 1902–18. Was Under-Sec. to the Home Dept., 1905–9; Chancellor of the Duchy of Lancaster, 1909–10; Home Secretary, 1931.

**Sand, George** (1804–76), the leading French authoress of her time—proper name, Armandine Lucile Aurore Dupin, Baroness Dudevant—who, both as novelist and dramatist, achieved the highest success. A friend of men of such singular power as Alfred de Musset, Chopin and Sandeau.

**Sankey, Ira David** (1840–1908). The celebrated American evangelist, singer, and composer, associated with Dwight L. Moody, the revivalist (1837–1899), in mission-work in America and Great Britain for many years.

**Sankey,** 1st Baron, created 1929, of Moreton, Co. Gloucester; **John Sankey** (b. 1866), educated at Lancing Coll. and at Jesus Coll., Oxford; G.B.E. (1917); K.C. (1909); knighted in 1914; P.C. 1928; a judge of the King's Bench Division, 1914–28; a Lord Justice of Appeal, 1928–29; Lord Chancellor, 1929; President of the British Institute of Adult Education; Chancellor of the Diocese of Llandaff from 1909.

**Santley, Sir Charles** (1834–1922). For many years he figured as our principal English baritone.

**Santos-Dumont, M.** (b. 1873 in Brazil), a successful experimenter in aerial navigation, his most notable flights have been made in Paris, and at Monte Carlo. He visited London in 1903.

**Sappho** (flourished 611–592 B.C.) was the famous lyric poetess of ancient Greece, whose romantic story of *Unrequited Love* is better known than her poetry, of which only a few samples survive.

**Sarasate, Pablo** (1844–1908), a Spanish composer and violinist.

**Sardanapalus** (properly Asurbanipal) was the last of the great line of Assyrian monarchs. 668–626 B.C.

**Sardou, Victorien** (1831–1908), began writing plays in 1854, but was at first unsuccessful. Later he obtained an introduction to Mlle. Dejazet, the famous actress, for whom he wrote some plays that proved highly popular and placed him at the head of French dramatists. Then followed a long series of successes—"Nos Intimes," "Séraphine," "Rabagas," "Divorçons," "Fédora," and so on, from triumph to triumph. Later he turned his attention to historic subjects, and in "Theodora," "Patrie," "La Tosca," "Madame Sans-Gène," "Robespierre," and "Dante," the last-named written specially for Sir Henry Irving, achieved further fame. He was elected to the French Academy in 1877.

**Sargent, John S.** (1856–1925). He was of American parentage and received his art education in Paris. As a portrait-painter he had few equals. Was made A.R.A. in 1894 and R.A. in 1897.

**Saroléa, Charles,** D.Ph., D.Litt., LL.D. (b. 1870), a great scholar and authority on literature. French by birth, but now a naturalised Englishman.

**Sassoon, Siegfried** (b. 1887), a poet of outstanding ability who received the Hawthornden Prize 1929 for *The Memoirs of a Foxhunting Man*.

**Savonarola, Girolamo** (1452–98), the great Florentine preacher and Reformer, a monk of the Dominican order who denounced the follies and luxuries of his time, especially attacking Pope Alexander VI., who dealt out vengeance upon him. He was excommunicated, imprisoned, and put to a dreadful death. Savonarola was one of the most learned men of his time, and his works have been translated into nearly all languages. George Eliot's *Romola* contains a fine estimate of his character, and his life by Villari is a great biography.

**Scarlatti, Alessandro** (1659–1725), a distinguished Italian composer. He composed an immense number of operas, masses, cantatas, madrigals, etc., and much of his music is still performed.

**Scarron, Paul** (1610–60), a clever, reckless and popular French writer of burlesques and comic romances.

**Scheffer, Ary** (1795–1858), a celebrated Dutch painter of religious pictures. "Paolo and Francesco" is reckoned his masterpiece.

**Schelling, Friedrich von** (1775–1854), a German metaphysician, who attracted much attention by his system of Idealistic Philosophy.

**Schiller, J. C. Friedrich von** (1759–1805), the famous German dramatist and poet. Was born at Marbach in Württemberg. Educated at the Military Academy at Stuttgart, and intended for a soldier, he evinced an irresistible desire for literary fame, and in 1782 had his first play, "The Robbers," successfully produced at the Mannheim Theatre, to which he was subsequently appointed dramatic composer. He left Mannheim for Leipsic in 1785. Later he proceeded to Dresden, where he completed his "Don Carlos"; and in 1789 he was at the University of Jena as Professor of History. While engaged in this capacity he wrote his *History of the Thirty Years' War*, and made the acquaintance of Goethe, at whose suggestion he removed to Weimar, and during the next ten years produced his greatest works—"Wallenstein," "Mary Stuart," "The Maid of Orleans," and "William Tell." He died at the early age of forty-six.

**Schlegel, August Wilhelm von** (1767–1845), was a famous German critic who for a number of years held the post of Professor of History in the University of Bonn. He is best known in this country by translations of his *Lectures on Dramatic Art and Literature*, which are remarkable for their appreciation of Shakespeare and their scholarly handling of the drama in all its leading phases. He spent many years with Madame de Staël.

**Schlegel, Karl W. F. von** (1772–1829), a famous critic, writer and author of *Lectures on the Philosophy of Life* and on the *Philosophy of History*.

**Schliemann, Heinrich** (1822–90), was a celebrated German traveller and archæologist, who discovered a number of royal tombs at Athens and Mycenæ.

**Schopenhauer, Arthur** (1788–1860), was a German philosopher of a pessimistic cast of mind. His mysticism partakes somewhat of the higher Buddhism. His chief works are *The World, Considered as Will and Idea*, and *The Two Fundamental Problems of Ethics*.

**Schubert, Franz P.** (1797–1828), one of the most eminent of German musical composers, whose songs and symphonies are among the most inspired of musical compositions, full of melodic beauty, and instinct with emotional power. He also wrote operas, Masses, and cantatas, all of which reached a high level of merit.

**Schumann, Robert** (1810–56), a famous German composer and musical critic, who did much to help forward the advanced school of German music. He was the author of numerous fantasias, songs, and orchestral compositions, and attained a prominent position among modern composers. His wife, Clara Schumann (1819–96), was a noted pianiste and interpreter of Chopin, and also a composer of meritorious music.

**Scipio, Publius Cornelius** (*circa* 232–183 B.C.), the greatest of the Scipios, known as Scipio Africanus the elder. A distinguished Roman general in the 2nd Punic War.

**Scott, Sir G. Gilbert** (1811–78), an eminent architect who gained special fame for his restorations of Gothic churches; designer of the Albert Memorial and the Martyrs' Memorial at Oxford.

**Scott, Sir Giles Gilbert,** R.A., F.R.I.B.A. (b. 1880), an eminent architect who designed the new Liverpool Cathedral. Knighted in 1924.

**Scott, Captain Robert F.** (1868–1912), commanded the National Antarctic Expedition 1900–4, and took charge of a similar expedition in 1910. His ship, the *Terra Nova*, left England on June 1, 1910. In Jan., 1911, winter quarters were established at Cape Evans, and in the following November Scott and a select party left Hut Point for the South Pole, which they reached on Jan. 18, 1912, finding there the Amundsen records. On the return journey every member of the party perished. Seaman Edgar Evans died from concussion of the brain on Feb. 17; Capt. Oates from exposure on March 17; and on March 29 the rest of the party (Scott, Wilson, and Bowers) died from starvation and exposure in a blizzard when only 11 miles from One Ton Depot.

**Scott, Sir Walter** (1771–1832), one of the greatest of British novelists and a distinguished poet. He was educated for the Bar. His *Minstrelsy of the Scottish Border* was published in 1802. This was followed in 1805 by "The Lay of the Last Minstrel," in 1808 by "Marmion"; "The Lady of the Lake," "Rokeby," and "The Lord of the Isles" coming afterwards in quick succession. In 1814 he published *Waverley* anonymously, which obtained instant success. Other stories followed and the Waverley novels and their author, "The great Unknown," were everywhere the subject of discussion. *Guy Mannering*, *The Antiquary*, *Old Mortality*, *Rob Roy*, and the *Heart of Midlothian* were all published before the secret of their authorship was disclosed. Scott made large sums of money by his writings, purchased Abbotsford, and was in the full tide of success when the failure of Ballantyne, his publisher, saddled him with liabilities to the extent of £150,000. Scott, who was then fifty-five, placed himself in the hands of trustees, retired into private lodgings, and within five years paid to his creditors £70,000, and before his death had satisfied all his obligations and purchased back his old estate. He was created a baronet in 1820.

**Scriabin, A. N.** (1871–1915), a Russian musical composer.

**Scullin, Rt. Hon. J. H.** (b. 1876), became Prime Minister of Australia 1929 and Commonwealth Treasurer 1930.

**Seaman, Sir Owen** (b. 1860), the editor of *Punch*, 1906. Knighted, 1914.

**Seeley, Sir John R.** (1834–95), was an historian of note, but acquired his chief fame as a writer by his *Ecce Homo* and *Natural Religion*.

**Seely, Rt. Hon. Major-Gen. J. E. B.,** C.B., C.M.G., D.S.O., P.C. (b. 1868), Sec. for War, 1912–14; Under-Sec. for War, 1911–12; Under-Sec. for the Colonies, 1908–11; Under-Sec. for Air, 1919; M.P. for Abercrombie Division, Liverpool, 1906–10; for Ilkeston, 1910–22; and Isle of Wight, 1923–24.

**Segrave, Major Sir Henry** (1896–1930), born in U.S.A. of Irish ancestry—Eton and Sandhurst—Royal Flying Corps. Was a great speed expert. He drove a motor-car at Daytona, U.S.A., at 231 miles per hour in 1929. Killed on Lake Windermere while driving a motor-launch at 100 miles per hour.

**Selborne, Earl of** (b. 1859), was President of the Board of Agriculture 1915–16. Was High Commissioner in S. Africa 1905–10, and had previously been Conservative Under-Secretary for the Colonies and First Lord of the Admiralty.

**Selden, John** (1584–1654), was a prominent lawyer, statesman, and author in the reign of Charles I.

**Semiramis,** Queen of Assyria and founder of Nineveh, flourished about 2182 B.C.

**Seneca, Lucius A.** (*circa* 4 B.C.–A.D. 65), the famous Roman philosopher, who was tutor to Nero, and one of that emperor's most influential advisers; he was sentenced to end his own life, a sentence which he courageously carried out.

**Senefelder, Aloys** (1772–1834), was the son of an actor at Munich, and himself engaged in dramatic composition. Being too poor to bear the cost of having his works printed, he turned his attention to inventing lithography, the main feature of the invention being discovered by accident.

**Sennacherib** was King of Assyria from 702 to 680 B.C. He built himself a splendid palace at Nineveh and greatly beautified the city. According to the Scriptural narrative his great host of 185,000 men, while on the eve of attacking Palestine, was destroyed in a single night by direct Divine visitation.

**Servetus, Michael** (1512–53), was a learned Spanish physician and theologian, opposed to the doctrine of the Trinity.

**Severus, Lucius S.** (146–211), was Roman Emperor from 193 to his death. After many victories in the East he passed over to Britain with an army, subjugated the Caledonians, and built the famous wall from the Solway Firth to the mouth of the Tyne which bears his name. He died at York.

**Sévigné, Marie, Marquise de** (1626–96), a French epistolary writer.

**Shackleton, Sir D. J.,** K.C.B. (b. 1863), Perm. Sec. Ministry of Labour, 1916–21; Senior Labour Adviser to the Home Office, 1910–11; Insurance Commissioner, 1912. M.P. Clitheroe Division, Lancashire, 1902–10. Chief Labour Adviser, 1921–25.

**Shackleton, Sir Ernest** (1874–1922), commander of the Nimrod Farthest South expedition of 1907–9, reached within 100 miles of the South Pole, and embarked on new expedition in 1914. He died whilst on a scientific voyage to the Antarctic.

**Shadwell, Thomas** (1640–92), was Poet Laureate and dramatist, and wrote a number of plays.

**Shaftesbury, Anthony Ashley-Cooper, 7th Earl of** (1801–85), a distinguished philanthropist, identified himself with the Ten-Hours Bill, connected with the Ragged School Union, Reformatories, Refuges, and Christian Associations of many kinds.

**Shakespeare, William** (1564–1616), England's greatest poet and dramatist, was born at Stratford-on-Avon, and was the son of a tradesman of that town who must have been at one time fairly well-off, seeing that he was made an alderman, and afterwards served as High Bailiff. Later on, however, he appears to have been unfortunate and fallen into straitened circumstances. William was the eldest son, and was probably educated at the Stratford Grammar School, but very little is known of his career up to his eighteenth year, when we have it on record that he married Anne Hathaway, who was eight years his senior. Five years after his marriage he went to London, and the next we hear of him is that he was connected with the Globe Theatre and appeared in sundry small parts. He first appeared before the public as a poet in 1593, with his "Venus and Adonis," following this in 1594 with "The Rape of Lucrece." Shortly afterwards he was proprietor of the Globe Theatre, and also had an interest in the Blackfriars Theatre. Then he began that remarkable career of play-writing which has since been the wonder of the world. It is impossible to name the thirty-five plays that he wrote in the exact order in which they were produced, but "Love's Labour's Lost" and "The Comedy of Errors" seem to have been among the earliest, being followed by

"The Two Gentlemen of Verona," "Romeo and Juliet," "A Midsummer Night's Dream," and others, the record being made up with "King Richard III.," "King John," "The Merchant of Venice," "The Taming of the Shrew," "The Merry Wives of Windsor," "King Henry VI." (Parts I., II. and III.), "Richard II.," "Henry IV." (Parts I. and II.), "Henry V.," "Much Ado About Nothing," "As You Like It," "Hamlet," "Julius Cæsar," "Coriolanus," "Twelfth Night," "Macbeth," "Measure for Measure," "Othello," "All's Well that Ends Well," "Antony and Cleopatra," "Troilus and Cressida," "King Lear," "Timon of Athens," "Cymbeline," "Pericles," and "Titus Andronicus," though as to the last two he could only have been part author. It was evident that his plays were remunerative, inasmuch as in a few years he was able to purchase property at Stratford, and when he retired from his profession (about 1610 or 1612) he returned to his native town to live in a house which he had himself built. He died at Stratford at fifty-two, and was buried in Stratford Church.

**Sharp, Granville** (1735–1813), slavery abolitionist and founder of the colony of Sierra Leone.

**Shaw, George Bernard** (b. 1856 in Dublin); joined Fabian Society, 1884; awarded the Nobel Prize for Literature, 1925; a brilliant Irish writer who conquered England by his pungent wit and devastating exposure of hypocrisy, cant and national weaknesses, and has persistently expressed a highly individual opinion whether in his musical criticism, Socialist pamphlets or plays. His plays include "Man and Superman," "Heartbreak House," "Back to Methuselah." In 1923 he gained a universal success through his play "St. Joan," and again in 1929 through "The Apple Cart."

**Shaw, Rt. Hon. Thomas,** C.B.E. (b. 1872), Secretary of State for War, 1929. Minister of Labour, 1924. M.P., Preston, 1918–31.

**Sheffield, Bishop of.** See **Burrows.**

**Shelley, Percy Bysshe** (1792–1822), one of the most brilliant poetic geniuses of the 19th century, renowned for the daring and unorthodox opinions which he held. His "Queen Mab" (written when he was nineteen), his "Alastor," "The Revolt of Islam," "The Witch of Atlas," and "Adonais" all breathe the true spirit of poetry, securing him a place in the first rank of British poets. He showed fine dramatic gifts in the "Cenci" and "Prometheus Unbound," almost reaching sublimity in the latter masterpiece. His "Adonais" was a splendid tribute to the genius of Keats. His first wife, whom he married while very young, committed suicide. He afterwards married Mary Wollstonecraft Godwin, and formed other attachments of a complicating nature. Was always at war with his family, and finally, after spending some time with Byron and Leigh Hunt and other friends in various parts of Italy, was drowned in the Gulf of Spezia by the capsizing of a boat in a storm.

**Shenstone, William** (1714–63),' an English poet of country life. His "Schoolmistress" is his principal poem.

**Sheridan, Richard Brinsley** (1751–1816), the greatest British comic dramatist of modern times. Was born in Dublin, and educated partly at Harrow. Showing considerable capacity for dramatic composition, he obtained an introduction to the Covent Garden management, and it was at the Covent Garden Theatre in 1775 that his first comedy, "The Rivals," was produced, with such a gratifying result that Garrick, who was then at Drury Lane, opened up negotiations with the dramatist which ended in Sheridan becoming part (and ultimately sole) proprietor of Drury Lane. "The Duenna," a musical comedy, was produced in 1775, and ran through the winter. From 1777 Sheridan managed Drury Lane, opening with an adaptation of Vanbrugh's "Relapse." This was followed by the production of the greatest of his comedies, "The School for Scandal," which had a wonderful success. In 1779 "The Critic" was given, and after that Sheridan wrote no more plays until 1789, when "Pizarro" was produced. In the meantime he had gained a high reputation in another sphere. In 1780 he obtained a seat in Parliament and although he only spoke on certain set occasions, he acquired a reputation for oratory which stood him in very good stead, and he filled one or two minor Ministerial offices, remaining in Parliament until 1812.

**Shirley, James** (1596–1666), was an eminent dramatist and poet, imbued with the Elizabethan traditions. The shock of the Great Fire caused the death of himself and his wife.

**Shorthouse, J. H.** (1834–1903), a Birmingham manufacturer, who, turning his leisure to literary account, produced a remarkable historical novel, *John Inglesant.*

**Sibelius, J. J.** (b. 1865), a Finnish composer of national inspiration; highly imaginative; has written many symphonies. His most popular work is "Finlandai."

**Sickert, W. Richard,** A.R.A. (b. 1860), a British painter and etcher of distinction; became President of Royal Society of British Artists, 1928.

**Siddons, Sarah** (1755–1831), the daughter of Roger Kemble, a theatrical manager. The greatest tragic actress of her time.

**Sidgwick, Henry** (1838–1900), Professor of Mental and Moral Science at Cambridge, and besides being an eminent educationist in the broader sense, devoted himself with special success to the cause of women's education, Newnham and Girton being largely the outcome of his efforts.

**Sidgwick, Mrs. Henry** (b. 1845), widow of the late Prof. Henry Sidgwick, and sister of the Earl of Balfour. Was Principal of Newnham College, Cambridge, from 1892 to 1910. Is a pioneer of the higher education and a brilliant woman.

**Sidney, Sir Philip** (1554–86), statesman, poet and soldier; was one of Queen Elizabeth's favourites, and a man of singular ability and bravery. While living in temporary retirement he composed his famous "Arcadia," but did not allow it to be published in his lifetime. He did not lack for literary fame, however, his *Apology for Poetry* and *Defence of Poesy,* as well as numerous miscellaneous pieces, all distinguished for their beauty of expression and tender sentiment, having won much favour, especially in the circle of the Court. In 1586 he was given a command in the Netherlands, and was killed at Zutphen.

**Siemens, Sir William** (1823–83), a German-born scientist and inventor, distinguished in physics, and particularly in electricity and heat.

**Sienkiewicz, Henryk** (1846–1916), a famous Polish author, well known for his work *Quo Vadis?*

**Simeon Stylites,** a Syrian monk of the 5th century, who is said to have passed thirty years of his life on a pillar near Antioch, from which he preached daily to great crowds.

**Simon, The Rt. Hon. Sir John A.,** G.C.S.I., K.C.V.O., O.B.E., K.C., M.P. for the Walthamstow Division 1906–18 (b. 1873); Counsel in Alaska Boundary Arbitration, 1903; Solicitor-General, 1910–13; Attorney-General, 1913–15; Home Secretary in the Coalition Govt. 1915–16; Major in Royal Air Force, served in France, 1917–18. Chairman India Royal Commission, 1927–30; Foreign Secretary, 1931.

**Simon, Jules** (1814–96), the eminent French philosopher and statesman. His writings include a history of the Thiers Government and *Liberty of Conscience.*

**Simpson, Sir James Young** (1811–70), the discoverer of the utility of chloroform as an anæsthetic, was a native of Scotland, and one of the most accomplished experimental surgeons of the 19th century.

**Sims, Admiral W. S.,** G.C.M.G. (b. 1858), Commanded American Fleet in British Waters during European War.

**Sismondi, Leonard de** (1773–1842), a Swiss historian.

**Sitwell, Edith,** an original poetess, whose works include "Bucolic Comedies," "Gold Coast Customs" and "Collected Poems," 1930.

**Skeat, Prof. Walter William** (1835–1912), an eminent philologist and scholar, and founder of the English Dialect Society. Author of multitudinous works dealing with early English literature, poetry, history and biography.

**Skelton, John** (1460–1529), was a lively satirist with the courage of his convictions. He wrote "Why Came ye not to Courte?" and "Colin Clout," a satirical poem against ecclesiastical

abuses, which incensed Wolsey, and led to the poet's downfall.

**Skobeleff, Michael** (1845–82), a Russian general and statesman who served his country with brilliance.

**Sloane, Sir Hans** (1660–1753), was born in county Down, Ireland, but settled in London, and became famed as a physician and naturalist. For some years he held the office of President of the Royal College of Physicians, and was elected President of the Royal Society in succession to Sir Isaac Newton. He was created a baronet in 1716. His library of 50,000 vols., and treasures in natural history and MSS., worth from £50,000 to £80,000, were offered by his will to, and bought by, the nation for £20,000, and with that nucleus the British Museum was founded.

**Smart, Christopher** (1722–71), an English poet, more noted for his translation of Horace than for his own poems.

**Smeaton, John** (1724–92), who rebuilt Eddystone Lighthouse, which had been burned down; he subsequently constructed many important works in connection with harbours and canals. He was also the inventor of an improved blowing apparatus for iron-smelting.

**Smiles, Dr. Samuel** (1812–1904), was in early life a medical practitioner; achieved wide popularity by his *Self Help*, a book that has had an enormous sale.

**Smith, Adam** (1723–90), the father of the science of political economy. Author of *Theory of Moral Sentiments* and *Wealth of Nations*, which immediately obtained the admiration of the leading men of the day, and secured him the friendship of Gibbon, Hume, Burke, Reynolds, and Dugald Stewart.

**Smith-Dorrien, Gen. Sir H. L.**, G.C.B., G.C.M.G., D.S.O. (1858–1930), Governor of Gibraltar, 1918–23; conspicuous in Army Corps command in France, 1914–15; afterwards transferred to German East Africa, but ill-health compelled him to resign. Commander-in-Chief of the Aldershot Command and held the Southern Command from 1912; Adj.-Gen. in India; commanded a division in the Boer War.

**Smith, George** (1840–76), a student of Assyrian antiquities whose excavations and researches were fruitful of many important discoverics.

**Smith, Captain John** (1580–1631), the noted seafarer and adventurer who in 1605 was the leading spirit of an expedition to Virginia, and founded Jamestown.

**Smith, Joseph** (1805–44), founder of Mormonism, was the son of an American farmer. He claimed to be the medium of Divine communications, including *The Book of Mormon*, which became the Bible of the sect. Smith, who was murdered, was not a polygamist; Brigham Young, who succeeded him, was.

**Smith, Sydney** (1771–1845), was for many years a canon of the Anglican Church, first of Bristol and then of St. Paul's, and enjoyed a great reputation as a wit and writer.

**Smith, Rt. Hon. William Henry** (1825–91), a newspaper and book agent in a colossal way of business who became prominent in British politics on the Conservative side, and sustained high Ministerial rank with great credit and esteem. His widow, who died in 1913, was created Viscountess Hambledon.

**Smollett, Tobias** (1721–71), a famous English novelist and humorist, whose *Roderick Random*, *Peregrine Pickle*, *Count Fathom* and *Humphry Clinker* abound in fun and genial characterisation, while their pictures of sea-life are inimitable.

**Smuts, Gen. Rt. Hon. Jan Christian**, P.C., C.H., Premier of South Africa 1919–24 (b. 1870). State Attorney at the Cape 1898, and in the Boer War held supreme command in Cape Colony. In General Botha's Ministry was Minister of Finance and Colonial Secretary. Succeeded Gen. Smith-Dorrien as commander of the British forces in German East Africa; 1917 and 1918 S. African representative Imperial War Cabinet. F.R.S., 1930. President British Association, 1931.

**Smythe, Dame Ethel**, G.B.E., Mus. Doc., a British composer and conductor. Her operas "The Wreckers" and "The Boatswain's Mate" have made her famous.

**Snowden, Rt. Hon. Philip**, P.C. (Viscount Snowden of Ickornshaw) (b. 1864), Chancellor of the Exchequer in the first Labour Government, 1924, and again, 1929. Socialist M.P. for Blackburn, 1906–18; Colne Valley, 1922; Lord Privy Seal, 1931; created Viscount, 1931.

**Snyders, Franz,** or **Frans** (1597–1657), a great Flemish animal painter who was associated with Rubens, Jordaens, and other masters, putting in the natural history subjects to their pictures. He was also an adept at flower and fruit-painting, and skilful in landscape work. He died at Antwerp.

**Soane, Sir John** (1753–1837), an eminent architect who designed numerous public buildings. By his will he left his museum, library, pictures, etc., for the use of the public, and the house in which he lived at Lincoln's Inn Fields still constitutes the Sir John Soane Museum.

**Sobieski, John** (1624–96), King of Poland from 1674, and heroic defender of his country from Cossacks, Tartars, and Turks.

**Socinus, Lælius** (1525–62), an Italian Protestant thinker and anti-Trinitarian, founder with his nephew, Faustus Socinus (1539–1604), of the Socinian system of theology.

**Socrates** (469–399 B.C.), the distinguished Greek philosopher. Was the son of a sculptor, and for some time followed that calling himself; but, having other ambitions, joined the army, and was present at the battle of Potidæa, and also at the battle of Delium, saving the life of Alcibiades in the first, and of Xenophon in the second. Returning to Athens he devoted himself to study and began to exhort the people on public questions and the conduct of life. In 406 B.C. he was made one of the Senate of Five Hundred, and had other honours accorded him, continuing his teaching alternately with his public duties. Not long afterwards Anytus charged him with impiety and he was found guilty and sentenced to death. When the fatal day came he calmly drank the poison which terminated his career.

**Soddy, Prof. Frederick**, F.R.S., M.A. (b. 1877), Prof. of Inorganic and Physical Chemistry, Univ. of Oxford, 1919. Nobel Laureate in Chemistry 1921. Has published many works on Radio-activity.

**Solon** (638–558 B.C.) was one of the Seven Sages of Greece, and became an eminent legislator, after having made a reputation as a poet. Solon's Laws were so highly esteemed that they were adopted by the Romans in their Twelve Tables.

**Solyman** (1490–1566), the celebrated Ottoman Sultan known as "the Magnificent," who won fame as a conqueror, law-giver, administrator, and patron of learning.

**Somerset, Duke of** (1500–52), was Protector of England in the early part of the reign of Edward VI., but he developed an arrogance that was strongly resisted and was deposed from power, tried for felony and executed.

**Somerville, Mary** (1780–1872), an eminent writer on scientific subjects, of which she had a clear and extensive knowledge, together with a capacity for presenting them in an attractive and lucid form. Her principal books are *The Mechanism of the Heavens*, *Physical Geography*, and *Molecular and Microscopic Science*. Her *Personal Recollections*, a fascinating work, appeared after her death.

**Sophocles** (495–406 B.C.), the famous Athenian dramatist, who enjoyed the highest popularity at Athens, and in a contest with Æschylus was crowned the victor. Of the 100 odd plays of Sophocles only seven have survived: "Antigone," "Electra," "Œdipus," "Ajax," "Trachiniæ," "Philoctetes," and "Œdipus at Colonus."

**Soult, Marshal Nicolas Jean** (1769–1851), was one of Napoleon's favourite and most capable generals, distinguishing himself in the Swiss and Italian campaigns, and also in the Peninsular War, where he was Wellington's bravest opponent.

**Southcott, Joanna** (1750–1814), a visionary and fanatic who proclaimed herself prophetess and the mother of the promised second Messiah, whom she announced would be born on the 19th October, 1814. Thousands of ignorant people believed in her, but on the 29th of the month she died of dropsy.

**Southey, Robert** (1774–1843), the son of a draper, was educated at Westminster and at Oxford. Devoting himself to literature, he produced in rapid succession a number of poems, plays and romances of varying merit. In 1803 he went to live at Greta Hall, near Keswick, where he resided until his death. A Civil List Pension of £160 a year was granted him in 1807, and in 1813 he was made Poet Laureate. In poetry he was overshadowed by the greater genius of Byron and Shelley, but in prose he was eminently successful, his *Life of Nelson*, his *Doctor*, *Commonplace Book*, and other works being as strong and vigorous as his verse was tame.

**Southwell, Robert** (1560–95), a famous Jesuit and religious poet of Elizabethan times.

**Spartacus** was a Thracian who became a Roman slave and gladiator in Capua, and headed an insurrection in Italy in 73 B.C. The slaves he raised routed several Roman armies, but he was eventually defeated by Crassus in 71 B.C. and slain.

**Speke, Capt. J. H.** (1827–64), was the discoverer, along with Captain Grant, of the Kagera, the main source of the White Nile, in 1862. In 1856 he discovered Lake Tanganyika and in 1858 Lake Victoria Nyanza.

**Spencer, 5th Earl** (1834–1910), a very popular Liberal peer, who held office as First Lord of the Admiralty, and President of the Council on two occasions, besides serving as Viceroy in Ireland.

**Spencer, Herbert** (1820–1903), was the son of a Derby schoolmaster. For some time followed the profession of civil engineer. His first book was published in 1851, under the title of *Social Statics*, when he was filling the position of sub-editor of the *Economist*. In 1855 his *Principles of Psychology* appeared, in which he seems to have anticipated Darwin's theory of Evolution. The *System of Synthetic Philosophy* began to appear in 1860, and the last of its ten volumes was issued in 1896.

**Spender, J. A.** (b. 1862), editor of the *Westminster Gazette* (1896–1922), and author of several works of shrewd observation and practical wisdom, controlled by a keen political aim.

**Spenser, Edmund** (1552–99), was born in London, educated at Cambridge, and early attracted notice by his poetic effusions. After the publication of his "Shepherd's Calendar," he was made known to Queen Elizabeth, and in 1580 received the appointment of Secretary to the Lord Deputy of Ireland, and in the division of confiscated lands that afterwards took place, Spenser received Kilcolman Castle and 3,000 acres of land. Here he wrote his "Faerie Queene." In 1598 a rebellion broke out, and Spenser's castle was burned to the ground. He then returned to London, and there died.

**Spilsbury, Sir Bernard H.**, knighted in 1923. Honorary Pathologist, Home Office.

**Spinoza, Baruch** (1632–77), the greatest modern pantheist, was born in Amsterdam of a Jewish family, but, having expounded philosophical doctrines antagonistic to Judaism, was excommunicated by the rabbis as a heretic. In 1663 he published his era-marking work on the Cartesian philosophy, from which he widely differed, and set forth a system of Pantheism which makes God the cause and substance of the universe, abolishes free-will, and establishes the necessity of the Divine nature. His *Ethics* was not published until after his death.

**Spohr, Ludwig** (1784–1850), a German violinist and composer, whose works include a number of oratorios.

**Spring-Rice, Sir Cecil A.**, G.C.M.G., G.C.V.O., British Ambassador to the United States 1912–18 (1859–1918).

**Spurgeon, Rev. C. H.** (1834–92), a renowned Baptist preacher.

**Staël, Madame de** (1766–1817), the daughter of Necker, the famous Finance Minister under Louis XVI., was married to Baron de Staël (Swedish Minister) at twenty. She was a brilliant woman, deeply imbued with philosophical sentiments. Two years after her marriage she made a considerable impression by her *Letters on Rousseau*, and was regarded as in sympathy with the Revolution. Later on, however, she was in disfavour, first with the Revolutionary leaders, and then with Napoleon, and was in turn exiled by both. She made good use of her exile by writing *Corinne* and other able works.

**Stainer, Sir John** (1840–1901), an English organist and composer of sacred music; co-editor of a valuable dictionary of musical terms.

**Stalin, Yosiph** (b. 1879), a prominent member of the Russian Soviet government; General Sec. of the Executive Committee of the Communist Party, 1919–20; member of the Central Executive Committee of the U.S.S.R. and of the Revolutionary Military Council of the Republic.

**Stamfordham, Lord**, G.C.B., G.C.I.E., G.C.V.O. (1849–1931), Private Secretary to King Edward VII. from 1910 to his death.

**Stamp, Sir Josiah**, G.B.E. (b. 1880), Chairman of the L.M.S. Railway, a Director of the Bank of England, member of the Economic Advisory Council and a brilliant economist.

**Standish, Miles** (1584–1656), a native of Lancashire, and one of a band who crossed to America in the *Mayflower* and founded the English settlement in New England.

**Stanfield, George Clarkson** (1794–1857), excelled in sea pictures, and was the painter of a noted picture of the death of Nelson, amongst other important works.

**Stanford, Sir C. Villiers** (1852–1924), Professor of Music at Cambridge University, and Professor of Composition and Orchestral Playing in the Royal College of Music. An organist and conductor of remarkable ability, and a composer of much fine instrumental, choral, operatic, and other music.

**Stanley, Arthur Penrhyn, Dean** (1815–81). Was for some years settled at Oxford, and made a high reputation as a tutor; in 1844 scored a notable literary success with his *Life of Dr. Arnold*, whose pupil he had been. Being in Holy Orders he was made Select Preacher. In 1862 he accompanied the late King (then Prince of Wales) on a tour to Egypt and the Holy Land. Made Dean of Westminster in 1863. Was buried in the Abbey.

**Stanley, Sir H. M.** (1841–1904). Born at Denbigh, of humble parentage and placed in St. Asaph workhouse under the name of John Rowland. While young he went as cabin-boy on a sailing vessel to New Orleans. There a merchant named Henry Morton Stanley (whose name he afterwards adopted) gave him employment, adopted and educated him, but his benefactor dying, he was left without provision, and had to sell newspapers in the streets. On the outbreak of the Civil War he enlisted on the Confederate side, was made prisoner, and put to work on a warship. Escaping, he turned his attention to writing, establishing a connection with the *New York Herald*. After the war he got engaged on the reporting staff of that journal, and was sent as special correspondent with the United States forces in the Indian Territories. Next he was war correspondent for the *Herald* with the British expedition to Magdala. Later on Mr. Gordon Bennett commissioned him to go to Africa and find Livingstone. Early in 1871 he left Zanzibar with a large party, and plunged into the "Dark Continent," succeeding in his quest the same year. From 1895 to 1900 Stanley was M.P. for Lambeth, and was knighted in 1899. In 1890 he married Miss Dorothy Tennant. His *Autobiography* is a remarkable work.

**Stanley of Alderley, Lord, Arthur Lyulph Stanley**, K.C.M.G. (1875–1931), 5th Baron Sheffield, Governor of Victoria April 1914–19. Was M.P. for the Eddisbury div. of Cheshire from 1906 to 1910.

**Staunton, Howard** (1810–74), Shakespearean commentator and writer on chess-play.

**Steele, Sir Richard** (1672–1729). Born in Dublin, he was the son of a lawyer, who died while Steele was a child. Through family influence he was sent to the Charterhouse School (where he made Addison's acquaintance) and to Oxford, and afterwards entered the Army and rose to be a captain in the Horse Guards. Then he drifted into literature, and wrote poems and pieces for the stage, but his first real success came when, in 1709, he began the publication of the *Tatler*, which made a great hit, Addison contributing many papers. Two years later he and Addison were associated in *The Spectator*,

Addison, however, being the leading contributor; the *Guardian* was another of Steele's ventures. He sat in Parliament for some time, and was knighted by George I.

**Steel-Maitland, Rt. Hon. Sir Arthur H. D. R., Bt.,** (b. 1876), Minister of Labour 1929, M.P. for Erdington 1918, Under-Sec. for the Colonies, 1915–17, M.P. for East Birmingham 1910–18, and was Chief Organiser of Conservative Party. Was Special Commissioner to the Royal Commission on Poor Laws 1906–7, private Secretary to Lord Ritchie and Mr. Austen Chamberlain at the Treasury.

**Stefansson, Vilhjalmur** (b. 1879), a famous Arctic explorer.

**Stephen** (1105–54) was King of England from 1135 to his death, usurping the crown that belonged to Matilda, the daughter of Henry I.

**Stephen, Sir James** (1789–1859), an English statesman, writer, and sometime Regius Professor of Modern History at Cambridge University.

**Stephen, Sir James Fitzjames** (1829–94), a great English jurist and judge who published valuable works on our Criminal Law.

**Stephen, Sir Leslie** (1832–1904), an eminent writer, critic, and biographer. Edited the *Cornhill Magazine* (1871–82), and the *Dictionary of National Biography* (1882–91). Wrote *Hours in a Library.*

**Stephenson, George** (1781–1848), was born at Wylam, near Newcastle, and up to 1804 was mainly engaged in ordinary colliery occupations. In 1804, however, an engagement as brakesman at Killingworth colliery brought him in touch with the working of Watt's steam engine, and his first efforts in invention were in improving one of those engines, showing so much ability that he was offered an engine-wright's position at Killingham, which he held for some time. Then it was that he began to think seriously of producing a locomotive engine, and managed to construct an engine that would draw coal trucks at the rate of four miles an hour. In 1821, when the Stockton and Darlington Railway was undertaken, he was appointed engineer, and when the railway was opened in 1825, as a line for the transport of coal only, Stephenson won his first great triumph, by putting a locomotive on the line that was able to draw a train of thirty-eight carriages, laden with goods and passengers, at a rate of twelve miles an hour. George Stephenson, subsequently, assisted by his son Robert, constructed the Liverpool and Manchester line, and after that the railway era commenced.

**Stephenson, Robert** (1803–59), the only son of George Stephenson, attained great eminence as a civil engineer, constructing numerous important railways and bridges. Being designer and contractor for the High Level Bridge at Newcastle, the Menai and Conway Tubular Bridges, the Victoria Bridge across the St. Lawrence at Montreal, and two notable bridges over the Nile.

**Sterne, Laurence** (1713–68), one of Britain's greatest humorists. Was born in Ireland, educated in Yorkshire and at Cambridge, and, obtaining Holy Orders, was preferred to the living of Sutton, near York, at which place he resided for twenty years, becoming Prebendary of the Cathedral. It was here that he wrote his great work *Tristram Shandy*, the first two volumes of which were published in 1759, and the last in 1767. The novel was so unique in character and so sparkling with wit and high spirits that, despite a certain coarseness, which gave less offence in those days than it would have occasioned in our time, it made him famous. He also wrote *The Sentimental Journey*, and published some volumes of sermons.

**Stevenson, Robert** (1772–1850), a native of Glasgow, and famed as a builder of lighthouses, including that on Bell Rock. He also invented the "flashing" system of throwing light at sea.

**Stevenson, Robert Louis** (1850–94), was born at Edinburgh, and was intended for the profession of a civil engineer, but his delicate condition of health stood in his way, and he tried his hand at various kinds of composition, including some essays which, in 1874, were published in the *Cornhill*. From that time he travelled for some few years on the Continent, and it was while journeying through France that he met Mrs. Osbourne, a Californian lady, of whom he became deeply enamoured. He followed her to America in 1879, and they were married the following year. For the next few years he drifted hither and thither in quest of health; was now in Scotland, now at Davos, now at Bournemouth and finally at Samoa, continuing to turn out a remarkable series of essays and stories to the end.

**Stewart, Dugald** (1753–1828), wrote largely on philosophical questions, but was more famed as a critic than as an original thinker. His works include *Elements of the Philosophy of the Human Mind, Outlines of Moral Philosophy*, and *Philosophy of the Active and Moral Powers.*

**Stolypin, Peter Arkazhevich** (1863–1911), the eminent Russian statesman who after serving several high Government positions became Premier in 1906. Assassinated at Kieff in September, 1911.

**Stonehaven, Lord,** G.C.M.G. (b. 1874), Governor-General and Commander-in-Chief of the Commonwealth of Australia, 1925–30; Parliamentary Under-Sec. of State for Air, 1918; Parliamentary Under-Sec. of State, Home Office, 1919–22; Minister of Transport and First Commissioner of Works, 1922–24.

**Stopes, Marie,** D.Sc., Ph.D., F.L.S., F.R.S.L., an eminent woman scientist. Has published many works on birth control and racial progress.

**Storey, George A.,** R.A. (1834–1919). Produced many notable pictures of homely sentiment and some fine portraits, and wrote a book of memoirs.

**Stothard, Thomas,** R.A. (1755–1834), a successful book illustrator of Scott, Shakespeare, and most of the British classics.

**Stow, John** (1525–1605), was a famous antiquary, who in 1561 published *A Summarie of Englishe Chronicles*, and in 1528 issued his celebrated *Survey of London and Westminster. Stow's Chronicles* was not published until after his death.

**Stowe, Harriet Beecher** (1811–96), the famous authoress of *Uncle Tom's Cabin.* Written to expose the horrors of slavery, it did much to advance the cause of abolition which the Civil War finally effected.

**Strachey, Giles Lytton,** LL.D. (1880–1932), a prominent author; his best-known publications are *Queen Victoria, Eminent Victorians*, and *Elizabeth and Essex.*

**Strachey, John St. Loe** (1860–1927), was editor and proprietor of the *Spectator.*

**Stradivari, Antonio** (1644–1730), an Italian maker of violins, first in his art in the world of all time.

**Strafford, Thomas Wentworth, Earl of** (1593–1641), the distinguished statesman, sent by Charles I. to Ireland as Lord Deputy in 1631. He imposed cruel exactions for his own enrichment and the benefit of English trade. Was the founder of the Irish linen manufacture. He obtained the name of "Thorough" by his sweeping measures for asserting the King's authority, but was ultimately impeached on a variety of charges, found guilty, and executed.

**Strauss, David F.** (1808–74), German theological writer, who made a great stir in the religious world by his *Life of Jesus*, published in 1835, which attempted to prove that the evangelical history mainly rested on a series of myths.

**Strauss, Johann** (1804–49), an Austrian composer and conductor, famous for his dance music, of which he produced some 250 pieces, many of them of a very high level. His son, Johann (1825–99), was even more distinguished in the same line, as the composer of the "Blue Danube" waltz and nearly 400 other dance tunes; while a younger son, Eduard (b. 1835), became conductor of the Court balls at Vienna in 1870, and was responsible for well over 200 compositions; and yet another son, Joseph (1827–1870), composed some 270 dances. The famous Strauss band, with which the family have so long been associated, has compelled the admiration of generations of music lovers in this country as well as in the capitals of the Continent.

**Strauss, Richard** (b. 1864), the son of a horn player in the Court Opera House at Munich, where he himself became conductor in due course and was later given the *bâton* at the

Royal Opera House, Berlin. He is the composer of many charming songs, and has won great distinction in the writing of elaborate instrumental music, operas, symphonies, etc.

**Stravinsky, I. F.** (b. 1882), a Russian composer; his compositions are highly original in structure; "Firebird" (1910), "Petroushka" (1912), "Les Noces" (1923).

**Strickland, Agnes** (1796–1874), an English authoress, who attained considerable popularity by her *Lives of the Queens of England* and *Lives of the Queens of Scotland*.

**Strindberg, August** (1849–1912), an original and famous Swedish author and dramatist.

**Stuart, Arabella** (1575–1615), daughter of the Earl of Lennox and cousin of James I., whose next heir she was both to the English and Scottish thrones. In 1610 she married William Seymour, afterwards Earl of Hertford and Duke of Somerset, and thereby incurring the king's displeasure, she was incarcerated in the Tower of London, where she died insane.

**Studd, Sir J. Kynaston** (b. 1858), Lord Mayor of London 1928–9; collaborator with Quinton Hogg in educational matters connected with the Regent Street Polytechnic.

**Sturdee, Admiral Sir F. C. Doveton, Bart.,** G.C.B., K.C.M.G., C.V.O. (1859–1925), Commander-in-Chief at The Nore 1918–21. Famous action off Falkland Islands, 1914.

**Sturt, Sir Charles** (1795–1869), an English explorer in Australia.

**Suckling, Sir John** (1609–42), a favourite English poet, who wrote many dainty and well-known songs and ballads.

**Sudermann, Herman** (b. 1857), a German dramatic poet and disciple of Ibsen.

**Sue, Eugène** (1804–57), a famous French novelist, whose stories, *The Mysteries of Paris*, *The Wandering Jew*, and other sensational and highly realistic works, were at one time immensely popular.

**Sulla, Lucius** (138–78 B.C.), the Roman dictator, and a general of considerable renown.

**Sullivan, Barry** (1824–91), an English actor who attained great popularity in tragic parts.

**Sullivan, Sir Arthur Seymour** (1842–1900), one of the most gifted of modern British composers, gained his first musical experiences as choir-boy at the Chapel Royal, but early showed capacity as a composer. He won the Mendelssohn Scholarship at the Royal Academy of Music in 1856, and after that studied at Leipsic. In 1862 his music to Shakespeare's "Tempest" was successfully given. His first really ambitious work was his oratorio, "The Prodigal Son," produced in 1868. A second oratorio, "The Light of the World," was given in 1873. Meanwhile, the composer had been cultivating with pronounced success a lighter vein. A musical version of "Box and Cox," and a more original trifle, "Trial by Jury," for the libretto of which Mr. (afterwards Sir) W. S. Gilbert was responsible, indicated a ready road to popularity, and from 1877, when the "Sorcerer" was produced, the Gilbert-Sullivan operas were for a number of years the most profitable stage-productions of the time. They comprised "H.M.S. Pinafore," "Pirates of Penzance," "Patience," "Princess Ida," "The Mikado," "Ruddigore," "The Yeomen of the Guard," "The Gondoliers," etc. A more serious opera of Sir Arthur's, "Ivanhoe" was produced at the opening of Mr. D'Oyly Carte's English Opera House (now the Palace Theatre).

**Sully, Maximilian** (1560–1641), a French Protestant statesman, a friend and companion of Henry of Navarre. His *Memoirs* made notable reading.

**Sumner, Charles** (1811–74), an American statesman and anti-slavery orator of very considerable ability.

**Sutro, Alfred** (b. 1863), author and dramatist. His most successful plays have been "The Walls of Jericho" (1904) and "John Glayde's Honour" (1907). Has published English translations of works by Maeterlinck.

**Swan, Sir Joseph Wilson** (1828–1914) was born at Sunderland, and first became known as an inventor in photography, being the discoverer of the autotype process, and of the art of making rapid dry plates. Turning his attention to electric lighting, he invented the incandescent electric lamp.

**Swedenborg, Emanuel** (1689–1772), Swedish philosopher, scientist, mystic. In later life he announced that Divine authority had been given him to explain natural and spiritual evidences. He published in quick succession *Arcana Cœlestia*, *The Apocalypse Revealed*, *Four Preliminary Doctrines*, and *The True Christian Religion*. He also claimed that his soul had been permitted to travel into hell, purgatory and heaven, and propounded a new theology in which there was much sound wisdom.

**Swift, Jonathan, Dean** (1667–1745), was born at Dublin, educated at Trinity College at the expense of an uncle, became secretary to Sir William Temple, and looked for political preferment, but it did not come. Entering the Church, he was made Dean of St. Patrick's in 1713. Getting entangled in political controversy, and changing his views from the Whig to the Tory side, he lost favour with the popular party, but consoled himself with a devotion to literature, which he greatly enriched by some powerful satires, poems and discourses. *Gulliver's Travels*, *A Tale of a Tub*, and *The Battle of the Books* are among his best-known works. His romantic attachment to "Stella" (Hester Johnson, whom he is believed to have married privately) and "Vanessa" (Esther Vanhomrigh), and their devotion to him, are familiar stories.

**Swinburne, Algernon Charles** (1837–1909), was educated at Oxford, and in the early 'sixties of last century gave to the world a number of poems of singular poetic beauty and musical charm, which procured him high rank among English poets. Mr. Swinburne's most famous productions include "Atalanta in Calydon," "Songs before Sunrise," "Bothwell," and "Mary Stuart." Perhaps the best of his writings is his essay on William Blake.

**Swynnerton, Mrs. Annie L.,** A.R.A., the first woman to be elected A.R.A., 1768; an eminent British painter.

**Swithin, St.** (*circa* 800–862), Bishop of Winchester in 852, and on the translation of his remains, to a shrine in the interior of the cathedral from the graveyard, fixed for July 15th, 971, violent rain intervened, and, it is said, continued for forty days; hence the superstition as to rain upon St. Swithin's Day.

**Sydenham, Baron, George Sydenham Clarke,** G.C.M.G., G.C.S.I., G.C.I.E., G.B.E., F.R.S. (b. 1848), educated at Haileybury and Wimbledon; entered the Royal Engineers 1868, served in Egypt, and made K.C.M.G. in 1893 for organising system of Colonial defence. Was Governor of Victoria 1901–4, secretary of the Committee of Imperial Defence 1904–7, member of War Office Reconstruction Committee 1904, and was appointed Governor of Bombay in 1907, retiring in 1913, when he was raised to the peerage.

**Symonds, John Addington** (1840–93), acquired fame as a poet and writer on *The Renaissance Period in Italy*.

## T

**Tacitus, Caius Cornelius** (55–*circa* 120). His chief claim to remembrance is that he was one of the ablest of Roman historians, and left behind him a number of works; among them a life of Agricola and his *Annales*, which have formed the ground-work of much that has since been written on the period he covered.

**Tacitus, Marcus Claudius** (205–276), the Roman Emperor who succeeded Aurelian in A.D. 275. His short reign was wise and marked by moderation.

**Taft, Wm. Howard** (1857–1930), Chief Justice United States 1921. Succeeded Mr. Roosevelt as President in 1908.

**Taglioni, Maria** (1804–84), daughter of the Italian ballet-master and composer of "La Sylphide," Filippo Taglioni (1777–1871). She was born at Stockholm, created a furore as première danseuse at Vienna as a mere girl in 1818, and later in London.

**Tagore, Sir Rabindranath** (b. 1861), a Bengal poet who won the Nobel Literature Prize in 1913. In recent years much of his work has seen the light in English form. His poems are of a distinctly Oriental caste and full of beauty.

**Taine, Hippolyte Adolphe** (1828–93), an able French historian and critical writer, who wrote learnedly on English and French literature and history.

**Tait, Archibald Campbell** (1811–82), was Archbishop of Canterbury from 1868 to his death. He was educated at Oxford, and allied himself with the Tractarian Movement.

**Talbot, Major-Gen. Hon. Sir Reginald A. J.,** K.C.B. (b. 1841), Governor of Victoria 1904–8, has seen a good deal of active service. Went through the Zulu campaign of 1882; Egypt, 1884–5; military attaché in Paris, 1889–95; and commanded in Egypt, 1899–1903.

**Talfourd, Sir Thomas Noon** (1795–1854), English judge and writer, and author of *Ion*, a tragedy.

**Talleyrand-Perigord, Prince** (1754–1838), a distinguished French diplomatist and prelate. After the Terror he became Foreign Minister under the Directory, remaining in that office, and greatly distinguishing himself in it, down to 1807, when the Emperor deposed him.

**Tallien, Jean L.** (1769–1820), was one of the prominent leaders of the later Revolutionary movement in France and Consul at Bordeaux during the early days of the Terror, carrying out Robespierre's instructions with apparent zest.

**Tallis, Thomas** (*c.* 1510–85), a distinguished musician, who was, as organist, attached to the Chapel Royal under Henry VIII., Edward VI., Mary, and Elizabeth, and was the composer of some of the finest of our Church music.

**Tamerlane,** or **Timûr the Tartar** (1335–1405), descendant of a follower of Jenghiz Khan, and founder of the Mogul Dynasty in India. He succeeded as chief of the Berlas Turks in 1361, and in turn conquered Turkestan, Persia, and Syria. He was a masterful warrior, and a terrible butcher, the scourge of the East in his day, and, after establishing himself in India, died whilst preparing for the invasion of China. His familiar name is a corruption of Timûr lenk = "Timûr the Lame."

**Tancred** (1078–1112) was a great Crusading hero, whose adventures and chivalrous deeds invested his name with considerable romance.

**Tannahill, Robert** (1774–1810), a gifted Scottish poet, whose lyrics—chief amongst which are the "Flower o' Dunblane," and "Gloomy Winter's noo awa'"—were inspired by the desire to emulate Burns.

**Tannhäuser,** a mythical German minnesinger of the 13th century, who belonged, according to the legend handled so romantically in Wagner's opera, to the Salzburg family of Tanhusen, and was the beloved of Lisaura.

**Tarquin Superbus** (or "the Proud"), the last King of Rome. Was banished 510 B.C. After his deposition came the Consuls.

**Tarquin the Elder,** 5th King of Rome, succeeded Ancius Martius 615 B.C., reformed the laws, embellished the city, and was assassinated.

**Tasman, Abel Janssen** (*circa* 1602–59), a famous Dutch navigator; in 1642 he discovered the island of Tasmania and New Zealand shortly thereafter.

**Tasso, Torquato** (1544–95), was one of the great Italian poets of the 16th century.

**Tatian,** a noted writer on Christianity, who flourished in Syria in the second century.

**Tauchnitz, Bernhard, Baron von** (1816–84), won wide celebrity by his enterprising expansion of the Leipsic publishing business established by his uncle, and particularly by the cheap editions of English and German classics with which he flooded the Continent.

**Tauler, Johann** (1290–1361), a German Dominican monk and mystic, who was styled "the Illuminated." Disregarding the interdict of John XXII. in 1339, he became associated with the "Friends of God." His sermons and *The Book of Spiritual Poverty* contain much that is

**Taylor, Bayard** (1825–78), an eminent American writer and traveller.

**Taylor, Brook** (1685–1731), an English mathematician of high attainments, who solved the problem of the centre of oscillation, and is best known as the discoverer of "Taylor's theorem."

**Taylor, Jeremy** (1613–67), an English divine of great influence. The most famous of his works was his *Holy Living and Holy Dying*.

**Taylor, Rowland,** for refusing to renounce Protestantism was burnt at the stake in 1555.

**Taylor, Zachary** (1784–1850), twelfth President of the United States in 1849; a distinguished soldier and statesman, earned the sobriquet of "Old Rough and Ready."

**Teck, Prince Alexander.** (*See* **Athlone, Earl of.**)

**Tegner, Esaias** (1782–1846). Swedish poet, theologian, and Greek professor.

**Telford, Thomas** (1757–1834), was a Scottish working stone-mason who became a great engineer and attained special fame as a builder of bridges, the Menai Suspension Bridge being, perhaps, his greatest work. He constructed the Ellesmere Canal, made many hundreds of miles of difficult mountain roads, was chief engineer of the Caledonian Canal, and altogether did an immense amount of public work.

**Tell, William,** the celebrated Swiss patriot. The story of his having been compelled to shoot an apple from the head of his boy by Gessler and his dramatic revenge is regarded as a legendary feat which had been attributed on English territory to William of Cloudesley, and had become a common Teutonic tradition before Tell's time. The Switzer hero of the Uri had, however, a great part in the strenuous struggle for Swiss independence in the early 14th century.

**Tempest, Miss Marie,** an accomplished English actress (b. 1866), who has won many successes in light opera and comedy.

**Temple, Frederick** (1821–1902), a famous Anglican Churchman, who became Headmaster of Rugby in 1858, in 1860 attained notoriety as the author of the first of the much-controverted *Essays and Reviews*, advocated the disestablishment of the Irish Church in 1868, was appointed Bishop of Exeter in 1869, translated to London in 1885, and in 1890 was raised to the Primacy. He made a strong Archbishop, and dominated the Church with his vigorous personality.

**Temple, Sir William** (1628–99), English statesman and author; was Ambassador to The Hague in Charles II.'s time, and is understood to have been instrumental in bringing about the marriage between William of Orange and the Princess Mary. William III. twice offered him the position of Secretary of State, but he declined the honour, spending the years of his retirement at Moor Park (where Swift served him for a time as private secretary).

**Teniers, David** (the younger) (1610–94), was born at Antwerp, and his paintings of the old rustic Flemish life are unsurpassed in their humour and fidelity. He died at Brussels. His father, David Teniers the elder (1582–1649), was also one of the leading landscape painters of the time.

**Tennant, Rt. Hon. H. J.,** P.C. (b. 1865), M.P. for Berwickshire, 1894–1918; Parliamentary Under Sec. for War, 1912–16; Sec. for Scotland, 1916; a Liberal politician of many activities, youngest son of the late Sir Charles Tennant.

**Tenniel, Sir John** (1820–1914), for over fifty years a leading artist of *Punch*. Tenniel also illustrated numerous books, including *Alice in Wonderland*.

**Tennyson, Alfred, Lord** (1809–92), was Poet Laureate from 1850 to his death. Born at Somersby, in Lincolnshire, he evinced the poetic gift while quite young, and in 1827, joined his brother Charles in the publication of "Poems by Two Brothers." In 1830 and 1832 he again appeared before the public, the two small volumes of those years, written entirely by himself, serving to mark him out as one of the coming men in poesy. It was not until 1842 that he was again attracting attention with two volumes; but these more than confirmed previous promise. In 1847 he published "The Princess"; in 1850 "In Memoriam," a poem of great beauty and depth of thought, in which he enshrined his affection for the memory of his dead friend Arthur Hallam; and in 1855 "Maud" appeared. His other works include "The Idylls of the King," "Enoch Arden," "Queen Mary," "Harold," and "Becket." He was raised to the peerage in 1883.

**Terence** (*circa* 194–158 B.C.), a Roman poet and dramatist, who rose from the position of a slave to that of one of the most honoured men in Rome.

**Teresa, St.,** or **Theresa** (1515–82), a Spanish saint

and author, born at Avila, entered the Carmelite order in 1534, established a reformed order in 1562, became famous for her ascetic life and mystic visions, and died at Alba de Liste. Her religious writings include *The Way of Perfection* and *The Castle of the Soul*. She was canonised by Pope Gregory XV.

**Terry, Dame Ellen (Mrs. James Carew)** (1848–1928), one of the most distinguished of English actresses. Began her stage life when seven years of age in one of Charles Kean's great productions at the Princess's Theatre. She afterwards obtained other London engagements, and while yet quite young had made an important position for herself. It was not, however, until she became associated with Sir Henry Irving at the Lyceum that her greatest successes were obtained. G.B.E. 1925.

**Tertullian, Quintus** (*circa* 150–230), a Father and writer of the Latin Church. His chief work was his *Apologeticus*, a defence of Christianity.

**Tesla, Nikola** (b. in Serbia, 1857), electrician and inventor, was for a time connected with the Telegraph Engineering Department of the Serbian Government; later he was in Paris, engaged in electric-lighting experiments; and in 1882 went to America (where he has resided ever since), and was associated with Edison for a time. He has been an active promoter of electrical developments.

**Tetrazzini, Luisa**, an Italian prima donna who sprang into sudden prominence in 1907 by her wonderful singing at Covent Garden. She was hailed as a second Patti, and achieved a brilliant success.

**Tetzel, John** (*c.* 1460–1519), the German Dominican monk and Inquisitor, the scandal of whose sale of indulgences roused Luther to publish his memorable ninety-five theses at Wittenberg in 1517, and led up to the Reformation.

**Thackeray, William Makepeace** (1811–63). His first ambition was to be an artist, he seriously proposed to be an illustrator of Dickens's works, but he never got much beyond the amateur stage in pictorial work, the drawings he made to illustrate some of his own novels being crude and inefficient. As a humorist and novelist he, however, attained high rank. To *Fraser's Magazine* and to *Punch* he contributed a large number of burlesques, sketches, poems, etc., all full of spirit and fun; but it was not until later life that his greatest successes were won. *Vanity Fair*, which was issued in monthly parts between 1846 and 1848, proclaimed him a master in the realm of fiction. *Pendennis*, *Esmond*, *The Newcomes*, *The Virginians*, *Philip*, and *Lovel the Widower* make up the main of his finished stories, and English literature is all the richer for them. He edited the *Cornhill Magazine* from the first number, January, 1860, for a few years, his most notable contributions being his *Roundabout Papers*. His *Yellowplush Papers* and *The Book of Snobs* (republished from *Punch*) were widely read and admired; and the lectures he delivered in America on "The Four Georges" were pungently powerful.

**Thales of Miletus** (*circa* 640–546 B.C.), a geometer, astronomer, and philosopher, and one of the seven wise men of ancient Greece. The earliest of the Ionian philosophers, he created a sensation by the pre-calculation and prediction of an eclipse of the sun, which took place 585 B.C., and he looked upon water as the principle of all material things.

**Themistocles** (*circa* 520–449 B.C.) was chief archon of Athens, and when Xerxes assailed Greece commanded the Athenian fleet.

**Theocritus** (285–247 B.C.), one of the great Greek poets. Thirty "Idylls" have come down to us and a number of "Epigrams."

**Theodore, King of Abyssinia** (1818–68), a warlike and cruel despot, whose imprisonment of the British Consul, Cameron, led up to the expedition of Napier to Magdala, and the storming of that fortress in 1868. Upon his defeat by the British, Theodore committed suicide.

**Theodoret** (*circa* 390–457), a Greek theologian and historian of the school of Antioch.

**Theodoric the Great** (455–526), a celebrated King of the East Goths, born at Pannonia. In mediæval German romance he is known as "Dietrich von Bern," and had a reputation for good government, akin to that ascribed in England to King Alfred. He was the founder of the Gothic Kingdom of Italy.

**Theodosius the Great** (346–95) was Roman Emperor of the East for nearly twenty years. He gained victories over the Goths, and the year before his death became sole Emperor. Noted in ecclesiastical history for his conversion to Christianity, and for his submission to the penance imposed by St. Ambrose.

**Theophrastus** (*circa* 372–287 B.C.). Succeeded Aristotle as President of the Lyceum at Athens. His *History of Plants* and his *Moral Characters* are the best known of his writings.

**Thierry, Jacques N.** (1795–1856), a distinguished French historian, known by his *History of the Norman Conquest*.

**Thiers, Louis Adolphe** (1797–1877), a French statesman and man of letters, author of *History of the French Revolution*.

**Thomas, Rt. Hon. J. H.**, P.C., M.P. (b. 1875), Lord Privy Seal, 1929; Colonial Sec. in first Labour Govt., 1924. M.P., Derby. Secretary for Dominions, 1930 and 1931.

**Thompson, Sir Edward Maunde** (1840–1929), Director and Principal Librarian of the British Museum 1888–1909.

**Thomson, James** (1700–48), a Scottish poet. "The Seasons" attracted much favourable attention. His other works included "The Castle of Indolence," "Liberty," and a masque on the subject of "Alfred," written in collaboration with his friend Mallet. It is in "Alfred" that "Rule, Britannia!" appears.

**Thomson, James** (1834–82), a Scottish poet who wrote "The City of Dreadful Night."

**Thomson, Sir Joseph**, O.M. (b. 1856), Master of Trinity College, Cambridge, since 1918; Cavendish Professor of Experimental Physics, Cambridge, 1884–1918; a great chemist and electrician, has written learnedly on magnetism, dynamics, and physics generally. Awarded the Nobel Prize for distinction in Physics in 1906. P.R.S. 1916–20.

**Thoreau, Henry D.** (1817–62), was a natural philosopher and nature-worshipper, who forsook trade and devoted himself to a primitive kind of existence in the American woods. He was the friend of, and for a time lived with, Emerson, but in 1845 adopted his career of solitude, and pursued those studies of nature which afterwards gained him a high reputation. His *Walden, or Life in the Woods*, is a unique book.

**Thorndike, Sybil**, LL.D. (b. 1885), a celebrated British actress. In 1927 she had a great success in "Macbeth," also in G. B. Shaw's "St. Joan" and in several Greek tragedies.

**Thornhill, Sir James** (1676–1734), was an eminent English painter in the time of George I. Hogarth studied under him.

**Thornycroft, Sir John Isaac**, LL.D., F.R.S. (1843–1928), founded the well-known Thornycroft shipbuilding works at Chiswick in 1866, where he built many noted high-speed vessels, and in later years devoted much attention to the improvement of motor vehicles.

**Thornycroft, Sir William Hamo**, R.A. (1850–1925), an eminent English sculptor, has produced many sculptures, including the Gladstone Memorial, the statue of General Gordon in Trafalgar Square, of Queen Alexandra in the Royal Exchange, Lord Granville in the Houses of Parliament, Cromwell at Westminster, and John Bright in Rochdale. Among his creative examples are "The Mower," "Lot's Wife," and "Teucer," the last-named being bought by the Chantrey Trustees.

**Thorwaldsen, Oertel** (1770–1844), a famous Danish sculptor.

**Thucydides** (471–401 B.C.) was a distinguished Greek historian.

**Thurlow, Edward, Lord** (1731–1806), was one of England's most celebrated Lord Chancellors.

**Tiberius, Claudius** (42 B.C.–37 A.D.), the second Emperor of Rome, notoriously wicked.

**Tieck, Johann Ludwig** (1773–1853), a renowned German poet and novelist.

**Tillett, Benjamin**, M.P. for North Salford 1917–24 and again 1929 (b. 1860), came into prominence in the great dock strike of 1889. He was the organiser and secretary of the Dockers' Union; for several years alderman of the L.C.C.; and an active labour leader. Chairman of the General Council T.U.C. 1928–29.

**Tillotson, Archbp. John** (1630–94), a celebrated preacher at Lincoln's Inn, "Popery" and "Atheism" being the main objects of his attacks; in 1674 became Archbishop.

**Timoleon of Corinth** (415–337 B.C.), an illustrious Greek general, who delivered Syracuse from Dionysius, defeated Hasdrubal and Hamilcar, and brought Sicily into prosperous tranquillity.

**Timon of Phlius,** a noted Greek sceptic philosopher, poet; and dramatist, who flourished about 280 B.C.

**Tindal, Matthew** (*c.* 1653–1733), a noted English Deist.

**Tintoretto** (1518–94), the famous Venetian painter, whose numerous religious pictures are of great value and interest. His real name was Jacopo Robusti, and he received the cognomen of Tintoret, or Tintoretto, from his father's avocation, that of a dyer.

**Tirpitz, Admi. von** (1849–1930), commanded German Fleet, 1914–1916; he built up and organised the German torpedo service. Modelled the fleet of Germany in accordance with that of Britain.

**Titian** (1477–1576), one of the greatest of painters. He studied under the Bellinis, and made his first essays in painting for the public in conjunction with Giorgione, whom he soon surpassed. In 1511 he was at Padua, where he painted some notable frescoes; in 1512 he was back in Venice, with a studio on the Grand Canal, employed on important commissions. From this time forward he was in great demand, and exercised his marvellous powers almost to the end of his life, dying at ninety-nine of the plague.

**Titiens (or Tietjens), Teresa** (1831–77), a famous German operatic prima donna and concert-room singer.

**Titus** (40–81), the Roman Emperor, and son of Vespasian. Attained great renown by his successful part in the Jewish war which terminated in the capture and destruction of Jerusalem; he was deemed a profligate and a tyrant, but no sooner was he in sole power than he exerted himself to the utmost to please the people, completed the Colosseum, gave plenty of exhibitions, built splendid baths, and otherwise made himself popular.

**Tocqueville, Alexis de** (1805–59), an able French statesman and writer, author of the celebrated book *Democracy in America*.

**Todhunter, Isaac** (1820–84), a mathematician.

**Todleben, E. Ivanovitch, Count** (1818–84), a noted Russian general and military engineer who defended Sebastopol against the Allies in the Crimean War.

**Togo, Admiral, Count** (b. 1847), a most conspicuous naval commander who distinguished himself in the Russo-Japanese War in 1904.

**Tolstoi, Count Leo** (1828–1910), was the most distinguished personality in modern Russian literature. Born of a good family, he was for a time in the army, but was so greatly moved by the trials and sufferings of the people that, out of pure sympathy of heart, he was impelled "to take up his pen and write." At twenty-four he published his *Childhood*, and in 1854, while in camp in the Crimea, wrote his *Tales from Sebastopol*, which procured him considerable literary fame. Later on he was a persistent advocate of progressive ideas, and, before the Emancipation Act for freeing all Russian serfs was enforced, he himself had given the serfs on his own estate their freedom. In 1862 he married, and settled down to a quiet country life, shortly afterwards publishing his *War and Peace* and *Anna Karénina*. In more recent years Tolstoi developed a sort of religious mysticism. Among his later works are *The Power of Darkness*, *The Kreutzer Sonata*, *The Cossacks*, *Resurrection*, and *The End of the Age*.

**Tone, Theobald Wolfe** (1763–98), the Nationalist agitator who founded the Society of United Irishmen in 1791.

**Tooke, John Horne** (1736–1812), politician and philologist.

**Toole, John Lawrence** (1832–1906), a popular English comedian.

**Torquemada, Tomas de** (1420–98), the chief officer of the Spanish Inquisition.

**Torricelli. Evangelista** (1608–47), Galileo's pupil. He invented the barometer and improved both the microscope and the telescope.

**Tourguenieff** (or **Turguenieff**), **Ivan** (1818–83), a clever Russian novelist and writer, who suffered imprisonment for his fearless expressions of political opinion, but contributed by his pen materially to the emancipation of the serfs. The most striking of his stories "with a purpose" are *A Nest of Nobles*, *Fathers and Sons*, *Smoke*, and *The Diary of a Superfluous Man*.

**Toussaint-L'Ouverture** (*c.* 1746–1803), negro leader in St. Domingo.

**Townshend, Major-Gen. Sir Charles,** K.C.B., D.S.O. (1861–1924), served South Africa 1899–1900; European War (Mesopotamia), 1914–16; commanded Div. in defence of Kut.

**Toynbee, Arnold** (1852–83), after graduating at Oxford, devoted himself to practical philanthropy and social reform. From his self-denying efforts sprang the settlement in East London —Toynbee Hall.

**Trajan** (*circa* 52–117) was Roman Emperor from 98 to his death. His rule was enlightened, and he was esteemed by the people.

**Tree, Sir Herbert Beerbohm** (1853–1917), the London actor-manager who scored successes at the Haymarket and His Majesty's Theatres.

**Treloar, Sir William, Bart.** (1842–1923), for many years a prominent member of the London Corporation. Lord Mayor 1906–7. Knighted in 1899. Bt. 1907. His work for the relief of crippled children had been highly beneficial.

**Trench, Richard Chenevix** (1807–86), Anglican ecclesiastic, poet, scholar, and miscellaneous writer.

**Trenchard, Air Marshal Lord** (b. 1873), G.C.B., D.S.O., Chief of Air Staff 1918, Marshal of the Royal Air Force 1927, Chief Commissioner of Police, 1931.

**Trent, Lord, of Nottingham** (Jesse Boot) (1850–1931), founder of Boots Cash Chemists, Ltd.; a great benefactor of Nottingham, especially to the University of Nottingham.

**Trevelyan, G. Macaulay,** O.M., O.B.E. (b. 1876), Regius Professor of Modern History, Cambridge University, since 1927; a Trustee of the British Museum and National Art Gallery. An eminent historian, author of many works, including *A History of England* (1926).

**Trevelyan, Rt. Hon. Sir George Otto,** O.M. (1838–1928), was educated at Harrow and Cambridge, and some years in the Indian Civil Service. In 1865 entered Parliament as a Liberal, and in 1868 was Civil Lord of the Admiralty in Mr. Gladstone's first Ministry. In 1880 he was Parliamentary Secretary to the Admiralty, and in 1882 Chief Secretary for Ireland. Was afterwards Chancellor of the Duchy of Lancaster, and Secretary for Scotland, but separated himself from Mr. Gladstone on the Home Rule question. Was again Secretary for Scotland from 1892–95, and retired from political life in 1897. As a writer, Sir George attained no mean reputation; his *Life and Letters of Lord Macaulay* is one of the best of modern examples of biography, and after leaving public life he made his mark as an historian.

**Treves, Sir Frederick, 1st Bart.,** C.B. (1853–1923), a skilful surgeon, who was Serjeant-Surgeon to King Edward VII. and Surgeon-in-Ordinary to Queen Alexandra.

**Trevithick, Richard** (1771–1833), a Cornish mine-manager's son, who invented the road-locomotive, putting upon the highway on Christmas Eve, 1801, the first steam-propelled vehicle for passengers.

**Trollope, Anthony** (1815–82), author of many novels. His Barchester series depicts a number of scenes of higher clerical life with great fidelity and success.

**Trotsky, Leon D. B.,** one of the leaders of the Bolshevist revolution, a strong supporter of Lenin. War Minister of the Bolshevist Government and its leading representative at the Brest-Litovsk conference of 1917–18. Dismissed from office 1925.

**Tsao-Kun,** installed President of China, Oct. 1923.

**Tschaikovsky, Peter Ilitch** (1840–93), a Russian musical composer of great force and originality.

**Tullius, Servus,** was, according to tradition, the sixth King of Rome, who reigned 578–534 B.C.

**Tulloch, Dr. John** (1823–86), an eminent Scottish Divine.

**Tupper, Martin Farquhar** (1810–89), a poet of some pretensions, who abandoned law for literature.

**Turenne, Vicomte de** (1611–75), a famous French commander and Marshal of France, who was highly successful in the Thirty Years' War.

**Turkey, President of Republic of,** Mustafa Kemal Pasha (b. 1881), elected President in 1923. He lives at Angora, the new capital of Turkey, and has enforced many widespread reforms.

**Turner, Joseph Mallord William** (1775–1851), was the son of a London barber, but while quite a child showed the possession of artistic genius. In 1789, after some miscellaneous schooling, he entered the Royal Academy classes, and soon began to make headway, being elected A.R.A. in 1799, and four years later R.A. Of his larger pictures may be mentioned "The Sun Rising through Vapour," "Crossing the Brook," "Dido building Carthage," "The Fighting Téméraire," and "Calais Pier." Ruskin in his *Modern Painters* wrote with great eloquence and critical insight regarding Turner's work, and brought about a fuller appreciation of his genius. He was never married, and took little interest in anything outside his art. He left the oil paintings and drawings he had preserved to the National Gallery. He bequeathed a fortune of some £150,000 for founding an asylum for male decayed English artists, but the will was disputed by his next of kin, who succeeded, owing to the want of clearness in the testator's wording of his desire, in obtaining the greater part of the estate, with the exception that £20,000 went to the Royal Academy, and the whole of the pictures and drawings to the nation.

**Tussaud, Madame** (1760–1850), a Swiss who, while practising the art of modelling wax in Paris at the time of the French Revolution, made her escape to England and set up a small exhibition of wax figures in the Strand, later carried on by her son, grandson and great-grandson at Baker Street and in 1884 transferred to Marylebone Road.

**Tut-ankh-amen** (*circa* B.C. 1350), an Egyptian Pharaoh of the 18th dynasty, whose tomb was discovered by Mr. Carter in 1922, with the mummy intact. The magnificence of the coffins and ornaments, together with large quantities of furniture, etc., of that time, caused world-wide interest.

**Twain, Mark.** (See **Clemens, Samuel L.**)

**Tyler, Wat,** the leader of the peasants' revolt of Richard II.'s time against the iniquitous poll-tax. Over 100,000 peasants followed Tyler into London in June, 1381, and the king met them in Smithfield and made promises of redress that were never fulfilled. It was at this meeting that Sir William Walworth, Lord Mayor of London, stabbed Tyler with a dagger, and afterwards handed him over to his followers to kill outright.

**Tyndale, William** (*c.* 1492–1536), was educated at Oxford, and conceived a strong desire to be the medium of presenting the Bible to his countrymen in their own language. He completed the translation of the New Testament at Wittenburg, where he was associated with Luther. This version was first published at Antwerp, and then found its way to England, where it was publicly burnt at St. Paul's Cross. Tyndale afterwards was associated with Miles Coverdale in a translation of the Old Testament, but only completed the Pentateuch and the book of Jonah. Antwerp was Tyndale's retreat during this later period, and in 1535 he was arrested for heresy and put to death by strangling and burning.

**Tyndall, John** (1820–93), was an eminent scientist. His books on *Light*, *Sound*, and *Heat* are well-known text-books.

**Tyrrell, Lord,** K.C.M.G., K.C.B., K.C.V.O. (b. 1866), British Ambassador in Paris since 1928. Secretary of State for Foreign Affairs 1907–15.

**Tytler, Patrick Fraser** (1791–1849), was a Scottish historian.

## U

**Udall, Nicholás** (1505–56), was a quaint humorist, who wrote a rollicking comedy, "Ralph Roister Doister."

**Uhland, Johann Ludwig** (1787–1862), a German poet who won great fame by his ballads and songs.

**Ullswater, Viscount.** (See **Rt. Hon. J. W. Lowther.**)

**Ursula, St.,** is said to have been an English princess, who with 11,000 virgins set out on a pilgrimage, but compelled by a fierce storm to take refuge in Cologne, was there put to death with her following by an army of Huns.

## V

**Valentine, St.,** was a Christian martyr of the reign of the Emperor Claudius (*circa* 270). His festival was commemorated on February 14 before Gregory the Great's time. The custom of sending valentines had its origin in a heathen practice associated with the worship of Juno about this date in the calendar, and had no connection with the saint.

**Vambery, Arminius** (1832–1913), a celebrated Orientalist and traveller.

**Vanbrugh, Irene** (**Mrs. Dion Boucicault**), and **Vanbrugh, Violet** (**Mrs. Arthur Bourchier**), are the stage names of two favourite and talented London actresses.

**Vanbrugh, Sir John** (1664–1726), was a prominent architect as well as a successful dramatist.

**Vancouver, George** (1758–98), a British navigator who served under Captain Cook, and later explored the Gulf of Georgia and the Straits of San Juan de Fuca, as also the shores of Vancouver Island.

**Vanderbilt, Cornelius** (1794–1877), a noted American merchant and railway speculator, who accumulated a fortune of twenty millions sterling. His son, William Henry Vanderbilt (1821–1885), inherited it and added to it.

**Van Dyck** (or **Vandyke**), **Sir Anthony** (1599–1641), was born at Antwerp, and after studying under Rubens went to Italy and there made a name as a portrait painter. In 1629 he came to England on the invitation of Charles I., but only remained a short time; in 1631 Charles prevailed upon him to return, made him a knight, granted him an annuity, and he became the Society painter of the day.

**Vane, Sir Harry** (1613–62), was a prominent statesman and diplomatist. At the Restoration he was arrested as an enemy to the State and ultimately beheaded on Tower Hill.

**Vasari, Giorgio** (1511–74), eminent alike as an architect, painter, and a writer.

**Vasco da Gama.** (*See* **Gama.**)

**Vauban, Sebastién** (1633–1707), a renowned French military engineer, who introduced great improvements in methods of fortification, conducted fifty-three sieges, and took part in 140 battles.

**Vaucanson, Jacques de** (1709–82), a French mechanician, who invented and exhibited some wonderful working automa, including a life-like flute-player, a tambourine and flageolet player, and a duck which could eat and drink.

**Vaughan, Father Bernard** (1847–1922), a fearless Romanist Preacher.

**Velasquez, Diego** (1465–1523), a Spanish soldier and companion of Columbus, sent to conquer Cuba. Velasquez founded Santiago and Havana.

**Velasquez, Diego** (1599–1660), was a famous Spanish painter, whose pictures rank among the finest in Spanish art.

**Venizelos, Eleutherios** (b. 1864), Greek patriot, who, in Aug. 1916, after the duplicity of King Constantine was established, headed a national movement for bringing Greece into harmony with the objects of the Entente Powers, and helped to bring about the downfall of Constantine, himself becoming Prime Minister. Was defeated in the elections of 1920 by the supporters of ex-King Constantine after the death of King Alexander, and resigned, leaving the country. On the expulsion of King George II. in Dec. 1923, was recalled to Greece and elected President of the National Assembly, but resigned in 1924.

**Verdi, Giuseppe** (1813–1901), the most popular composer of Italian opera of the 19th century. His works are "Nabucodonosor," "I Lombardi," "Ernani," "Rigoletto," "Il Trovatore," "La Traviata" and "Aida"; followed by "Otello" and "Falstaff."

**Verne, Jules** (1828–1905), was one of the most

popular authors of wonder-stories in Europe. The best-known of his numerous works are *Five Weeks in a Balloon, Twenty Thousand Leagues under the Sea, Round the World in Eighty Days.*

**Vernet, Horace** (1789–1863), was a distinguished French painter of battle-pieces.

**Vernier, Pierre** (1580–1637), a Spaniard, who invented the mechanism of the *vernier* axiliary scale, enabling lines and angles to be measured to a minute degree. The vernier, however, is now superseded for the most part by micrometer-screws.

**Veronese, Paul,** or **Paolo Cagliari** (1528–88), a celebrated Italian painter of religious subjects. His "Marriage Feast at Cana in Galilee," "The Feast in the House of Simon," and "The Presentation of the Family of Darius to Alexander," are paintings of world-wide celebrity, while his "Adoration of the Magi," in our National Gallery, is a grand work.

**Veronica, St.,** a legendary woman of Jerusalem, who was said to have handed to Christ her kerchief on His way to Calvary. The old belief was that the Redeemer wiped His brow therewith, leaving on the handkerchief a miraculous impression of His face, the so-called "Veronicon." The Saint is commemorated on February 4th.

**Vespasian** (9–79) was Roman Emperor during the last nine years of his life. At one time he commanded the Roman army of occupation in Britain.

**Vespucci, Amerigo** (1451–1512). (*See* **Amerigo.**)

**Victor Emmanuel II.** (1820–78) was King of Sardinia from 1849 to 1861, became King of Italy, according to the Proclamation of the Sardinian Senate; but it was not until 1870, when the unification of Italy was fully secured, that the title came to have its true significance.

**Victor Emmanuel III.** (b. 1869), son of Humbert I. and grandson of Victor Emmanuel II., succeeded his father as King of Italy in 1900.

**Victoria** (1819–1901), Queen of Great Britain and Ireland and Empress of India, was daughter of the Duke of Kent, and came to the throne in 1837 on the death of her uncle, William IV., being crowned in Westminster Abbey in the following year. In 1840 she married Prince Albert of Saxe-Coburg-Gotha, who died in 1861. There were nine children of the marriage, namely, Victoria Adelaide, Princess Royal, born 1840; Albert Edward, Prince of Wales, 1841 (Edward VII.); Alice Maud, 1843; Alfred Ernest, 1844; Helena, 1846; Louise, 1848; Arthur, 1850; Leopold, 1853; and Beatrice, 1857. Of these Edward VII. died in 1910; the Princess Royal, who was married to Prince Frederick William of Prussia, became Empress of Germany, and was the mother of the Ex-Kaiser William II. of Germany, died in 1901; Princess Alice, who married Prince Louis of Hesse-Darmstadt, died in 1878; Prince Alfred (Duke of Edinburgh and afterwards of Saxe-Coburg) died in 1900; Helena (Princess Christian of Schleswig-Holstein), died 1923; whilst Prince Leopold died in 1884. Lord Melbourne was Prime Minister at the date of the Queen's accession, and for a number of years the country lived through troublesome times, the Corn Law and Chartist agitations being at times very threatening, but a more settled condition of things supervened, and for the remainder of the long and illustrious Victorian reign there was no serious home unrest. The principal events, beyond the bounds of the United Kingdom, of her Majesty's reign were the Crimean War, the Indian Mutiny, her proclamation as Empress of India, and finally the Boer War. The Jubilee of Queen Victoria's accession was celebrated in 1887, and the Diamond Jubilee ten years later.

**Villeneuve, Pierre** (1763–1806), the French naval commander who was opposed to Nelson at Trafalgar and captured along with his ship, the *Bucentaure.*

**Villiers, Charles Pelham** (1802–98), was one of the Free Trade leaders along with Cobden and Bright, an untiring worker and an eloquent advocate of the cause.

**Villiers, Geo. Wm. Fredk., 4th Earl of Clarendon.** (*See* **Clarendon.**)

**Villon, François** (1431–61), was a clever French adventurer and poet, who lived an unscrupulous, romantic life.

**Vimy, Baron Byng of,** G.C.B. (b. 1862). Chief Commissioner of Police, 1928–31. Distinguished service in South Africa, Soudan, &c. As General Sir Julian Byng won fame for leading successful attack on the Hindenburg Line in Nov. 1917, when thousands of prisoners were taken. Formerly commanded the Canadian Corps. Barony 1919. Governor-General of Canada 1921.

**Virchow, Rudolf** (1821–1902), a celebrated German anatomist and physiologist, the founder of cellular pathology; he was also a politician.

**Virgil** (70–19 B.C.), the great Roman epic poet, was born near Mantua, and cultivated a farm in the adjacent village of Andes. He proceeded to Rome in his thirtieth year to obtain redress for the occupation of his lands by the military. Became known to Octavian and Mæcenas, and, having had his demand satisfied, began the writing of his *Eclogues. The Georgics* followed; his most famous work, the *Æneid,* comprised twelve books, dealing with the story of the wanderings of Æneas after the destruction of Troy.

**Vitus, St.,** Roman Catholic saint and martyr, who lived in the 4th century. It used to be the custom to dance before his shrine on his festival day, June 15th, in the belief that good health was thereby ensured for the next twelvemonth. The nervous ailment, St. Vitus' dance, derives its name from this practice.

**Viviani, René,** Premier of France 1914–15, a strong leader and a fine administrator during a difficult period of the war.

**Volta, Count Alessandro** (1745–1827), Professor of Natural Philosophy both at Como and at Pavia University. In the course of his studies on electricity he discovered the voltaic pile, giving his name thereto, and also to the electrical unit, the volt.

**Voltaire, François Marie Arouet de** (1694–1778), one of the greatest of French philosophers and writers. His first essays offended the authorities, and he lived in London for a couple of years (1726–28), and there wrote some of his dramas. Returning to France, he published his *Philosophical Letters,* which aroused the enmity of the priesthood. At this juncture, the Marquise du Châtelet offered him the asylum of her castle of Cirey, and for the next fifteen years he made this his home, writing there his *Discourses on Man, Essay on the Morals and Spirit of Nations, Age of Louis XIV,* &c. From 1750–53 he lived in Berlin, on the invitation of Frederick the Great.

## W

**Wade, Benjamin Franklin,** American statesman (1800–78), anti-slavery leader and acting Vice-President of the U.S.A., under Johnson.

**Wagner, Richard** (1813–83), born at Leipsic, was the composer who exerted the greatest influence upon musical art during the 19th century. He revolutionised operatic methods, and doing away with set ballads and choruses, endeavoured to give the same unity of action to an opera as would be realised in a play without music. This continuity of musical thought and action was a long time in forcing itself into acceptance, but to-day is acknowledged as the only adequate interpretation of dramatic musical expression. Wagner fought for his position with great pertinacity and courage, but it was not until the King of Bavaria enabled him to indulge his aims to their fuller development that he realised his ambition. At the famous opera house at Bayreuth were produced all the later Wagnerian operas of the "Ring des Nibelungen" tetralogy. His last work, "Parsifal," given in 1882, shows the fullness of his powers.

**Wain, Louis** (b. 1860), a clever artist and animal caricaturist, widely popular for his drawings of cats.

**Wakefield, Lord Charles Cheers,** C.B.E. (b. 1859), Governing Director of the great Oil Company of that name. A generous benefactor to aviation. Was Lord Mayor of London 1916. Holds many civic dignities. Peerage 1930.

**Walker, Frederick** (1840–75), a clever painter and black-and-white artist.

**Walker, George** (1618–90), the hero of the siege of Londonderry, in 1688, who kept the besiegers at bay for 105 days.

**Wallace, Alfred Russel** (1823–1913), celebrated naturalist, a native of Usk, attracted much notice as far back as 1853 by his book *Travels on the Amazon*, detailing his experiences in that region. In 1858, while down with illness in the Moluccas, the idea of the evolution theory occurred to him, and curious to say, he drafted his first notes upon it and sent them to Darwin in England while the latter was on the eve of publishing his own exposition of the theory, the result being the reading of a joint paper on the subject to the Linnean Society. The coincidence was fully acknowledged by Darwin. There are differences, however, between the points of view of the two thinkers. Wallace's *Darwinism* fully expresses his own views on the subject. He also wrote on *Miracles and Modern Spiritualism*. He enjoyed a Government pension from 1891, and in 1905 published a deeply interesting autobiography.

**Wallace, Sir Donald Mackenzie** (1841–1919), journalist, traveller, and picturesque miscellaneous writer. Edited the tenth edition of the *Encyclopædia Britannica*, and wrote notable books on Russia and Egypt.

**Wallace, General Lewis** (1827–1905), a popular American novelist; his historical romance, *Ben Hur : A Tale of the Christ*, made him famous.

**Wallace, Sir Richard** (1818–90), son of the Marquis of Hertford, and inheritor from him of a famous collection of pictures and other works of art, to which he himself added largely. This collection was bequeathed to the nation by his widow along with Hertford House, and now forms one of the most important exhibitions in London.

**Wallace, Sir William** (*circa* 1270–1305), the great Scottish patriot and chieftain who led the Scottish armies against Edward I. and for a time the English were kept completely in check. Later, Edward defeated him at Falkirk, and finally in 1304 he was captured, taken to London, condemned for treason, and executed at Smithfield.

**Wallenstein, Albrecht von** (1583–1634), a great Bohemian general and Duke of Friedland.

**Waller, Edmund** (1606–87), was one of the most graceful of English poets, who tuned his lyre to suit both the Cromwellians when they were a power, and Charles II. when his turn came.

**Walpole, Horace** (1717–97), was the younger son of Sir Robert Walpole, filled a number of Government positions, and was a member of the House of Commons. He retired in 1768 to his favourite House at Strawberry Hill, and devoted himself to the writing of books and the accumulation of works of art.

**Walpole, Hugh**, C.B.E. (b. 1884), a well-known British novelist whose novels include *Fortitude*, *The Dark Forest*, and *Mr. Perrin and Mr. Traill*.

**Walpole, Sir Robert** (1676–1745), was the great Whig statesman of the early part of the 18th century. He resolutely opposed the South Sea scheme, and showed enlightened views of financial policy. He was Prime Minister for twenty-two years; he relieved from duty more than 100 export and forty import articles, a policy which greatly extended the scope of British commerce.

**Walpurga, St.**, was an abbess who emigrated in the 8th century from England to Germany, and became associated with the witch legends of Walpurgis Night in legendary lore. Her day in the calendar of the Church is May 1st.

**Walsh, Most Rev. Wm. J.** (1841–1921), Roman Catholic Archbishop of Dublin, 1885–1921. Closely associated with the Irish Nationalist movement.

**Walter, John** (1776–1847), the name borne by the founder of the *Times*, and also by the next two managing proprietors of the paper. The second John Walter was the leading spirit of the *Times* from 1803 to 1847, and it was his efforts that made the journal the greatest newspaper in the world.

**Walton, Izaak** (1593–1683), one of the most loveable of English writers, the famous author of *The Compleat Angler, or the Contemplative Man's Recreation*. Up to the age of fifty he was a London draper.

**Walton, Sir J. Lawson** (1840–1908), a leading man at the Bar and in Liberal politics, and the son of an Ex-President of the Wesleyan Conference. Appointed Attorney-General by Sir H. Campbell-Bannerman in his Government formed at the end of 1905, and died on January 7th, 1908.

**Warbeck, Perkin** (1474–99), a Pretender to the English Crown. The son of a Tournai Jew, he claimed to be Richard, Duke of York, supposed to have been murdered in the Tower, and therefore entitled to the throne of England in preference to its then occupant, Henry VII. The Duchess of Burgundy and Charles VIII. of France and James IV. of Scotland gave him their countenance. Warbeck was enabled in 1497 to appear in England at the head of a force of 7,000 men, but was easily defeated, tried for treason and hanged at Tyburn.

**Warburton, William** (1698–1779), was a celebrated English divine; author of several theological books.

**Ward, Edward Matthew** (1816–79), an English historical painter and R.A., who executed some of the frescoes in the Houses of Parliament and produced numerous large and notable canvases.

**Ward, Mrs. Humphry** (1851–1920), was granddaughter of Dr. Arnold, of Rugby renown. She first sprang into notice as a novelist with her *Robert Elsmere* in 1888, and subsequently wrote several other stories which, in the main, realised the high promise of her first work. These included *Marcella*, *Sir George Tressady*, *David Grieve*, *Fenwick's Career*, and *Missing* (1917).

**Ward, Rt. Hon. Sir Joseph G., Bart., K.C.M.G.**, Premier of New Zealand, 1906–12; Minister of Finance, 1915. A strong supporter of the Unity of Empire. Attended the Imperial Conferences of 1909 and 1911. Died 1930.

**Ward, Sir Leslie** (1851–1922), a portrait painter, widely famous as "Spy," the caricaturist of *Vanity Fair*.

**Warner, Charles Dudley** (1829–1900), American author and humorist, who was for a while absorbed in journalism, and later became associate editor of *Harper's Magazine*. Author of : *Back-Log Studies*, *My Summer in a Garden*, *Being a Boy*, *Captain John Smith*.

**Warner, Susan** (1819–85), an American novelist better known by her pet name of "Elizabeth Wetherell." Her books, *The Wide Wide World*, *Daisy*, *The Old Helmet*, gained her universal favour.

**Warren, Samuel** (1807–77), a barrister and novelist, who by his *Diary of a Late Physician*, and *Ten Thousand a Year*, won considerable popularity. He was for many years Recorder of Hull, and later a Master in Lunacy.

**Warton, Joseph** (1722–1800), clergyman, poet, and miscellaneous writer, and for twenty-seven years Head Master at Winchester School. He edited Pope, and wrote a masterly essay on that poet.

**Warton, Thomas** (1728–90), brother of the last named, was the author of a *History of English Poetry*, and for the last five years of his life was Poet Laureate.

**Warwick, Countess of** (b. 1861), wife of the present (5th) Earl, has been identified with many public movements for the betterment of her sex, and is an ardent advocate on the platform and in the Press of Socialism. She has established at Studley a college for the agricultural training of women, a horticultural college and hostel at Reading for the daughters of professional men, a science and technical school for boys and girls in Essex, and a home at Warwick for crippled children.

**Warwick, Richard Neville, Earl of** (*circa* 1428–71), "The King Maker," was the leader of the York party in the Wars of the Roses. At the battle of Northampton he made Henry VI. captive, and afterwards proclaimed Edward, Earl of March, king under the title of Edward IV. Then, when Edward showed a disposition to resent Warwick's protection, the latter drove Edward from the country and once more placed Henry VI. on the throne. He lost his life at the battle of Barnet.

**Washington, George** (1732–99), was of English descent, and was living on his American estate at Mount Vernon when the dispute between the British home government and the colonists broke out. He became one of the leaders of the local opposition, and later was elected to the first Congress at Philadelphia. The following year, 1775, saw him Commander-in-Chief of the American army, and from that time to the

end of the struggle in 1788 he was trusted and adored by the people, and on the founding of the Republic became its first President in 1789. He served a second term of office from 1793 onwards, and refused election for a third time. He was one of the noblest characters in history —good, simple, honest, brave, and efficient.

**Watkin, Sir Edward** (1819–1901), a great English railway magnate in his day. He fought hard for the promotion of the Channel Tunnel, and was a tireless worker for railway progress in all directions.

**Watson, Rev. John** ("Ian Maclaren") (1850–1907), a Free Church Minister. In 1893 he came before the public as a writer of popular Scottish stories: *Beside the Bonnie Briar Bush*, *Kate Carnegie*, *The Days of Auld Lang Syne*, and *Young Barbarians*.

**Watson, Sir William**, b. 1858 at Burley-in-Wharfedale, and educated at Liverpool. In 1880 his "Princess Quest" was published, followed in 1884 by "Epigrams of Art, Life and Nature." These, however, attracted no special attention, but when in 1890 he issued his "Wordsworth's Grave," it was felt that a new poet had arisen, and much that he has written since has been of high merit. Has written some fine poems on the War. In receipt of a Civil List Pension of £100 a year since 1895. Knighted, 1917.

**Watt, James** (1736–1819). Born at Greenock, this genius was originally a mathematical instrument maker, and being brought into touch with mechanical problems, conceived the idea of the modern, that is, high-pressure steam-engine. Watt took out his first patent in 1769; the engine, however, was only used for mining operations until 1785, when it was applied to a cotton factory, Watt being greatly aided in his developments of the engine by the business ability of his partner Matthew Boulton.

**Watteau, Jean Antoine** (1684–1721), a French landscape painter of transcendent ability, and especially great in *genre*. His shepherds and shepherdesses, rustic dance and fête scenes were wonderful for their harmonious brilliancy of coloration. His *chef-d'œuvre* is the "Embarkation for the Isle of Cytherus" in the Louvre.

**Watts, George Frederick**, R.A. (1817–1904), occupied a unique place in English art, the majority of his works being marked by depth of thought and a poetic meaning which rendered them highly distinguished. His works are numerous; among them may be mentioned "Love and Death," "Hope," and "The Angel of Death." He bequeathed to the nation a large number of his finest pictures. His portraits of Swinburne, Carlyle, Cardinal Manning, Browning, and Tennyson are especially fine.

**Watts, Isaac** (1674–1748), a great English hymn-writer; author of "O God, our help in ages past."

**Watts-Dunton, Theodore** (1836–1914), a prominent critic—especially of poetry. He published *The Coming of Love* in 1897, and in 1898 his brilliant romance of *Aylwin*.

**Waugh, Edwin** (1817–90), the Lancashire poet and writer of dialect sketches and stories, the best among the latter being his *Tufts of Heather*, *Chimney Corner*, and *Besom Ben Stories*. His *Lancashire Songs* were first collected in 1859.

**Webb, Sir Aston**, C.B., R.A. (1849–1930), President of the Royal Academy 1919–24, one of our foremost architects, and the designer of the general scheme of the Victoria Memorial in front of Buckingham Palace, the new Birmingham University, the Britannia Naval College at Dartmouth and many other fine structures. G.C.V.O. 1925.

**Webb, Matthew** (1848–83), in 1875 swam the English Channel in twenty-two hours, and was drowned eight years later in an attempt to swim through the Niagara rapids.

**Webb, Sidney** (b. 1859), Colonial Secretary, 1929. M.P., Durham, 1922. President of Board of Trade in first Labour Government, 1924. An active Progressive politician, and writer on economic questions. Was a member of the London County Council, 1892–1910, and is one of the Senate of London University. He founded (1913) and edited (–1922) the *New Statesman*. Raised to the Peerage, 1929, as Lord Passfield. Secretary of State for Dominion Affairs, 1929–30.

**Weber, Carl Maria von** (1786–1826), was a distinguished German opera composer. His opera, "Der Freischutz," was immensely popular.

**Webster, Benjamin** (1800–82), a London actor-manager of much popularity in his day. Built the Adelphi Theatre in 1858, and was later lessee of the Olympic. He was a fine comedian.

**Webster, Daniel** (1782–1852), a United States lawyer and politician.

**Webster, Noah** (1758–1843), the American lexicographer and grammarian. Author of the *Dictionary of the English Language*, and works on literary and political themes.

**Wedgwood, Josiah** (1730–95), was the most famous of English potters. He was born at Burslem. Served an apprenticeship that carried him through all the branches of the trade, and in 1759 was able to set up in business for himself with money he had saved. He persevered through failure after failure, and in a few years produced such an improved form of ware that it came into great demand. He engaged Flaxman to make classical designs for him, and his pottery became the fashion, and led to a great extension of the Staffordshire earthenware industry. His works at Etruria were the most extensive of the kind in the Kingdom.

**Wedgwood, Rt. Hon. Josiah**, D.S.O. (b. 1872), Chancellor of Duchy of Lancaster, 1924; Vice-Chairman of Labour Party, 1921–24; M.P., Newcastle-under-Lyme, 1906. Colonel during European War, 1914–16.

**Wedmore, Sir Frederick** (1844–1921), writer on art; an authority on the art of France and on etchings.

**Welldon, Rt. Rev. J. E. C.** (b. 1854), Dean of Durham since 1918; Dean of Manchester 1906–18. Has been successively Head Master of Dulwich College, Chaplain to Queen Victoria, Head Master at Harrow, Bishop of Calcutta and Metropolitan of India, and Canon of Westminster.

**Wellesley, Marquess of** (1760–1842), elder brother of the great Duke of Wellington, and himself a statesman of note.

**Wellington, Arthur Wellesley, Duke of** (1769–1852), was the most famous British general of the 19th century. He distinguished himself in India and conducted successfully the Peninsular War. Wellington returned to England, and was received as a hero. In 1814 he was British Ambassador at Paris. Then came Napoleon's escape from Elba, the short and sharp campaign which terminated at Waterloo, and the final overthrow of Napoleon. Wellington became the most prominent man in the Empire. From 1828 to 1830 he was Prime Minister. From 1842 to his death he was Commander-in-Chief. His funeral at St. Paul's was one of the great pageants of last century.

**Wells, C. J.** (1800–1879), a gifted but neglected poet, the schoolfellow of Keats.

**Wells, H. G.** (b. 1866), B.Sc. London; a distinguished English novelist whose work, whether romantic as in *Kipps* and *The History of Mr. Polly*, or scientific as in *The Outline of History*, has gained him a world-wide reputation. Social, political and educational problems are treated with breadth of vision and are clearly analysed in his books.

**Werner, Friedrich** (1768–1823), a German romantic poet and dramatist.

**Wesley, Charles** (1708–88), brother of John Wesley, and the poet of Methodism. Wrote a large number of hymns of enduring merit.

**Wesley, John** (1703–91), the founder of the great religious communion of the "people called Methodists," and the son of a clergyman of the Anglican church. Taking orders himself, in 1735, he went to Georgia as a missioner and allied himself with the Moravians, but later he abandoned all ecclesiastical traditions, and established, on a wonderfully well-devised basis, the connexion called by his name. His own open-air preaching was powerful in the extreme, his energy and depth of purpose inspiring, and his organising ability exceptional. He accomplished a great work of religious revivification, taking the world as his parish; and profound as was his conviction of his high calling as an Evangelist, John Wesley "builded better than he knew" in rearing the denominational edifice which is the monument of his faith and strenuosity.

**West, Benjamin** (1738–1820), was born in America, but settled in England in 1763. He was a painter of religious and historical pictures, such as "Christ Healing the Sick," "Penn's Treaty with the Indians," "The Black Prince at Poictiers," and "The Death of General Wolfe."

**Wester Wemyss, 1st Baron of Wemyss** (cr. 1919); **Admiral of the Fleet Rosslyn Erskine Wemyss**, G.C.B. (1918), K.C.B. (1916), C.M.G. (1911), M.V.O. (1901) (b. 1864). Entered Navy 1877; rose to be Admiral of the Fleet 1919; in command of squadron at landing of troops in Gallipoli, April 1915; First Sea Lord, 1917–19; retired list 1929.

**Westmacott, Sir Richard** (1775–1856), a great English sculptor who studied under Canova at Rome, and succeeded Flaxman as Professor at the Royal Academy. He executed many fine monuments in Westminster Abbey, at St. Paul's Cathedral, and elsewhere, including the statue of Achilles in Hyde Park and the pediment of the British Museum.

**Weyman, Stanley** (1855–1928), novelist. His first success was *The House of the Wolf*, published in 1890. His best-known novels are *A Gentleman of France*, *Under the Red Robe*, *The Man in Black*, and *The Castle Inn*.

**Wheatstone, Sir Charles** (1802–75), was an eminent English electrician and scientist, whose experiments in association with Mr. W. F. Cooke resulted in the first application in this country of the principle of the electric telegraph. The stereoscope was also one of his inventions. He was Professor of Natural Philosophy to King's College, London, for many years.

**Whewell, William** (1794–1866), English philosopher and scientist.

**Whistler, J. A. McNeill** (1834–1903), was an original artist, writer, and wit, who first came to Europe from America in 1857, and made a name as an etcher both in Paris and in London. His studies of Thames scenery were especially fine and now fetch large prices. The finest of his oil paintings are his portrait of his mother and that of Carlyle.

**White, Field-Marshal Sir George** (1835–1912), the heroic defender of Ladysmith in the South African War, and a soldier who achieved renown at many points of a long military career.

**White, Gilbert** (1720–93), was born and lived and died at Selborne, in Hampshire, where he held the position of clergyman. His book *The Natural History and Antiquities of Selborne* is a British classic.

**White, Sir William H.**, K.C.B. (1845–1913), a great naval engineer and architect. Designed 250 ships for the navy.

**Whitefield, George** (1714–70), was for a time associated with John Wesley at Oxford in the propagation of Methodism, and attracted great attention by his gifts as a preacher. He was Wesley's most powerful champion; but in 1741, differing from Wesley on a point of doctrine, he left the Methodists, and thenceforward simply preached as an evangelist, allying himself with no sect, but expounding Calvinistic doctrines with fervour and eloquence. The Countess of Huntingdon built and endowed numerous chapels for him in various parts of the country. He died in America on his seventh tour.

**Whitehead, Robert** (1823–1905), inventor of the Whitehead torpedo, was a native of Bolton, and built his first torpedo in 1866, which was taken up by the Austrian Government, and later was adopted by the British and other leading navies of the world.

**Whitgift, Archbishop** (1530–1604), a gifted Anglican prelate. Prosecuted the Puritans, and was one of the authors of the famous *Lambeth Articles*.

**Whitley, Rt. Hon. J. H.** (b. 1866), P.C., J.P.; Speaker of House of Commons, 1921–28. Chairman B.B.C., 1931.

**Whitman, Walt** (1819–92), was an original figure in the world of American authorship, and produced many works of striking poetic merit. He served in the Civil War, and his vigorous humanity, as expressed in his writings, made him a distinguished personality. His works include *Leaves of Grass*, *Drum Taps*, and *Democratic Views*.

**Whitney, Eli** (1765–1825), an American schoolteacher who was mechanically gifted, invented the cotton gin, and subsequently amassed a fortune in the manufacture of fire-arms.

**Whittier, John Greenleaf** (1807–92), America's Quaker poet, was the son of a New England farmer, and for a time followed the trade of a shoemaker. After some experience in journalism, he published his first book of poems, "Legends of New England" (1831). His best-known volumes are: "Lays of My Home" (1843), "Voices of Freedom" (1846), "Songs of Labour" (1850), and "National Lyrics" (1865).

**Whittington, Sir Richard** (*circa* 1358–1423). The son of a Gloucestershire knight who was outlawed. Richard went up to be apprenticed in London, and there found fortune and fame eventually as a merchant. Thrice Lord Mayor and representative of the City in Parliament, he was a great man in his time, engaging in many profitable and honourable enterprises. Sir Richard was well styled "the model merchant of the Middle Ages," and he did marry his master's daughter, and no doubt drew some sort of inspiration from the bells of Bow.

**Whitworth, Sir Joseph** (1803–87), an English manufacturer and inventor of guns and artillery who was born at Stockport, and brought out in 1855 the rifle bearing his name. In 1868 he founded the Whitworth scholarships which have done such splendid service.

**Whymper, Edward** (1840–1911), a wood-engraver and artist; also one of the best-known Alpine climbers, and the first to reach the summit of the Matterhorn. Author of books on mountaineering in various countries.

**Whyte-Melville, G. J.** (1821–78), a novelist of country life and breezy action, who had been a captain in the army before he turned to authorship. He wrote many stories, among the best being *Digby Grand*, *The White Rose*, and *Good for Nothing*.

**Wieland, Christopher** (1773–1813), German poet and miscellaneous writer.

**Wiggin, Kate Douglas (Mrs. George C. Riggs)**, an American novelist of quaint charm and humour.

**Wilberforce, William** (1759–1833), was the son of a Hull merchant. He was educated at Cambridge, and entered Parliament in 1780. In 1789 made the first of his many proposals in the House of Commons for the abolition of the slave trade, but it was not until 1807 that the Act embodying these proposals was carried.

**Wilcox, Mrs. Ella Wheeler**, a popular American poetess (1855–1919). A writer of sentimental verse.

**Wilfrid, St.** (634–709), an English ecclesiastic, who took the Roman side at the synod of Whitby in 665, and was made Archbishop of York.

**Wilkes, John** (1727–1797), was a forcible, daring, and original politician, who championed the cause of the people with great vigour, and was for a time exceedingly popular. For a violent attack on the Government in his paper *The North Briton*, he was committed to the Tower, but obtained release on the ground that he was a member of Parliament. He was then sued for libel, and retaliated by reprinting the paper containing it. He also got into trouble for publishing an *Essay on Woman* of a very objectionable nature, and was expelled from the House. He then went abroad, and remained away for some years, but in 1768 returned, and not long afterwards was elected M.P. for Middlesex. A fresh prosecution, however, and a fresh expulsion took place, and three times was he expelled and as often re-elected. A great agitation ensued, and so high was he in favour among the people, that he was made alderman, then sheriff, then Lord Mayor of London. In the end his opponents gave way, the orders against him were withdrawn, and from 1779 he was Chamberlain of the City of London.

**Wilkie, Sir David** (1785–1841), was an eminent R.A., a painter of popular subjects, mostly of rural life.

**Wilkins, Capt. Sir Hubert**, M.C., F.R.G.S. (b. 1888), knighted in 1928. A famous explorer; was with Stefansson's Arctic expedition, 1913–17; naturalist in Shackleton's expedition, 1921–22; navigator English–Australian flight, 1919; with British Antarctic Expedition, 1928–29; conducted *Nautilus* expedition to Arctic, 1931.

**William I.** (1027–87), better known as "William the Conqueror," was Duke of Normandy when

he claimed the throne of England as legally appointed successor to the Confessor. The claim was resisted by Harold II., but the battle of Hastings, in which Harold was slain and his army routed, gave the victory to William, who in due course was crowned in Westminster Abbey. The story of his life and reign is the story of the crushing of Saxon power, the parcelling out of the country among his Norman followers, and, for the rest, a firm rule that made England respected, and settled this country as a great Power among the nations.

**William I. of Prussia** (1797–1888), the maker of modern Germany. Succeeded to the throne of Prussia in 1861, and it fell to him to have the control of his country during a period of mighty transition and development, with Bismarck as his chief minister. The war with Austria which signalised the opening year of his reign rendered him highly popular, and when in 1870 the war with France was entered upon the whole German people rallied round him, and after a series of brilliant achievements by his army he was proclaimed German Emperor on the 18th of January, 1871.

**William II.** (1056–1100), the Conqueror's son, surnamed "Rufus," was King of England from 1087 to his death. He was in constant conflict with his barons, lived a life of wanton pleasure, was oppressive to his subjects, and was shot (by accident or design) while hunting in the New Forest.

**William II.**, Ex-German Emperor (b. 1859), deposed 1918. Educated at Cassel and Bonn, afterwards entered the army and took a keen interest in military affairs, succeeded his father, the Emperor Frederick, in 1888. His reign was marked by a strong militarism and an intense ambition to secure the dominance of Germany in the Councils of Europe—an ambition which by unscrupulous action and utter disregard of treaty obligations brought about the most destructive war in the history of the world. To him was due the introduction of a system of war savagery which greatly increased the horrors of warfare and must leave an indelible stain upon his name. Visited England in 1907, was present at King Edward VII.'s funeral in 1910, and in 1911 at the unveiling of the memorial to Queen Victoria. Fled to Holland on seeing defeat inevitable.

**William III. of England** (1650–1702), while Stadtholder of Holland, married Mary, eldest daughter of the Duke of York (afterwards James II.). As captain-general of the Dutch forces he was successful against the French, and in 1688, when James had abdicated and fled the country, William was invited to succeed him, and he and Mary afterwards became joint King and Queen. Later he was at war with France, and suffered defeats, but ultimately effected an honourable peace by the Treaty of Ryswick, in 1697.

**William IV. of England** (1765–1837) was the third son of George III., and ascended the throne in 1830 in succession to his brother, George IV. He had seen some sea service, and was flatteringly styled the "Sailor King." He showed little of kingly capacity, but was genial and pleasure-loving, and placed no obstacles in the way of government, so was, after a sort, popular. In the early part of his reign (1832) the first great Reform Bill was passed.

**Williams, Sir George** (1821–1905), the founder of the Young Men's Christian Association.

**Williams, John** (1796–1839), the English Nonconformist martyr-missionary to the South Seas, who was murdered by hostile natives.

**Williams, Sir Monier** (1819–99), a great Sanskrit scholar who laboured with distinction in bringing westward the wisdom of the Orient.

**Williams, Roger** (1600–84), a Welshman who went out to New England in 1631. Originally in Anglican orders, he became a Puritan preacher, and obtained great political and personal influence, founding the first Baptist Church in America. He obtained a charter for the colonisation of Rhode Island in 1644.

**Williams, Dr. Vaughan** (b. 1872), a prominent British composer, whose most popular works are "Hugh, the Drover," "On Wenlock Edge," and his "London Symphony."

**Willingdon, Lord, 1st Earl, of Ratton, Freeman Freeman-Thomas,** G.C.S.I., G.C.I.E., G.B.E. (b. 1866), Governor of Madras, 1919–24; Governor of Bombay, 1913–19. Was Junior Lord of the Treasury 1905–13, M.P. for Hastings 1900–06, and for Bodmin 1906–10. Delegate for India at League of Nations 1924. Governor-General of Canada 1926–31. Viceroy and Governor-General of India 1931.

**Willis, Nathaniel Parker** (1807–67), was an American writer of mark. Author of *Pencillings by the Way*, *Slingsby Papers* and *Dashes at Life*.

**Willoughby, Sir Hugh** (d. 1554), a 16th century English navigator, who was the first to open up British trade with Russia by way of Archangel, and later led an expedition fitted out by London merchant adventurers for extending discoveries in northern latitudes, but the whole of his force perished in a storm off the coast of Lapland.

**Wilson, Alex.** (1766–1813), a weaver who suffered imprisonment for writing lampoons respecting a dispute between masters and men in Paisley, and went out to Philadelphia, where he tramped about the woods, which resulted in his publication of a seven-volume work on *American Ornithology*.

**Wilson, Andrew,** Ph.D., M.B., F.R.S.E. (1852–1912), a Scottish scientist, journalist and a popular lecturer and writer. His opinion of Pears' Soap is worth recording here. He said that "no purer article of its kind had ever been offered."

**Wilson, Sir Erasmus** (1809–84), an eminent physician and specialist in skin diseases. He pronounced Pears' Soap to be "one of the most agreeable and refreshing of balms for the skin, and calculated to preserve it in health and maintain its complexion and tone." Transported "Cleopatra's Needle" to London at his own cost from Alexandria.

**Wilson, George** (1818–1859), a distinguished chemist and President of the Physical Society; published valuable *Researches on Colour-Blindness*, and many scientific, biographical, and other works of an important and popular character.

**Wilson, Field Marshal Sir Henry** (1864–1922), served Burmah Campaign 1885, South Africa 1899–1900, European War 1914–15 (K.C.B.), and Chief to Lord French 1914. Field Marshal 1919. Chief of Imperial General Staff 1918–22. Assassinated by Irish political fanatics, and buried in St. Paul's.

**Wilson, Richard** (1714–82), a landscape and portrait painter.

**Wilson, Woodrow** (1856–1924), President of the United States 1913–21. Was Governor of New Jersey 1912–13. In 1916 secured from the Kaiser a promise to abandon the more inhuman forms of submarine warfare, and, on their resumption in 1917, broke off official relations with Germany and proclaimed a state of war. Entered into the conflict with the utmost vigour, bringing the full military and financial resources of the Republic into play against Germany. Was a great factor in the winning of victory and in the concluding of a just peace. Sat through the whole of the Paris Conference.

**Wimborne, Viscount, Ivor Churchill Guest,** (b. 1873), a director of Barclays Bank; Lord-Lieut. of Ireland 1915–18. As the Hon. Ivor Guest was M.P. for Plymouth 1900–6, and for Cardiff 1906–10.

**Winckelmann, Johann** (1717–68), a German classical scholar and writer on art.

**Wingate, General Sir F. Reginald, Bart.,** G.C.B., G.C.V.O., G.B.E., K.C.M.G., D.S.O. (b. 1861), High Commissioner, Egypt, 1917–19; Sirdar of the Egyptian Army and Governor-General of the Sudan, 1899–1916. A soldier of experience and distinction. In military expedition to the Nile and its neighbourhood he was Kitchener's chief Intelligence Officer, succeeded him as Sirdar, and completed the rout of the Khalifa.

**Winifred, St.,** the 7th-century patron saint of virgins, a Welsh maiden who, importuned by Prince Caradoc, treated him with scorn, and he had her beheaded.

**Winthrop, John** (1587–1649), an English Colonial governor who in 1629 settled at Boston, where he was for some time in supreme authority.

**Wishart, George** (*circa* 1500–46), a Scottish schoolmaster and associate of John Knox the Reformer.

**Wither, George** (1588–1667), Puritan poet and [satirist.

**Witte, Count Serghis de** (1849–1915), the Russian

statesman. Finance Minister of the Empire in 1892. Under his direction the Siberian railway was constructed. He was a man of liberal tendencies, and the maker of industrial Russia. He negotiated the peace with Japan after the failure of the Czar's operations in Manchuria, and was created a Count and called to the Premiership, but resigned in 1906.

**Woffington, Peg** (1720–60), an Irish bricklayer's daughter, who became a celebrated actress. She was much sought after in private life by people of rank and talent. For a while she lived with Macklin and Garrick in Bow-street. She was stricken with paralysis whilst playing Rosalind in 1757.

**Wolcot, John** (1738–1819), doctor, clergyman, and author of topical satirical effusions, many of them directed against George III. He wrote under the pseudonym of "Peter Pindar."

**Wolf, Friedrich** (1759–1824), a great German scholar, regarded by some as the founder of scientific classical philology.

**Wolfe, Charles** (1791–1823), was an Irish clergyman and writer whose literary fame was won by a single poem, "The Burial of Sir John Moore."

**Wolfe, General James** (1727–59), commanded the British forces in Canada at the siege of Quebec, where he won a brilliant victory, which cost him his own life.

**Wollaston, William Hyde** (1766–1828), a celebrated English chemist and physicist, President of the Royal Society in 1820. Discovered rhodium and palladium, the dark lines in the solar spectrum and the ultra-violet rays, invented the goniometer and the camera lucida, and carried out many important investigations in electricity and optics.

**Wolsey, Cardinal Thomas** (1471–1530), was the son of an Ipswich butcher. Showing ability, he was sent to Oxford to be educated, and later on entered the Church, where he gradually rose to a position of eminence, and was entrusted with several diplomatic missions. He was especially favoured by the King, Henry VIII., and secured rapid preferment under that monarch, being in turn Bishop of Lincoln, and Archbishop of York. He was subsequently made Cardinal and became Henry's Chancellor. For a number of years he was supreme, and by his diplomacy did much to strengthen the kingly power. But when Wolsey was unable, though willing enough, to obtain the papal sanction for Henry's divorce of Katharine, he fell into disfavour, and his decline was rapid indeed. From being a great personage, with a princely entourage, he was humbled, persecuted, and harried, and died at Leicester Abbey a broken, dejected man.

**Wood, Anthony à** (1632–95), a famous English antiquary, the historian of Oxford University, and biographer of its worthies.

**Wood, Sir Evelyn, Field Marshal,** V.C. (1838–1919).

**Wood, Sir Henry J.** (b. 1869), the most popular of present-day English musical conductors. After filling the position of organist at St. Mary's, Aldermanbury, and other places, and conducting numerous opera and concert companies on tour and in London, he started his Queen's Hall concerts in 1895, which have done more than any other enterprise for the cause of high-class music in London. Knighted, 1911.

**Wood, Mrs. Henry** (1814–87), was a prolific Victorian novelist. Author of *Danesbury House*, *East Lynne*, and others.

**Woolf, Mrs. Virginia,** a prominent English novelist. Author of: *To the Lighthouse*, *Mrs. Dalloway*, etc.

**Worcester, Marquis** of (1601–1667), was the first of our noblemen scientists, whose quaint and instructive work, *A Century of Inventions*, contained the foreshadowings of many later inventions of importance, notably the steam-engine.

**Wordsworth, William** (1770–1850), the chief of the "Lake Poets," and one of the most inspired of all British bards, was a native of Cockermouth, and was educated at Hawkshead and St. John's College, Cambridge. In association with Coleridge he issued a volume of "Lyrical Ballads" in 1798. The following year saw him settled at Grasmere, and there and at Rydal Mount he passed the rest of his days. In 1802 he married Mary Hutchinson, his cousin, and the two, with the poet's sister Dorothy, formed an ideally poetic household. Here he carried out his creed of "plain living and high thinking," and produced at intervals some of the purest and noblest poetry in the language. As an interpreter of Nature in her many moods he stands unrivalled. From 1813 to 1842 he was stamp distributor for Westmorland, and succeeded to the Poet Laureateship on the death of Southey in 1843, enjoying thenceforward to his death a pension of £300 a year.

**Woodville, Elizabeth** (1437–92), wife of Sir John Grey. After her first husband's death she made a secret marriage with Edward IV., and became the mother of Edward V. and his brother Prince, both of whom were put to death in the Tower by order of Richard III. She was also mother to Elizabeth, Queen of Henry VII.

**Wornum, Ralph Nicholson** (1812–77). Was a portrait painter for a time, but later became a writer and lecturer upon art. He was Keeper of the National Gallery for many years.

**Worthington-Evans, Rt. Hon. Sir L.,** Bart. (1868–1931), War Secretary, 1924–29; Postmaster-General, 1923; Sec. of State for War, 1921–22; Minister of Pensions, 1919–20; M.P. for Colchester, 1910.

**Wotton, Sir Henry** (1568–1639), whose life was written by Izaak Walton, was in Elizabeth's reign Secretary to the Earl of Essex, and under James I. was for twenty years in the diplomatic service. In 1624 was made Provost of Eton, a position which he held for fifteen years. He was a poet and Latin pamphleteer, and wrote a book on the *Elements of Architecture*, and another, on *The State of Christendom*.

**Wotton, William** (1666–1727), a scholar of marvellous precocity, who was entered at Cambridge University in his twelfth year, took his B.A. a year later, then knowing twelve languages, and was Fellow of St. John's at nineteen. Wotton became a clergyman of some distinction, and is best remembered as an author by his *Reflections upon Ancient and Modern Literature*.

**Wouvermans, Philip** (1620–68), a Dutch painter of landscapes and hunting scenes.

**Wren, Sir Christopher** (1632–1723), the most famous English architect of his time. He did not quite have all his own way with the tremendous thirty-five years' task he accepted in undertaking the reconstruction of St. Paul's after the Fire, but he produced a masterpiece of which Britain may well be proud. Chelsea and Greenwich Hospitals and a number of London's finest churches were also his work.

**Wright, Sir Almroth E.,** M.D., F.R.S. (b. 1861), discoverer of the system of anti-typhoid inoculation, the method of therapeutic inoculation for bacterial infections (vaccinotherapy), and of methods of measuring the protective substances in human blood.

**Wright, Joseph** (1734–97), usually styled "Wright of Derby," was a painter of note.

**Wright, Thomas,** F.S.A. (1810–77), a well-known and industrious antiquary, whose works comprise 129 separate publications.

**Wyatt, James,** R.A. (1746–1813), a celebrated architect in his day. He built Fonthill Abbey for Beckford, and the Royal Military Academy at Woolwich.

**Wyatt, Sir Thomas** (1503–42), was the first writer of English sonnets, and a poet who did much to develop the earlier forms of verse. He was also a distinguished diplomatist.

**Wyatt, Sir Thomas** ("The Younger"), b. 1520; joined with the Duke of Suffolk in favour of Lady Jane Grey and against Queen Mary. Son of the last-mentioned. Led the men of Kent in rebellion on London in 1554, but was captured and executed.

**Wycherley, William** (1640–1715), the Restoration dramatist, was for many years in high favour at Court. His genius for comedy writing was remarkable, and readily adapted itself to the Restoration atmosphere; thus while he provided wit and intrigue and plot and characterisation in plenty and of great merit, the taint of the time was over it all. His plays include "The Country Wife," "Love in a Wood," "The Plain Dealer," and "The Way of the World."

**Wyclif, John** (1324–84), born in Yorkshire, educated at Oxford, and one of the most eminent ecclesiastics of his time. He adopted the principles of the Reformation, and brought down upon himself the bitter enmity of the

Roman Catholic leaders, and would probably have been put to death but for the protection of John of Gaunt. While in comparative retirement as Rector of Lutterworth, in Leicestershire, he finished his translation of the Bible.

**Wykeham, William of** (1324–1404), was Bishop of Winchester from 1366 to his death, and from 1367 to 1371 Lord Chancellor. He was a man of great learning and an excellent preacher, and wielded great influence. He founded New College, Oxford.

**Wyndham, Sir Charles** (1837–1919), was educated for the medical profession, took part in the American Civil War, then went on the stage, and migrating to London in 1868 began a highly successful career.

**Wynn, Sir Charles Watkin Williams** (1775–1850), was a well-known politician.

## X

**Xantippe** (flourished 5th century B.C.), the irascible spouse of the Greek philosopher Socrates, and the type of the scolding wife.

**Xavier, St. Francis** (1506–1552), the apostle of the Indies, was the follower of Ignatius de Loyola, and devoted his life to missionary work in the East. He was canonised in 1622.

**Xenocrates** (396–314 B.C.), a Greek philosopher and the disciple of Plato.

**Xenophon** (444–359 B.C.), the Athenian general and follower of Socrates. His chief works are *Anabasis*, *Hellenica*, and *Cyropædia*.

**Xerxes** (*circa* 519–465 B.C.), King of Persia, was the son of the first Darius and a great commander. In 481 B.C. he started on his famous expedition against Greece when, according to Herodotus, he had a combined army and navy of over two and a half million men. He defeated the Spartans at Thermopylæ, but his fleet was overcome at Salamis. He reigned from 485 to 465 B.C. and met his death by assassination.

**Ximines, Francisco** (1436–1517), a Spanish statesman and Cardinal.

**Ximines de Quesada, Gonzalo** (1498–1546), a Spanish lawyer who undertook an expedition to and became the conqueror of New Granada in 1538.

## Y

**Yamagata, Field-Marshal Prince** (1838–1922), a Japanese statesman of very considerable ability and astuteness, and a soldier also of some prowess.

**Yapp, Sir Arthur,** K.B.E. (b. 1869), Food Control Director, 1917–18. As Secretary to the National Y.M.C.A. Council, succeeded in organising a very extensive and powerful system of war-aid at home and on the battle fronts.

**Yarrow, Sir Alfred F., Bart.** (1842–1932), the founder of the Yarrow shipbuilding firm. He has given among many other liberal donations £100,000 in 1923 to the Royal Society for Scientific Research.

**Yeats, W. B.,** LL.D. (b. 1865), poet, playwright, and author, who has especially identified himself with the Irish literary movement. Nominated Senator in the Irish Free State, 1922. Nobel Prize for literature 1923.

**Yonge, Charlotte** (1823–1901), a favourite novelist and writer, whose popular story, *The Heir of Redclyffe*, was very successful.

**York, Duke of (Richard).** Protector during Henry VI.'s imbecility. His claim to the throne precipitated the Wars of the Roses.

**Young, Brigham** (1801–77). Mormon leader, and head of the Latter Day Saints of Salt Lake City. At his death he had seventeen wives.

**Young, Charles Mayne** (1777–1856), a noted actor.

**Young, Edward** (1684–1765), an English poet and clergyman, author of "Night Thoughts."

**Young, James** (1811–83), a Glasgow chemist who discovered the method of distilling oil from shale, and founded the mineral oil industry of Scotland, which led to the development of petroleum concerns.

**Younghusband, Col. Sir Francis** (b. 1863), headed the British Mission to Tibet, 1903–04. Was *Times* correspondent with the Chitral expedition. Pres. of Royal Geographical Soc. 1919.

**Yuan-Shi-Kai** (1859–1916), President of the Chinese Republic, 1913–16. Minister in Korea in 1894; in 1907 was Minister for Foreign Affairs; but in 1908, on the death of the Empress, went out of office. In 1911, on the outbreak of the rebellion, he took up the reins again, and after the formation of the Republic was in 1913 elected President. Proclaimed Emperor 1915.

## Z

**Zadkiel** (the angel of Jupiter in Jewish rabbinical lore) was the name assumed by Lilly the astrologer, and also by Lieut. R. J. Morrison, in the prophetic almanack first issued by him in 1830.

**Zaharoff, Sir Basil,** G.C.B., G.B.E. (b. 1850), an influential Greek banker and financier. Has endowed a number of University chairs in different countries, among them being a chair of Aviation at the Imperial College of Science in London.

**Zangwill, Israel** (b. 1864), President of the International Jewish Territorial Organisation. Made a hit with *The Premier and the Painter* in 1888; afterwards edited a comic weekly called *Ariel*; then began novel writing. Mr. Zangwill also wrote plays, of which *The Melting Pot* is a prominent example. He died in 1926.

**Zeller, Edward** (1814–92), a noted German writer and Professor of Philosophy at Berlin from 1872.

**Zeller, Jules Sylvain** (1820–1900), French historiographer and biographical author.

**Zeno of Citium** was a Greek philosopher, who founded the Stoic system in the 3rd century B.C.

**Zenobia** was Queen of Palmyra 266–73, and after the murder of her husband, King Odenathus, proclaimed herself Queen of the East. The Emperor Aurelian defeated her in 273.

**Zenodorus** (flourished A.D. 54–68), a Greek sculptor who executed the colossi of Nero and of Mercury.

**Zenodotus,** an Alexandrian Homeric scholar who lived in the 3rd century B.C. and was the first superintendent of the famous library at Alexandria.

**Zephaniah** (flourished *circa* 630 B.C.), the Hebrew prophet who foretold judgments to come to the Jews but predicted an ultimate Hebraic restoration.

**Zeppelin, Count Ferdinand von** (1838–1917), inventor of the huge dirigible airship bearing his name. His first long flight was in 1900. He organised a Zeppelin service for the German army in the war.

**Zeuxis,** a famous Greek painter who flourished in the 5th century B.C.

**Zimmerman, Yohann Georg von** (1728–95), was a Swiss philosopher and physician.

**Zinoviev, G. E.** (b. 1883), became a leading figure in Bolshevik Russia after the Revolution. In 1919 he was President of the Communist International. An ardent upholder of Leninism after Lenin's death. Expelled from the Communist party in 1926; later given a minor post. Known in England in connection with the Zinoviev Letter.

**Ziska, John** (1360–1424), a famous Hussite leader.

**Zoffany, John** (1733–1810), painter, was a native of Ratisbon, and came to England in 1758.

**Zogu I** (b. 1895), King of Albania since 1928.

**Zola, Emile** (1840–1902), was the son of an Italian engineer, and came before the public as a novelist in 1867 with *Thérèsa Raquin*. He then conceived the idea of a series of novels which should depict the history of a Second Empire family in various realistic phases, and began the series with *La Fortune das Rougons*, in 1871. In 1877 he made a higher success by *L'Assommoir*. From that time every novel he published had an immense sale.

**Zonaras, Johannes,** a Greek historical writer who compiled in the 12th century a chronicle from the creation down to his own day.

**Zoroaster** is supposed to have lived in the 5th century B.C. The religious system which bears his name dates back to the days of ancient Persia.

**Zuccarelli, Francesco** (1702–88), a very celebrated Italian artist, who came to England, succeeded, made a handsome fortune, and was one of the first members of the Royal Academy.

**Zumpt, Karl** (1792–1849), a German classical scholar of distinction.

**Zwicker, Daniel** (1612–58), a Dutch Socinian doctor, who published in 1658 a notable book entitled *Irenicon Irenicorum*.

**Zwingli, Ulrich** (1484–1531), was one of the ablest of the Swiss Reformation leaders.

**Zwirner, Ernst Friedrich** (1802–61), an eminent Silesian architect, who restored Cologne Cathedral.

# OFFICE COMPENDIUM



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*This compendium comprises a variety of items of ready reference on everyday matters and routine, and will be of special utility to business men, accountants, clerks, and others engaged in office work, as well as to the general reader. It includes a number of useful tables, the latest postal and other official information, numerous statistical compilations, full lists of frequently employed—but not always understood—abbreviations, pseudonyms, foreign phrases, etc.; with a host of other matters such as people generally want to know in a hurry.*

## THE BRITISH EMPIRE

The British Empire comprises the United Kingdom of Great Britain and Northern Ireland and the Irish Free State, the Empire of India, and the British Dominions beyond the seas, including the self-governing Dominions, and the Crown Colonies, Protectorates, and other Dependencies, the whole forming one Empire under George V., King and Emperor, whose title rests upon the Act of Settlement of 1701, which settled the succession to the throne on the Princess Sophia of Hanover and "the heirs of her body being Protestants."

The British Empire contains a total area of over 13,355,000 square miles, equal to upwards of one-fifth of the earth's surface. Its population is about 450,000,000 or over one-fifth of the inhabitants of the globe.

| Component parts of the British Empire. | Extent in Square Miles. | Population. |
|---|---|---|
| United Kingdom of Great Britain and Northern Ireland | 94,633 | 46,540,385 |
| Irish Free State | 27,000 | 2,972,000 |
| Empire of India and its Dependencies | 1,900,000 | 345,863,678 |
| Ceylon and Maldives | 26,000 | 4,550,000 |
| Eastern Asia (including Straits Settlements, Malay Straits, etc., etc.) | 138,550 | 5,900,000 |
| Dominion of Canada, Newfoundland, etc. | 3,892,750 | 9,100,000 |
| West India Islands, South America, Falkland Islands | 115,500 | 2,200,000 |
| Commonwealth of Australia, etc. | 3,100,000 | 6,570,085 |
| Dominion of New Zealand | 105,000 | 1,500,000 |
| South Africa | 1,238,000 | 7,200,000 |
| West Africa | 600,000 | 20,000,000 |
| East and Central Africa | 750,000 | 16,000,000 |
| Mauritius, Seychelles, etc. | 900 | 400,000 |
| Gibraltar, Malta, and Cyprus | 3,721 | 560,000 |
| Antarctic; South Georgia | 2,970,000 | — |

## ENGLISH MONARCHS

### I.—BEFORE THE CONQUEST.

| SAXONS. | Began to Reign. |
|---|---|
| Egbert (first "King of the English") | A.D. 827 |
| Ethelwulf | 839 |
| Ethelbald | 858 |
| Ethelbert | 858 |
| Ethelred I. | 866 |
| Alfred (the Great) | 871 |
| Edward (the Elder) | 901 |
| Athelstan | 925 |
| Edmund I. (the Magnificent) | 940 |
| Edred | 946 |
| Edwy | 955 |
| Edgar (the Peaceable) | 958 |
| Edward (the Martyr) | 975 |

| SAXONS. | Reigned. |
|---|---|
| Ethelred II. (the Unready) A.D. | 979–1013 |
| " " Retired on Sweyn's Proclamation; restored (in Canute's absence) on Sweyn's death | 1014–1016 |
| Edmund II. (Ironside) divided the Kingdom with Canute for seven months | 1016 |
| DANES. | |
| Sweyn | 1013–1014 |
| Canute | 1017–1035 |
| Harold I. | 1035–1040 |
| Hardicanute | 1040–1042 |
| SAXONS, RESTORED. | |
| Edward the Confessor | 1042–1066 |
| Harold II. | 1066 |

## II.—FROM THE CONQUEST TO THE PRESENT DAY.

| | Access. | Died. | Reigned Age. | Reigned (Years). |
|---|---|---|---|---|
| **NORMANS.** | | | | |
| William I. | 1066 | 1087 | 60 | 21 |
| William II. | 1087 | 1100 | 43 | 13 |
| Henry I. | 1100 | 1135 | 67 | 35 |
| Stephen | 1135 | 1154 | 50 | 19 |
| **PLANTAGENETS.** | | | | |
| Henry II. | 1154 | 1189 | 56 | 35 |
| Richard I. | 1189 | 1199 | 42 | 10 |
| John | 1199 | 1216 | 50 | 17 |
| Henry III. | 1216 | 1272 | 65 | 56 |
| Edward I. | 1272 | 1307 | 68 | 35 |
| Edward II. | 1307 | 1327 | 43 | 20 |
| Edward III. | 1327 | 1377 | 65 | 50 |
| Richard II. | 1377 Dep. | 1399 | 34 | 22 |
| Henry IV. (York) | 1399 | 1413 | 47 | 13 |
| Henry V. (Lancaster) | 1413 | 1422 | 34 | 9 |
| Henry VI. (Lancaster) | 1422 Dep. | 1461 | 49 | 39 |
| Edward IV. (York) | 1461 | 1483 | 41 | 22 |
| Edward V. (York) | 1483 | 1483 | 13 | 0 |
| Richard III. (York) | 1483 | 1485 | 35 | 2 |
| **TUDORS.** | | | | |
| Henry VII. | 1485 | 1509 | 53 | 24 |
| Henry VIII. | 1509 | 1547 | 56 | 38 |
| Edward VI. | 1547 | 1553 | 16 | 6 |
| Mary I. | 1553 | 1558 | 43 | 5 |
| Elizabeth | 1558 | 1603 | 70 | 44 |

| | Access. | Died. | Reigned Age. | Reigned (Years). |
|---|---|---|---|---|
| **STUARTS.** | | | | |
| James I. (VI. of Scotland) | 1603 | 1625 | 59 | 22 |
| Charles I. | 1625 | Beh. 1649 | 48 | 24 |
| Charles II. | 1649 | 1685 | 55 | [actual. 25 |
| Commonwealth declared May 19, 1649. Oliver Cromwell, Lord Protector 1653–8. Richard Cromwell, Lord Protector 1658–9. | | | | |
| James II. | 1685 | Abdicated 1688; | Age (at death in exile in 1701) 68. | Reigned 3 years. |
| William III. and Mary II. | 1689 | 1702 | 51 | 13 |
| | 1689 | 1694 | 33 | 6 |
| Anne | 1702 | 1714 | 49 | 12 |
| **HOUSE OF HANOVER.** | | | | |
| George I. | 1714 | 1727 | 67 | 13 |
| George II. | 1727 | 1760 | 77 | 33 |
| George III. | 1760 | 1820 | 81 | 59 |
| George IV. | 1820 | 1830 | 68 | 10 |
| William IV. | 1830 | 1837 | 72 | 7 |
| Victoria | 1837 | 1901 | 81 | 63 |
| **HOUSE OF KENT.** | | | | |
| Edward VII. | 1901 | 1910 | 69 | 9 |
| **HOUSE OF WINDSOR.** | | | | |
| George V. | 1910 | | | |

# THE ROYAL FAMILY

His Majesty George V., King of the United Kingdom of Great Britain and N. Ireland, and of the British Dominions beyond the seas, Emperor of India, b. June 3, 1865; m. July 6, 1893, to Princess Mary of Teck (b. May 26, 1867); succeeded May 6, 1910; crowned at Westminster Abbey, June 22, 1911.

### CHILDREN.

Prince of Wales (Edward Albert Christian George Andrew Patrick David), b. June 23, 1894; Prince Albert Frederick Arthur George, Duke of York, b. Dec. 14, 1895; m. April 26, 1923, Lady Elizabeth Bowes-Lyon; Princess Victoria Alexandra Alice Mary (Princess Royal), b. April 25, 1897; m. Feb. 28, 1922, to Henry G. C. Viscount Lascelles, K.G., D.S.O. (6th Earl of Harewood); Prince Henry William Frederick Albert, b. Mar. 31, 1900; Prince George Edward Alexander Edmund, b. Dec. 20, 1902; Prince John Charles Francis, b. July 12, 1905; d. Jan. 18, 1919.

### SISTERS LIVING.

Princess Victoria Alexandra Olga Mary, b. July 6, 1868.

Princess Maud Charlotte Mary Victoria, b. November 26, 1869, married July 22, 1896, Prince Charles, 2nd son of the then Crown Prince of Denmark, who succeeded to the throne on Jan. 29, 1906, Prince Charles having meanwhile been chosen to rule over Norway. He was crowned King Haakon VII., on June 22, 1906, and he and Queen Maud have a son, Olav (born July 2, 1903).

### BROTHERS DECEASED.

Albert V. C. E. (Duke of Clarence and Avondale), born January 8, 1864; died January 14, 1892.

Alexander J. C. A., b. April 6, 1871; d. April 7, 1871.

### SISTER DECEASED.

Princess Louise Victoria Alexandra Dagmar (Princess Royal), b. Feb. 20, 1867; d. Jan. 4, 1931; married July 27, 1889, the Duke of Fife, K.T. (who died 1912), and had issue—Lady Alexandra Victoria Alberta Edwina Louise Duff, born May 17, 1891 (married to Prince Arthur of Connaught, Oct. 15, 1913); Lady Maud Alexandra Victoria Georgina Bertha Duff, born April 3, 1893; married, November 12, 1923, Lord Carnegie.

### UNCLES AND AUNTS LIVING.

Duke of Connaught (Arthur William Patrick Albert), born May 1, 1850.

Duchess of Argyll (H.R.H. Princess Louise Caroline Alberta), born March 18, 1848.

Princess Henry of Battenberg (Beatrice Mary Victoria Feodora), born April 14, 1857, whose only daughter, the Princess Victoria Eugenie (Ena), was married to King Alfonso of Spain on May 31, 1906.

### UNCLES AND AUNTS DECEASED.

Prince Alfred, Duke of Edinburgh, afterwards Duke of Saxe-Coburg and Gotha, born 1844; died 1900.

Prince Leopold, Duke of Albany, born 1853; died 1884. His son, Prince Charles Edward, became Duke of Saxe-Coburg and Gotha in 1900.

Empress (Frederick) of Germany (mother of Kaiser William II.), born 1840; died 1901.

Princess Alice, Grand Duchess of Hesse, b. 1843; d. 1878 (mother of Princess Louis of Battenberg, Grand Duchess Serge of Russia, Princess Henry of Prussia, Grand Duke of Hesse (Ernest Louis), and the Empress of Russia).

Princess Christian of Schleswig-Holstein (Helena Augusta Victoria), born May 25, 1846; d. June 9, 1923.

### ANNUITIES TO THE ROYAL FAMILY.

| THE KING. | |
|---|---|
| Their Majesties' Privy Purse. | £110,000 |
| Salaries of Household, and Retired Allowances | 125,800 |
| Expenses of Household | 193,000 |
| Works | 20,000 |
| Royal Bounty, Alms, etc. | 13,200 |
| Unappropriated | 8,000 |
| | £470,000 |

| | |
|---|---|
| Duke of York | £25,000 |
| His Majesty's Younger Children | 26,000 |
| Princess Louise (Duchess of Argyll) | 6,000 |
| Duke of Connaught | 25,800 |
| Princess Beatrice (Henry of Battenburg) | 6,000 |
| King Edward VII's daughters | 18,000 |
| | £106,000 |

**During the critical period in 1931 the King voluntarily reduced his allowance by £50,000 p.a., and the Duke of York by £5,000.**

# PREMIERS, PRINCIPAL SECRETARIES, AND OTHER OFFICERS OF STATE

| Date. | Premier. | Exchequer. | Home (1782). | Foreign (1782). | War (1794). | Colonies (1854). | Lord Chancellor. | Board of Trade. | Admiralty. | India. | Chief Secretary (Ireland). |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Feb. 6, 1886 | W. E. Gladstone | Sir W. Harcourt | H. C. E. Childers | Rosebery | H. C.-Bannerman. | Granville | Herschell | A. J. Mundella | Ripon | Kimberley | J. Morley. |
| Aug. 3, 1886 | Salisbury<br>W. H. Smith 1st Lord | Ld. R. Churchill<br>G. J. Goschen | H. Matthews | Iddesleigh<br>Salisbury | W. H. Smith.<br>E. Stanhope. | E. Stanhope<br>Knutsford | Halsbury | Stanley of P.<br>Sir M. H.-Beach | Ld. G. Hamilton | Cross | Sir M. H.-Beach.<br>A. J. Balfour.<br>W. L. Jackson. |
| Aug. 18, 1892 | W. E. Gladstone | Sir W. Harcourt | H. H. Asquith | Rosebery | H. C.-Bannerman. | Ripon | Herschell | A. J. Mundella | Spencer | Kimberley | J. Morley. |
| March 3, 1894 | Rosebery | Sir W. Harcourt | H. H. Asquith | Kimberley | H. C.-Bannerman. | Ripon | Herschell | A. J. Mundella.<br>J. Bryce | Spencer | Fowler | J. Morley. |
| July 2, 1895 | Salisbury<br>Balfour 1st Ld. | Sir M. H.-Beach | Sir M. W. Ridley<br>C. T. Ritchie | Salisbury<br>Lansdowne | Lansdowne.<br>St. J. Brodrick. | J. Chamberlain | Halsbury | C. T. Ritchie<br>G. W. Balfour | G. J. Goschen<br>Selborne | Hamilton | G. W. Balfour.<br>G. Wyndham. |
| July 12, 1902 | A. J. Balfour<br>A. Chamberlain | C. T. Ritchie | A. Akers-Douglas | Lansdowne | St. J. Brodrick.<br>H. O. A.-Forster. | J. Chamberlain<br>A. Lyttelton | Halsbury | G. W. Balfour<br>Salisbury | Selborne<br>Cawdor | Hamilton<br>Brodrick | G. Wyndham.<br>W. H. Long. |
| Dec. 5, 1905 | Sir H. C.-Bannerman | H. H. Asquith | H. J. Gladstone | Sir E. Grey | R. B. Haldane. | Elgin | Loreburn | D. Lloyd George | Tweedmouth | J. Morley | J. Bryce.<br>A. Birrell. |
| April 8, 1908 | H. H. Asquith | D. Lloyd George | H. J. Gladstone<br>W. S. Churchill<br>R. McKenna | Sir E. Grey | R. B. Haldane.<br>Haldane (Viscount).<br>Col. J. E. B. Seely.<br>H. H. Asquith.<br>Kitchener. | Crewe<br>L. Harcourt | Loreburn<br>Haldane | W. S. Churchill<br>Sydney Buxton<br>John Burns<br>W. Runciman | R. McKenna<br>W. S. Churchill | Morley (Visc.)<br>Crewe | A. Birrell. |
| May 26, 1915 | H. H. Asquith | R. McKenna | Sir J. Simon<br>Herbert Samuel | Sir E. Grey<br>Grey (Viscount) | Kitchener.<br>D. Lloyd George. | A. Bonar Law | Buckmaster | W. Runciman | A. J. Balfour<br>Sir E. Carson | A. Chamberlain | A. Birrell.<br>H. E. Duke. |
| Dec. 7, 1916 | D. Lloyd George | A. Bonar Law | Sir G. Cave | A. J. Balfour | Derby.<br>Milner. | W. H. Long | Finlay | Sir A. Stanley | Sir E. Geddes | Montagu | H. E. Duke.<br>E. Shortt. |
| [Privy Seal | D. Lloyd George<br>A. Bonar Law<br>A. Chamberlain] | A. Chamberlain<br>Sir R. S. Horne | E. Shortt | A. J. Balfour<br>Curzon | W. S. Churchill<br>Sir L. Worthington-Evans. | Milner<br>W. S. Churchill | Birkenhead | Sir A. Geddes<br>Sir R. S. Horne<br>S. Baldwin | W. H. Long<br>Lee | Montagu<br>Peel | I. Macpherson.<br>Sir H. Greenwood. |
| | | | | | | | | | | | **P.M.G.** |
| Oct. 23, 1922 | A. Bonar Law | S. Baldwin | W. C. Bridgeman | Curzon | Derby. | Devonshire | Cave | Sir P. Lloyd-Greame | L. C. M. S. Amery | Peel | N. Chamberlain. |
| May 22, 1923 | S. Baldwin | S. Baldwin<br>N. Chamberlain | W. C. Bridgeman | Curzon | Derby. | Devonshire | Cave | Sir P. Lloyd-Greame | L. C. M. S. Amery | Peel | Sir W. J.-Hicks.<br>Sir L. Worthington-Evans. |
| Jan. 22, 1924 | J. R. MacDonald | P. Snowden | A. Henderson | J. R. MacDonald | S. Walsh. | J. H. Thomas | Haldane | S. Webb | Chelmsford | Olivier | V. Hartshorn. |
| Nov. 4, 1924 | S. Baldwin | W. S. Churchill | Sir W. J.-Hicks | A. Chamberlain | Sir L. Worthington-Evans. | L. C. M. S. Amery | Cave<br>Hailsham | Sir P. Cunliffe-Lister | W. C. Bridgeman | Birkenhead<br>Peel | Sir W. M. Thomson. |
| June 7, 1929 | J. R. MacDonald | P. Snowden | J. R. Clynes | A. Henderson | T. Shaw. | J. H. Thomas<br>Passfield | Sankey | W. Graham | A. V. Alexander | W. Benn | H. B. Lees Smith. |
| | | | | | | | | | | | **M. for Health.** |
| Aug. 25, 1931 | J. R. MacDonald | P. Snowden | Sir H. Samuel | Marq. of Reading | Lord Crewe. | J. H. Thomas | Lord Sankey | Sir Philip Cunliffe-Lister | Sir Austen Chamberlain | Sir Samuel Hoare | N. Chamberlain. |
| Oct. 27, 1931 | J. R. MacDonald | N. Chamberlain | Sir H. Samuel | Sir John Simon | Lord Hailsham | Sir P. Cunliffe-Lister | Lord Sankey | W. Runciman | Sir Bolton Eyres-Monsell | Sir Samuel Hoare | Sir E. Hilton Young. |

*N.B.*—See Prominent People under "Ministry" for further appointments.

# FOREIGN MONARCHS, PRESIDENTS, ETC.

| | Succeeded |
|---|---|
| Abyssinia, Haeli Sellassie I. (Negus) | 1930 |
| Afghanistan, King M. Nadir Khan | 1929 |
| Albania, King Zog I. | 1928 |
| Argentina, Pres. Gen. Justo | 1932 |
| Austria, Pres. Herr Miklas | 1928 |
| Belgium, King Albert I. | 1909 |
| Bolivia, Sr. Daniel Salamanca | 1931 |
| Brazil, Pres. Dr. G. Vargas | 1930 |
| Bulgaria, Tsar Boris | 1918 |
| Chile, Pres. D. J. E. Monterro | 1931 |
| China, Pres. Chiang Kai Shek | 1928 |
| Colombia, Pres. Dr. Enrique Olaya Herrera | 1930 |
| Costa Rica, Pres. C. G. Viquez | 1928 |
| Cuba, Pres. Gen. G. Machado | 1929 |
| Czecho-Slovakia, Pres. Prof. Masaryk | 1918 |
| Denmark, King Christian X | 1912 |
| Ecuador, Pres. Alfredo Baquerize | 1931 |
| Egypt, King Ahmed Fuad I. | 1917 |
| France, Pres. M. Doumer | 1931 |
| Germany, Pres. F.-M. von Hindenburg | 1925 |
| Greece, Pres. Alexander Zaimis | 1929 |
| Guatemala, Pres. Gen. Ubico | 1931 |
| Hejaz, King Abdul Aziz. I. Saud | 1926 |
| Haiti, Pres. Eugéne Roy | 1930 |
| Holland, Queen Wilhelmina | 1890 |
| Honduras, Pres. V. M. Colindres | 1929 |
| Hungary (Reg.), Admi. N. Horthy de Nagybanya | 1920 |

| | Succeeded |
|---|---|
| Iraq, King Faisal I. | 1921 |
| Italy, King Victor Emmanuel III. | 1900 |
| Japan, Emperor Hirohito | 1926 |
| Liberia, Pres. C. D. B. King | 1920 |
| Mexico, Pres. Ortiz Rubio | 1930 |
| Monaco, Prince Louis | 1922 |
| Morocco, Sultan Sidi Mohamed | 1927 |
| Nicaragua, Pres. J. M. Moncada | 1929 |
| Norway, King Haakon VII. | 1905 |
| Panama, Dr. Ricardo J. Alfaro | 1931 |
| Paraguay, Pres. Dr. J. Guggiari | 1928 |
| Persia, Shah Reza. K. Pahlevi | 1925 |
| Peru, Pres. Lt.-Col. Luis M. S. Cerro | 1930 |
| Poland, Pres. I. Moscicki | 1926 |
| Portugal, Chf. Exec. General Carmona | 1926 |
| Roumania, King Carol | 1930 |
| Russia, Pres. A. I. Rykoff | 1924 |
| Salvador, Pres. P. R. Bosque | 1927 |
| Siam, King Prajadhipok | 1925 |
| Spain, Provisional Republic | 1931 |
| Sweden, King Gustavus V. | 1907 |
| Switzerland, Pres. M. Musy | 1930 |
| Turkish Empire, Pres. Mustapha Kemal | 1923 |
| United States, Pres. H. Hoover | 1929 |
| Uruguay, Pres. Dr. J. Campisteguy | 1927 |
| Venezuela Pres. J. B. Perez | 1929 |
| Yugo-Slavia, King Alexander | 1921 |

# TABLE OF PRECEDENCY

The Sovereign.
The Prince of Wales.
Other Sons of the Sovereign.
Grandsons of the Sovereign.
Brother (or brothers, when more than one) of the Sovereign, Sovereign's Uncles, Sovereign's Nephews, Ambassadors.
The Archbishop of Canterbury.
The Lord High Chancellor.
[In Scotland, Moderator of the General Assembly if in attendance at a royal function.]
The Archbishop of York.
Prime Minister.
The Lord President of the Council.
Speaker of the House of Commons.
The Lord Privy Seal.
The Lord Great Chamberlain.
Lord High Constable.
The Earl Marshal.
The Lord Steward of His Majesty's Household
Master of the Horse.
The Lord Chamberlain.
The last five rank above all Peers of their own degree.
Dukes, according to their Patents of Creation.
1. Of England;
2. Of Scotland;
3. Of Great Britain;
4. Of Ireland;
5. Those created since the Union.

Eldest Sons of Dukes of Royal blood.
Marquesses, according to their Patents, in the same order as Dukes.
Dukes' eldest Sons.
Earls, according to their Patents, in the same order as Dukes.
Younger Sons of Dukes of Royal blood.
Marquesses' eldest Sons.
Dukes' younger Sons.
Viscounts, according to their Patents, in the same order as Dukes.
Earls' eldest Sons.
Marquesses' younger Sons.
Bishops of London, Durham, and Winchester.
All other English Bishops, according to their seniority of Consecration.
Secretaries of State, if of the degree of a Baron.
Barons, according to their Patents, in the same order as Dukes.
Treasurer of H.M.'s Household.
Comptroller of H.M.'s Household.
Vice-Chamberlain of Household.
Secretaries of State under the degree of Barons.
Viscounts' eldest Sons.
Earls' younger Sons.
Barons' eldest Sons.
Knights of the Garter.
Privy Councillors.
Chancellor of the Exchequer.
Chancellor of the Duchy of Lancaster.
Lord Chief Justice King's Bench.
Master of the Rolls.
The Lords Justices of Appeal.
Lords of Appeal.
Judges according to seniority.
Viscounts' younger Sons.
Barons' younger Sons.
Sons of Life Peers.
Baronets of England, Scotland, Ireland, and United Kingdom, according to date of Patents.
Knights of the Thistle.
Knights of St. Patrick.
Knights Grand Cross of the Bath.
Knights Grand Commanders of the Star of India.
Knights Grand Cross of St. Michael and St. George.
Knights Grand Commanders of the Indian Empire.
Knights Grand Cross of the Royal Victorian Order.
Knights Grand Cross of the British Empire.
Knights Commanders of the Bath.
Knights Commanders of the Star of India.
Knights Commanders of St. Michael and St. George.
Knights Commanders of the Indian Empire.
Knights Commanders of the Royal Victorian Order.
Knights Commanders of the British Empire.
Knights Bachelors.
Judges of County Courts.
Serjeant at Law.
Masters in Chancery.
Masters in Lunacy.
Companions of the Bath.
Companions of the Star of India.
Companions of St. Michael and St. George.
Companions of the Indian Empire.
Commanders of Royal Victorian Order.
Commanders of the British Empire.
Companions of the Distinguished Service Order.
Members 4th Class of the Royal Victorian Order.
Officers of the British Empire.
Companions of the Imperial Service Order.
Gentlemen of the Privy Chamber.
Eldest Sons of younger Sons of Peers.
Baronets' eldest Sons.

Eldest Sons of Knights:—
1. Garter;
2. Thistle;
3. St. Patrick;
4. The Bath;
5. Star of India;
6. St. Michael and St. George;
7. Indian Empire;
8. Royal Victorian Order;
9. British Empire Order;
10. Knights Bachelors.

Members of the 5th Class of the Royal Victorian Order.
Members of the British Empire.
Younger Sons of the younger Sons of Peers.
Baronets' younger Sons.
Younger Sons of Knights in the same order as eldest Sons.
Gentlemen entitled to bear arms.

Women rank as their husbands or as their eldest brothers; but the daughter of a Peer marrying a Commoner retains her title as Lady or Honourable. Daughters of Peers rank next after the wives of their elder brothers, and before their younger brothers' wives. Daughters of Peers marrying Peers of lower degree are given only thenceforth the same order of precedency as that of their husbands; thus the daughter of a Duke marrying a Baron ranks as Baroness only, while her sisters married to commoners would retain their rank and take Precedence of the Baroness. Official rank on the husband's part does not afford recognised similar precedence to the wife. There are three Orders confined to Ladies: the Order of Victoria and Albert, the Crown of India, and the Royal Red Cross, but no special precedence attaches to such membership.

Precedence is formed by statute, patent, or usage, but the chief regulations regarding the order of precedence were settled by Parliament in the reign of Henry VIII.

Precedence locally, in county or city, has not been promulgated by written code, but in any county the Lord Lieutenant naturally stands first, followed by the Sheriff. In London and other Municipal Corporations—civil or borough—the aldermen, sheriffs, and chief officers have precedence in the order named after the Mayor (or Lord Mayor, as the case may be); the Livery coming next, where such is existent.

# IN WRITING LETTERS TO PERSONS OF RANK

## THE PROPER FORM OF ADDRESS IS AS FOLLOWS:

To The King.
*Begin:* Sir.
*Conclude:* I remain, with the profoundest veneration, Your Majesty's most faithful subject and dutiful Servant.
Superscribe:
To the King's Most Excellent Majesty, etc.

The Queen.
Madam.
I remain,
With the profoundest veneration,
Your Majesty's most faithful and devoted Servant.
Superscribe:
To the Queen's Most Excellent Majesty, etc.

The Prince (or, Princess) of Wales.
Sir (or Madam).
I remain,
With the greatest respect,
Sir (or Madam),
Your Royal Highness's most dutiful and most obedient Servant.
Superscribe:
To His Royal Highness the Prince of Wales, K.G.
To Her Royal Highness the Princess of Wales.

Princes and Princesses and Dukes and Duchesses of the Blood Royal.
Sir (or Madam).
I remain, with the greatest respect,
Your Royal Highness's most dutiful and most obedient Servant.
Superscribe:
To His (or Her) Royal Highness Prince E—— (or Princess E——); or To Her Royal Highness the Princess of, etc., or to His Royal Highness the Duke of C——; or To Her Royal Highness the Duchess of C——.

NOBILITY.

Dukes.
My Lord Duke,
I remain, my Lord Duke,
Your Grace's most devoted and most obedient Servant.
Superscribe:
To His Grace the Duke of A——, K.T., etc., etc.

Marquises.
My Lord Marquis.
I have the honour to be, my Lord Marquis,
Your Lordship's obedient and humble Servant.
Superscribe:
To the most Honourable the Marquis of R——, K.G., etc., etc., etc.

Earls, Viscounts, and Barons.
My Lord.
Conclude as to a Marquis.
Superscribe:
To the Right Honourable the Earl of ——; or To The Right Honourable the Lord Viscount ——; or To The Right Honourable Lord ——.

Baronets and Knights.
Sir,
I have the honour to be, Sir,
Your humble and obedient Servant.
Superscribe:
Sir Francis T——, Bart.; or Sir John B——, etc., etc., etc.

*Wives of Dukes:* Madam. I have the honour to be, Madam, Your Grace's most humble and most obedient Servant. Superscribe: To Her Grace the Duchess of O——.

*Wives of Marquises:* Madam. I have the honour to be, Madam, Your Ladyship's obedient and humble Servant. Superscribe: To the most Honourable the Marchioness of Q——.

*Wives of Earls, Viscounts, and Barons:* Begin and end as to a Marchioness. Superscribe: The Right Honourable the Countess of ——; or The Right Honourable the Lady Viscountess——; or the Right Honourable Lady ——.

*Wives of Baronets and Knights:* Madam. I have the honour to be, Madam, Your ladyship's most obedient Servant. Superscribe: Lady ——.

CLERGY.

Archbishop.
My Lord Archbishop,
I remain, my Lord Archbishop,
Your Grace's most devoted and obedient Servant.
Superscribe:
To His Grace, the Lord Archbishop of Canterbury.

The style of address to the Archbishop of Armagh is: To His Grace the Lord Primate of Ireland, or the Right Hon. and Most Rev. the Archbishop of Armagh. The other Irish Archbishop (of Dublin) is addressed in the same style as the English Archbishops.

Bishops.
My Lord Bishop,
I remain, my Lord Bishop,
Your Lordship's most obedient Servant.
Superscribe:
To the Right Reverend the Lord Bishop of ——, etc., etc., etc.

Colonial Bishops are addressed in the same manner as those of England. Bishops of the Episcopalian Church of Scotland and of the United States are not addressed by the title of Lord, and letters begin: Right Reverend Sir, and end: I remain, Right Reverend Sir, Your most obedient Servant. Superscribe: The Right Reverend Bishop —— [surname simply].

DEANS.

Very Rev. Sir,
Your most obedient Servant.

Superscribe:
The Very Reverend The Dean of ——.

ARCHDEACONS.

Begin and end as to a Dean, and superscribe:
The Venerable The Archdeacon ——.

## JUDICIAL OFFICERS.

LORD CHANCELLOR.

My Lord,
I have the honour to be, with great respect,
Your Lordship's most obedient Servant.

Superscribe:
The Right Honourable the Lord Chancellor, etc., etc., etc.

LORDS OF APPEAL IN ORDINARY.

As to Lord Chancellor.

Superscribe:
The Right Honourable Lord ——.

LORD CHIEF JUSTICE.

As to Lord Chancellor.

Superscribe:
The Right Honourable the Lord Chief Justice of England.

MASTER OF THE ROLLS.

My Lord (or Sir),
I have the honour to be, My Lord (or Sir),
Your most obedient Servant.

Superscribe:
To the Right Honourable Lord —— (or Sir —— ——), Master of the Rolls; or His Honour The Master of the Rolls.

LORDS JUSTICES OF APPEAL.

Sir (only addressed as "My Lord" when on the Bench),
I have the honour to be, Sir,
Your most obedient and humble Servant.

Superscribe:
The Right Hon. the Lord Justice ——; or The Right Hon. Sir —— ——, Lord Justice of Appeal.

LORD MAYOR.

The Right Honourable the Lord Mayor of ——.
My Lord,
Your Lordship's obedient Servant.

Superscribe:
The Right Hon. the Lord Mayor of ——.

# THE BRITISH COINAGE

The Standard Coinage of Great Britain consists of the following pieces, some of which are issued for special purposes (not for currency):—

| Name of Coin. | Standard Weight. |
|---|---|
| **Gold:** | Grains. |
| Five Pound Piece | 616·37239 |
| Two Pound Piece | 246·54895 |
| Sovereign | 123·27447 |
| Half Sovereign | 61·63723 |
| **Silver:** | |
| Crown | 436·36363 |
| Double Florin | 349·09090 |
| Half-Crown | 218·18181 |
| Florin | 174·54545 |
| Shilling | 87·27272 |
| Sixpence | 43·63636 |
| Groat | 29·09090 |
| Threepenny Piece | 21·81818 |
| Twopenny Piece | 14·54545 |
| Penny | 7·27272 |
| **Bronze:** | |
| Penny | 145·83333 |
| Halfpenny | 87·50000 |
| Farthing | 43·75000 |

**Standard Gold** Coinage in Britain consists of eleven-twelfths of fine metal and one-twelfth of alloy: fineness, 916·66. Twenty troy pounds of standard gold are coined into 934 sovereigns and one half-sovereign; one troy ounce is, therefore, worth £3 17*s.* 10½*d.*, and one ounce of pure gold is nominally worth £4 4*s.* 11½*d.* Early in 1922 the actual price of gold considerably exceeded this figure. During 1921 it varied from £5 15*s.* 11*d.* in January to £4 17*s.* 7*d.* in December. The minimum weight at which a sovereign is allowed to remain current unchallenged is 122½ grains; that of half-a-sovereign 61¼ grains. Any person to whom it is tendered may break, cut, or deface any gold coin below the least current weight, but light gold coin which has not been illegally dealt with is received by the Bank of England on behalf of the Mint at its full face value.

**Standard Silver.** The first change in the silver standard since the reign of Queen Elizabeth was made in 1920, the new coins being issued early in December, when the degree of fineness was reduced to 500 parts in a thousand as against 925. This change was necessary owing to the rise in the price of silver and in order "to restore the token character of the silver coinage." The alloy now consists of 400 parts copper, 50 parts nickel, 50 parts zinc.

**Bronze** as employed in minting in the British Empire is an alloy of copper 95 parts, tin 4 parts, and zinc 1 part.

No person is permitted to coin any token to pass for, or as representing, any British piece of money under a penalty of £20.

**Bank of England Notes** are issued for sums of 10*s.*, £1, £5, £10, £20, £50; also for £100, £200, £500, and £1,000. The tender of Bank of England Notes is legal in England and Wales for every purpose; but no one can be compelled by law to give change. Gold, if above the minimum recognised current weight, is a legal tender to any amount. Silver is not a legal tender for sums over £2, nor bronze, including farthings, for beyond a shilling.

**Treasury Notes** of the value of 10*s.* and £1 issued during the War were withdrawn November 1928.

# EASTER SUNDAY

Comes next after the full moon that follows, or falls on, the 21st of March (the vernal equinox). When that date is Sunday and full moon also, the next is Easter Sunday. Thus, in 1894, the full moon was on the very day of the equinox, Wednesday, March 21st, and the Sunday following, March 25th, was Easter Sunday.

**Dates of Easters**

| | | | |
|---|---|---|---|
| 1928 | April | 8 | |
| 9 | March | 31 | |
| 30 | April | 20 | |
| 1 | ,, | 5 | |
| 2 | March | 27 | |
| 3 | April | 16 | |
| 4 | ,, | 1 | |
| 1935 | April | 21 | |
| 6 | ,, | 13 | |
| 7 | March | 28 | |
| 8 | April | 17 | |
| 9 | ,, | 9 | |
| 1940 | March | 24 | |
| 1 | April | 13 | |
| 2 | ,, | 5 | |
| 3 | ,, | 25 | |
| 4 | ,, | 9 | |
| 5 | ,, | 1 | |
| 6 | ,, | 21 | |
| 7 | ,, | 6 | |
| 8 | March | 28 | |
| 9 | April | 17 | |
| 1950 | ,, | 9 | |

# POPULATION OF THE BRITISH EMPIRE

British Empire (1931) . (Est.) 450,000,000
United Kingdom . . . . . 46,540,385
Isle of Man, Channel Isles, etc. . . 149,852
Colonies, Dependencies, etc. . (Est.) 414,548,000

COMPARATIVE DECENNIAL RETURNS FOR THE BRITISH ISLES, 1821–1931.

ENGLAND AND WALES.

| Year. | Total Population. | Increase or Decrease. | Per Cent. |
|---|---|---|---|
| 1821 | 12,000,236 | 1,835,980 | 18·06 |
| 1831 | 13,896,797 | 1,896,561 | 15·80 |
| 1841 | 15,914,148 | 2,017,351 | 14·27 |
| 1851 | 17,927,609 | 2,013,461 | 12·65 |
| 1861 | 20,066,224 | 2,138,615 | 11·90 |
| 1871 | 22,712,266 | 2,646,042 | 13·21 |
| 1881 | 25,974,439 | 3,262,173 | 14·36 |
| 1891 | 29,002,525 | 3,028,086 | 11·65 |
| 1901 | 32,527,843 | 3,525,318 | 12·17 |
| 1911 | 36,070,492 | 3,542,649 | 10·89 |
| 1921 | 37,885,242 | 1,814,750 | 5·03 |
| 1931 | 39,947,931 | 2,062,689 | 5·44 |

SCOTLAND.

| Year. | Total Population. | Increase or Decrease. | Per Cent. |
|---|---|---|---|
| 1821 | 2,091,521 | 285,657 | 15·82 |
| 1831 | 2,364,386 | 272,865 | 13 04 |
| 1841 | 2,620,184 | 255,798 | 10·82 |
| 1851 | 2,888,742 | 268,558 | 10·25 |
| 1861 | 3,062,294 | 173,552 | 6·00 |
| 1871 | 3,360,018 | 297,724 | 9·72 |
| 1881 | 3,735,573 | 375,555 | 11·18 |
| 1891 | 4,025,647 | 290,074 | 7·77 |
| 1901 | 4,472,103 | 446,456 | 11·09 |
| 1911 | 4,760,904 | 288,801 | 6·46 |
| 1921 | 4,882,497 | 121,593 | 2·55 |
| 1931 | 4,842,554 | *39,943 | *·82 |

IRELAND.

| Year. | Total Population. | Increase or Decrease. | Per Cent. |
|---|---|---|---|
| 1831 | 7,767,401 | 965,574 | 14·19 |
| 1841 | 8,175,124 | 407,723 | 5 25 |
| 1851 | 6,552,385 | *1,622,739 | *19 85 |
| 1861 | 5,798,967 | *753,418 | *11·50 |
| 1871 | 5,412,377 | *386,590 | *6·67 |
| 1881 | 5,174,836 | *237,541 | *4 39 |
| 1891 | 4,704,750 | *470,086 | *9·08 |
| 1901 | 4,458,775 | *245,975 | *5·23 |
| 1911 | 4,390,219 | *68,556 | *1 54 |
| 1926 | 4,221,000 | | |

ISLANDS.

| Year. | Total Population. | Increase or Decrease. | Per Cent. |
|---|---|---|---|
| 1861 | 143,447 | 321 | 0 22 |
| 1871 | 144,638 | 1,191 | 0 83 |
| 1881 | 141,260 | *3,378 | *2·34 |
| 1891 | 147,842 | 6,582 | 4·66 |
| 1901 | 150,370 | 2,528 | 1·71 |
| 1911 | 148,915 | *1,455 | *0·95 |
| 1921 | 149,852 | 937 | 0·60 |
| 1931 | 142,399 | *7,453 | *4·97 |

* Indicates decrease in the decennial periods so marked.

# LONDON BOROUGHS

Apart from the great local governing bodies of the London County Council and the ancient Corporation of the City, London has 28 separate borough councils. The following is a list of these, with population for 1931, the area in acres, and the number of aldermen and councillors elected in each, in addition to a Mayor :—

| Borough. | Population. | Aldermen. | Councillors. | Acreage. | Borough. | Population. | Aldermen. | Councillors. | Acreage. |
|---|---|---|---|---|---|---|---|---|---|
| Battersea . . | 159,542 | 9 | 54 | 2,163 | Kensington | 180,681 | 10 | 60 | 2,290 |
| Bermondsey . | 111,526 | 9 | 54 | 1,503 | Lambeth . | 296,192 | 10 | 60 | 4,083 |
| Bethnal Green | 108,178 | 5 | 30 | 760 | Lewisham . | 219,942 | 8 | 50 | 7,015 |
| Camberwell . | 251,373 | 10 | 60 | 4,480 | Marylebone | 97,620 | 10 | 60 | 1,473 |
| Chelsea . . | 59,026 | 6 | 36 | 660 | Paddington | 144,950 | 10 | 60 | 1,357 |
| Deptford . . | 106,886 | 6 | 36 | 1,564 | Pancras, St. | 198,113 | 10 | 60 | 2,694 |
| Finsbury . . | 69,888 | 9 | 56 | 588 | Poplar . . | 155,083 | 7 | 42 | 2,333 |
| Fulham . . | 150,940 | 6 | 40 | 1,706 | Shoreditch . | 97,038 | 7 | 42 | 658 |
| Greenwich . | 100,879 | 5 | 30 | 3,859 | Southwark . | 171,657 | 10 | 60 | 1,181 |
| Hackney . . | 215,380 | 10 | 60 | 3,287 | Stepney . | 225,203 | 10 | 60 | 1,765 |
| Hammersmith | 135,521 | 6 | 36 | 2,286 | Stoke New'tn | 51,215 | 5 | 30 | 863 |
| Hampstead . | 88,914 | 7 | 42 | 2,265 | Wandsworth | 353,101 | 10 | 60 | 9,106 |
| Holborn . . | 38,816 | 7 | 42 | 405 | Westminster | 120,535 | 10 | 60 | 2,503 |
| Islington . . | 321,712 | 10 | 60 | 3,092 | Woolwich . | 146,944 | 7 | 45 | 8,282 |

## ENGLISH LAW SITTINGS, 1932.

Hilary—Begins January 11, ends March 23.
Easter—Begins April 5, ends May 13.
Trinity—Begins May 24, ends July 30.
Michaelmas—Begins October 12, ends December 21.

## LAW TERMS IN SCOTLAND.

Law sittings in Scotland are from October 15 to March 20, and from May 12 to July 20. Should the first day of Term fall on a Sunday, legal business commences on the day following.

## UNIVERSITY TERMS, 1932.

OXFORD.

Lent—Begins January 10, ends March 19.
Trinity—Begins April 10, ends June 30.
Michaelmas—Begins October 1, ends December 17.

CAMBRIDGE.

Lent—Begins January 5, ends March 25.
Easter—Begins April 16, ends June 24.
Michaelmas—Begins October 1, ends December 19.

# POSTAL INFORMATION

## INLAND POST.

The expression "Inland" when used in relation to any postal packet, that is, with regard to any packet or article transmissible by post, means a postal packet posted within the British Islands (excluding the Irish Free State area) and addressed to some place in the British Islands (including the Irish Free State area).

Inland postal packets are divided into the following classes, viz.:—Letters, Post-cards, Printed Papers, Newspapers, and Parcels.

### LETTERS.

The prepaid rate of postage is as follows:—
Not exceeding 2 oz. in weight . . . . . 1½d.
For every additional 2 oz. or fraction of 2 oz. ½d.

A letter if posted unpaid is charged on delivery with double postage; if posted underpaid, with double the amount short paid. No letter may exceed two feet in length, one foot in width, or one foot in depth.

Postage Stamps of the following values are issued:—

| | | | |
|---|---|---|---|
| ½d. | 2½d. | 6d. | 2s. 6d. |
| 1d. | 3d. | 9d. | 5s. |
| 1½d. | 4d. | 10d. | 10s. |
| 2d. | 5d. | 1s. | |

*Books of Postage Stamps.*—Books are issued at 5s. containing thirty-four 1½d., and six each of 1d. and ½d. stamps, 3s. containing eighteen 1½d., and six each of 1d. and ½d., and at 2s. containing ten at 1½d., six each of 1d. and ½d.

### POST-CARDS.

The prepaid rate of postage on every post-card is one penny. A post-card posted unpaid is chargeable on delivery with double postage: if posted underpaid, with double the amount short paid. The prepaid rate of postage on every reply post-card is twopence.

The material for private cards to be used as post-cards must be ordinary cardboard not thinner than that used for the thinnest cards issued and sold by the Postmaster-General for use as post-cards. No card may exceed 5½ inches in length by 4¼ inches in width, or be less than 4 inches in length by 2¾ inches in width.

Post-cards, Envelopes embossed with 1½d. and ½d. stamps, Registered Letter Envelopes, Letter-cards, and Newspaper Wrappers are also issued by the Postmaster-General for sale to the public.

In a rural district ½d., 1d., and 1½d. postage stamps and registered letter envelopes can be obtained from the postman.

### PRINTED PAPERS.

The prepaid rate is:—
Not exceeding 2 oz. in weight . . . . . ½d.
and then at the rate of ½d. for every subsequent 2 oz. or fraction of 2 oz. up to 2 lb. The rate for 1 lb. will be 4d., and for 2 lb. 8d.

No Printed Paper may exceed 2 lb. in weight. The only limit of size applicable is that applicable to letters.

### SAMPLES.

Samples cannot be sent by Inland Post at any rates other than the Letter and the Parcel Rates.

### NEWSPAPERS.

The prepaid rate of postage on copies of publications registered for transmission at the Inland Newspaper Rate, including any Supplements thereto, is one penny for every copy not exceeding 6 oz. in weight, with a further charge of one halfpenny for every additional 6 oz. or fraction of 6 oz.

### PARCELS.

#### Rates and Weight.

The rates of postage on parcels are as follows:—
Not exceeding 2 lb. in weight . . . . 6d.
Exceeding 2 lb. but not exceeding 5 lb. 9d.
" 5 " " " 8 " 1s.
" 8 " " " 11 " 1s. 3d.
No parcel may exceed 11 lb. in weight.

#### Size.

The size allowed for an Inland Parcel is:—
Greatest length . . . . . 3 ft. 6 ins.
Greatest length and girth combined 6 ft. 0 ins.

#### RE-DIRECTION.

Any kind of postal packet may be re-directed to the same addressee at another address, either by an Officer of the Post Office, or by an agent of the addressee after delivery, under the following rules:—

Letters, Post-cards, Printed Papers and Newspapers are re-transmitted by post without additional charge.

Parcels are, when re-directed, liable to additional postage at the prepaid rate for each re-directon.

### POSTE RESTANTE.

Postal packets of any kind to be called for are, as a rule, taken in at all Post Offices except Town Sub-Offices. The words "to be called for" or "Poste Restante" should appear in the address.

The Poste Restante is intended solely for the accommodation of strangers and travellers, and even they may not use the Poste Restante for more than three months.

### REGISTRATION AND COMPENSATION.

Any letter, parcel, or other postal packet may be registered.

The minimum fee for registration is 3d.

*Registered Letter Envelopes* for Foreign as well as Inland Letters, bearing a 4½d. stamp embossed on the flap for the payment of registration fee 3d. and postage 1½d., of five sizes, are sold.

#### Instructions for Registering.

Anything intended for registration must be handed to an Officer of the Post Office, and a certificate of posting, bearing an acknowledgment that the fee for registration and compensation has been paid, must be obtained. Nothing intended for registration should be dropped into a letter box.

The fees payable over and above the postage, and the respective limits of compensation, are as follows:—

| Fee.* | Limit of Compensation. | Fee.* | Limit of Compensation. |
|---|---|---|---|
| 3d. | £5 | 1s. 1d. | £200 |
| 4d. | 20 | 1s. 2d. | 220 |
| 5d. | 40 | 1s. 3d. | 240 |
| 6d. | 60 | 1s. 4d. | 260 |
| 7d. | 80 | 1s. 5d. | 280 |
| 8d. | 100 | 1s. 6d. | 300 |
| 9d. | 120 | 1s. 7d. | 320 |
| 10d. | 140 | 1s. 8d. | 340 |
| 11d. | 160 | 1s. 9d. | 360 |
| 1s. 0d. | 180 | 1s. 10d. | 380 |
| | | 1s. 11d. | 400 |

* These fees include the ordinary registration fee of 3d. The highest amount of compensation obtainable for any one packet is £400.

#### Unregistered Parcels.

The maximum limit of compensation is £2.

No compensation is given in respect of money of any kind sent by Parcel Post, whether registered or unregistered, or in respect of jewellery (gold, silver, jewels, etc.) sent by Parcel Post unregistered.

In order to secure compensation in respect of the loss of a parcel in the post a certificate of posting should be obtained by the sender when the parcel is posted.

### LATE-FEE LETTERS.

At many Head Post Offices and at some other Post Offices, letters for despatch by the Night

Mails may, on payment of a special late fee of ½d., be posted after the ordinary hours of collection. In certain instances similar facilities are afforded in connection with Day Mails.

### PREPAYMENT IN MONEY.

In London at the General Post Office, and at the Head Offices in certain large towns in the provinces, any Inland postal packets, other than newspapers, may be prepaid in money, provided that the articles are chargeable with a uniform rate of postage, that the amount paid (including any registration fees) is in no case less than 10*s.* and that, except in the case of parcels, the packets are tied in bundles of 60 (or in the case of bulky packets, in bundles of a convenient size, each containing 10 packets or a multiple of 10), with the addresses arranged in the same direction. Prepayment, however, cannot be made partly in money and partly in stamps, and the money must be paid at the time the packets are handed in at the Post Office.

### MONEY ORDERS AND POSTAL ORDERS.

An Inland Money Order may be obtained for any sum, not comprising a fractional part of a penny, up to £40; for transmission abroad the limit varies from £20 to £40. If payable in the United Kingdom or in the Irish Free State an Order may be crossed for payment through a Bank.

Orders for payment of sums up to £40 may also be transmitted by telegraph to offices within the United Kingdom and the Irish Free State, and to certain British Colonies and Foreign Countries.

A Postal Order can be obtained for 6*d.* and for any multiple of 6*d.* up to £1 1*s.* 0*d.* Intermediate amounts may be made up by affixing postage stamps not exceeding two or three in number and 5*d.* in total value. Larger amounts may be made up by purchasing two or more Orders, and any sum up to £1 16*s.* 10*d.* can be sent more cheaply by Postal Order (or Orders) than by Money Order. The Orders may be cashed at any office which the sender, or, in default of the sender, the payee, selects.

British Postal Orders are issued and paid in most British Possessions and Protectorates and certain other places abroad.

### INLAND MONEY ORDERS.

#### Rates of Poundage.

The rates of poundage on ordinary Inland Money Orders are:—

| | | |
|---|---|---|
| For sums not exceeding £3 | ..... | 4*d.* |
| ,, above £3 and not exceeding | £10 .. | 6*d.* |
| ,, ,, £10 ,, ,, | £20 .. | 8*d.* |
| ,, ,, £20 ,, ,, | £30 .. | 10*d.* |
| ,, ,, £30 ,, ,, | £40 .. | 1*s.* |

No single Money Order can be issued for a sum exceeding £40.

No Order may contain a fractional part of 1*d.*

The above rates apply to Orders issued for payment in the Irish Free State.

### INLAND TELEGRAPH MONEY ORDERS.

Money may be transmitted by Telegraph Money Order from any Money Order Office in the United Kingdom or the Irish Free State, which is also a despatching office for telegrams, and may be made payable at any Money Order Office which is also an office for the delivery of telegrams.

### POSTAL ORDERS.

The following are the amounts for which Postal Orders are issued, together with the poundage payable in the United Kingdom in respect of each Order:—

| *s.* | *d.* | *d.* | *s.* | *d.* | *d.* | *s.* | *d.* | *d.* |
|---|---|---|---|---|---|---|---|---|
| 0 | 6 | 1 | 6 | 0 | 1½ | 11 | 6 | 1½ |
| 1 | 0 | 1 | 6 | 6 | 1½ | 12 | 0 | 1½ |
| 1 | 6 | 1 | 7 | 0 | 1½ | 12 | 6 | 1½ |
| 2 | 0 | 1 | 7 | 6 | 1½ | 13 | 0 | 1½ |
| 2 | 6 | 1 | 8 | 0 | 1½ | 13 | 6 | 1½ |
| 3 | 0 | 1½ | 8 | 6 | 1½ | 14 | 0 | 1½ |
| 3 | 6 | 1½ | 9 | 0 | 1½ | 14 | 6 | 1½ |
| 4 | 0 | 1½ | 9 | 6 | 1½ | 15 | 0 | 1½ |
| 4 | 6 | 1½ | 10 | 0 | 1½ | 15 | 6 | 2 |
| 5 | 0 | 1½ | 10 | 6 | 1½ | 16 | 0 | 2 |
| 5 | 6 | 1½ | 11 | 0 | 1½ | 16 | 6 | 2 |

| *s.* | *d.* | *d.* |
|---|---|---|
| 17 | 0 | 2 |
| 17 | 6 | 2 |
| 18 | 0 | 2 |
| 18 | 6 | 2 |
| 19 | 0 | 2 |
| 19 | 6 | 2 |
| 20 | 0 | 2 |
| 21 | 0 | 2 |

By purchasing two Orders larger amounts may be made up, as follows:—

| *s.* | *d.* | *s.* | *d.* | *d.* | |
|---|---|---|---|---|---|
| 21 | 6 to | 30 | 0 | .... 3 | (Two Orders at 1½*d.*). |
| 30 | 6 ,, | 36 | 0 | .... 3½ | (One at 2*d.* and one at 1½*d.*). |
| 36 | 6 ,, | 42 | 0 | .... 4 | (Two at 2*d.*). |

#### Period during which Orders are Payable.

If an Order be not paid within three months from the last day of the month of issue, a commission equal to the original poundage will be charged.

#### Filling in of Order.

The purchaser of a Postal Order must, before parting with it, fill in (in ink) the name of the person to whom the amount is to be paid, and is recommended to fill in (also in ink), the name of the Office of Payment as a precaution in case the Order should be lost or stolen.

#### Counterfoils.

Every person to whom a Postal Order is issued should tear off and retain the counterfoil. Its production will facilitate inquiry if the Order should be lost.

### NATIONAL SAVINGS CERTIFICATES.

Certificates of nominal value £1, £5, £10, £25, £50, and £100, can be obtained at most Post Offices. Limit of holding £500.

The purchase price of a single Certificate (formerly 15*s.* 6*d.*) is now 16*s.* 0*d.* The purchase price is repayable at any time on application together with any interest which has accrued. A single Certificate now becomes worth £1 at the end of 6 years and £1 4*s.* 0*d.* at the end of ten years.

### POST OFFICE SAVINGS BANK.

The Post Office acts as a Bank for Savings throughout the United Kingdom.

In every town and in almost every village small savings may be paid in at the Post Office. The money will be held in safety by the Government, will earn interest, and, when required, may be drawn out again through the local Post Office wherever the owner may be.

Any person over the age of seven may become a depositor in the Savings Bank, and accounts may also be opened—

(*a*) On behalf and in the names of children under 7 years of age. (Money so deposited is not withdrawable until the children attain the age of 7 years, and is then payable to their signatures only.)

(*b*) By two or more persons jointly on their own behalf. Any person who has already an account or accounts standing in his sole name may also become a party to joint accounts.

#### Opening an Account.

On opening an account, a person must state his full name, occupation, and residence. He must also sign a declaration setting forth the particulars of any accounts already standing in his sole name, of any joint accounts in which his name appears and of any accounts opened in trust for him. He need not attend at the Post Office himself provided the declaration is duly made by him and presented on his behalf.

#### The Deposit Book.

Every person opening an account should see that he obtains a Deposit Book. This Book may be used to make deposits or withdrawals at any Post Office Savings Bank in Great Britain and Ireland.

Two patterns of deposit book are in use:—

(1) If the amount of the opening deposit is 10*s.* or more a book is issued in which deposits are recorded by means of written entries.

(2) If the amount of the opening deposit is less than 10*s.*, a book is issued in which deposits are recorded by means of adhesive labels (called Coupons) of the uniform value of one shilling. When the amount due in a Coupon Book reaches £1, the account is transferred to a book of the other pattern.

### TELEGRAMS.

1s. for 12 words including address, and 1d. for each additional word (five figures count as one word). Irish Free State 1s. 6d.

### ANNUITIES.

The Post Office issue Government annuities at prices varying according to the price of Consols.

# FOREIGN AND COLONIAL POST

### LETTERS.

The prepaid rate of postage on letters from the United Kingdom for all Foreign Countries (except the United States of America, Egypt, and Tangier) is 2½d. for the first ounce, and 1½d. for each succeeding ounce or fraction thereof; from the United Kingdom to British Possessions generally (excepting Iraq and Transjordan), the United States of America, Egypt, and Tangier the letter rate is 1½d. for one ounce, and 1d. for each succeeding ounce.

### POST-CARDS.

The prepaid rate of postage on every Post-card for a destination outside the United Kingdom is 1½d., and on every reply Post-card 3d. A Post-card from a place abroad, if unpaid, is chargeable with a postage of 3d.; if partially paid, with double the deficient postage, with a minimum surcharge of 1d.

### PRINTED PAPERS AND COMMERCIAL PAPERS.

The prepaid rate of postage on Printed Papers for all places abroad is ½d. per 2 oz., and on Commercial Papers is 2½d. for the first 10 oz. and ½d. per 2 oz. thereafter.

### LIMITS OF SIZE AND WEIGHT.

Packets of printed or commercial papers, not in the form of a roll, addressed to British Colonies or Possessions may not exceed 2 feet in length and 1½ feet in width or depth; for foreign countries the dimensions may not exceed 18 inches in any direction. Packets in the form of a roll may not in either case exceed 30 inches in length and 4 inches in diameter. The limit of weight for the British Empire is 5 lb., and for foreign countries and Egypt 4 lb. The limits of size for Egypt in respect to letters is 2 feet in length and 1½ feet in width and 1½ feet in any direction for Printed and Commercial Papers.

### SAMPLES.

**Postage and Definition.**

The prepaid rate of postage on Sample Packets for all places abroad is 1d. for the first 4 oz. and ½d. per 2 oz. thereafter.

### PARCELS.

It is impossible to give here full particulars of postage, weight restrictions, etc., on parcels sent to Foreign Countries, as these vary according to distance, etc.

For Europe generally the average rate on a 2 lb. parcel is 1s 9d., for 7 lb. 2s. 6d., and 11 lb. 3s. 6d.

Australia 1s. 4d. per lb. and 6d. per lb. thereafter to 11 lb.

| | 2 lb. | 7 lb. | 11 lb. | 22 lb. |
|---|---|---|---|---|
| | s. d. | s. d. | s. d. | s. d. |
| Canada . . . | 2 3 | 4 3 | 6 0 | — |
| China . . . | 2 3 | 3 3 | 4 3 | 7 0 |
| Egypt . . . | 2 0 | 3 6 | 4 6 | 7 3 |
| India . . . | 2 0 | 3 9 | 5 3 | — |
| Japan . . . | 2 0 | 2 9 | 3 9 | — |
| New Zealand . | 2 3 | 4 0 | 6 3 | 9 3 |
| U.S.A. . . | 2 0 | 3 9 | 5 0 | 7 6 |

Union of South Africa 9d. per lb. up to 11lb.

Foreign parcels are subject to Customs Regulations and special forms (obtainable at the Post Office) must be filled up giving particulars of contents, value, etc. They cannot be registered, but may be insured. The *Post Office Guide* should be consulted for further details.

### TELEGRAPHIC SERVICE.

Europe generally from 2½d. to 6d. per word. Australia 2s. per word. Canada from 9d. to 2s. 6d. per word, according to distance. China 2s. 9d. Japan 2s. 9d. Egypt 9d. to 1s. 4d. India 1s. 5d. New Zealand 1s. 11d. U.S.A. from 9d. to 1s. 4d. per word. South Africa 1s. 8d. per word.

"Deferred" rates at about half the ordinary rates may be obtained for many places. See *Post Office Guide*.

### MONEY ORDERS.

**Ordinary.**

| For sums:— | s. | d. |
|---|---|---|
| Not exceeding £1 ..... | 0 | 6 |
| Above £1 but not exceeding £2.... | 1 | 0 |
| " £2 " " £3.... | 1 | 6 |
| " £3 " " £4.... | 1 | 9 |

and so on, 3d. additional for each £1 or fraction of £1 up to the maximum amount of an Order.

Above £39 but not exceeding £40 .. 10 9

# GENERAL SUMMARY OF PRINCIPAL POST OFFICE CHARGES

## INLAND.

**Letters.**

Not exceeding 2 oz. .....1½d.
For every additional 2 oz. ..... ½d.

**Post-cards.**

Post-cards ..... 1d.
Reply paid ..... 2d.

**Printed Papers.**

Not exceeding 2 oz. ..... ½d.
For every additional 2 oz. up to 2 lb. .... ½d.

**Newspapers.**

*(Registered at the G.P.O.)*

Not exceeding 6 oz. (per copy) ..... 1d.
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Not exceeding 2 lb. ..... 6d.
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**Registration Fee 3d.**

### TELEGRAMS.

1s. for first 12 words, and 1d. each additional word.

### MONEY ORDERS: ORDINARY.

For sums not over £3, £10, £20, £30, £40, the charge is 4d., 6d., 8d., 10d., 1s. respectively.

### MONEY ORDERS: TELEGRAPHIC.

Poundage at the same rate as for Ordinary Inland Money Orders, plus supplementary fee of 2d. and cost of official Telegram of Advice.

### POSTAL ORDERS.

| Amount of Order. | Poundage. |
|---|---|
| 6d., 1s., 1s. 6d., 2s., 2s. 6d. ..... | 1d. |
| 3s., 3s. 6d., 4s., 4s. 6d., 5s., 5s. 6d., 6s., 6s. 6d., 7s., 7s. 6d., 8s., 8s. 6d., 9s., 9s. 6d., 10s., 10s. 6d., 11s., 11s. 6d., 12s., 12s. 6d., 13s., 13s. 6d., 14s., 14s. 6d., 15s. ..... | 1½d. |
| 15s. 6d., 16s., 16s. 6d., 17s., 17s. 6d., 18s., 18s. 6d., 19s., 19s. 6d., 20s., or 21s..... | 2d. |

### FOREIGN AND COLONIAL.

**Letters.**

To British Possessions generally, to H.M. Ships of War and H.M. Troops serving abroad, Egypt, United States of America, and Tangier, 1½*d.* per first oz. and 1*d.* for each additional oz.

To all other places, 2½*d.* for first oz. and 1½*d.* for each additional oz.

**Printed Papers, Commercial Papers, and Samples.**

Per 2 oz. .....½*d.*

Minimum for Commercial Papers 3*d.*, and for Samples 1*d.*

**Money Orders.**

| For sums:— | *s.* | *d.* |
|---|---|---|
| Not exceeding £1 ..... | 0 | 6 |
| Above £ but not exceeding £2 .... | 1 | 0 |
| ,, £2 ,, ,, £3 .... | 1 | 6 |
| ,, £3 ,, ,, £4 .... | 1 | 9 |

and so on, 3*d.* additional for each £1 or fraction of £1 up to the maximum amount of an Order.

Above £39 but not exceeding £40 .. 10 9

# LAW OF INTESTACY

## (ENGLAND AND WALES)

By the operation of the Administration of Estates Act, 1925, which came into effect on January 1, 1926, the law of descent has been completely changed as regards Intestacy. The attempt has been made to ensure the same rules of law for real and personal property.

The Statutes of Distribution which have been in force since 1670 and the Inheritance Act of 1833 have been repealed with numerous other kindred Acts of long standing. The general effect of the new statute is to equalise the position of the husband and wife and also the parents and grandparents. The mother is now given a prior claim over the brothers and sisters of the deceased, as also children of "whole blood" over those of "half blood." All relations more remote than first cousins and their children do not now share in the property. Sec. 45 of this Act abolishes with regard to both real estate and personal inheritance, (1) all existing rules and canons of descent, including the custom of gavelkind, borough English, (2) tenancy by the curtesy and other estate and interest of a husband in real estate, (3) dower and free bench and other estate and interest of a wife (subject to certain exceptions), (4) escheat to the Crown or the Duchy of Lancaster or the Duke of Cornwall or to a mesne lord for want of heirs.

Sec. 46 deals with "the residuary estate of an intestate" which may be defined as that which remains after all debts and legacies have been paid. This is now to be distributed or held in trust as follows:—

| *If Intestate leaves* | *Distribution of the Estate* |
|---|---|
| Husband or wife (with or without issue) . . . . . | Surviving wife or husband takes personal chattels, such as domestic animals, motors, etc., but not chattels used for business purposes, nor money or securities for money. [Sec. 55.]<br>The residuary estate stands charged [Sec. 46(1)i] with payment of £1,000 free of death duties and costs to the surviving wife or husband with interest at 5 per cent. from date of death until paid. Subject to this charge the whole estate is held on trust for the surviving wife or husband if the intestate leaves no issue. If there be issue then one half of this is held on trust for the wife or husband during life and afterwards on the statutory trusts for the issue of the intestate. As to the other half on the statutory trusts for the issue of the intestate. If these trusts fail then on trust for the surviving wife or husband during life |
| Issue but no surviving wife or husband . . . . . | Held in statutory trust for the benefit of the issue. [Sec. 46(1)ii.] |
| No issue but both parents . . | Held in trust for father and mother in equal shares absolutely subject to interest of surviving wife or husband. [Sec. 46(1)iii.] |
| No issue but one parent . . . | Held in trust for surviving parent absolutely subject to interest of surviving wife or husband. [Sec. 46(1)iv.] |
| No issue or parent . . . . . | Held in trust for the following persons living at the death of the intestate in order named; (1) brothers and sisters of the whole blood; (2) brothers and sisters of the half blood; (3) grandparents in equal shares (not on statutory trust); (4) uncles and aunts being whole blood of a parent of intestate; (5) uncles and aunts being half blood of a parent of intestate; (6) surviving wife or husband absolutely. [Sec. 46(1)v.] |
| No surviving wife or husband or relations within degree mentioned above. | The Crown or Duchy of Lancaster or Duke of Cornwall as *bona vacantia* in lieu of any right to escheat. Either of the above may provide for dependents whether kindred or not for whom the intestate might reasonably have been expected to make provision. [Sec. 46(1)vi.] |

STATUTORY TRUSTS.—Sec. 47 provides that the residuary estate is to be held in trust for the issue of the intestate in equal shares for all children living at the death of the intestate who attain 21 years or marry under that age. Similarly for all the issue of any child of the intestate, who predeceases the intestate. Such issue to take through all degrees according to their stocks (in equal shares of more than one) the share which the parent would have taken if living at the death of the intestate. Hence a nephew and niece can only share if his or her parent be deceased, when the child takes the parent's share. [Sec. 47(1)i.]

Any money paid by way of advancement, to start in life or on the marriage of the child of the intestate will (unless there is a contrary intention expressed) be taken as paid out of the share the child would have taken if living at the death of the intestate. [Sec. 47(1)iii.]

The personal representatives may allow any infant contingently interested to have the use and enjoyment of any personal chattels subject to reasonable conditions and without being liable to account for consequential loss, *i.e.* loss arising to a person from the culpable act or omission of another. [Sec. 47(1)iv.]

If the trusts in favour of the issue of the intestate fail by reason or no child or other issue attaining an absolutely vested interest then the residuary estate and the income, etc., shall go as if the intestate had died without leaving issue living at the death of the intestate. [Sec. 47(2).]

References to a child or issue living at the death of any person include a child or issue *en ventre sa mère* at the death. [Sec. 55(2).]

## (SCOTLAND)

The Intestate Husband's Estate (Scotland) Act 1911 provides that the heritable and moveable estate of every man dying intestate and domiciled in Scotland after August 18, 1911, shall (if the net value of the estate be less than £500), belong to the widow absolutely and exclusively.

If the estate be over £500 in value, the widow first takes £500 with interest at 4 per cent. from the date of the death until payment. This charge is borne proportionately between the heir-at-law and the representatives of the moveable estate.

This provision for the widow is in addition to her rights of "terce," *i.e.* the life rent of one-third of the heritage left by the husband and *jus relictae*, *i.e.* one-third of the moveables after payment of debts, in the heritable and moveable estate of the Intestate after payment of the sum of £500.

### MOVEABLE ESTATE

| *If the Intestate die leaving* | *Moveable estate is divided in the proportions shown below:*— |
|---|---|
| Widow only | Half to widow. Half to next-of-kin of the deceased, if none then half to Crown. |
| Widow and children | One-third to widow. Two-thirds to children equally. |
| Widow, children, and issue of predeceased children | One-third widow. One-third children equally, and remaining one-third between the children and issue of predeceasing children. The children taking *per capita* (= by the head) and issue *per stirpes* (= inheriting through a parent deceased). |
| Widow and grandchildren | Half to widow and half to grandchildren equally. |
| Widow and *his* children by previous marriage | One-third to widow. Two-thirds to children equally. |
| Widow and *her* children by last and previous marriages | One-third to widow. Two-thirds to deceased's children. |
| Children | Whole to children. |
| Children and issue of predeceased children | Half to children. Half to children *per capita* and issue *per stirpes*. |
| Grandchildren | Equally to all. |
| Children by two or more marriages | Equally to all. |
| Father only or mother only | Whole to father or mother. |
| Father and mother | Whole to father. |
| Father and mother and brothers and sisters | Half to father. Half to brothers and sisters equally. |
| Mother and brothers and sisters | One-half to mother. One-half to brothers and sisters equally. |
| Father, mother, brothers or sisters and issue of deceased brothers and sisters | Half to father. Half to brothers and sisters *per capita* and issue *per stirpes*. |
| Mother, brothers or sisters and issue of deceased brothers and sisters | One-half to mother. One-half to brothers and sisters, *per capita* and issue *per stirpes*. |
| Brothers or sisters | Equally among them. |
| Brothers and sisters and nephews and nieces | Brothers and sisters *per capita*, nephews and nieces *per stirpes*. |
| Nephews and nieces | Equally. |
| Grand nephews or nieces | Equally. |
| Brothers or sisters of full-blood and brothers or sisters of half-blood | Whole to brothers and sisters of full-blood. |
| Brothers or sisters (by same father), and uncles and aunts | Whole to brothers and sisters. |
| Brothers and sisters (by same mother) and uncles or aunts | Half to brothers and sisters. Half to uncles and aunts. |
| Father, mother and uncles and aunts | Whole to father. |
| Father and cousins of full-blood | Whole to father. |
| Mother and uncles and aunts | Whole to mother. |
| Mother and cousins of full-blood | Whole to mother. |
| Grandfathers and uncles and aunts | Whole to uncles and aunts. |
| *If a wife die leaving* | |
| Husband | Half to husband. Half to next-of-kin of the wif |
| Husband and children | One-third to husband, rest to children. |
| Children only | Whole to children. |
| Children and issue of deceased children | Half to children, other half to children *per capita* and issue *per stirpes*. |
| Children by two or more marriages | Equally to all. |

By the Legitimacy Act, if the mother of an illegitimate child (such child not being a legitimated person) die intestate after 1st January, 1927, and does not have any legitimate issue surviving her, the illegitimate child (or if dead, his issue) is entitled to take such interest in the estate as if he had been legitimate. If after 1st January, 1927, an illegitimate child died intestate, the mother is entitled to any interest she would have had if the child had been born legitimate.

### HERITAGE

The Law of Succession in Scotland is very complicated but heritable property in the absence of any destination in the property writs other than to "heirs and successors" may be said to descend in the order shown below:—

(1) Eldest son.
(2) Grandson by eldest son.
(3) Granddaughter by eldest son.
(4) Younger son.
(5) Grandson by younger son.
(6) Granddaughter by younger son.
(7) Daughter.
(8) Grandson by elder daughter. / Granddaughter by younger daughter.
(9) Younger grandson by elder daughter.
(10) Younger brother.
(11) Elder brother.
(12) Eldest brother.
(13) Elder sister. / Younger sister.
(14) Half brother.
(15) Half-sister.
(16) Father.
(17) Father's younger brother.
(18) Father's elder brother.
(19) Father's sister.
(20) Father's half-brother. / Father's half-sister.
(21) Paternal grandfather.

On Intestacy succession to heritage proceeds by descent and does not ascend to the mother and her relations. A mother's estate after vesting in a son or daughter never returns to the maternal line. A wife if left only and no blood relations, one-third goes to the wife for life and the rest to the Crown as *ultimus haeres*.

# WILL FORM

A will must be in writing and signed at the end by the testator in the presence of two witnesses who must both be present when the testator signs his name, and they must both sign their names in each other's presence and in that of the testator. If the will is written on more than one single sheet, each sheet should be signed by the testator and the witnesses.

A person under 21 years of age other than a soldier or sailor actually on military service cannot legally make a will.

FORMAL PARTS OF A WILL

This is the last will and testament of me
Here put full name and address. .....of .....in
the County of.....
I revoke all former wills and codicils.
Here put full name and address. I appoint.....
.....
to be the Executor(s) of this my will.
(Then follows all bequests and instructions.)
IN WITNESS whereof I have hereunto set my hand this.....day of.....
One thousand nine hundred and.....

Signed by the Testator as and for his (her) last will in the presence of us both present at the same time who in his (her) presence and in that of each other have hereunto subscribed our names as witnesses.

(Testator's Signature.)

(Witnesses' names and addresses.)

# INCOME-TAX, 1932–'33.

From 1931–32 the standard rate is 5*s.* in the £, but on "Personal" incomes the rate is, on the first £175 of "Taxable" income, 2*s.* 6*d.* in the £; on all the rest 5*s.* in the £.

"Taxable" income is found by deducting from "Total" income certain allowances.

(1) On "Earned" income an abatement of 20 per cent. (*i.e.* ⅕th) is allowed up to £300—*i.e.* 20 per cent. on a total of £1,500 earned is allowed to all persons.
(2) A general abatement (called personal allowance) of £100 (net) is allowed to all persons.
(3) For a wife £50 (net) is allowed.
(4) For the first child £50 (net) allowed. Each other child after the first £40 (net) is allowed, provided such child has no personal income exceeding £50 per annum. ("Children" must be under 16 years of age.)
(5) Dependents. For each relative maintained whose own income does not exceed £50, allowance £25 (net) in certain circumstances.
(6) For a housekeeper (certain restrictions) £50 (net) allowed.

(*See* p. 132.)

Sur Tax is paid on all incomes exceeding £2,000. Where income is not earned but is all proceeds of investments the allowance of ⅕th (as on earned incomes) is *not* deducted, but the other allowances (for children, dependents, etc.) are deducted.

A few examples of tax payable, and the method of arriving at that amount, are given below.

(1) Single person (or childless widow, or widower) with no dependents.

| | £ |
|---|---|
| Earned income | 1,000 |
| Less 20 per cent. allowance (⅕) | 200 |
| | 800 |
| General abatement | 100 |
| Taxable income | 700 |

Charges as follows:—

| | £ | s. | d. | £ | s. | d. |
|---|---|---|---|---|---|---|
| | 175 at | 2 | 6 | 21 | 17 | 6 |
| Balance | 525 ,, | 5 | 0 | 131 | 5 | 0 |
| Making a total tax of | | | | 153 | 2 | 6 |

If the above income was all from investments the tax payable would be £203 2*s.* 6*d.*, being the ⅕th (or £200) at 5*s.* added to the "Earned" total.

(2) Married couple with 3 children.

| | £ | £ |
|---|---|---|
| Earned income | | 500 |
| Less 20 per cent. allowance (⅕) | | 100 |
| | | 400 |
| General abatement | | 100 |
| | | 300 |
| Wife allowance | | 50 |
| | | 250 |
| 3 children (1) | 50 | |
| (2) | 40 | |
| (3) | 40 | |
| | 130 | |
| Taxable income | | 120 |

But as first £175 is only payable at 2*s.* 6*d.* the tax payable here is £15.

If the income in this case was from investments he would pay the extra £100 as follows: £55 at 2*s.* 6*d.* and £45 at 5*s.* = £18 2*s.* 6*d.* which is added to the Earned Total, making in all £33 2*s.* 6*d.*

(3) Married man with 2 children whose income is partly earned and partly from investment.

| | £ | £ | | £ |
|---|---|---|---|---|
| Earned income | 500 | Invested income, | | |
| Less 20 per cent. (⅕) | 100 | gross | | 500 |
| | 400 | | | |
| General abatement | 100 | | | |
| | 300 | | | |
| Wife | 50 | | | |
| £50 and £40 for children | 90 | | | |
| | 140 | | | |
| | | | | 160 |
| | | Taxable income | | 660 |

Charged as follows:—

| | £ | s. | d. | £ | s. | d. |
|---|---|---|---|---|---|---|
| | 175 at | 2 | 6 | 21 | 17 | 6 |
| Balance | 485 ,, | 5 | 0 | 121 | 5 | 0 |
| Amount payable | | | | 143 | 2 | 6 |

Single persons pay no tax up to £125 gross (earned).
Married Couples ,, ,, ,, 188 ,, ,,
,, ,, (3 children) ,, 350 ,, ,,

# INCOME-TAX AND SUR TAX

The following table shows the amount of income-tax (and sur tax, if any) on specimen incomes payable by single persons, and by married couples with three children under the new scales. Pence are omitted from the table :—

SINGLE PERSONS.

| Total Income. | If income all earned income. | If income all investment income. |
|---|---|---|
| £ | £ s. d. | £ s. d. |
| 250 | 12 10 0 | 18 15 0 |
| 300 | 17 10 0 | 28 2 6 |
| 350 | 23 2 6 | 40 12 6 |
| 400 | 33 2 6 | 53 2 6 |
| 500 | 53 2 6 | 78 2 6 |
| 600 | 73 2 6 | 103 2 6 |
| 700 | 93 2 6 | 128 2 6 |
| 800 | 113 2 6 | 153 2 6 |
| 900 | 133 2 6 | 178 2 6 |
| 1,000 | 153 2 6 | 203 2 6 |
| 1,250 | 203 2 6 | 265 12 6 |
| 1,500 | 253 2 6 | 328 2 6 |
| 2,000 | 378 2 6 | 453 2 6 |
| 2,500 | 530 12 6 | 605 12 6 |
| 3,000 | 690 0 0 | 765 0 0 |
| 4,000 | 1,050 0 0 | 1,125 0 0 |
| 5,000 | 1,465 0 0 | 1,540 0 0 |

MARRIED—3 CHILDREN.

| Total Income. | If income all earned income. | If income all investment income. |
|---|---|---|
| £ | £ s. d. | £ s. d. |
| 300 | — | 2 10 0 |
| 350 | — | 8 15 0 |
| 400 | 5 0 0 | 15 0 0 |
| 500 | 15 0 0 | 33 2 6 |
| 600 | 28 2 6 | 58 2 6 |
| 700 | 48 2 6 | 83 2 6 |
| 800 | 68 2 6 | 108 2 6 |
| 900 | 88 2 6 | 133 2 6 |
| 1,000 | 108 2 6 | 158 2 6 |
| 1,250 | 158 2 6 | 220 12 6 |
| 1,500 | 208 2 6 | 283 2 6 |
| 2,000 | 333 2 6 | 408 2 6 |
| 2,500 | 485 12 6 | 560 12 6 |
| 3,000 | 645 0 0 | 720 0 0 |
| 4,000 | 1,005 0 0 | 1,080 0 0 |
| 5,000 | 1,420 0 0 | 1,495 0 0 |

# CLAIMS FOR REPAYMENT OF INCOME-TAX

Many persons whose income is partially, or wholly derived from Investment, etc., and is thus said to be "taxed by deduction" (that is to say, the full standard rate of tax is deducted before receipt) are entitled to claim for repayment of any overcharge. A form of claim can be obtained from the local Inspector of Taxes, and this should be filled up as per the printed instructions, but claims must be made within 6 years.

The official Financial Year is from April 6th to April 5th of the following year.

# NATIONAL INSURANCE ACTS

## HEALTH.

The National Health Insurance Act, 1924, consolidates the law on the subject and came into operation on January 1, 1925.

### INSURED PERSONS.

The scope of the Act has been enlarged so that it now includes all persons in employment in the United Kingdom under any contract of service or apprenticeship, whether the employed person is paid by the employer or some other person, and whether paid by time or by the piece, or, except in the case of apprenticeship, even without any money payment.

All persons in the following employment are excepted from the operation of this Act:—

(*a*) The Naval, Military, or Air Services.
(*b*) Servants of the Crown, or of a public authority, or a statutory Company where the Minister certifies that favourable benefits are secured.
(*c*) Teachers of recognised services in England, Scotland and Northern Ireland.
(*d*) Agents paid by commission or fees or a share in the profits, when the person is mainly dependent on his earnings from some other occupation.
(*e*) Without money wages, when employer is the occupier of an agricultural holding or where the employed is the child of or maintained by the employer.
(*f*) Other than manual labour and at a rate over £250 per annum.
(*g*) Casual employment otherwise than for the employer's trade or business.
(*h*) Where employment is not the principal means of livelihood.
(*i*) Out-workers, where the employed person is wife of an insured person and is not wholly dependent on such employment.
(*j*) Crew of a fishing vessel, paid by shares in the profits or gross earnings of the vessel.
(*k*) Employment in the service of the husband or wife of the employed person.

*Benefits to the Insured.*

(1) Medical treatment and attendance. No voluntary contributor whose total income exceeds £250 a year may have medical benefit.
(2) "Sickness benefit" during a period of incapacity due to disease or bodily or mental disablement of which notice has been given. Payments begin on the fourth day of incapacity and continue not more than 26 weeks. The rate is 15*s.* per week for men and 12*s.* per week for women.
(3) "Disablement benefit" for the period over the "Sickness benefit." Periodical payments are made whilst incapable of work. The rate is 7*s.* 6*d.* per week for men and women. It begins after 26 weeks from the date of the sickness and continues as long as the disablement lasts or until the age of 65 years.
(4) "Maternity benefit," in cases of confinement of the person insured or of the wife of an insured person. The sum payable is 40*s.* and the woman must abstain from remunerative work for 4 weeks.
(5) "Additional benefits" may be granted by an "approved Society" including medical treatment and attendance for "member's dependents," free dental treatment, increased sickness benefit where there are dependent children, disablement allowance to those not totally incapable of work, increased maternity benefit. Benefits under the Insurance Acts are not assignable; any agreement to charge them is void in law.

*Contributions.*—The sum of 1*s.* 6*d.* per week (9*d.* from employer, and 9*d.* from employed) per man and 1*s.* 1*d.* per week (7*d.* from employer, and 6*d.* from employed) per woman is divided, payable weekly, and the employer is responsible that the sums due are paid and the card stamped. No contributions are made during sickness, and no

arrears are reckoned for such period. Seven-ninths of the whole are paid by contributor and employer, the State paying the balance of two-ninths.

*Voluntary Contributors* are (1) those who for 104 weeks or more have been classed as "employed contributors" and who have given the necessary notice that they wish to become voluntary contributors as they have ceased to be employed contributors; (2) those persons who are in excepted employments, with sanction of the Minister may become voluntary contributors; (3) those who under previous Acts were voluntary contributors but now have to be insured persons.

*Approved Societies.*—An employed person may be insured through an approved Society, in which case he should apply in case of sickness to his local secretary and a certificate from the doctor must be sent to him.

*Sick Pay.*—The rate of payment is 15*s.* per week for a man or 12*s.* per week for a woman. It is payable after the third day's illness and may last for 26 weeks. After this period Disablement Benefit is 7*s.* 6*d.* per week for men and women. A married woman can get neither sickness nor disablement benefit for 4 weeks after a confinement unless suffering from disease or disablement not connected directly or indirectly with her confinement.

## WIDOWS', ORPHANS', AND OLD-AGE PENSIONS

The Widows', Orphans', and Old-Age Contributory Pensions Act 1929 altered the provisions of the 1925 Act. It came into operation on January 2, 1930. It provides that the beneficiaries under the scheme are the survivors of members of the working population insured under the health insurance scheme. It includes now, wives whose husbands were insured and who themselves had reached the age of 70 before January, 1928. An option is given to a person who ceases to be compulsorily insurable to continue in, or to resume, insurance as a voluntary contributor at the full rate of contribution ordinarily payable by employer and employee jointly. Thus all members of the community who at some time in their lives pass through a period of not less than two years insurable employment will be able to take advantage of the scheme. But the voluntary contributor, like the employed contributor, must be insured both for health insurance and for pensions.

The benefits to be paid under the scheme are:—

**Widows.**—10*s.* a week for a widow until she reaches the age of 70, when she will draw the old-age pension, or remarries, with 5*s.* a week for the eldest child and 3*s.* for each of the other children until they reach the age of 14 or as long as the child remains under full-time instruction in a day-school, but not exceeding 16 years. Remarriage not to affect the children's allowance. If the widow is over 70 at the death of her husband and is not already in receipt of old-age pension, she shall become entitled to it without the application of existing tests as to means, residence, and nationality.

**Orphans.**—7*s.* 6*d.* a week for each child up to the age of 14, or under 16 if under full time instruction in a day school.

**Old-Age Pensions.**—10*s.* a week to insured men and insured women between the ages of 65 and 70, and 10*s.* a week to the wives between the ages of 65 and 70 of insured men who are themselves entitled to pensions. At 70, 10*s.* a week under the Old-Age Pensions Acts. Since January 2, 1928, all contributors if exceeding 65 years of age are paid 10*s.* per week.

**Contributions Payable.**—The ordinary rate of contribution is 9*d.* a man, divided equally between the employer and the employee, and 4½*d.* for a woman, of which 2½*d.* will be payable by the employer and 2*d.* by the woman.

The total payment for health and pensions deducted per week is as follows:—

| | Employer Health Pensions | Employed Health Pensions | Total |
|---|---|---|---|
| Men | 4½*d.* | 4½*d.* = 9*d.* | 1*s.* 6*d.* |
| Women | 4½*d.* | 2½*d.* = 7*d.* | 1*s.* 1*d.* |

Payment is made by stamps on a combined card for health and pensions.

Men serving in the Navy, Army, and Air Force will be fully insured under the scheme at the ordinary rate.

## UNEMPLOYMENT

The Unemployment Insurance Acts 1920–1925 provide for the payment of benefit during unemployment.

**Scope.**—The Scheme is compulsory for all persons of the age of 16 and upwards who are ordinarily employed, but exceptions are made in the case of agriculture, ordinary domestic servants, men serving in H.M. Forces, Police, and sundry other "semi-official" occupations.

Persons employed in other than manual labour, whose remuneration exceeds £250 per annum are also excepted.

In certain cases persons with an independent income of at least £26 per annum, or a pension of like amount, need not themselves pay contribution, although the employer of such persons is liable for contributions.

**Contributions.**—The contributions (as in the case of Health Insurance) are made by means of special stamps which are affixed to the cards or books by the employer—the workers' share being deducted from the weekly wage.

The contributions now (October 5, 1931), payable are as follows:—

| | Value of new stamp. | Amount which may be deducted from wages. |
|---|---|---|
| | *s.* *d.* | *s.* *d.* |
| Man (aged 21 but under 65) | 1 8 | 0 10 |
| Young man (aged 18 but under 21) | 1 6 | 0 9 |
| Boy (aged 16 but under 18) | 0 10 | 0 5 |
| Woman (aged 21 but under 65) | 1 6 | 0 9 |
| Young woman (aged 18 but under 21) | 1 4 | 0 8 |
| Girl (aged 16 but under 18) | 0 9 | 0 4½ |

EXEMPT PERSONS.

| | *s.* *d.* | |
|---|---|---|
| Man (aged 21 but under 65) | 0 10 | Nil. |
| Young man (aged 18 but under 21) | 0 9 | Nil. |
| Boy (aged 16 but under 18) | 0 5 | Nil. |
| Woman (aged 21 but under 65) | 0 9 | Nil. |
| Young woman (aged 18 but under 21) | 0 8 | Nil. |
| Girl (aged 16 but under 18) | 0 4½ | Nil. |

PERSONS AGED 65 AND OVER.

| | *s.* *d.* | |
|---|---|---|
| Man | 0 10 | Nil. |
| Woman | 0 9 | Nil. |

**Benefit.**—Benefit is payable for 26 weeks in any one Insurance Year, after which a fresh Insurance qualification will be required.

The applicant for benefits, of course, has to prove that he is capable of and available for work, but unable to obtain suitable employment. An insured person is not qualified to receive benefit if he leaves his employment without just cause—or from stoppage of work due to a trade dispute.

The rates of benefit are:—

| Class. | Weekly rate of benefit. |
|---|---|
| | *s.* *d.* |
| Man (aged 21 and upwards) | 15 3 |
| Young man (aged 18 and under 21) | 12 6 |
| Boy (aged 17) | 8 0 |
| Boy (aged 16) | 5 6 |
| Woman (aged 21 and upwards) | 13 6 |
| Young woman (aged 18 and under 21) | 10 9 |
| Girl (aged 17) | 6 9 |
| Girl (aged 16) | 4 6 |
| Adult dependant | 8 0 |

# ENTERTAINMENTS TAX

Entertainment Duty is a Duty levied on payments exceeding 2d. for admission of persons to any entertainment as spectators or members of an audience. Thus it is chargeable on payments for admission to see or hear an entertainment, *e.g.*, an exhibition of cinematograph films or a football match or a concert, but not on payments to take part in an entertainment, *e.g.*, a dance or a whist drive.

Tickets for dances and whist drives are not liable, and there are various other exemptions such as persons admitted to an entertainment without payment on a free or complimentary ticket provided such tickets are clearly marked as such; where the whole of the takings are devoted to charitable purposes, etc.

Payment of the Tax is made by adhesive stamps of various denominations which can be purchased at any Head or Branch Post Office or by post direct from the Collector of Customs and Excise, Custom House, London, E.C. 3, and from whom further details and certificates of exemption can be obtained.

The present Tax is as follows :—

Rates of Duty where Admission (excluding Tax) does not exceed :—

| | | |
|---|---|---|
| 2½d. | Tax | ½d. |
| 6d. | ,, | 1d. |
| 7½d. | ,, | 1½d. |
| 10d. | ,, | 2d. |
| 1s. 0½d | ,, | 2½d. |
| 1s. 3d. | ,, | 3d. |

beyond 1s. 3d., 3d. for the first 1s. 3d., then 1d. for every 5d. or part of 5d. over 1s. 3d.

# STAMPS, TAXES, ESTATE DUTIES, &c.

| | £ | s. | d. |
|---|---|---|---|
| AFFIDAVIT, or statutory declaration | 0 | 2 | 6 |
| AGREEMENT or Memorandum of Agreement, under hand, not otherwise charged | 0 | 0 | 6 |
| AGREEMENT FOR LEASE for a term or a furnished house less than one year where rent exceeds £25 | 0 | 5 | 0 |
| for a dwelling-house for term not exceeding one year at a rent of £40 per annum or less | 0 | 0 | 1 |
| APPOINTMENT OF A NEW TRUSTEE | 0 | 10 | 0 |
| APPRAISEMENT or VALUATION of any estate or effects where the amount of the appraisement shall not exceed £5 | 0 | 0 | 3 |
| Not exceeding £10 | 0 | 0 | 6 |
| ,, 20 | 0 | 1 | 0 |
| ,, 30 | 0 | 1 | 6 |
| ,, 40 | 0 | 2 | 0 |
| ,, 50 | 0 | 2 | 6 |
| ,, 100 | 0 | 5 | 0 |
| ,, 200 | 0 | 10 | 0 |
| ,, 500 | 0 | 15 | 0 |
| Exceeding £500 | 1 | 0 | 0 |
| APPRENTICESHIP INDENTURES | 0 | 2 | 6 |
| ARMS, grant of | 10 | 0 | 0 |
| AWARD, by arbitrator in England and Wales or Decreet arbitral in Scotland | 0 | 10 | 0 |
| BILLS OF EXCHANGE, for any amount, payable on demand or within 3 days | 0 | 0 | 2 |
| BILLS OF EXCHANGE of any other kind, and also PROMISSORY NOTES: Not exceeding £10 | 0 | 0 | 2 |
| Exceeding £10, and not exceeding £25 | 0 | 0 | 3 |
| ,, 25 ,, 50 | 0 | 0 | 6 |
| ,, 50 ,, 75 | 0 | 0 | 9 |
| ,, 75 ,, 100 | 0 | 1 | 0 |
| Every £100, and also for any fractional part of £100, of such amount | 0 | 1 | 0 |
| BILL OF LADING | 0 | 0 | 6 |
| CAPITAL DUTY on shares on each £100 | 1 | 0 | 0 |
| CERTIFICATE,—Of goods, etc., being duly entered inwards, for drawback | 0 | 4 | 0 |
| Of birth, marriage, death, or burial (certified copy of) | 0 | 0 | 1 |
| CONTRACT NOTES, for the sale or purchase of Stocks and marketable securities. Scale of Stamp Duties, according to the value of the stock, etc.: £5 to £100, 6d.; over £100 up to £500, 1s.; over £500 up to £1,000, 2s.; over £1,000 up to £1,500, 3s.; over £1,500 up to £2,500, 4s.; over £2,500 up to £5,000, 6s.; and so on (2s. extra for each additional £2,500) up to a maximum of £1, where the value exceeds £20,000. Duty is payable by special adhesive stamps. | | | |
| *Continuation Notes* to be chargeable on one only of the two transactions embraced. | | | |
| *Option Contract Notes* to be chargeable with half above rates only, unless the option is a double one. | | | |
| *Contract Note following* a duly stamped option contract note to be relieved from half the duty. | | | |
| CONVEYANCE OF STOCK, SHARES, etc., where purchase money is under £5 | 0 | 1 | 0 |
| Exceeding £5, and not exceeding £10 | 0 | 2 | 0 |
| ,, 10 ,, 15 | 0 | 3 | 0 |
| Exceeding £15, and not exceeding £20 | 0 | 4 | 0 |
| ,, 20 ,, 25 | 0 | 5 | 0 |
| For every additional £25 up to £300 | 0 | 5 | 0 |
| If exceeding £300, then for every £50 | 0 | 10 | 0 |
| Of any kind not otherwise charged | 0 | 10 | 0 |
| CONVEYANCE OR TRANSFER :— | | | |
| Of Bank of England Stock | 0 | 15 | 6 |
| Of Canadian Stock or any stock to which the Colonial Stock Act, 1877, applies: 5s. for every £100 or fraction of £100 of nominal amount transferred. | | | |
| Of stock or marketable security (other than Bank of England or Colonial Stock), where the amount of consideration for the sale does not exceed £25, 1s. for each £5 or fraction of £5; where it does not exceed £300, 5s. for each £25 or fraction of £25; where it exceeds £300, 10s. for each £50 or fraction of £50. | | | |
| Of any property (except as aforesaid) *half* the above rates, except that when the amount of consideration exceeds £500, the duty is 10s. for every £50 or fraction of £50. | | | |
| CONVEYANCES OR TRANSFERS on sale of any property, other than those mentioned above, are liable to duty at double the rates given. | | | |
| *Conveyances by way of gift inter vivos* to be charged as conveyances on sale. Exceptions for marriage settlements and certain gifts of property for preservation of open spaces, and for conveyances to appoint new trustees, etc. | | | |
| CHEQUE, Draft, Order, or Letter of Credit, for payment of any sum to bearer or order, on demand | 0 | 0 | 2 |
| LIMITED LIABILITY COMPANIES, on every £100 of the nominal capital | 1 | 0 | 0 |
| MARRIAGE LICENCE (Special), England and Ireland | 5 | 0 | 0 |
| Not Special in England | 0 | 10 | 0 |
| PASSPORT | 0 | 0 | 6 |
| SHARE WARRANT AND STOCK CERTIFICATE TO BEARER— A stamp duty equal to three times the ad valorem stamp duty which would be chargeable on a deed transferring the stock specified if the consideration for the transfer were the nominal value of such stock. See CONVEYANCE OF STOCK. | | | |

## EXCISE LICENCES, ETC

| | £ | s. | d. |
|---|---|---|---|
| ARMORIAL BEARINGS, Annual licence | 1 | 1 | 0 |
| if used on carriages | 2 | 2 | 0 |
| CARRIAGES, ANNUAL LICENCE (Great Britain)— | | | |
| For every carriage with four or more wheels, drawn by two or more horses, or drawn or propelled by mechanical power | 2 | 2 | 0 |
| For every carriage with four or more wheels, drawn by one horse | 1 | 1 | 0 |
| For every carriage with less than four wheels | 0 | 15 | 0 |

| | £ | s. | d. |
|---|---|---|---|
| For every hackney carriage (including motors used as such) | 0 | 15 | 0 |
| MECHANICALLY PROPELLED VEHICLES. | | | |
| *Motor Cars*— | | | |
| not exceeding 6 h.p. *or* electrically propelled | 6 | 0 | 0 |
| exceeding 6 h.p., £1 for each unit or part of a unit of horse power. | | | |
| *Motor Cycles* (including scooters and autowheels)— | | | |
| not exceeding 224 lbs. unladen | 1 | 10 | 0 |
| exceeding " " | 3 | 0 | 0 |
| Trailer or Sidecar | 1 | 0 | 0 |
| Vehicles used only for conveyance of goods of trade | | | |
| If electrically propelled and not exceeding 25 cwt. in total weight | 6 | 0 | 0 |
| Any other such vehicle registered under Road Act, 1930, not exceeding 12 cwt. | 10 | 0 | 0 |
| from 12 cwts. and up to 5 tons varying rates. | | | |
| Exceeding 5 tons | 48 | 0 | 0 |
| Extra for use of trailer | 6 | 0 | 0 |
| Motor Driver's Licence per annum | 0 | 5 | 0 |
| Dogs of any kind (Great Britain) | 0 | 7 | 6 |
| [Dogs kept by blind persons for guidance, shepherd dogs solely used as such, and all dogs under six months old, are exempt.] | | | |
| Game Licences (U.K.), if taken out after July 31 and before November 1, to expire on July 31 following | 3 | 0 | 0 |
| After July 31, expiring October 31 | 2 | 0 | 0 |
| After October 31, expiring July 31 | 2 | 0 | 0 |
| Occasional Licence for 14 days, continuous | 1 | 0 | 0 |
| Gamekeepers (Great Britain) | 2 | 0 | 0 |
| Male Servant Licence, each per annum | | 15 | 0 |
| Game Dealer's Licence (U.K.) | 2 | 0 | 0 |
| Gun or Pistol Licence. (This is strictly enforced even for carrying a revolver, wherever possible; volunteers and holders of game licences personally exempt, but not their servants.) Expires on 31st July of each year | 0 | 10 | 0 |
| House Agents letting furnished houses above £25 a year (per annum) | 2 | 0 | 0 |
| Medicine (Patent) Dealers (Great Britain)— for each shop | 0 | 5 | 0 |
| Pawnbrokers, per annum | 7 | 10 | 0 |
| extra if trading in gold and silver plate, per annum | 5 | 15 | 0 |
| Pedlars, Police Licence | 0 | 5 | 0 |

ESTATE DUTY: 1930-31, where the value of property, real or personal, settled or not settled:—

| Exceeds | *Rate per cent.* | Exceeds | *Rate per cent.* |
|---|---|---|---|
| £100 | £1 | £75,000 | £18 |
| 500 | 2 | 85,000 | 19 |
| 1,000 | 3 | 100,000 | 20 |
| 5,000 | 4 | 120,000 | 22 |
| 10,000 | 5 | 150,000 | 24 |
| 12,500 | 6 | 200,000 | 26 |
| 15,000 | 7 | 250,000 | 28 |
| 18,000 | 8 | 300,000 | 30 |
| 21,000 | 9 | 400,000 | 32 |
| 25,000 | 10 | 500,000 | 34 |
| 30,000 | 11 | 600,000 | 36 |
| 35,000 | 12 | 800,000 | 38 |
| 40,000 | 13 | 1,000,000 | 40 |
| 45,000 | 14 | 1,250,000 | 42 |
| 50,000 | 15 | 1,500,000 | 45 |
| 55,000 | 16 | 2,000,000 | 50 |
| 65,000 | 17 | | |

*Gifts* made by deceased during his life to be charged unless made more than three years before death. Gifts made for public or charitable purposes, unless made over twelve months before decease, are charged, but gifts in consideration of marriage, or as part of deceased's reasonable normal expenditure, and gifts of less than £100 in value or amount are excepted.

*Payment* of all Death Duties may be made by the transfer to the Commissioners of the following Government securities:—

| SECURITY:— | Taken for Duty at: |
|---|---|
| Savings Certificates | cash value |
| 5 per cent. War Loan, 1929–1947 | 95 |
| 4 per cent. Funding Loan | 80 |
| 4 per cent. Victory Bonds | 100 |
| All National War Bonds | 100 |

N.B.—The securities must have formed part of the estate (or of trust funds passing on the death liable to duty) for six months before the deceased's death, and must be free from any lien or charge.

INCOME TAX: The standard rate is 5*s.* in £, but is reduced to 2*s.* 6*d.* on the first £175 of Taxable Income, *i.e.* total income less certain allowances (*see* p. 128).

On joint incomes of husband and wife there is a personal allowance of £150, but where the total incomes include any earned income of the wife, an additional allowance may be claimed on ⅔ of the amount of such earned income (subject to a maximum additional allowance of tax on £45).

In certain circumstances income tax may be assessed on the separate incomes of husband and wife, in which case the incomes are added together for the purpose of estimating the amounts to be allowed by way of deduction. Husband and wife receive the benefit of allowances and the reduction of the rate of tax on the first £150 joint income in proportion to the amounts of their respective assessments. The benefit of allowances for life assurance premiums and deduction on account of child or dependent relative is given to the one who pays the premium and maintains the child or relative.

Relief is allowed for children over 16 years (*i.e.* £50 one, £90 two, £130 three) if receiving full-time instruction at school.

Income tax on earned incomes and on rents is payable in two instalments, ½ on January 1st and ½ July 1st respectively.

Wage-earners by manual labour pay half-yearly on half-yearly assessments.

Allowances are made for tools of trade.

SUR TAX: (Section 4 of Income Tax Act, 1918, as amended, 1931).

| | |
|---|---|
| For first £2,000 income | nil |
| For excess of income over £2,000— | *s. d.* |
| £1 to £500 (to £2,500) | 1 1·2 in £ |
| On the next £500 (to £3,000) | 1 4·5 " |
| " " £1,000 (to £4,000) | 2 2·4 " |
| " " £1,000 (to £5,000) | 3 3·6 " |
| " " £1,000 (to £6,000) | 3 10·2 " |
| " " £2,000 (to £8,000) | 4 4·8 " |
| " " £2,000 (to £10,000) | 5 6 " |
| " " £5,000 (to £15,000) | 6 0·6 " |
| " " £5,000 (to £20,000) | 6 7·2 " |
| " " £10,000 (to £30,000) | 7 1·8 " |
| " " £20,000 (to £50,000) | 7 8·4 " |
| On the remainder (above £50,000) | 8 8 " |

MINERAL RIGHTS DUTY: payable in respect of the rental value of all rights to work minerals and of all mineral wayleaves.

*Rate of Duty* [payable by the proprietor where he works the minerals, or, in any other case, by the immediate lessor of the working lessee]: 1*s.* annually for each £1 of rental value.

*Exemptions, etc.*—Common clay, common brick clay, common brick earth, sand, chalk, limestone, and gravel not to be charged.—*Reversion Duty* is not to be charged on the determination, nor *Increment Duty* on the grant of a mining lease.—Minerals which were the subject of a mining lease or were being worked on April 30, 1909, are exempt from *Increment Value Duty*, and minerals not so exempt are to be charged *to that Duty* on a special basis in the form of an annual duty.

LEASES: Lease of any dwelling-house for a period not exceeding one year and rent not exceeding £40 per annum, 1*d.*

For any definite period less than one year of furnished dwelling-house or apartments, weekly rent being less than 25*s.*, 5*s.*

In the case of land, etc.:—

| | not exceeding 35 years. | | | 35—100 years | | | exceeding 100 years | | |
|---|---|---|---|---|---|---|---|---|---|
| £ | £ | *s.* | *d.* | £ | *s.* | *d.* | £ | *s.* | *d.* |
| 1— 5 | 0 | 1 | 0 | 0 | 6 | 0 | 0 | 12 | 0 |
| 5—10 | 0 | 2 | 0 | 0 | 12 | 0 | 1 | 4 | 0 |
| 10—15 | 0 | 3 | 0 | 0 | 18 | 0 | 1 | 16 | 0 |
| 15—20 | 0 | 4 | 0 | 1 | 4 | 0 | 2 | 8 | 0 |
| 20—25 | 0 | 5 | 0 | 1 | 10 | 0 | 3 | 0 | 0 |
| 25—50 | 0 | 10 | 0 | 3 | 0 | 0 | 6 | 0 | 0 |
| 50—75 | 0 | 15 | 0 | 4 | 10 | 0 | 9 | 0 | 0 |
| 75—100 | 1 | 0 | 0 | 6 | 0 | 0 | 12 | 0 | 0 |
| Over £100 for each £50 | 0 | 10 | 0 | 3 | 0 | 0 | 6 | 0 | 0 |

LEGACY AND SUCCESSION DUTIES: the duty payable depends on the relationship to the deceased thus :—

| Relationship to deceased | Rate | Rate if Estate Duty is *not* paid |
|---|---|---|
| (*a*) Husband or wife, children, and their lineal descendants, including the husband or wife of such persons, father or mother, or any lineal ancestor | 1% | 1¼% |
| (*b*) Brothers and sisters and their descendants, and husband or wife of any such persons | 5% | varies from 4¼% to 11¼% |
| (*c*) Persons in any other degree of collateral relationship and strangers in blood, including those related only by natural ties | 10% | |

*Exemptions.*—In estates not exceeding £15,000 in value legacies and successions of less than £1,000 (or £2,000 in case of widow, or child under 21 years of age: of the deceased) under class (*a*) are exempt from duty.

Small estates up to £300 and £500, on which estate duty is paid, are exempt from legacy and succession duties. Where the value of all the successions on the same death is less than £100 no succession duty is payable.

*For other Excise Duties* and Licences administered by the Board of Customs and Excise see below.

# LIQUOR, TOBACCO, SPIRIT AND OTHER LICENCES AND DUTIES

## LIQUOR MANUFACTURERS' LICENCES.

Brewer of Beer for sale: according to quantity brewed in preceding year, viz., not exceeding 100 barrels, £1; exceeding 100, £1 for the first 100, and 12s. for every further 50.

Distiller of Spirits: not exceeding 50,000 gallons, £10; exceeding 50,000, £10 for the first 50,000, and £10 for every further 25,000.

Makers of Methylated Spirits, £10 10s. 0d. per annum.

| | £ | s. | d. |
|---|---|---|---|
| Rectifier of Spirits | 15 | 15 | 0 |
| Sweets (including Brit. Wine), Maker of | 5 | 5 | 0 |

## LIQUOR DEALERS' (WHOLESALE) LICENCES.

| | | £ | s. | d. |
|---|---|---|---|---|
| Beer | Per annum | 10 | 10 | 0 |
| Spirits | do. | 15 | 15 | 0 |
| Sweets (including Brit. Wine) | do. | 5 | 5 | 0 |
| Wine | do. | 10 | 10 | 0 |

"Sweets" means any liquor made from fruit and sugar that has undergone fermentation in the manufacture.

## LIQUOR RETAILERS' ON-LICENCES.

Beer (Beer-house Licence): a Duty equal to a third of the annual value of the premises, subject to a minimum of from £3 10s. to £23 10s., according to population of district. There is an option to pay in proportion to the annual "compensation value" in certain cases of large beer-houses and "seasonal" hotels.

Cider: from £2 5s. where annual value is under £30, up to £6 where it is £100 or over.

Spirits (Publican's Licence): a Duty equal to half the annual value of the premises, subject to a minimum of from £5 to £35 according to population of district. There is an option to pay in proportion to the annual "compensation value" in certain cases of large public-houses and "seasonal" hotels.

If premises are closed the whole day on Sundays, the duty is six-sevenths of the normal rate. If closed one hour earlier every day as well as Sundays, then duty charged is five-sevenths.

(Hotels and Restaurants): duty to be charged according to proportion that receipts from intoxicating liquors bear to total receipts, or optionally, 25 per cent. of the "annual licence value"; subject in either case to a minimum charge.

(Clubs): an Excise duty of 3d. in the £ on their purchases of intoxicating liquors, but no Licence Duty.

(Railway Refreshment Rooms): the maximum duty is £50 for retailer's on-licence.

(Theatres): the authority which licenses a theatre may refuse to grant a theatre licence, unless applicant gives an undertaking not to apply for an excise licence. If the annual value of a theatre is not exceeding £2,000, duty for retail licence for sale of intoxicating liquor must not exceed £20 or in any other case £50. The permitted hours for the sale applies to theatre bars.

(Music Halls): Justice's Licence is necessary.

Sweets: the same scale as for Cider.

Wine: from £4 10s. where annual value is under £30, up to £12 where it is £100 or over.

## LIQUOR RETAILERS' OFF-LICENCES.

Beer: from £1 10s. where annual value does not exceed £10, up to £10 where it exceeds £500.

| | £ | s. | d. |
|---|---|---|---|
| Cider | 2 | 0 | 0 |

Spirits: from £10 (annual value not exceeding £10) up to £50 (annual value exceeding £500).

| | £ | s. | d. |
|---|---|---|---|
| Sweets | 2 | 0 | 0 |

Wine: from £2 10s. (annual value not exceeding £20) up to £10 (annual value exceeding £500).

## OTHER LICENCES.

| | £ | s. | d. |
|---|---|---|---|
| Passenger Vessel: £10 (annual): £2 (one day). | | | |
| Railway Restaurant Car (annual) | 1 | 0 | 0 |
| Occasional Licences: 10s. per day (5s. if for beer and wine only). | | | |
| Tobacco Growers, Cultivators or Curers, England and Scotland, annual licence | 0 | 5 | 0 |
| Tobacco and Snuff, U.K., annual Dealers in | 0 | 5 | 3 |
| Occasional Licences for, per day | 0 | 0 | 4 |
| Tobacco Manufacturers— | | | |
| Not exceeding 20,000 lbs. | 5 | 5 | 0 |
| Exdg. 20,000 and not exdg. 40,000 lbs. | 10 | 10 | 0 |
| " 40,000 " 60,000 " | 15 | 15 | 0 |
| " 60,000 " 80,000 " | 21 | 0 | 0 |
| " 80,000 " 100,000 " | 26 | 5 | 0 |
| " 100,000 lbs. | 31 | 10 | 0 |

Beginners to pay £5 5s., and a surcharge on renewal.

## CUSTOMS AND EXCISE DUTIES.

### *Customs Duties.*

| Upon tobacco unmanufactured, viz.: | s. | d. |
|---|---|---|
| Containing 10 lbs. or more of moisture in every 100 lbs. weight thereof— | | |
| Unstripped . . the pound | 9 | 6 |
| Stripped . . the pound | 9 | 6½ |
| Containing less than 10 lbs. of moisture in every 100 lbs. weight thereof— | | |
| Unstripped . . the pound | 10 | 6 |
| Stripped . . the pound | 10 | 6½ |
| Upon tobacco manufactured, viz.:— | | |
| Cigars . . . the pound | 18 | 1 |
| Cigarettes . . . the pound | 14 | 7 |
| Cavendish or Negrohead . the pound | 13 | 9 |
| Cavendish or Negrohead manufactured in bond . . the pound | 12 | 0 |
| Other manufactured tobacco the pound | 12 | 0 |
| Snuff containing more than 13 lbs. of moisture in every 100 lbs. weight thereof . . . . the pound | 11 | 4 |
| Snuff not containing more than 13 lbs. of moisture in every 100 lbs. weight thereof . . . . the pound | 13 | 9 |

### *Excise Duties.*

| Upon tobacco unmanufactured, viz.: | s. | d. |
|---|---|---|
| Tobacco containing 10 lbs. or more of moisture in every 100 lbs. weight thereof . . . the pound | 7 | 3½ |
| Tobacco containing less than 10 lbs. of moisture in every 100 lbs. weight thereof . . . the pound | 8 | 0½ |
| Upon tobacco manufactured, viz.:— | | |
| Cavendish or Negrohead manufactured in bond . . . the pound | 9 | 4½ |

and so in proportion for any less quantity.

| | £ | s. | d. |
|---|---|---|---|
| Spirits, made in U.K.: £3 12s. 6d. additional, if Immature and Warehoused less than 2 years—per proof gallon | 0 | 1 | 6 |
| If Warehoused 2–3 years, additional—per proof gallon | 0 | 1 | 0 |

### RECEIPTS.

Receipts for the payment of £2 or upwards . 2d.
Penalty for giving receipt not duly stamped, £10, except for salaries, wages, pensions or allowances.

### LETTERS PATENT.

*(For Inventions)*

On application for provisional protection £1 0 0
On filing complete specification . . 3 0 0

Upon application for certificate of renewal, before expiration of the 4th year and in respect of the 5th year, £5; 6th year, £6; 7th year, £7; 8th year, £8; 9th year, £9; 10th year, £10; 11th year, £11; 12th year, £12; 13th year, £13; 14th year, £14; 15th year, £15; 16th year, £16.

Every Patent is granted for the term of 16 years from the date of application, subject to the payment, before the expiration of the 4th and each succeeding year during the term of the Patent, of fees as above.

The annual fees may be paid in advance.

### REGISTRATION OF BIRTHS, MARRIAGES AND DEATHS.

BIRTHS.—An infant must be registered within 42 days after its birth (in Scotland 21 days). No fee is payable; but after six weeks the registration must take place in the presence of the Superintendent Registrar, when—besides liability to a penalty for neglect—a fee is chargeable.

MARRIAGES.—Marriage must be solemnised between 8 a.m. and 3 p.m. either before a Registrar or by Nonconformist Ministers under Marriage Act 1898 or in a Church of England.

DEATHS.—A death must be registered within five days after the demise by one of the relatives of the deceased present at the death, or, if impossible, any relative or anyone present or the occupier of the house where the death occurred. If none of these available, then by any inmate of the house or the person who arranges for the burial. Intimation must be made orally to the Registrar of Births and Deaths. In Scotland the period is eight days.

## ROAD TRAFFIC ACT, 1930

The third reading of the Bill took place on July 22, and the Royal Assent was given on August 1, 1930.

(1).—THE ACT MAKES PROVISION FOR THE REGULATION OF MOTOR VEHICLES.

No person may drive without a licence. If a motorist cannot show his licence when asked by a policeman to do so, he is liable to be fined £5, unless he brings it in person to a specified police-station within 5 days.

To obtain a licence the motorist has now first to satisfy the licensing authorities as to physical fitness by declaring on a form that he is not suffering from any disease or physical disability which might make him a source of danger to the public when driving. The licence is granted for 12 months; cost, 5*s*.

If a man is not granted a licence on account of a disability not in the list, he may be allowed to submit to a practical test on payment of a fee, but the licence is only for the type of car for which he was tested.

Any person disqualified on physical grounds from holding a licence, who applies for *or* obtains one will be liable to 6 months' imprisonment or a fine of not more than £50, or both.

A person under 16 years of age must not drive a motor cycle on a road unless on first applying for a licence after the commencement of the Act he satisfies the licensing authority that he was during the period 1st July to 31st December, 1929, in the habit of driving a motor vehicle. (Hitherto this age was 14.)

No person under 17 shall drive a motor vehicle except a motor-cycle or an invalid carriage.

No person under 21 shall drive a heavy locomotive, lorry, tractor, etc.

Penalty for driving under influence of drink or drugs: fine up to £50, or imprisonment 4 months.

No one may ride pillion otherwise than astride. Penalty: fine up to £5.

The former speed limit of 20 M.P.H. has been abolished. Henceforth for—

Motor-cycles—no limit.
Motor cars (up to 7 passengers and driver)—no limit.
Motor omnibuses, coaches . . . . 35 M.P.H.
Heavier goods vehicles . . . . 30 M.P.H.

(2).—THE ACT PROVIDES FOR THE PROTECTION OF THIRD-PARTY RISKS ARISING OUT OF THE USE OF MOTOR VEHICLES.

No one may use or permit another to use a motor vehicle unless there exists in relation to the user of the vehicle by the first or that second person, as the case may be, an insurance policy in respect of third-party risks. Penalty: fine up to £50, or 3 months' imprisonment, or both.

The insurance policy must be one—

(*a*) issued by an authorised insurer;
(*b*) insuring person (or persons) specified in the policy in respect of any liabilities incurred by him (or them) in case of death or injury to anyone caused by use of the motor vehicle.

The penalties for dangerous driving have been increased to £50 for the first offence, or alternatively a term of imprisonment, and £100 for any subsequent offence together with suspension of the driving licence for a period of 6 months.

The Act also makes certain amendments in the law relating to highways, to the regulation of public service vehicles and to the running of public service vehicles by local authorities, for details of which consult the Road Traffic Act, 1930, published by H.M. Stationery Office.

## SUNRISE

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| January | 1 | 8.8 | May | 7 | 4.25 | September | 3 | 5.16 |
| | 8 | 8.6 | | 14 | 4.13 | | 10 | 5.27 |
| | 15 | 8.2 | | 21 | 4.3 | | 17 | 5.38 |
| | 22 | 7.55 | | 28 | 3.55 | | 24 | 5.49 |
| | 29 | 7.46 | June | 4 | 3.49 | October | 1 | 6.1 |
| February | 5 | 7.35 | | 11 | 3.45 | | 8 | 6.12 |
| | 12 | 7.24 | | 18 | 3.44 | | 15 | 6.24 |
| | 19 | 7.10 | | 25 | 3.45 | | 22 | 6.36 |
| | 26 | 6.56 | | | | | 29 | 6.48 |
| March | 5 | 6.41 | July | 2 | 3.49 | November | 5 | 7.1 |
| | 12 | 6.25 | | 9 | 3.55 | | 12 | 7.13 |
| | 19 | 6.9 | | 16 | 4.2 | | 19 | 7.25 |
| | 26 | 5.53 | | 23 | 4.11 | | 26 | 7.37 |
| | | | | 30 | 4.21 | | | |
| April | 2 | 5.37 | | | | December | 3 | 7.47 |
| | 9 | 5.22 | August | 6 | 4.31 | | 10 | 7.56 |
| | 16 | 5.6 | | 13 | 4.42 | | 17 | 8.2 |
| | 23 | 4.51 | | 20 | 4.53 | | 24 | 8.6 |
| | 30 | 4.38 | | 27 | 5.4 | | 31 | 8.8 |

# SUNSET TABLE, 1932

| | London. | Birmingham. | Cardiff. | Edinburgh. | Exeter. | Glasgow. | Leeds. | Manchester. | Norwich. |
|---|---|---|---|---|---|---|---|---|---|
| Jan. 1 | 4.1 | 4.3 | 4.13 | 3.48 | 4.18 | 3.53 | 3.54 | 3.59 | 3.49 |
| Jan. 15 | 4.18 | 4.21 | 4.30 | 4.8 | 4.35 | 4.13 | 4.13 | 4.18 | 4.7 |
| Feb. 5 | 4.54 | 4.58 | 5.7 | 4.52 | 5.10 | 4.56 | 4.53 | 4.57 | 4.45 |
| Feb. 19 | 5.20 | 5.25 | 5.32 | 5.22 | 5.35 | 5.27 | 5.21 | 5.24 | 5.12 |
| March 5 | 5.45 | 5.51 | 5.57 | 5.52 | 5.59 | 5.57 | 5.48 | 5.51 | 5.28 |
| March 19 | 6.11 | 6.18 | 6.23 | 6.23 | 6.24 | 6.28 | 6.17 | 6.19 | 6.5 |
| April 2 | 6.34 | 6.42 | 6.47 | 6.52 | 6.47 | 6.56 | 6.43 | 6.45 | 6.30 |
| April 16 | 6.58 | 7.7 | 7.10 | 7.20 | 7.10 | 7.24 | 7.8 | 7.11 | 6.54 |
| May 7 | 7.32 | 7.43 | 7.46 | 8.2 | 7.44 | 8.7 | 7.47 | 7.48 | 7.31 |
| May 21 | 7.53 | 8.4 | 8.5 | 8.28 | 8.3 | 8.32 | 8.9 | 8.11 | 7.52 |
| June 4 | 8.10 | 8.23 | 8.23 | 8.50 | 8.20 | 8.54 | 8.29 | 8.30 | 8.11 |
| June 18 | 8.20 | 8.33 | 8.32 | 9.2 | 8.30 | 9.6 | 8.40 | 8.41 | 8.21 |
| July 2 | 8.21 | 8.33 | 8.33 | 9.1 | 8.30 | 9.5 | 8.40 | 8.41 | 8.21 |
| July 16 | 8.11 | 8.23 | 8.23 | 8.48 | 8.21 | 8.52 | 8.29 | 8.30 | 8.11 |
| Aug. 6 | 7.41 | 7.52 | 7.53 | 8.11 | 7.52 | 8.15 | 7.56 | 7.57 | 7.40 |
| Aug. 20 | 7.14 | 7.24 | 7.26 | 7.39 | 7.26 | 7.43 | 7.26 | 7.28 | 7.11 |
| Sept. 3 | 6.43 | 6.51 | 6.55 | 7.2 | 6.55 | 7.7 | 6.52 | 6.54 | 6.39 |
| Sept. 17 | 6.12 | 6.20 | 6.24 | 6.27 | 6.25 | 6.31 | 6.19 | 6.22 | 6.7 |
| Oct. 1 | 5.40 | 5.46 | 5.52 | 5.50 | 5.54 | 5.54 | 5.44 | 5.47 | 5.33 |
| Oct. 15 | 5.9 | 5.14 | 5.21 | 5.14 | 5.23 | 5.18 | 5.11 | 5.14 | 5.1 |
| Nov. 5 | 4.27 | 4.32 | 4.40 | 4.25 | 4.44 | 4.30 | 4.26 | 4.30 | 4.19 |
| Nov. 19 | 4.7 | 4.10 | 4.19 | 4.0 | 4.23 | 4.5 | 4.3 | 4.7 | 3.57 |
| Dec. 3 | 3.54 | 3.57 | 4.7 | 3.43 | 4.11 | 3.48 | 3.49 | 3.53 | 3.43 |
| Dec. 17 | 3.52 | 3.54 | 4.4 | 3.38 | 4.9 | 3.43 | 3.45 | 3.50 | 3.40 |

(By the courtesy of the Automobile Association.)

# MOTOR-CAR SPEED PROHIBITION AND CAUTION SIGNS

(FROM THE ROYAL AUTOMOBILE CLUB YEAR BOOK)

The following are the signs employed on highways:—

1. For 10 miles or lower limit of speed, a white ring, 18in. in diameter, with plate below giving the limit in figures.

Example:

2. For prohibition, a solid red disc, 18in. diameter.

Example:

3. For caution (dangerous corners, cross-roads, school, or precipitous places) a hollow red equilateral triangle, 18in. sides.

Example:

4. All other notices under the Act to be on diamond-shaped boards.

Example:

The above signs are placed on the near side of the road facing the driver, with their lower edges not less than 8 ft. from the ground, and about fifty yards from the spot to which they apply.

# MOTOR-CAR INDEX MARKS ALPHABETICALLY ARRANGED

The following is a list, alphabetically arranged, of the index marks allotted to the County and Borough Councils of Great Britain by the Ministry of Transport. The marks in Ireland are under the Irish Free State and the Government of Northern Ireland.

It will facilitate the reading of the marks still further if automobilists bear in mind that all the marks containing an "S" belong to Scotland, and those containing an "I" to Ireland.

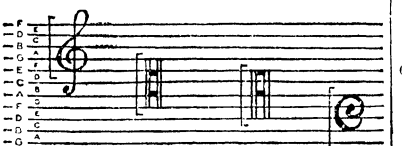
| | | | | | |
|---|---|---|---|---|---|
| A | London. | A R | Hertfordshire. | B I | Monaghan. |
| A A | Southampton. | A S | Nairnshire. | B J | East Suffolk. |
| A B | Worcestershire. | A T | Kingston-upon-Hull. | B K | Portsmouth. |
| A C | Warwickshire. | A U | Nottingham. | B L | Berkshire. |
| A D | Gloucestershire. | A V | Aberdeen (Co.). | B M | Bedfordshire. |
| A E | Bristol. | A W | Salop. | B N | Bolton. |
| A F | Cornwall. | A X | Monmouthshire. | B O | Cardiff. |
| A G | Ayrshire. | A Y | Leicestershire. | B P | West Sussex. |
| A H | Norfolk. | A Z | Belfast. | B R | Sunderland. |
| A I | Meath. | B | Lancashire. | B S | Orkney. |
| A J | Yorks. (N. Riding). | B A | Salford. | B T | Yorks. (E. Riding). |
| A K | Bradford. | B B | Newcastle-on-Tyne. | B U | Oldham. |
| A L | Nottinghamshire. | B C | Leicester. | B V | Blackburn. |
| A M | Wiltshire. | B D | Northamptonshire. | B W | Oxfordshire. |
| A N | West Hsm. | B E | Lincs. (Lindsey). | B X | Carmarthenshire. |
| A O | Cumberland. | B G | Birkenhead. | B Y | Croydon. |
| A P | East Sussex. | B H | Buckinghamshire. | B Z | Co. Down. |

C Yorks. (W. Riding).
C A Denbighshire.
C B Blackburn.
C C Carnarvonshire.
C D Brighton.
C E Cambridgeshire.
C F West Suffolk.
C G Hampshire.
C H Derby.
C I Queen's County.
C J Herefordshire.
C K Preston.
C L Norwich.
C M Birkenhead.
C N Gateshead.
C O Plymouth.
C P Halifax.
C R Southampton (Boro.).
C T Lincs. (Kesteven).
C U South Shields.
C V Cornwall.
C W Burnley.
C X Huddersfield.
C Y Swansea.
D Kent.
D A Wolverhampton.
D B Stockport.
D C Middlesbrough.
D D Gloucestershire.
D E Pembrokeshire.
D F, D G Gloucestershire.
D H Walsall.
D I Roscommon.
D J St. Helens.
D K Rochdale.
D L Isle of Wight.
D M Flintshire.
D N York.
D O Lincs. (Holland).
D P Reading.
D R Plymouth.
D S Peebles-shire.
D T Doncaster.
D U Coventry.
D V Devonshire.
D W Newport (Mon.).
D X Ipswich.
D Y Hastings.
E Staffordshire.
E A West Bromwich.
E B Isle of Ely
E C Westmorland.
E D Warrington.
E E Grimsby.
E F West Hartlepool.
E G Peterboro.
E H Stoke-on-Trent.
E I Sligo.
E J Cardiganshire.
E K Wigan.
E L Bournemouth.
E M Bootle.
E N Bury.
E O Barrow-in-Furness.
E P Montgomeryshire.
E R Cambridgeshire.
E S Perthshire.
E T Rotherham.
E U Brecknockshire.
E V Essex.
E W Huntingdonshire.
E X Great Yarmouth.
E Y Anglesey.
F Essex.
F A Burton-on-Trent.
F B Bath.
F C Oxford.
F D Dudley.
F E Lincoln.
F F Merionethshire.
F G Fife.
F H Gloucester.
F I Tipperary (N. R.).
F J Exeter.
F K Worcester.
F L Soke o' Peterboro.
F M Chester.
F N Canterbury.
F O Radnorshire.
F P Rutland.
F R Blackpool.
F S Edinburgh.
F T Tynemouth.
F U Lincs. (Lindsey).
F V Blackpool.
F W Lincs. (Lindsey).
F X Dorsetshire.
F Y Southport.
G, G A, G B, G D, G E, G G Glasgow.
G C, G F, G H, G J, G K, G N, G O, G P, G T, G U, G W, G X, G Y London.
G L Bath.
G M Motherwell & Wishaw.
G R Sunderland.
G S Perthshire.
G V Suffolk (W.).
H Middlesex.
H A Smethwick.
H B Merthyr Tydfil.
H C Eastbourne.
H D Dewsbury.
H E Barnsley.
H F Wallasey.
H G Burnley.
H H Carlisle.
H I Tipperary (S. R.).
H J Southend-on-Sea.
H K Essex.
H L Wakefield.
H M East Ham.
H N Darlington.
H O Southampton.
H P Coventry.
H R Wiltshire.
H S Renfrewshire.
H T, H U, H W, H Y Bristol
H V East Ham.
H X Middlesex.
I A Antrim.
I B Armagh.
I C Carlow.
I D Cavan.
I E Clare.
I F Cork (Co.).
I H Donegal.
I J Down.
I K Dublin (Co.).
I L Fermanagh.
I M Galway.
I N Kerry.
I O Kildare.
I P Kilkenny.
I R King's County.
I T Leitrim.
I U Limerick.
I W Londonderry.
I X Longford.
I Y Louth (Ireland).
I Z Mayo.
J Durham.
J A Stockport.
J B Berkshire.
J C Carnarvonshire.
J D West Ham.
J E Isle of Ely.
J F Leicester.
J G Canterbury.
J H Hertfordshire.
J I Tyrone.
J K Eastbourne.
J L Lincolnshire.
J M Westmorland.
J N Southend.
J O Oxford.
J P Wigan.
J R Northumberland.
J S Ross and Cromarty.
J T Dorsetshire.
J U Leicestershire.
J V Grimsby.
J W Wolverhampton.
J X Halifax.
J Y Plymouth.
K, K A, K B, K C, K D Liverpool.
K E, K J, K K, K L, K M, K N, K O, K P, K R, K T Kent.
K F Liverpool.
K G Cardiff.
K H Kingston-on-Hull.
K I Waterford (Co.).
K S Roxburghshire.
K U, K W Bradford.
K V Coventry.
K X Buckinghamshire.
K Y Bradford.
L Glamorganshire.
L A, L B, L C, L D, L E, L F, L H, L K, L L, L M, L N, L O, L P, L R, L T, L U, L W, L X, L Y London.
L G Cheshire.
L I Westmeath.
L J Bournemouth.
L S Selkirkshire.
L V Liverpool.
M, M A, M B Cheshire.
M C, M D, M E, M F, M G, M H, M K, M L, M M, M P, M T, M U, M V, M X, M Y Middlesex.
M I Wexford.
M J Bedfordshire.
M N Isle of Man.
M O Berkshire.
M R, M W Wiltshire.
M S Stirlingshire.
N, N A, N B, N C, N D, N E, N F Manchester.
N G Norfolk.
N H Northampton.
N I Wicklow.
N J East Sussex.
N K Hertfordshire.
N L Northumberland.
N M Bedfordshire.
N N Nottinghamshire.
N O Essex.
N P Worcestershire.
N R Leicestershire.
N S Sutherlandshire.
N T Salop.
N U Derbyshire.
N V Northampton.
N W Leeds.
N X Warwickshire.
N Y Glamorganshire.
O, O A, O B, O C, O D, O F, O G, O H, O J, O K, O L, O M, O N, O P, O V, O X Birmingham.
O D Devonshire.
O I Belfast.
O R, O T, O U Southampton.
O S Wigtownshire.
O W Southampton.
O Y Croydon.
P, P A, P B, P C, P D, P E, P F, P G, P H, P J, P K, P L Surrey.
P I Cork.
P M, P N East Sussex.
P O, P X West Sussex.
P P Buckinghamshire.
P R Dorset.
P S Zetland.
P T Durham (Co.).
P U Essex.
P V Ipswich.
P W Norfolk.
P Y Yorks. (N. Riding).
Q A, Q C, Q Q, Q S London
R, R A, R B, R C Derbyshire.
R D Reading.
R E, R F Staffordshire.
R G, R S Aberdeen.
R H Kingston-on-Hull.
R I Dublin.
R J Salford.
R K Croydon.
R L Cornwall.
R M Cumberland.
R N Preston.
R O Hertfordshire.
R P Northamptonshire.
R R Nottinghamshire.
R T Suffolk, E.
R U Bournemouth.
R V Portsmouth.
R W Coventry.
R X Berkshire.
R Y Leicester.
S, S C, S F, S G Edinburgh.
S A Aberdeenshire.

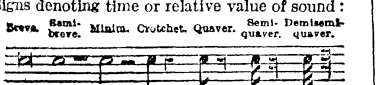
S B Argyllshire.
S D Ayrshire.
S E Banffshire.
S H Berwickshire.
S J Buteshire.
S K Caithness-shire.
S L Clackmannanshire.
S M Dumfries-shire.
S N Dumbartonshire.
S O Moray.
S P Fifeshire.
S R Forfarshire.
S S East Lothian.
S T Inverness-shire.
S U Kincardineshire.
S V Kinross-shire.
S W Kirkcudbrightshire.
S X West Lothian.
S Y Midlothian.
T, T A, T T Devonshire.
T B, T C, T D, T E, T F, T J Lancashire.
T G Glamorgan.
T H Carmarthenshire.
T I Limerick.
T K Dorset.
T L Lincs. (Kesteven).
T M Bedfordshire.
T N Newcastle-on-Tyne.
T O Nottingham.
T P Portsmouth.
T R Southampton (Boro.).
T S Dundee.
T U Cheshire.
T V Nottingham.
T W Essex.
T X Glamorganshire.
T Y Northumberland.
U, U A, U B, U M Leeds.
U C London.
U D Oxfordshire.
U E Warwickshire
U F Brighton.
U G Leeds.
U H Cardiff.
U I Londonderry.
U J Salop.
U K Wolverhampton.
U L London.
U N Denbighshire.
U O Devonshire.
U P Durham (Co.).
U R Hertfordshire.
U S Glasgow.
U T Leicestershire.
U U, U V, U W London
U X Salop.
U Y Worcestershire.
V, V A Lanarkshire.
V B Croydon.
V C Coventry.
V D Lanarkshire.
V E Cambridge.
V F Norfolk.
V G Norwich.
V H Huddersfield.
V J Hereford.
V K Newcastle-on-Tyne.
V L Lincoln.
V M Manchester.
V N Yorks. (N. Riding).
V O Nottingham.
V P Birmingham.
V R, V U Manchester.
V S Greenock.
V T Stoke-on-Trent.
V V Northampton.
V W, V X Essex.
V Y York.
W, W A, W B, W E, W J Sheffield.
W D Warwickshire.
W F Yorks. (E. Riding).
W G Stirlingshire.
W H Bolton.
W I Waterford.
W K Coventry.
W L Oxford.
W M Southport.
W N Swansea.
W O Monmouthshire.
W P Worcestershire.
W R, W T, W U, W W, W X, W Y Yorks. (W. Riding).
W S Edinburgh.
W V Wiltshire.
X Northumberland.
X A, X B, X C, X D, X E, X F, X H, X K, X L, X M, X N, X O, X P, X R, X T, X U, X V, X W, X X, X Y London.
X G Middlesbrough.
X I Belfast.
X J Manchester.
X S Paisley.
Y, Y A, Y B, Y C, Y D Somersetshire.
Y E, Y F, Y H, Y K, Y L, Y M, Y N, Y O, Y P, Y R, Y T, Y U, Y V, Y W, Y X, Y Y London.
Y G Yorkshire (W. Riding).
Y I Dublin.
Y J Dundee.
Y S Glasgow.
Z, Z I Dublin.

# MUSICAL SIGNS AND ABBREVIATIONS

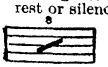
Musical signs or notes are written on a stave of 11 lines and 10 spaces, starting at G and finishing at F, sometimes called the Great Stave. This is supposed to cover the range of the human voice. For convenience, however, music is usually written in staves of 5 lines each, the top 5 being the Treble and the bottom 5 the Bass. The "normal C," which usually can be sounded by all voices, is one line below the stave in the Treble and one line above the stave in the Bass. The following diagram shows which 5 lines of the Grand Stave are used for the Treble, Alto, Tenor and Bass clefs respectively.



Signs denoting time or relative value of sound:




Each of these notes represents twice the duration of sound of that which comes next in order. The sign to the right of each note indicates a rest or silence equal to its sound duration.



In time the figure above a line drawn thus across the stave denotes the length of the pause in bars.

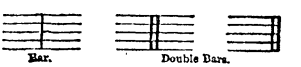
*Accel.* Accelerando. Gradually increasing the speed.

*Adg°* or *Ad°*. Adagio. Slow; also name given to a slow movement or piece.

*Ad lib.* Ad libitum. Passages so marked may be rendered at the will of the performer.

*And.* Andante. Moderately slow: graceful; sometimes used as the name of a movement or separate piece.

*Anim°.* Animato. Animated: with soul.

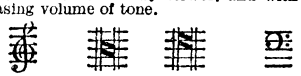
*A tem.* A tempo. In time.

*Bar.* A line drawn perpendicularly across the stave, separating the notes into measures of equal length; also the music comprised within two such lines.

Bind or tie. Placed over two or more notes in the same position on the stave, to show they are to be played as one.

Breath-marks. In vocal music, signs used to show where breath should be taken.

Denoting common time: the former indicating four crochets to the bar, the latter two minims to the bar.

*Cal.* Calando. Gradually slower, and with decreasing volume of tone.




Clef. The sign placed at the beginning of a stave denotes the position of the middle C of the Grand Stave in the 5 lines being used.

Crescendo. Gradual increase of tone.

(') Dash. When placed over or under a note, implies a very detached (*staccato*) style.

*D.C.* Da capo. From the beginning: indicating that the performer must return to the beginning of the movement, and conclude at the double bar marked *Fine*.

Decrescendo. Gradually softer.

*Dim.* Diminuendo. Gradual decrease of tone.

(·) Dot. When added to a note or rest, lengthens it by one-half. When placed over or under a note, means that its duration should be cut short.

♭ Flat. The sign which lowers the pitch of a note one semitone.

♭♭ Double Flat. Used before a note already flat, lowering it another semitone. It is corrected by a flat and a natural.

*f.* Forte. Loudly: strongly.

*ff.* Fortissimo. Very loud.

*f.s.* Sforzando. As loud as possible.
*f.p.* Forte-piano. Loud, then soft.
*Leg.* Legato. In a smooth and gliding manner.
*Lo.* Loco. Indicating to return to the proper pitch after having played an octave higher.
*mf.* or *mff.* Mezzo-forte. Moderately loud.
*mp.* Mezzo-piano. Moderately soft.
*Manc.* Mancando. Dying away, decreasing.
*Marc.* Marcato. In a marked manner, emphasised.
M.M. Maelzel's metronome.
M.M. ♩ = 80. Denoting that the beat of a crochet is equal to the pulse of the pendulum of Maelzel's metronome, with the weight set at 80.
♮ Natural. Restores a note, which has been raised by the sharp or lowered by the flat, to its original pitch.
*Ott.*, $O^{va}$, $8^{va}$ = Ottava. An octave—as $8^{va}$ *alta* = *ottava alta*, (to be played) an octave higher; $8^{va}$ *bas* = *ottava bassa*, an octave lower.
*p.* Piano. Softly.
*P.F.* or *pf.* Piano-forte. Soft, then loud.
*pp.* Pianissimo. Very soft.
*ppp.* Pianississimo. As softly as possible.
𝄐 Pause or *Corona.* When placed over a note or rest, indicates that it must be held longer than its natural length. When over a double bar, indicates where the piece is to be concluded after a repeat.
*Pizz.* Pizzicato. A direction to violinists to twang the string with the finger instead of using the bow.

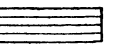
Quintuplet. A group of five notes played in the time of four.

$4^{tte}$. Quartette.
$5^{tte}$. Quintette.
*Raddol.* Raddolcendo. Gradually softer and sweeter.
*Rall.* Rallentando. Becoming gradually slower.



Repeat when placed at the beginning and end of a passage or movement, indicates that the portion so marked is to be played over again.

*Rit.* Ritardando. Retarding, holding back the time.
𝄋 Segno. The sign—as *Al Segno*, to the sign; *Dal Segno*, from the sign.
*Sem.*, *Semp.* Sempre. Always, throughout—as *sempre legato*, smooth throughout; *sempre ritardando*, continually slackening in time.
$6^{tte}$. Sextet, or Sestet.
$7^{tte}$. Septet.
∧ ∨ > Sforzando. Denoting emphasis applied to a particular note or notes. Abbreviated *sf.*, *rf.*, *rfz.*
> Sforzato-piano. A sudden *forte* followed by a *diminuendo* or *piano*. Abbreviated *sfp.*, *sfz.p.*
♯ Sharp. The sign which raises the pitch of a note one semitone.
× Double Sharp. Used before a note already sharp, raising the pitch by a semitone. It is corrected by a natural and a sharp.
⌒ Slur. Showing that the notes over which it is placed must be played in a smooth (*legato*) manner.
*Sos.*, *Sost.* Sostenuto. Sustained; prolonging the tone for the full duration of time indicated.
*Spir.* Spiritoso. In a spirited or lively manner.



Stave or Staff. The horizontal and parallel lines on which the notes are placed, used to indicate their relative position as regards pitch.

*Trem.* Tremolando. With trembling or wavering; a note or chord played with great rapidity so as to produce such an effect.
3°. Trio.
*T.S.* Tasto solo. One key alone: a direction to play a part in unison.

# BRITISH WEIGHTS AND MEASURES

Since January 1, 1826, there has been compulsory uniformity of Weights and Measures.

## AVOIRDUPOIS WEIGHT.

| | | |
|---|---|---|
| 27 11.32 grains | make | 1 dram = 27 11.32 grains. |
| 16 drams | ,, | 1 ounce = 437½ ,, |
| 16 ounces | ,, | 1 pound (lb.) = 7000 ,, |
| 28 pounds | ,, | 1 quarter (qr.). |
| 4 quarters | ,, | 1 hundredweight (cwt.). |
| 20 cwt. (112 lbs. each) | ,, | 1 ton (2240 lbs.). |

This is the weight in common use in all ordinary trade dealings.

## TROY WEIGHT.

| | | |
|---|---|---|
| 4 grains | make | 1 carat. |
| 6 carats (or 24 grains) | ,, | 1 pennyweight. |
| 20 pennyweights | ,, | 1 ounce. |
| 12 ounces | ,, | 1 pound. |
| 25 pounds | ,, | 1 quarter. |
| 100 pounds | ,, | 1 hundredweight. |
| 20 hundredweights | ,, | 1 ton of gold or silver. |

The precious metals are weighed by this scale.

Gold plate, or any manufacture of gold, may be of any of the standards of 18, 15, 12, or 9 carats fine gold in every pound troy. The relative value of the carat of gold is 10 pennyweights.

## DRY MEASURE.

| | |
|---|---|
| 4 gills | 1 pint. |
| 2 pints | 1 quart. |
| 2 quarts (4 pints) | 1 pottle. |
| 2 pottles (4 quarts) | 1 gallon. |
| 2 gallons | 1 peck. |
| 4 pecks | 1 bushel. |
| 3 bushels | 1 bag. |
| 4 bushels | 1 coomb. |
| 5 bushels (or porter's load) | 1 sack of flour. |
| 8 bushels | 1 quarter. |
| 12 bags (36 bushels) | 1 chaldron. |
| 5 quarters (40 bushels) | 1 wey or horse-load. |
| 2 weys (10 quarters) | 1 last. |

## APOTHECARIES' WEIGHT.

| | | |
|---|---|---|
| 20 grains | make | 1 scruple. |
| 3 scruples | ,, | 1 drachm. |
| 8 drachms | ,, | 1 ounce. |
| 12 ounces | ,, | 1 pound. |

The pound and ounce are the same as in troy weight. Medicines are compounded by this weight, but drugs are bought and sold by avoirdupois.

## APOTHECARIES' FLUID MEASURE.

| | | |
|---|---|---|
| 60 minims | make | 1 drachm. |
| 8 drachms | ,, | 1 ounce. |
| 20 ounces | ,, | 1 pint. |
| 8 pints | ,, | 1 gallon. |
| 60 drops | ,, | 1 drachm. |
| 4 drachms | ,, | 1 tablespoonful. |
| 2 ounces | ,, | 1 wineglassful. |
| 3 ounces | ,, | 1 teacupful. |

There are 437½ grains in a fluid ounce.

## WINE AND SPIRIT MEASURE.

| | | | |
|---|---|---|---|
| 4 gills | make | 1 pint | = pt. |
| 2 pints | ,, | 1 quart | = qt. |
| 4 quarts | ,, | 1 gallon | = gal. |
| 63 gallons | ,, | 1 hogshead | = hhd. |
| 84 gallons | ,, | 1 puncheon | = pun. |
| 2 hogsheads or 126 gallons | ,, | 1 pipe or butt | = pipe. |
| 4 hogsheads or 252 gallons | ,, | 1 tun | = tun. |

## ALE, BEER, AND PORTER MEASURE.

| | | | |
|---|---|---|---|
| 4 gills | make | 1 pint | = pt. |
| 2 pints | ,, | 1 quart | = qt. |
| 4 quarts | ,, | 1 gallon | = gal. |
| 9 gallons | ,, | 1 firkin | = fir. |
| 2 firkins | ,, | 1 kilderkin | = kild. |
| 2 kilderkins | ,, | 1 barrel | = bar. |
| 3 kilderkins | ,, | 1 hogshead | = hhd. |
| 2 hogsheads | ,, | 1 butt | = butt. |
| 30 gallons | ,, | 1 American barrel | = Am. bar. |

## MISCELLANEOUS LIQUID MEASURES.

The Imperial Standard Gallon comprises 10 Imperial Standard Pounds weight of distilled water weighed in air, with water and air at the temperature of 62 deg. Fahrenheit, and the barometer at 30 inches. The measure of an Imperial Standard Gallon is 277·274 cubic inches.

| | | |
|---|---|---|
| 1 hogshead of Claret | 46 | gallons. |
| 1 pipe or butt of Sherry | 108 | ,, |
| 1 pipe of Port | 115 | ,, |
| 1 pipe of Madeira | 92 | ,, |
| 1 pipe of Teneriffe | 100 | ,, |
| 1 butt of Lisbon | 117 | ,, |
| 1 pipe of Malaga | 105 | ,, |
| 1 pipe of Cider | 100 to 118 | ,, |
| 1 hogshead of Hock, Rhine, and Moselle | 30 | ,, |
| 1 hogshead of Cape | 92 | ,, |
| 1 hogshead of Tent | 54 | ,, |
| 1 hogshead of Marsala Bronté | 93 | ,, |
| 1 hogshead of Brandy | 57 | ,, |
| 1 hogshead of Rum | 54 to 60 | ,, |
| 1 puncheon of Brandy | 90 to 100 | ,, |
| 1 puncheon of Rum | 90 to 100 | ,, |
| Quarter-cask of Brandy | 28 | ,, |
| Butt of Wine | 126 | ,, |
| Butt of Beer | 108 | ,, |
| Tun of Wine | 252 | ,, |

## LINEAL MEASURE.

| | | |
|---|---|---|
| 3 barleycorns | make 1 | inch (in.). |
| 12 inches | ,, 1 | foot (ft.). |
| 3 feet | ,, 1 | yard (yd.). |
| 5½ yards | ,, 1 | pole (po.), rod, perch. |
| 4 poles, or 22 yds. | ,, 1 | chain. |

## CUBIC OR SOLID MEASURE.

Cubic Foot = 1,728 Cubic Inches.
Cubic Yard = 27 Cubic Feet, 21 033 Bushels.
Stack of Wood = 108 Cubic Feet.
Shipping Ton = 40 Cubic Feet merchandise.
Shipping Ton = 42 Cubic Feet of Timber.
Ton of Displacement of a Ship = 35 Cubic Feet.

## MISCELLANEOUS MEASURES OF LENGTH.

Mile, Geographical Admiralty Knot, or Nautical Mile, 6,080 feet = 1·15 Mile Statute.
League = 3 miles (obsolete).
Degree = 60 Geographical, or 69·121 Statute Miles.

| | |
|---|---|
| Inch (in.) | = 72 Points, or 12 Lines. |
| Nail (1–16) | = 2¼ Inches. |
| Palm | = 3 Inches. |
| Hand | = 4 Inches. |
| Link | = 7·92 Inches. |
| Quarter (or a Span) | = 9 Inches. |
| Foot | = 12 Inches. |
| Cubit | = 18 Inches (obsolete). |
| Yard | = 36 Inches. |
| Pace, Military | = 2 Feet, 6 Inches. |
| Pace, Geometrical | = 5 Feet. |
| Fathom | = 6 Feet. |
| Rod, Pole, or Perch | = 5½ Yards. |
| Chain (100 Links) | = 22 Yards (4 Poles). |
| Cable's Length | = 100 Fathoms, 600 Feet. |
| Furlong | = 40 Rods, 220 Yards. |
| Mile | = 8 Furlongs, 80 Chains, 320 Rods, 1,760 Yards, 5,280 Feet, 63,360 Inches. |

The old *Scottish Mile* was 5,920 feet; 10 Scots Miles being about equal to 11¼ Statute Miles. Eleven *Irish Miles* were equal to 14 Statute Miles.

## SQUARE, SURFACE, OR LAND MEASURE.

The Square Foot contains 144 square inches.
Yard = 9 feet = 1,296 inches.
Rod, Pole, or Perch = 30¼ yards = 272¼ feet.
Chain = 16 rods = 484 yards = 4,356 feet.
Rood = 40 rods = 1,210 yards = 10,890 feet.
Acre = 4 roods = 160 rods = 4,840 yards.
Yard of Land = 30 acres = 120 roods.
Hide = 100 acres = 400 roods.
Mile = 640 acres = 2,560 roods = 6,400 chains = 102,400 rods, poles, or perches, or 3,097,600 square yards.
An Acre *roughly* stated has four equal sides of 69½ yards: *accurate* measurement gives each side 208·71 feet.
The sides of a square half-acre would be 147·581 feet, and of a square quarter-acre 104·355 feet.

## METRIC WEIGHTS AND MEASURES.

*Lineal Measure.*

The unit for length is the metre.

| | yds. | ft. | in. | |
|---|---|---|---|---|
| 10 millimetres, or | 0 | 0 | 0·3937 | = 1 centim. |
| 10 centimetres ,, | 0 | 0 | 3·9370 | = 1 decim. |
| 10 decimetres ,, | 1 | 0 | 3·3708 | = 1 METER. |
| 10 metres ,, | 10 | 2 | 9·7079 | = 1 decam. |
| 10 decametres ,, | 109 | 1 | 1·079 | = 1 hectom. |
| 10 hectometres ,, | 1093 | 1 | 10·79 | = 1 kilom. |

*Surface, or Square Measure.*

100 centiares, or 119·6 sq. yds. = 1 ARE.
100 ares ,, 2·471 acres = 1 hectare.
A centiare measures 1·196033 sq. yard.

*Solid Measure* (Wood).

cub. ft.
10 centisteres, or 3·5317 = 1 decistere.
10 decisteres ,, 35·317 = 1 stere.
A centistere measures 610·28 cubic inches.

*Capacity.*

The unit for capacity is the litre.

| | gals. | qts. | pints. | | |
|---|---|---|---|---|---|
| 10 millilitres, or | 0 | 0 | 0·0176077 | = | 1 centilitre or 10 cub. c. |
| 10 centilitres ,, | 0 | 0 | 0·176077 | = | 1 decilitre or 100 cub. c. |
| 10 decilitres ,, | 0 | 0 | 1·76077 | = | 1 litre or cub. c. |
| 10 litres ,, | 2 | 0 | 1·6077 | = | 1 decalitre or centistere. |
| 10 decalitres ,, | 22 | 0 | 0·077 | = | 1 hectolitre or decistere. |
| 10 hectolitres ,, | 220 | 0 | 0·77 | = | 1 kilolitre, or stere, or cub.metre. |

A millilitre measures ·00176 of a pint, or ·0000275 of a bushel.

*Weight.*

The unit for weight is the gram.

| | lb. | oz. | drams. | |
|---|---|---|---|---|
| 10 milligrammes, or | 0 | 0 | 0·0056438 | =1 centigr. |
| 10 centigrammes ,, | 0 | 0 | 0·056438 | =1 decigr. |
| 10 decigrammes ,, | 0 | 0 | 0·56438 | =1 gramme. |
| 10 grammes ,, | 0 | 0 | 5·6438 | =1 decagr. |
| 10 decagrammes ,, | 0 | 3 | 8·43 | =1 hectogr. |
| 10 hectogrammes ,, | 2 | 3 | 4·38 | =1 kilogr. |

A milligramme measures ·01543 of a grain.

## ELECTRICAL MEASURES.

The chief units as generally accepted by electricians are as follows:—

| | |
|---|---|
| Volt | Electromotive force is equal to about 92·6 per cent. of that given by one Daniell's battery cell. |
| Ohm | Resistance equals the resistance offered to the passage of a current of electricity by a thread of mercury 106 cm. long and 1 mm. cross section at the temperature of melting ice. |
| Megohm | Equals one million ohms. |
| Ampere | Current equals the current 1 volt will drive through 1 ohm. |
| Coulomb | Quantity equals 1 ampere flowing for 1 second of time. |
| Microfarad | Capacity equals ·000001 coulomb at 1 volt pressure. |
| Watt | Power equals 44 ft. lbs. per minute. |

Board of Trade Unit, officially defined as "the energy contained in a current of one thousand amperes flowing under an electromotive force of 1 volt during an hour."

Kilowatt hour equals one Board of Trade Unit. One Board of Trade Unit will keep a 20-candle incandescent metal filament lamp alight for about 33 hours.

746 Watts equals 1 horse-power.

## HAY AND STRAW MEASURE.

Truss of Straw, 36 lbs. Truss of Old Hay, 56 lbs. Truss of New Hay (to September 1st), 60 lbs. Load, 36 Trusses,—Straw, 11 cwt. 2 qrs. 8 lbs.; Old Hay, 18 cwt.; New Hay, 19 cwt. 1 qr. 4 lbs.

## SCOTCH LIQUID MEASURE.

| | | |
|---|---|---|
| 4 gills | make 1 | mutchkin. |
| 2 mutchkins | ,, 1 | choppin. |
| 2 choppins | ,, 1 | pint. |

## WOOL WEIGHT.

Clove, *cl.* = 7 lbs.
Stone, *st.* = 2 Cloves = 14 lbs.
Tod, *td.* = 2 Stones = 1 qr.
Wey, *wy.* = 6½ Tod = 1 cwt. 2 qrs. 14 lbs.
Pack, *pk.* = 240 lbs.
Sack, *sk.* = 2 Weys = 13 qrs. or 364 lbs.
Last, *la.* = 12 Sacks = 39 cwt.

## WORSTED YARN MEASURE.

Wrap, 80 yards; Hank, 560 yards = 7 Wraps. Counts are reckoned according to the number of hanks in a lb.

## COTTON WOOL WEIGHT.

Cotton Wool, Bale variable; U.S.A. average 477 lbs.; Egyptian, 719 lbs.; East Indian, 396 lbs.; Brazilian, 220 lbs.

## COTTON YARN AND SILK MEASURE.

Thread = 1½ yards.
Lea, or Skein = 120 yards.
Hank = 7 Skeins, or Leas = 840 yards.
Spindle = 18 Hanks.
Reels of Cotton vary from 30 to 1,760 yards, but the length must be correctly specified.

## FISH MEASURE.

Fresh Herrings are sold by the *Cran*, containing 37½ imperial gallons except on the West Coast, Isle of Man, and in Ireland, where they are sold by the *Maze*, which contains 5 long hundreds of 126 each. On the East coast of England they are sold by the *Last*, which contains 13,200 fish. They are counted by the *Warp*, which is 4 fish. 33 Warps = 1 Long Hundred, 132; 10 Hundred = 1 Thousand, 1,320; 10 Thousand = 1 Last, 13,200. A barrel of cured herrings in Scotland must always be 28½ imperial gallons; a barrel of anchovies contains 30 lbs.

## BREAD WEIGHT.

| | lbs. | oz. | drs. |
|---|---|---|---|
| 1 peck loaf | 17 | 6 | 2 |
| 1 half peck loaf | 8 | 11 | 1 |
| * quartern loaf | 4 | 5 | 8½ |
| 1 quartern (or quarter peck) of flour | 3 | 8 | 0 |

* Bakers are not allowed to sell bread by the peck or quartern. It is generally sold in 4-lb. and 2-lb. loaves (usually called quartern and half-quartern loaves).

## COAL WEIGHT.

14 lbs. . . . . 1 stone.
28 lbs. . . . . 1 quarter.
112 lbs. . . . . 1 cwt.
20 cwt. . . . . 1 ton.
1 sack . . . . . 1 cwt.
1 large sack . . . . . 2 cwt.
21 tons 4 cwt. . . . . 1 barge or keel.
20 keels (424 tons) . . . . 1 ship load.
7 tons . . . . . 1 room.

Water . A cubic inch of water weighs 252½ grains.
" . A gallon of water weighs 10 lbs.
" . A cubic foot of water weighs 62·32 lbs.

Flour . 100 lb. of wheat produces 70 lbs. of flour.
" . 100 lb. of flour produces 130 lbs. of bread.

## MEASURES OF TIME.

60 Seconds . . . . . = 1 Minute.
60 Minutes . . . . . = 1 Hour.
24 Hours . . . . . = 1 Day.
(23*h.* 56*m.* 4*s.* = 1 Sidereal Day.)
7 Days . . . . . = 1 Week.
28 Days . . . . . = 1 Lunar Month.
28, 29, 30, or 31 Days . . = 1 Calendar Month.
12 Calendar Months . . = 1 Year.
365¼ Days . . . . . = 1 Common Year.
366 Days . . . . . = 1 Leap Year.
365*d.* 5*h.* 48*m.* 45·5*s.* . . = 1 Tropical Year.

## MISCELLANEOUS WEIGHTS.

| | | |
|---|---|---|
| Almonds | sack | 224 lbs. |
| " | chaldron | 85 bushels |
| Cocoa | bags | 1 to 2 cwt. |
| Coffee | bags | 1¼ to 1½ cwt. |
| Currants | bags | 56 lbs. |
| Eggs | standard case | 12×120 |
| " | (120 = long hundred) | |
| Flour | sack | 280 lbs. |
| " | barrel (U.S.) | 196 lbs. |
| " | peck | 14 lbs. |
| Golden Syrup | metal drum | 1 cwt. |
| Hides | last | 12 dozen |
| Honey | gallon | 12 lbs. |
| Hops | bag | 280 lbs. |
| " | pocket | 1½ to 2 cwt. |
| Lard | boxes (U.S.) | 56 lbs. |
| " | pails | 28 lbs. |
| Lemons | cases | 300 each |
| Lentils | pocket | 100 lbs. |
| Meat | stone | 8 lbs. |
| Oranges | cases (Denia) | 200 to 1064 each |
| " | boxes (Jaffa) | 144 each |
| Pepper | bags | 168 lbs. |
| Pork | barrel | 224 lbs. |
| Rice | bags | 168 lbs. |
| " | pockets (American) | 100 lbs. |
| Raisins | boxes | 7, 14, 28 lbs. |
| Soap, soft | firkin | 64 lbs. |
| " | barrel | 256 lbs. |
| Sultanas | bags | 56 lbs. |
| " | boxes | 28 lbs. |
| Sugar (cubes) | cases | 1 cwt. |
| " (gran.) | bags | 2 cwt. |
| " (crys.) | " | 2 cwt. |
| Sago | bag | 112 lbs. |
| Tar | barrel | 26¼ gallons |
| Tea | chests (Indian) | 126 lbs. |
| " | ½ chests | 65 lbs. |
| " | chests (Ceylon) | 120 lbs. |
| " | " (China) | 90 to 100 lbs. |
| Tobacco | hogshead | 12 to 18 cwt. |
| Turpentine | barrel | 224 to 280 lbs. |
| Wool | sack | 364 lbs. |

## IMPERIAL TO METRIC.

### Linear Measure.

1 inch . . . . . = 25·400 millimetres.
1 foot (12 inches) . . = 0·30480 metre.
1 YARD (3 feet) . . = 0·914383 METRE.
1 fathom (6 feet) . . = 1·8288 metres.
1 pole (5½ yards) . . = 5·0292 "
1 chain (22 yards) . . = 20·1168 "
1 furlong (220 yards) . = 201·168 "
1 mile (8 furlongs) . . = 1·6093 kilometres.

### Square Measure.

1 sq. in. . . . . = 6·4516 sq. centimetres.
1 sq. ft. (144 sq. in.) = 9·2903 sq. decimetres.
1 sq. yd. (9 sq. ft.) = 0·836126 sq. metre.
1 perch (30¼ sq. yds.) = 25 293 sq. metres.
1 rood (40 perches) = 10·117 ares.
1 ac. (4,840 sq. yds.) = 0·40468 hectare.
1 sq. mile (640 acs.) = 259·00 hectares.

### Cubic Measure.

1 cub. in. . . . . = 16·387 cub. centimetres.
1 cub. ft. (1728 cub. inches) = 0·028317 cub. metre.
1 cub. yd. (27 cub. ft.) = 0·764553 " "

### Measures of Capacity.

1 gill . . . . . = 1·42 decilitres.
1 pint (4 gills) . . . = 0·568 litre.
1 quart (2 pints) . . = 1·136 litres.
1 GALLON (4 quarts) . . = 4·5459631 LITS.
1 peck (2 gallons) . . = 9·092 litres.
1 bushel (8 gallons) . . = 3·637 decalitres.
1 quarter (8 bushels) . . = 2·900 hectolitres.

### Apothecaries Measure.

1 minim . . . . . = 0·059 millilitre.
1 fluid scruple . . . = 1·184 millilitres.
1 fluid dchm. (60 minims) = 3·552 "
1 fluid ounce (8 drachms) = 2·84123 centilitres.
1 pint . . . . . = 0·568 litre.
1 GALLON (8 pints or 160 fluid ounces) = 4·5459631 litres.

### Avoirdupois Weight

1 grain . . . . . = 0·0648 gramme.
1 dram . . . . . = 1·772 grammes.
1 ounce (16 drachms) . = 28·350 "
1 POUND (16 oz. or 7,000 grains) = 0·45359243 K'GRAM

| | | |
|---|---|---|
| 1 stone (14 lbs.) | = | 6·350 kilograms. |
| 1 quarter (28 lbs.) | = | 12·70 ,, |
| 1 hundredweight (cwt.) (112 lbs.) | = | 50·80 ,, / 0·5080 quintal. |
| 1 ton (20 cwt.) | = | 1·0160 tonnes or 1016 kilograms. |

TROY WEIGHT.

| | | |
|---|---|---|
| 1 grain | = | 0·0648 gramme. |
| 1 pennyweight (24 grains) | = | 1·5552 grammes. |
| 1 troy ounce (20 pennyweights) | = | 31·1035 ,, |
| 1 troy pound (12 oz.) | = | 373·2420 ,, |

APOTHECARIES WEIGHT.

| | | |
|---|---|---|
| 1 grain | = | 0·648 gramme. |
| 1 scruple (20 grains) | = | 1·296 grammes. |
| 1 drachm (3 scruples) | = | 3·888 ,, |
| 1 oz. (8 drachms) | = | 31·1035 ,, |

NOTE.—One litre equals 1,000 cubic centimetres, and one millilitre equals one cubic centimetre.

## EQUIVALENTS OF METRIC WEIGHTS AND MEASURES IN TERMS OF IMPERIAL WEIGHTS AND MEASURES FOR USE IN TRADE.

### METRIC TO IMPERIAL.

LINEAR MEASURE.

| | | |
|---|---|---|
| 1 millimetre (mm.) (1-1000th m.) | = | 0·03937 inch. |
| 1 centimr. (1-100th m.) | = | 0·3937 ,, |
| 1 decimetre (1-10th m.) | = | 3·937 inches. |
| 1 METRE (m.) | = | 39·370113 INCHES. / 3·280843 FEET. / 1·0936143 YARDS. |
| 1 decametre (10 m.) | = | 10·936 yards. |
| 1 hectometre (100 m.) | = | 109·36 ,, |
| 1 kilometre (1000 m.) | = | 0·62137 mile. |

SQUARE MEASURE.

| | | |
|---|---|---|
| 1 square centimetre | = | 0·15500 sq. in. |
| 1 sq. decimetre (100 sq. centimetres) | = | 15·500 sq. in. |
| 1 sq. metre (100 sq. decimetres) | = | 10·7639 sq. ft. / 1·1960 sq. yds. |
| 1 are (100 sq. metres) | = | 119·60 ,, ,, |
| 1 hectare (100 ares or 10,000 sq. metres) | = | 2·4711 acres. |

CUBIC MEASURE.

| | | |
|---|---|---|
| 1 cubic centimetre | = | 0·0610 cubic in. |
| 1 cubic decimetre (c.d.) (1,000 cub. centimetres) | = | 61·024 cubic in. |
| 1 cub. metre (1,000 cub. decimetres) | = | 35·3166 cub. ft. / 1·307954 ,, yds. |

MEASURES OF CAPACITY.

| | | |
|---|---|---|
| 1 centilit. (1-100th litre) | = | 0·07 gill. |
| 1 decilitre (1-10th litre) | = | 0·176 pint. |
| 1 LITRE | = | 1·7598 PINTS. |
| 1 decalitre (10 litres) | = | 2·2 gallons. |
| 1 hectolitre (100 litres) | = | 2·75 bushels |

WEIGHT.

| | | *Avoirdupois* |
|---|---|---|
| 1 milligm. (1-1000th gm.) | = | 0·015 grain. |
| 1 centigm. (1-100th gm.) | = | 0·154 ,, |
| 1 decigm. (1-10th gm.) | = | 1·543 grains. |
| 1 gramme (1 gm.) | = | 15·432 ,, |
| 1 decagm. (10 gm.) | = | 5·644 drams. |
| 1 hectogm. (100 gm.) | = | 3·527 oz. |
| 1 KILOGRAM (1,000 gm.) | = | 2·2046223 LBS. or 15432·3564 GRAINS |
| 1 myriagm. (10 kilog.) | = | 22·046 lb. |
| 1 quintal (100 kilog.) | = | 1·968 cwt. |
| 1 tonne (1,000 kilog.) | = | 0·984 ton. |

| | | *Troy.* |
|---|---|---|
| 1 gramme (1 gm.) | = | 0·03215 oz. troy. / 15·432 grains. |
| | | *Apothecaries.* |
| 1 gramme (1 gm.) | = | 0·2572 drachm. / 0·7716 scruple. / 15·432 grains. |

# PAPER

Paper was originally made from rag, but now wood pulp is chiefly used, but in conjunction with rag and esparto for the better kinds. Ordinary common "News" is all wood. In the first case the wood is torn into small shreds between spiked rollers and converted into pulp. Unless chemically treated, the paper made from "Mechanical Pulp," as it is called, turns brown quickly, and to obviate this, the pulp is treated by the "Sulphite" process and becomes "Chemical Pulp," and the paper retains its colour much better when exposed to light. Rag or Esparto Grass (a coarse grass grown much in N. Africa) is added in various proportions to the chemical pulp to give the paper toughness and better bulk. Various matter, such as Size, etc., is added to the pulp to obtain the various "Surfaces" and do away with the porousness, and so make the papers capable of taking inks. Various gradations of surface are obtained by rolling with hot or cold rollers, called "Callendering." So-called "Art" or Enamelled paper has the surface treated with China Clay, and a very smooth surface can be obtained, better adapted for very fine half-tone block printing. The descriptions of papers are: S.C. or Sup.-Cald.; M.F. or Mill Finish; E/S or Engine-Sized; T/S or Tub-Sized. Engine-size is mixed with the pulp. Tub-Sized means that the paper is run through a vat containing Size.

## EQUIVALENT WEIGHTS. Based upon Demy (393¾ sq. ins.)

| Name. | Size. | Sq. Ins. | lb. | lb. | lb. |
|---|---|---|---|---|---|
| Demy | (22½ × 17½) | 393¾ | 11 | 15 | 20 |
| Post | (19½ × 15½) | 298⅜ | 8½ | 11½ | 15½ |
| Large Post | (21 × 16½) | 346½ | 9½ | 13½ | 17½ |
| Medium | (23 × 18) | 414 | 11⅝ | 15½ | 21½ |
| Royal | (25 × 20) | 500 | 14 | 19½ | 25½ |
| Elephant | (28 × 23) | 644 | 18 | 24⅝ | 32½ |
| Imperial | (30 × 22) | 660 | 18½ | 25½ | 33⅛ |
| Double Foolscap | (27 × 17) | 459 | 12⅞ | 17½ | 23⅛ |
| Double Crown | (30 × 20) | 600 | 16⅞ | 22⅞ | 30½ |
| Double Large Post | (33 × 21) | 693 | 19⅜ | 26½ | 35⅞ |
| Double Demy | (35 × 22½) | 787½ | 22 | 30 | 40 |
| Double Royal | (40 × 25) | 1000 | 28 | 38½ | 50⅞ |
| Quad Crown | (40 × 30) | 1200 | 33⅝ | 45⅝ | 61 |
| Quad Demy | (45 × 35) | 1575 | 44 | 60 | 80 |
| Grammes per square metre | | | 41 | 56 | 75 |

# SPORTS RECORDS

## ROWING

### UNIVERSITY BOAT RACE.

Instituted 1829. Present Course, Putney to Mortlake, 4¼ miles.
Including 1925, 84 races rowed. Oxford won 40; Cambridge, 43. Dead heat, 1 (1877).

| | | min. | sec. | Lengths won by. |
|---|---|---|---|---|
| 1915–1919 | No race. | | | |
| 1920 | Cambridge | 21 | 11 | 4 |
| 1921 | Cambridge | 19 | 45 | 1 |
| 1922 | Cambridge | 19 | 27 | 4½ |
| 1923 | Oxford | 20 | 54 | ¾ |
| 1924 | Cambridge | 18 | 41 | 4½ |
| 1925 | Cambridge | *21 | 51 | |
| 1926 | Cambridge | 19 | 29 | 5 |
| 1927 | Cambridge | 20 | 14 | 8 |
| 1928 | Cambridge | 20 | 25 | 10 |
| 1929 | Cambridge | 19 | 24 | 7 |
| 1930 | Cambridge | 19 | 9 | 2 |
| 1931 | Cambridge | 19 | 26 | 2½ |
| 1932 | Cambridge | †19 | 11 | 5 |

The first race rowed in outriggers was in 1846. First race in present style of boats without keels 1875. Sliding seats used for the first time 1873. Record Time, 18 min. 29 sec. (1911) by Oxford.
* In 1925 Oxford boat waterlogged. Cambridge finished alone. † Course shorter by 400 yds.

### HENLEY ROYAL REGATTA.

Course: 1 mile 550 yards.

Grand Challenge Cup for Eight Oars. Instituted 1839.

| | | min. | sec. |
|---|---|---|---|
| 1910 | Magdalen (Oxford) | 7 | 19 |
| 1911 | Magdalen (Oxford) | 7 | 2 |
| 1912 | Sydney R.C. | 7 | 6 |
| 1913 | Leander Club | 7 | 11 |
| 1914 | Harvard B.C. (U.S.A.) | 7 | 20 |
| 1915–1919 | No regatta. | | |
| 1920 | Magdalen (Oxford) | 7 | 24 |
| 1921 | Magdalen (Oxford) | 6 | 54 |
| 1922 | Leander | 7 | 36 |
| 1923 | Thames | 6 | 45 |
| 1924 | Leander | 8 | 3 |
| 1925 | Leander | 6 | 53 |
| 1926 | Leander | 6 | 56 |
| 1927 | Thames | 7 | 16 |
| 1928 | Thames | 6 | 56 |
| 1929 | Leander | 7 | 0 |
| 1930 | London R.C. | 6 | 59 |
| 1931 | London R.C. | 7 | 33 |

### HENLEY DIAMOND CHALLENGE SCULLS.

Open to all amateurs duly entered according to rules.

| | | min. | sec. |
|---|---|---|---|
| 1911 | W. D. Kinnear, Ken'ton R.C. | 8 | 14 |
| 1912 | E. W. Bowell, Vikings R.C. | 8 | 49 |
| 1913 | C. McVilly, Tasmania | 8 | 49 |
| 1914 | Giuseppe Sinigaglia, Italy | 9 | 0 |
| 1915–1919 | No race. | | |
| 1920 | J. Beresford, jun., Thames R.C. | 8 | 57 |
| 1921 | F. E. Eyken (Delft Univ.) | 8 | 26 |
| 1922 | W. M. Hoover (Duluth, U.S.A.) | 9 | 32 |
| 1923 | M. K. Morris, London R.C. | 8 | 23 |
| 1924 | J. Beresford (Thames) | 10 | 32 |
| 1925 | J. Beresford (Thames) | 8 | 28 |
| 1926 | J. Beresford (Thames) | 8 | 45 |
| 1927 | R. T. Lee (Oxon.) | 9 | 6 |
| 1928 | J. Wright (Argonaut, Canada) | 8 | 24 |
| 1929 | L. Gunther (Holland) | 8 | 42 |
| 1930 | J. S. Guest (Don Rowing Club, Toronto, Canada) | 8 | 29 |
| 1931 | R. Pearce (Leander, Canada) | 10 | 3 |

### A.A.A. RECORDS, 1931.

100 yds., Page, Blackheath H., 10 sec.
220 yds., Murdoch, Glasgow Univ. A.C., 22⅕ sec.
440 yds., Rampling, Milocarian A.C., 48⅖ sec.
½ Mile, Hampson, Achilles A.C., 1 min. 54⅕ sec.
1 Mile, Thomas, R.A.F. and Surrey A.C., 4 min. 16⅘ sec.
4 Miles, Burns, Elswick H., 19 min. 49⅗ sec.
120 yds. Hurdles, Lord Burghley, Achilles A.C., 14⅘ sec.
440 yds. Hurdles, Facelli, Italy, 54⅘ sec.
7 Miles Walk, Frigerio, Italy, 53 min. 32 sec.
2 Miles Steeplechase, Evenson, Salford H., 10 min. 36⅗ sec.
High Jump, Gray, Polytechnic H., 6 ft.
Long Jump, De Boer, Holland, 23 ft. 8 in.
Putting Weight, Daranyi, Hungary, 49 ft. 11½ in.
Hammer, Skold, Sweden, 168 ft. 6 in.
Javelin, Sunde, Norway, 199 ft. 4½ in.
Pole Vault, Lindblad, Sweden, 12 ft. 9 in.
440 yds. Relay, Achilles A.C., 43⅗ sec.
Throwing the Discus, Madarasz, Hungary, 141 ft. 4½ in.

## HORSE RACING

### THE DERBY.

| | Owner. | Horse. | Jockey. |
|---|---|---|---|
| 1906 | Major E. Loder. | Spearmint | D. Maher. |
| 1907 | Mr. R. Croker | Orby | J. Reiff. |
| 1908 | Chev. Ginistrelli | Signorinetta | W. Bullock. |
| 1909 | King Edward VII | Minoru | H. Jones. |
| 1910 | Mr. Fairie | Lemberg | B. Dillon. |
| 1911 | Mr. J. B. Joel | Sunstar | G. Stern. |
| 1912 | Mr. W. Raphael | Tagalie | J. Reiff. |
| 1913 | Mr. A. P. Cunliffe | Aboyeur | E. Piper. |
| 1914 | Mr. H. B. Duryea | Durbar II | M. MacGee. |
| 1915 | Mr. S. Joel | Pommern. | S. Donoghue. |
| 1916 | Mr. E. Hulton | Fifinella | J. Childs. |
| 1917 | Mr. Fairie | Gay Crusader | S. Donoghue. |
| 1918 | Lady J. Douglas. | Gainsborough | J. Childs. |
| 1919 | Lord Glanely. | Grand Parade | F. Templeman. |
| 1920 | Capt. G. Loder | Spion Kop | F. O'Neill. |
| 1921 | Mr. J. B. Joel | Humorist | S. Donoghue. |
| 1922 | Lord Woolavington | Captain Cuttle | S. Donoghue. |
| 1923 | Mr. B. Irish | Papyrus | S. Donoghue. |
| 1924 | Lord Derby | Sansovino | T. Weston. |
| 1925 | Mr. H. E. Morris | Manna | S. Donoghue. |
| 1926 | Lord Woolavington | Coronach | J. Childs. |
| 1927 | Mr. F. Curzon | Call Boy | E. C. Elliott. |
| 1928 | Sir H. Cunliffe-Owen | Felstead | H. Wragg. |
| 1929 | Mr. W. Barnett | Trigo | J. Marshall. |
| 1930 | The Aga Khan | Blenheim | H. Wragg. |
| 1931 | Mr. J. A. Dewar | Cameronian | F. Fox |

# PRESIDENTS OF THE UNITED STATES

**The terms are for four years, and no President has served more than two terms.**

| | | | |
|---|---|---|---|
| George Washington | 1789 | Andrew Johnson (elected from Vice-President) | 1865 |
| George Washington | 1793 | General Grant | 1869 |
| John Adams | 1797 | General Grant | 1873 |
| Thomas Jefferson | 1801 | Rutherford Birchard Hayes | 1877 |
| Thomas Jefferson | 1805 | Gen. J. Abram Garfield (died April 19, 1881) | 1881 |
| James Madison | 1809 | Gen. Chester A. Arthur (elected from Vice-President) | 1881 |
| James Madison | 1813 | Grover Cleveland | 1885 |
| James Monroe | 1817 | General Benjamin Harrison | 1889 |
| James Monroe | 1821 | Grover Cleveland | 1893 |
| John Quincey Adams | 1825 | W. McKinley | 1897 |
| Andrew Jackson | 1829 | W. McKinley (assassinated same year) | 1901 |
| Andrew Jackson | 1833 | Theodore Roosevelt (elected from Vice-Pres.) | 1901 |
| Martin Van Buren | 1837 | Theodore Roosevelt | 1905 |
| General Wm. Henry Harrison (died April 4) | 1841 | William Taft | 1909 |
| John Tyler (elected from Vice-President) | 1841 | Dr. Woodrow Wilson | 1913 |
| James Knox Polk | 1845 | Dr. Woodrow Wilson | 1917 |
| General Zachary Taylor (died July 9, 1850) | 1849 | Warren G. Harding (died Aug. 2, 1923) | 1921 |
| Millard Fillmore (elected from Vice-President) | 1850 | Calvin Coolidge (elected from Vice-Pres.) | 1923 |
| General Franklin Pierce | 1853 | Herbert Hoover | 1929 |
| James Buchanan | 1857 | | |
| Abraham Lincoln | 1861 | | |
| Abraham Lincoln (assassinated April 14 same year) | 1865 | | |

# ELEMENTS OF THE SOLAR SYSTEM

| | Mean distance from Sun. Millions of Miles. | Sidereal Period. Yrs. | Days | Synodic Period. Days | Inclination of Orbit to Ecliptic. ° | ′ | Diameter. Miles | Mass compared with Earth. | Period of Rotation on Axis. d. | h. | m. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sun ☉ | — | — | | — | — | | 864,367 | 332,000 | 25 | 7 | 48 |
| Mercury ☿ | 36·0 | 0 | 88 | 116 | 7 | 0 | 3,008 | 0·05 | | 25 | 42? |
| Venus ♀ | 67·2 | 0 | 225 | 584 | 3 | 24 | 7,600 | 0·82 | | 23 | 21? |
| Earth ⊕ | 92·9 | 1 | 0 | — | 0 | 0 | 7,913 | 1·00 | | 23 | 56 |
| Mars ♂ | 141·5 | 1 | 322 | 780 | 1 | 51 | 4,200 | 0·11 | | 24 | 37½ |
| Jupiter ♃ | 483·3 | 11 | 314 | 399 | 1 | 19 | 90,254eq.<br>84,778p. | 318 | | 9<br>9 | 50<br>56 |
| Saturn ♄ | 886·0 | 29 | 167 | 378 | 2 | 30 | 75,100<br>67,200 | 95 | | 10<br>10 | 14½<br>38 |
| Uranus ♅ | 1,782·8 | 84 | 7 | 370 | 0 | 46 | 31,900 | 15 | | 10 | 49 |
| Neptune ♆ | 2,793·4 | 164 | 280 | 367½ | 1 | 47 | 32,900 | 17 | | | |

## THE SEASONS (1932).

| | | | |
|---|---|---|---|
| Spring opens | March 20 | Autumn opens | September 23 |
| Summer ,, | June 21 | Winter ,, | December 22 |

The longest day is June 22. The shortest day December 22.
Summer Time 1932 begins April 17 ends October 2.

## QUARTER DAYS.

### ENGLAND AND IRELAND.

| | | | |
|---|---|---|---|
| Lady Day | March 25 | Michaelmas | September 29 |
| Midsummer | June 24 | Christmas | December 25 |

### SCOTLAND.

| | | | |
|---|---|---|---|
| Candlemas | February 2 | Lammas | August 1 |
| Whitsun | May 15 | Martinmas | November 11 |

## HALF QUARTER DAYS.

### ENGLAND.

February 8. | May 9. | August 11. | November 11.

# SOME LENGTHY TUNNELS

| | Miles. | | Miles. |
|---|---|---|---|
| Simplon, Swiss-Italian Frontier | 12¼ | Totley, L.N.E.R. England | 3¼ |
| St. Gothard do. | 9¼ | Stanhedge, L.M.S. ,, | 3 m. 64 yds. |
| Lotschberg, Switzerland | 9¼ | Woodhead, L.N.E.R. ,, | 3 |
| Mont Cenis, France | 8 | Mersey | 1¼ |
| Arlberg, Tyrol | 6¼ | | |
| Tauran | 5¼ | Moffat, U.S.A. (Water) | 6 |
| Otera, N. Zealand | 5¼ | Marseilles, France (for Barges) | 5 |
| Severn, G.W.Ry. England | 4¼ | Holland Tubes, N.Y. (for Road Traffic) | 1¼ |

# THE LONDON

| | |
|---|---|
| 1697 to June 1720. | (1) Britannia (Fig. A). (2) Maker's Mark. (3) Date Letter. (4) Lion's Head erased (Fig. B). |
| June 1720 to 1756. | (1) Leopard's Head Crowned (Fig. C). (2) Maker's Mark. (3) Date Letter. (4) Lion Passant (Fig. D). |
| 1756 to 1784. | (1) Leopard's Head Crowned (Fig. E). (2) Maker's Mark. (3) Date Letter. (4) Lion Passant (Fig. F). |
| 1784 to 1821. | (1) Leopard's Head Crowned (Fig. E). (2) Maker's Mark. (3) Date Letter. (4) Lion Passant (Fig. F). (5) Reigning Sovereign's Head. The first two years of King's Head, *i.e.* 1784–1785 the head is to Left and intaglio, after that it was turned to Right in relief. |

A

B

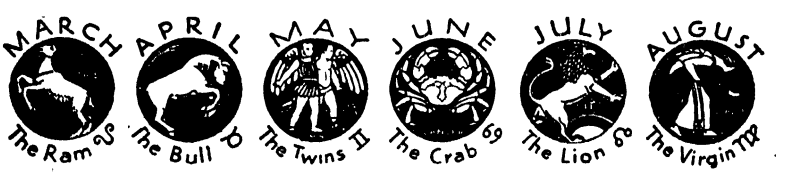
C

D

E

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1697 Mar. to May | A | 1716–17 | a | 1736–7 | A | 1756–7 | a | 1776–7 | A | 1796–7 |
| 1697–8 | B | 1717–18 | b | 1737–8 | B | 1757–8 | b | 1777–8 | B | 1797–8 |
| 1698–9 | C | 1718–19 | C | 1738–9 | C | 1758–9 | c | 1778–9 | C | 1798–9 |
| 1699–1700 | D | 1719–20 | dd | 1739–40 | D | 1759–60 | d | 1779–80 | D | 1799–1800 |
| 1700–01 | E | 1720–21 | e | 1740–41 | E | Geo. III. 1760–61 | e | 1780–81 | E | 1800–01 |
| 1701–2 | F | 1721–2 | f | 1741–2 | F | 1761–2 | f | 1781–2 | F | 1801–2 |
| Anne 1702–3 | G | 1722–3 | g | 1742–3 | G | 1762–3 | g | 1782–3 | G | 1802–3 |
| 1703–4 | H | 1723–4 | h | 1743–4 | H | 1763–4 | h | 1783–4 | H | 1803–4 |
| 1704–5 | I | 1724–5 | i | 1744–5 | I | 1764–5 | i | 1784–5 | I | 1804–5 |
| 1705–6 | K | 1725–6 | k | 1745–6 | K | 1765–6 | k | 1785–6 | K | 1805–6 |
| 1706–7 | L | 1726–7 | l | 1746–7 | L | 1766–7 | l | 1786–7 | L | 1806–7 |
| 1707–8 | M | Geo. II. 1727–8 | m | 1747–8 | m | 1767–8 | m | 1787–8 | M | 1807–8 |
| 1708–9 | N | 1728–9 | n | 1748–9 | N | 1768–9 | n | 1788–9 | N | 1808–9 |
| 1709–10 | O | 1729–30 | o | 1749–50 | O | 1769–70 | o | 1789–90 | O | 1809–10 |
| 1710–11 | P | 1730–31 | p | 1750–51 | P | 1770–71 | p | 1790–91 | P | 1810–11 |
| 1711–12 | Q | 1731–2 | q | 1751–2 | Q | 1771–2 | q | 1791–2 | Q | 1811–12 |
| 1712–13 | R | 1732–3 | r | 1752–3 | R | 1772–3 | r | 1792–3 | R | 1812–13 |
| 1713–14 | S | 1733–4 | s | 1753–4 | S | 1773–4 | s | 1793–4 | S | 1813–14 |
| Geo. I. 1714–15 | T | 1734–5 | t | 1754–5 | T | 1774–5 | t | 1794–5 | T | 1814–15 |
| 1715–16 | V | 1735–6 | u | 1755–6 | U | 1775–6 | u | 1795–6 | U | 1815–16 |

## SIGNS OF



# SILVER MARKS

1821 to 1890. (1) Leopard's Head Uncrowned (Fig. G). (2) Maker's Mark. (3) Date Letter. (4) Lion Passant (Fig. H). (5) Reigning Sovereign's Head.

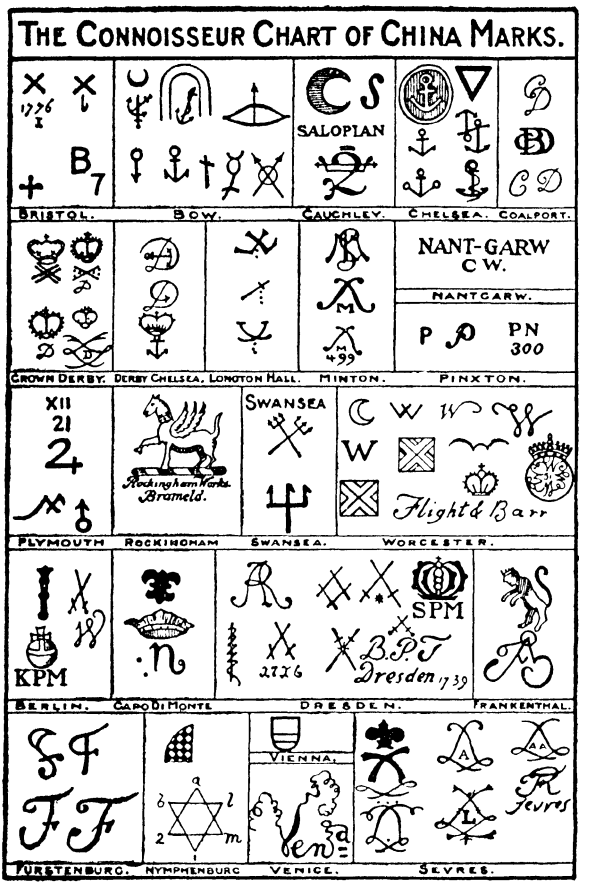
1890 to 1896. As above, but without Sovereign's Head as Duty on Silver was withdrawn.

1896 to present day. (1) Leopard's Head Uncrowned (Fig. J). (2) Maker's Mark. (3) Date Letter. (4) Lion Passant (Fig. K).

NOTE.—The date letter is usually changed at the end of May, and that accounts for two years appearing opposite each mark.

| | F | | G | | H | | J | | K |
|---|---|---|---|---|---|---|---|---|---|
| a | 1816–17 | A | 1836–7 | A | 1856–7 | A | 1876–7 | a | 1896–7 | a | 1916–17 |
| b | 1817–18 | B | Vic. 1837–8 | b | 1857–8 | B | 1877–8 | b | 1897–8 | b | 1917–18 |
| c | 1818–19 | C | 1838–9 | c | 1858–9 | C | 1878–9 | c | 1898–9 | c | 1918–19 |
| d | 1819–20 | D | 1839–40 | d | 1859–60 | D | 1879–80 | d | 1899–1900 | d | 1919–20 |
| e | Geo. IV. 1820–21 | E | 1840–41 | e | 1860–61 | E | 1880–81 | e | 1900–01 | e | 1920–21 |
| f | 1821–2 | F | 1841–2 | f | 1861–2 | F | 1881–2 | f | Ed. VII. 1901–2 | f | 1921–2 |
| g | 1822–3 | G | 1842–3 | g | 1862–3 | G | 1882–3 | g | 1902–3 | g | 1922–3 |
| h | 1823–4 | H | 1843–4 | h | 1863–4 | H | 1883–4 | h | 1903–4 | h | 1923–4 |
| i | 1824–5 | I | 1844–5 | i | 1864–5 | I | 1884–5 | i | 1904–5 | i | 1924–5 |
| k | 1825–6 | K | 1845–6 | k | 1865–6 | K | 1885–6 | k | 1905–6 | k | 1925–6 |
| l | 1826–7 | L | 1846–7 | l | 1866–7 | L | 1886–7 | l | 1906–7 | l | 1926–7 |
| m | 1827–8 | M | 1847–8 | m | 1867–8 | M | 1887–8 | m | 1907–8 | m | 1927–8 |
| n | 1828–9 | N | 1848–9 | n | 1868–9 | N | 1888–9 | n | 1908–9 | n | 1928–9 |
| o | 1829–30 | O | 1849–50 | o | 1869–70 | O | 1889–90 | o | 1909–10 | o | 1929–30 |
| p | Will. IV. 1830–31 | P | 1850–51 | p | 1870–71 | P | 1890–91 | p | Geo. V. 1910–11 | p | 1930–31 |
| q | 1831–2 | Q | 1851–2 | q | 1871–2 | Q | 1891–2 | q | 1911–12 | q | 1931–2 |
| r | 1832–3 | R | 1852–3 | r | 1872–3 | R | 1892–3 | r | 1912–13 | | |
| s | 1833–4 | S | 1853–4 | s | 1873–4 | S | 1893–4 | s | 1913–14 | | |
| t | 1834–5 | T | 1854–5 | t | 1874–5 | T | 1894–5 | t | 1914–15 | | |
| u | 1835–6 | U | 1855–6 | u | 1875–6 | U | 1895–6 | u | 1915–16 | | |

# THE ZODIAC

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### Useful Terms for China Collectors.

CHINA.—A modern descriptive term applied to pottery which is made semi-transparent by adding bone to the other materials used in its manufacture.

PORCELAIN.—Semi-transparent pottery made from natural clays, no bone being used. For example:—Chinese, Dresden, Limoges, etc.

LUSTRE WARE.—Pottery decorated with gold, silver, or copper.

BISCUIT.—The first stage of china after being fired. It is white and porous, and ready for decoration.

IRONSTONE CHINA, SEMI-PORCELAIN SILICON CHINA, etc.—Trade terms applied to fine qualities of earthenware.

EARTHENWARE.—A descriptive term to distinguish opaque pottery from china, stoneware, terra-cotta, etc.

ON-GLAZE.—Decoration on the ware, after it has been glazed.

UNDER-GLAZE.—Decoration on the ware when it is in biscuit state.

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### POISONS AND THEIR ANTIDOTES.

1. ACIDS: SULPHURIC, NITRIC, MURIATIC, NITRO-MURIATIC.

*Antidote.*—Chalk, whiting, carbonate of soda, carbonate of magnesia in water, milk and white of egg and olive oil, very thick lime water.

CARBOLIC ACID.—Stomach pump with care, and wash with water until no smell. Then give sulphate of soda in solution, then olive oil, milk and white of egg in water.

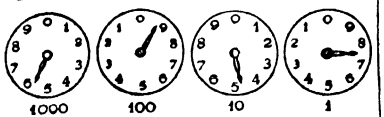
PHOSPHORUS.—An emetic containing a tablespoonful of mustard or salt.

*Antidote.*—Teaspoonful of *very old* turpentine.

# ELECTRICITY METERS

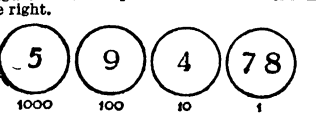
Two Types.

1. Clock dials of the same type as a gas meter.



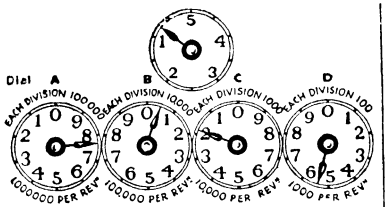

Read from left. If pointer is between two numbers, read the lower. Take no reading of smaller dials if any. Above example is reading 5947.

2. Cyclometer dials on which figures appear in openings; each dial (except units dial) moves one figure for a complete revolution of the dial to the right.




Read from the left. If two figures are showing in units opening, read the lower. Take no notice of smaller or red dials if they appear in conjunction with the others; these are for testing purposes only. Above example is reading 5947.

# GAS METER




The top dial is only used as a test dial, and has nothing to do with the record of gas consumed.

| Dial. | One Complete Revolution of Hand Records. | Each figure, 1 to 9, on Dial Records. |
|---|---|---|
| A. | 1,000,000 cubic feet. | 100,000 cubic feet. |
| B. | 100,000 do. | 10,000 do. |
| C. | 10,000 do. | 1,000 do. |
| D. | 1,000 do. | 100 do. |

Commencing with dial A, write down the smaller of the two figures between which each of the hands is standing, unless the hand is between 9 and 0, when put down 9.

Add 00 after the figures so set down, and you have the present state of the index.

Deduct the state of the index previously recorded, and you have the figures representing the consumption of gas since the last reading. The accompanying index reads 701,500. If the reading a month before had been 640,600, the consumption during the month would have been 60,900 cubic feet.

### THE MEANING OF "A THERM."

A Therm is 100,000 British Thermal Units (B.Th.U.).

A British Thermal Unit is the quantity of heat required to raise the temperature of 1 lb. of water 1 degree Fah.

The number of Therms in 1,000 cubic feet of gas of 500 B.Th.U. per cubic foot =

$$\frac{1{,}000 \text{ cubic feet} \times 500 \text{ B.Th.U.}}{100{,}000} = 5 \text{ Therms.}$$

The number of cubic feet of gas that will produce one Therm =

$$\frac{100{,}000}{500} = 200 \text{ cubic feet.}$$

### BRITISH GAME, FISH AND SPORTING SEASONS.

Black Game, from August 20 to December 10; but in Somerset, Devon, and New Forest, from September 1 to December 10.
Blackcock—August 20 to December 10.
Buck-hunting—August 20 to September 17.
Bustard—September 1 to March 1.
Red Deer hunted—August 20 to September 30.
Male Deer (Ireland)—October 20 to June 10.
Fallow Deer (Ireland)—June 20 to Michaelmas.
Eels (about)—April 20 to October 28.
Fox-hunting—October to Lady Day.
Fox Cubs—August 1 to first Monday in November.
Grouse-shooting—August 12 to December 10.
Hare-hunting—October 29 to February 27.
Hare-coursing—Between September and March.
Hind—Hunted in October, and again between April 10 and May 20.
Moor Game (Ireland)—August 20 to December 10.
Oyster Season—September to April.
Partridge-shooting—September 1 to February 1.
Pheasant-shooting—October 1 to February 1.
Ptarmigan—August 12 to December 10.
Quail—August 12 to January 10.
Rabbits—Between October and March.
Salmon—February 1 to September 1.
Salmon, rod-fishing—November 1 to September.
Trout-fishing—May 1 to September 10.
Trout, in the Thames—April 1 to September 10.
Woodcock—November to January.

Game in England—Hare, pheasant, partridge, grouse, and moor fowl.
Game in Ireland—Same as England, with the addition of deer, black game, landrail, quail, and bustard.
Game in Scotland—Same as England, with the addition of ptarmigan.

### PERCENTAGE OF ALCOHOL IN WINES, SPIRITS, ETC.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Beer | 4·0 | Orange | 11·2 | Canary | 18·8 | Curaçoa | 27·0 |
| Porter | 4·5 | Bordeaux | 11·5 | Sherry | 19·0 | Aniseed | 33·0 |
| Ale | 7·4 | Hock | 11·6 | Vermouth | 19·0 | Maraschino | 34·0 |
| Cider | 8·6 | Gooseberry | 11·8 | Cape | 19·2 | Chartreuse | 43·0 |
| Perry | 8·8 | Champagne | 12·2 | Malmsey | 19·7 | Gin | 51·6 |
| Elder | 9·3 | Claret | 13·3 | Marsala | 20·2 | Brandy | 53·4 |
| Moselle | 9·6 | Burgundy | 13·6 | Ratafia | 21·0 | Rum | 53·7 |
| Tokay | 10·2 | Malaga | 17·3 | Madeira | 21·0 | Irish Whisky | 53·9 |
| Rhine | 11·0 | Lisbon | 18·5 | Port | 23·2 | Scotch Whisky | 54·8 |

*Mulhall.*

# HOW TO CORRECT PRINTERS' PROOFS

caps. bold —Undoubtedly the high esteem in which Pears' Soap is held by civilised people the world over, and the wide popularity that it enjoys, is due to the successful formula found by Andrew Pears in 1789 and to the supreme care and lengthy time taken in manufacture.

its/ trs. s. caps. Only the purest materials are chosen, and these are subjected to a refining process which definitely expels all alkaline matter, giving the soap that pure transparency for which it has become world-famous. Incidentally, the *glycerine* which is to be found in all toilet soaps, and which is usually extracted for ~~other~~ purposes, is retained in Pears' Soap. This is another reason for Pears' soothing and preserving action upon the skin. After extremely careful refining, which imparts a beautiful transparency to the soap, come months of slow maturing, during which period the soap takes on that rich amber color so appealing to the eye. The exceptional time taken for this maturing assures the complete elimination of all moisture from the tablet, enabling it to outlast two, or even three cakes of ordinary toilet soap; thus it is no exaggeration to say that the manufacture of Pears' Soap begins where other soaps leave off. Such care in preparation guarantees not only exceptional purity, but exceptional consistency of quality and imperviousness to climatic conditions. So that no matter when or where you buy Pears' Soap, it will always be equally fresh, equally fragrant and long lasting, which fact largely explains ~~their~~ wide use in countries overseas.

bold R, lare/ l.c. ×× ⁄ full out stet H ital. very run on # eq. # " "

lead in ⊙# nom. ⁄ = ⁄ wg. lead/ w/ ⁄ ⁄ p/ N.P. improve spacing wf. ! ⊙ J/ ⁄ ⁄ its/

# EXPLANATION OF CORRECTIONS

Line 1.—Reset flush in capitals; reset bold.
" 2.—Reset bold; alter to "r,".
" 3.—Alter "is" to "are."
" 6.—Insert "its"; transpose "un."
" 7.—Reset in small capitals; alter small cap to lower case.
" 8.—Replace battered type; insert space between ll. 8 and 9.
" 9.—Replace full stop by comma.
Lines 10-11.—Space lines full width.
Line 11.—Full stop for comma and slightly more space.
" 12.—Reset in Roman; delete quotation sign.
" 13.—Let it stand.
" 15.—Insert apostrophe.
" 16.—Insert hyphen.
Line 17.—Aline and insert comma.
" 18.—Reset in italics; delete extra space after the line.
" 19.—Insert "very."
" 20.—Insert "u" and continue paragraph.
" 22.—Delete "s," alter "d" to "p," and insert space.
" 24.—Commence fresh sentence.
" 27.—Commence new paragraph, and turn "t."
Lines 28–33.—Equalise spacing of lines.
Line 28.—Close up.
" 30.—Equalise spacing.
" 31.—Insert quotation signs.
" 32.—Alter wrong fount "a," and push down rising space.
" 33.—Alter "their" to "its."

The following shows how the opposite page will read after the corrections have been made:—

UNDOUBTEDLY the high esteem in which **Pears' Soap** is held by civilised people the world over, and the wide popularity that it enjoys, are due to the successful formula found by Andrew Pears in 1789 and to the supreme care and lengthy time taken in its manufacture.

Only the PUREST materials are chosen, and these are subjected to a refining process which definitely expels all alkaline matter, giving the soap that pure transparency for which it has become world-famous. Incidentally, the glycerine which is to be found in all toilet soaps, and which is usually extracted for other purposes, is retained in Pears' Soap. This is another reason for Pears' soothing and preserving action upon the skin. After extremely careful refining, which imparts a beautiful transparency to the soap, come months of *slow maturing*, during which period the soap takes on that very rich amber colour so appealing to the eye. The exceptional time taken for this maturing assures the complete elimination of all moisture from the tablet, enabling it to outlast two, or even three cakes of ordinary toilet soap. Thus it is no exaggeration to say that the manufacture of Pears' Soap begins where other soaps leave off.

Such care in preparation guarantees not only exceptional purity, but exceptional consistency of quality and imperviousness to climatic conditions. So that no matter when or where you buy "Pears' Soap," it will always be equally fresh, equally fragrant and long lasting, which fact largely explains its wide use in countries overseas.

## WATERFALLS

| | Feet. | | Feet. |
|---|---|---|---|
| Kaieteur Falls, B. Guiana | 822 | Great Falls, Orange River | 400 |
| Victoria Falls, Zambesi | 415 | Niagara Falls, Canada | 165 |

# SIZES OF TYPE

*The following are the names and sizes in ordinary use for printed matter in books, pamphlets, and newspapers :—*

DIAMOND

A hundred and forty years ago, PEARS' SOAP was invented, and its popularity has increased from decade to decade, it being known and used in every part of the world.

PEARL

A hundred and forty years ago, PEARS' SOAP was

RUBY

A hundred and forty years ago, PEARS' SOAP was

NONPAREIL

A hundred and forty years ago, PEARS' SOA

MINION

A hundred and forty years ago, PEARS'

BREVIER

A hundred and forty years ago, Pear

BOURGEOIS

A hundred and forty years ago, P

LONG PRIMER

A hundred and forty years ago,

SMALL PICA

A hundred and forty years ago

PICA

A hundred and forty years

ENGLISH

A hundred and forty

# STYLES OF TYPE

CASLON OLD FACE

"Pears' Cyclopaedia" has

CENTAUR ITALIC

*"Pears' Cyclopaedia" has the*

ANTIQUE

**"Pears' Cyclopaedia" has the**

ITALIAN

"Pears' Cyclopaedia" has the

PLANTIN

"Pears' Cyclopaedia" has t

MODERN

"Pears' Cyclopaedia" has the

FOURNIER

"Pears' Cyclopaedia" has

BASKERVILLE

"Pears' Cyclopaedia"

CHELTENHAM ITALIC

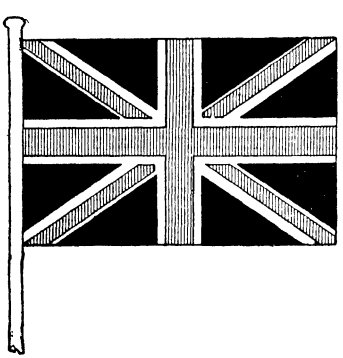
*"Pears' Cyclopaedia" has*

GARAMOND ITALIC

*"Pears' Cyclopaedia" h*

BOLD OLD FACE

**"Pears' Cyclopaedia"**

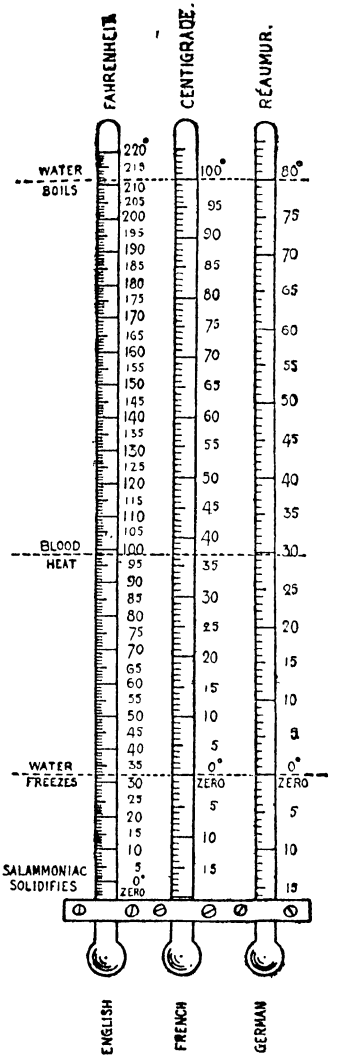


# THE UNION JACK

The present Union Jack is composed of three heraldic crosses, viz., the cross of St. Andrew, forming the blue and white basis; upon which lies the red and white cross of St. Patrick; and upon the whole rests the red and white cross of St. George, dividing the flag vertically and horizontally. The original Union Jack combined only the St. George and St. Andrew crosses, and was adopted on the accession of James VI. of Scotland to the throne of England under the title of James I. in 1603. No further alteration was made in the flag until January 1st, 1801, when the Irish Parliament was dissolved and the Act of Union came into force.

It is usually flown on the following days :—

| | | |
|---|---|---|
| April | 23 | St. George's Day |
| May | 6 | Anniversary of the King's Accession. |
| ,, | 24 | Empire Day. |
| ,, | 26 | The Queen's Birthday. |
| June | 3 | The King's Birthday. |
| ,, | 4 | ,, ,, ,, (Official Celebration). |
| ,, | 23 | The Prince of Wales's Birthday. |
| Oct. | 21 | Anniversary of Trafalgar. |




# THERMOMETER COMPARISONS.

The Fahrenheit thermometer, in general use throughout the British Empire and the United States, was introduced in 1714, and is an adaptation of the thermometer invented by Sir Isaac Newton, and described by him in the *Philosophical Transactions* for 1701. Newton's lowest point was that of freezing, his highest that of boiling water, his starting point, however, being the heat of the human body, which he called by the round number 12, the duodecimal system being then in use; that is, he divided the space between the freezing point and the temperature of the body into twelve parts. When Fahrenheit took the thermometer in hand he divided each of Newton's degrees into two parts, so getting a more minute record, while he got lower temperatures than freezing by using a mixture of ice and salt for his zero. Newton used linseed oil as the fluid, but mercury came into general use as more convenient. The boiling point of a Fahrenheit thermometer is 212°, the freezing point 32°.

The centigrade thermometer, in general use in France, has 0° for its freezing point and zero, and 100° for boiling point. The temperatures below freezing point are indicated by a minus sign − prefixed to the degree number. Thus −12 C means 12 centigrade degrees of frost, while −12 F means 12 degrees below 0°, or 44 Fahrenheit degrees of frost.

The German thermometer, the Réaumur, gives 0° as the freezing point, and 80° as the boiling point.

Readings of any one of these three scales can be converted into those of any other by the following rules:—

| | |
|---|---|
| Réaumur to Centigrade | × 5÷4 |
| ,, to Fahrenheit | × 9÷4+32 |
| Fahrenheit to Réaumur | −32÷9×4 |
| ,, to Centigrade | −32÷9×5 |
| Centigrade to Réaumur | × 4÷5 |
| ,, to Fahrenheit | × 9÷5+32 |

| | |
|---|---|
| Réaumur—Water solidifies . . . | 0° |
| Centigrade ,, ,, . . . | 0° |
| Fahrenheit ,, ,, . . . | 32° |
| ,, Sal-ammoniac . . . | 0° |

## BANK AND PUBLIC HOLIDAYS.

In *England and Ireland* it is ordained that the Bank Holidays shall be: Good Friday, Easter Monday, the Monday in Whitsun Week, first Monday in August, the 26th day of December (or the 27th should the 26th be a Sunday). Ireland has in addition a special Bank Holiday on St. Patrick's Day, March 17th.

The Stock Exchange is also closed on January 1st, May 1st and November 1st, in addition to the Bank Holidays.

Empire Day (May 24th, the birthday of Queen Victoria) is still observed in the Customs and certain other Government establishments as a holiday.

In *Scotland* it is enacted that the Bank Holidays observed shall be: New Year's Day, Christmas Day (should either of the above days fall on a Sunday, the following Monday shall be a Bank Holiday), Good Friday, first Monday in May, first Monday in August.

There are also one day each annually of special Spring and Autumn holiday in Edinburgh; and one in Glasgow on the Fair Saturday in July.

# PSEUDONYMS

## UNDER WHICH WELL-KNOWN WRITERS AND OTHERS HAVE BEEN OR ARE KNOWN.

Achurch, Janet, Mrs. Charrington.
Adams, Stephen, Michael Maybrick.
Adeler, Max, Charles Heber Clark.
Alexander, Mrs., Mrs. Alexander Hector.
Amyand, A., Major Arthur Haggard.
Anderson, Mary, Mme. A. Navarro.
Ane of that ilk, Prof. W. E. Aytoun.
Annunzio, Gabriele d', G. Rampagnetto.
Anstey, F., Thomas Anstey Guthrie.
Ape (*Vanity Fair* caricatures), Carlo Pelegrini.
Arlon, G. L. Chesterton.
Artist (Unknown), Joseph Pennell.
Ashwell, Lena, Mrs. Arthur Playfair.
Astor, Adelaide, Mrs. George Grossmith, Jun.
Atlas, Edmund Yates.
Bab, W. S. Gilbert.
Baird, Dorothy, Mrs. H. B. Irving.
Baron de Book Worms, H. W. Lucy in *Punch*.
"Beachcomber," J. B. Morton.
Bede, Cuthbert, Rev. Edward Bradley.
Bell, Acton, Anne Brontë.
Bell, Currer Charlotte Brontë.
Bell, Ellis, Emily J. Brontë.
Belloc, M. A., Mrs. Lowndes.
Berwick, Mary, Adelaide Anne Proctor.
Biglow, Hosea, James Russell Lowell.
Billings, Josh, Henry Wheeler Shaw.
Birmingham, George A., Rev. J. O. Hannay.
Bloom, Ursula, Mrs. U. H. Gower-Robinson.
Bobbin, Tim, John Collier.
Boldrewood, Rolf, T. A. Browne.
Bon Gaultier, Prof. W. E. Aytoun and Sir Theo. Martin.
Bouverie, Bartholomew, W. E. Gladstone.
Boz, Charles Dickens.
Braddon, Miss M. E., Mrs. Maxwell.
Breitmann, Hans, Charles G. Leland.
Brown, Tom, Thomas Hughes.
Brown, Tom, the Younger, Thomas Moore.
Bystander, The, Goldwin Smith.
Callum, Beg., J. C. O. Mack.
Cambridge, Ada, Mrs. George F. Cross.
Carmichael, Marie, Marie C. Stopes.
Carroll, Lewis, Rev. C. Lutwidge Dodgson.
Chudleigh, Arthur, Mr. Lillias.
Clear, Claudius, Dr. Robertson Nicoll.
Cleeve, Lucas, Mrs. Kingscote.
Cleishbotham, Jedediah, Sir Walter Scott.
Cobbleigh, Tom, Walter Raymond.
Collett, Stephen, T. Byerley.
Connor, Ralph, Rev. C. W. Gordon.
Conrad, Joseph, Joseph C. Korzeniowski.
Conway, H. Derwent, Henry W. Inglis.
Conway, Hugh, F. J. Fargus.
Coo-ee, W. Sylvester Walker.
Cornwall, Barry, Bryan Waller Procter.
Country Parson, Rev. A. K. H. Boyd.
Craddock, C. E., Mary Noailles Murfree.
Crawley, Capt., G. F. Pardon.
Crayon, Christopher, J. Ewing Ritchie.
Crayon, Geoffrey, Washington Irving.
Crowfield, Christopher, Mrs. H. Beecher-Stowe.
Cruiser, Benedict, G. A. Sala.
Cynicus, Martin Anderson.
Dagonet, G. R. Sims.
Danby, Frank, Mrs. Julia Frankau.
Dane, J. Clemence, Miss Winifred Ashton.
Dangerfield, John, Oswald Crawfurd, C.M.G.
Daryl, Sydney, Sir Douglas Straight.
Dell, Ethel M., Mrs. Savage.
D'Hardelot, Guy, Mrs. Rhodes.
Doctor Syntax, William Coombe.
Dods, Meg, Mrs. Johnstone.
Donovan, Dick, J. E. Muddock.
Dooley, Mr., F. P. Dunne.
Duncan, Sarah Jeannette, Mrs. Everard Cotes.
Duran, Carolus, G. Auguste Emile Durand.
Eagle, Solomon, J. C. Squire.
Elia, Charles Lamb.
Eliot, George, Mrs. J. W. Cross *née* Marion Evans.
Emery, Winifred, Mrs. Cyril Maude.
English Gentleman, Thos. Newte.
English Opium Eater, Thomas de Quincey.
Ennuyée, Mrs. A. Jameson.
"Erskine Gower," Duchess of Sutherland.
Ettrick, Shepherd, James Hogg.
"Evoe," E. V. Knox.
Fairlegh, Frank, Frank E. Smedley.
Fairless, Michael, Margaret Fairless Barber.
Fane, Violet, Lady Currie.
Field, Martyn, F. W. Horner.
Fieldmouse, Timon, W. B. Rands.
Filomena, Mrs. Fenwick Miller.
Fin-Bec, Blanchard Jerrold.
Fisher, Paul, W. A. Chatto.
Fitzvictor, John, Percy Bysshe Shelley.
Five of Clubs, Richard A. Proctor.
Flaneur, The, Edmund Yates.
Florry, J., Frank Kernan.
Forbes, Athol, Rev. Forbes A. Phillips.
Forrester, Frank, H. W. Herbert.
Foucher, Paul, Victor Hugo.
France, Anatole, Jacques Anatole Thibault.
Froissart, Jean, Alphonse Daudet.
Garrett, Edward, Mrs. Isabella Fyvie Mayo.
Gerard, Dorothea, Mme. Longard de Longarde.
Gerard, Morice, Rev. T. Jessop Teague.
Glyn, Elinor, Mrs. Clayton Glyn.
Gorky, Maxim, Alexei Maximovich Pyeshkov.
Goslet, Paul, Chas. Lever.
Graduate of Oxford, John Ruskin.
Graham, Ennis, Mrs. Molesworth.
Gray, Maxwell, Miss M. G. Tuttiett.
Gushington, Impulsia, Lady Dufferin.
Gyp, Comtesse de Martel.
Hal, Dane, Haldane McFall.
Halifax, Clifford, Dr. E. Beaumont.
Hall, Owen, James Davis and H. H. Lusk.
Hamlet, Edith, Hon. Mrs. Alfred Lyttelton.
Hammergafferstein, Hans, Henry W. Longfellow.
Hay, Ian, John H. Beith.
Hewitt, Martin, Arthur Morrison.
Hill, Headon, F. Grainger.
Hobbes, John Oliver, Mrs. Craigie.
Hoffman, Professor, Angelo Lewis.
Homely, Josias, John Bradford.
Hope, Anthony, Anthony Hope Hawkins.
Hope, Ascott R., R. Hope Moncrieff.
Hope, F. T. L., Dr. Farrar.
Hotspur, H. M. Feist.
Howard, Keble, Keble Bell.
Hughes, Annie, Mrs. Edmund Maurice.
Hutton, G. M., Mrs. Mona Caird.
Ian Maclaren, Rev. John Watson.
Iconoclast, Charles Bradlaugh, M.P.
Ignatius, Father, Rev. J. L. Lyne.
Ingoldsby, Thomas, Rev. R. H. Barham.
Iron, Ralph, Olive Schreiner (Mrs. Cronwright).
Jersey, Mr., Mrs. Langtry.
Jules Verne, M. Olchewitz.
Katharine Tynan, Mrs. H. A. Hinkson.
Kendal, Mrs., Mrs. W. H. Grimston.
King, Alice, Mrs. A. King Hamilton.
Kipling, Alice M., Mrs. J. M. Fleming.
Knickerbocker, Diedrich, Washington Irving.
Lafargue, Philip, Dr. Joseph Henry Philpot.
Le Breton, John, Miss M. Harte-Potts and T. Murray Ford.
Le Fanu, J. S., J. Sheridan.
Lehmann, Eliza, Mrs. Herbert Bedford.
Lenin, Nicholas, Vladimir Ulianov.
Levi, Eliphas, Alphonse L. Constant.
Limner, Luke, Lord Leighton.
Little, Thomas, Thomas Moore.
Logroller, Richard Le Gallienne.
Longway, Hugo A., Andrew Lang.
Lothrop, Amy, Anna B. Warner.
Ludlow, Johnny, Mrs. Henry Wood.
Lyall, Edna, Miss Ada Ellen Bayly.
Maartens, Maarten, J. H. W. Van der Poorten-Schwartz.
M'Graith, Terence, Sir Henry Arthur Blake.
McGrath, Mrs. Arthur, Rosita Forbes.
Mackay, Marion, Marie Corelli.
Mackenzie, Marian, Mrs. Smith Williams.
Maclaren, Ian, Rev. John Watson.
Madge (in *Truth*), Mrs. C. E. Humphry.
Maitland, Thomas, Robert Buchanan.
Malet, Lucas, Mary St. Leger Harrison.
Mallecho, Miching, Percy Bysshe Shelley.
Man of Kent, Dr. Robertson Nicoll.
Manners, Mrs. Horace, A. C. Swinburne.

Mannin, Ethel Edith, Mrs. J. A. Porteous.
Mansfield, Katherine, K. Beauchamp, Mrs. Middleton-Murry.
Markham, Mrs., Mrs. E. C. Penrose.
"Marmaduke," of *Truth*, C. E. Jerningham.
Marryatt, Florence, Mrs. F. Lean.
Mathers, Helen, Mrs. Reeves.
Meade, L. T., Mrs. Toulmin Smith.
Medium Tom Plum, Mostyn T. Piggott.
Meredith, Owen, Hon. E. R. Bulwer-Lytton, 1st Earl Lytton.
Merlin (*The Examiner*), Lord Tennyson.
Merriman, Henry Seton, H. S. Scott.
Miller, Joaquin, C. H. Miller.
Montbard, G., Charles Auguste Loyes.
Montgomery, Charles Montague, Sir T. Dick Lauder, Bart.
Moore, Eva, Mrs. Henry Esmond.
Mulholland, Rosa, Lady Gilbert.
Mulock, Dinah Maria, Mrs. Craik.
Nauticus, Owen Seaman.
Neilson, Julia, Mrs. Fred Terry.
Neruda, Mme. Norman, Lady Hallé.
Nilsson, Mme. Christine, Countess Miranda.
Nunquam, Robert Blatchford.
Ogilvy, Gavin, Sir J. M. Barrie.
Oldcastle, John, Wilfrid Meynell.
Oldstyle, Jonathan, Washington Irving
Oliver, Stephen, W. A. Chatto.
"One of the Firm," Anthony Trollope.
Orum, Mona K., Mrs. Arthur Grenville.
Orczy, Baroness, Mrs. Montague Barstow.
O'Rell, Max, Paul Blouet.
Ouida, Louise de la Ramée.
Oxenham, John, W. A. Dunkerley.
Parley, Peter, William Martin.
Pathfinder, H. C. Dear.
Pattison, Peter, Sir Walter Scott.
Paul, Jean, Jean Paul F. Richter.
Pendennys, Arthur, W. M. Thackeray.
Pendragon, Henry Sampson.
Peppercorn, Peter, M.D., Thomas Love Peacock.
Percy Sholto, J. C. Robertson.
Perier, Jules, Alfred Joseph Xavier.
Periwinkle, Paul, W. J. Neale.
Peter Pindar, John Wolcott.
Petroleum, V. Nasby, David Locke.
Pfaal, Hans, Edgar Allan Poe.
Phiz, Hablot K. Browne.
Plymley, Peter, Sydney Smith.
Poor Richard, Benjamin Franklin.
Prendergast, Paul, Douglas Jerrold.
Prevost, Francis, H. F. Prevost-Battersby.
Priggins, Peter, Rev. H. Hewlett.
Prout (Father), F. S. Mahony.
Puck, John Proctor.
Q., Sir A. T. Quiller-Couch.
Query, Peter, Esq., Martin Farquhar Tupper.
Raleigh, Cecil, Cecil Rowlands.
Ramsbottom, Mrs., Theodore Hook.
Reddie, Mrs. Sarah Tytler.
Remus, Uncle, Joel Chandler Harris.
Rip, Rowland Hill.
Rita, Mrs. W. D. Humphreys.
Rob Roy, John MacGregor.
Rochester, Mark, Charles Kent.
Rochfort, Bernard, Aubyn Trevor-Battye.
Ross, Adrian, Arthur Reed Ropes.
Rover, Alfred Gibson.
Rowlands, Cadwalader, J. S. Roberts.
Rowley, Thomas, Thomas Chatterton.
Roy, John, Sir Mortimer Durrand.
Runnymede, Rt. Hon. B. Disraeli, Earl of Beaconsfield.
Sadie, Miss Sarah Williams.
St. Aubyn, Alan, Frances Marshall.
St. Barbe, Douglas Sladen.
"Saki," H. H. Munro.
Saladin, W. Stewart Ross.
Sand, George, Madame Dudevant.
"Sapper," Capt. H. C. McNeile.
Saunders, Richard, Benjamin Franklin.
Sauzade, John S., James Payn.
Savonarola, Jeremy, Francis S. Mahony.
Schreiner, Olive, Mrs. Cronwright.
Scriblerus, Martinus, Swift, Pope, and Arbuthnot.
Selkirk, J. B., J. Brown.
Senex, Robert Reid.
Severin, Paul, Raymond Brucker.
Sharp, Luke, Robert Barr.
Shirley, Sir John Skelton.
Shufflebottom, Abel, Robert Southey.
Silverpen, Eliza Meteyard.
Sinjohn, John, John Galsworthy.
Sir Marmaduke, Theodore Tilton.
Sketchley, Arthur, Rev. George Rose.
Slick, Sam, Hon. T. C. Haliburton.
Slop, Dr., Sir J. Stoddart.
Sloper, Ally, Charles H. Ross.
Smith, Shirley, Ella Curtis.
South Simeon, J. MacGregor.
Sparks, Timothy, Charles Dickens.
Spectator, A. B. Walkley.
Spy, Leslie Ward.
Stendhal, M. de, Marie Henri Beyle.
Sterling, Mme. Antoinette, Mrs. J. M'Kinley.
Stern, G. B., Mrs. Holdsworth.
Stonehenge, J. H. Walsh.
Stretton, Hesba, Sarah Smith.
Stuart, Esmé, Miss Leroy.
Swan, Annie S., Mrs. Burnett Smith.
Sylva, Carmen, Queen of Roumania.
Sylvan, R. W. Procter.
Sylvander, Robert Burns.
Talepitcher, Arthur M. Binstead.
Tennant, Dorothy, Lady Stanley.
Teufelsdröckh, Herr, Thomas Carlyle.
Thackeray, Anna Isabella, Lady Ritchie
Thanet, Octave, Alice French.
Thompson, Alice, Mrs. Wilfred Meynell.
Thompson, Elizabeth, Lady Butler.
Thundertentronckh, Arminius von, Matthew Arnold.
Thurston, Henry T., Francis Turner Palgrave.
Titcomb, Timothy, J. G. Holland.
Tivoli, Horace W. Bleachley.
Toby, M.P., H. W. Lucy.
T. P., T. P. O'Connor.
Trafford, F. G., Mrs. J. H. Riddell.
Twain, Mark, Samuel Langhorne Clemens.
Two Brothers, Alfred (afterwards Lord) and Chas. Tennyson.
Tynan, Katharine, Mrs. H. A. Hinkson.
Tytler, Sarah, Miss Henrietta Keddie.
Ubique, Capt. Parker Gillmore.
Uncle Remus, Joel Chandler Harris.
Underhill, Evelyn, Mrs. Stuart Moore.
Vacuus Viator, Thomas Hughes.
Vagrant, R. C. Lehmann.
Vane, Derek, Mrs. B. Eaton-Back.
Vera, Lady Colin Campbell.
Verne, Jules, M. Olchewitz.
W. A., William Archer.
Wagstaffe, Launcelot, Washington Irving and Charles Mackay.
Ward, Artemus, Charles F. Browne.
Warden, Florence, Mr. G. James.
Wash, Redbarn, G. Bernard Shaw.
West, Rebecca, Cecily Fairfield.
Wetherell, Elizabeth, Susan Warner.
Winter, John Strange, Mrs. Arthur Stannard.
Woodbine Willie, Rev. G. A. S. Kennedy.
Yorick, Laurence Sterne.
Yorke, Oliver, Francis S. Mahony.
Yorke, Stephen, Miss Linskill.
Z.Z., Louis Zangwill.
Zadkiel, R. J. Morrison.
Zeta, J. A. Froude.

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# IMPORTANT CANALS

| | Miles. | | Miles |
|---|---|---|---|
| Suez, Egypt | 100 | Elbe, Germany | 41 |
| Kiel, Germany | 61 | Manchester, England | 35 |
| Panama, U.S.A. | 50 | Welland, Canada | 27 |

# AIR RAIDS ON ENGLAND AND SCOTLAND.

## From the Outbreak of the War in 1914 to the Armistice of Nov. 11, 1918.

The first air raid on this country occurred on December 24, 1914, when an aeroplane dropped a bomb in a garden at Dover. The first Zeppelin raid occurred on January 19, 1915, four people being killed in Yarmouth and King's Lynn. The letter Z indicates by Zeppelins and A by Aeroplanes:—

| | | Killed. | Injured. |
|---|---|---|---|
| **1914.** | | | |
| Dec. 24—Dover | (A) | — | — |
| „ 25—Dover and Mouth of Thames | „ | — | — |
| **1915.** | | | |
| Jan. 19—Yarmouth and King's Lynn | (Z) | 4 | 9 |
| Feb. 21—Colchester and Dist. | „ | — | — |
| April 14—Tyneside | „ | — | 2 |
| „ 15—Lowestoft and East Coast | „ | — | — |
| „ 16—Faversham | „ | — | — |
| „ 29—Ipswich, Bury St. Edmunds | „ | — | — |
| May 10—Southend | „ | 1 | 1 |
| „ 16—Ramsgate | „ | 1 | 3 |
| „ 27—Southend | „ | 2 | 4 |
| „ 31—Outer London | „ | 6 | — |
| June 4—East and South-East Coast | „ | 24 | 40 |
| „ 6—East Coast | „ | 5 | 40 |
| „ 15—North-East Coast | „ | 16 | 40 |
| July 3—Harwich | „ | — | — |
| Aug. 9—East Coast | „ | 14 | 14 |
| „ 12—East Coast | „ | 6 | 23 |
| „ 17—Eastern Counties | „ | 10 | 36 |
| Sept. 7—Eastern Counties | „ | 13 | 43 |
| „ 8—Eastern Counties and London (1 Zepp. destroyed) | „ | 20 | 86 |
| „ 11—East Coast | „ | — | — |
| „ 12—East Coast | „ | — | — |
| „ 13—Kent Coast | „ | — | 7 |
| Oct. 13—London and Eastern Counties | „ | 56 (15 soldiers) | 114 (13 soldiers) |
| **1916.** | | | |
| Jan. 23—East Coast and Kent | (A) | 1 | 6 |
| „ 31—Norfolk, Suffolk, Lincolnshire, Leicestershire, Staffordshire and Derbyshire | (Z) | 67 | 117 |
| Feb. 9—Kent Coast | (A) | — | — |
| „ 20—Lowestoft and Walmer | „ | 3 | — |
| Mar. 1—South Coast | „ | 1 | — |
| „ 6—Eight English Counties | (Z) | 12 | 33 |
| „ 19—Kent Coast (1 enemy machine brought down) | (A) | 11 | 31 |
| „ 31—East and North-East Coasts (1 enemy machine brought down) | (Z) | 43 | 68 |
| April 1—North-East Coast | „ | 17 | 100 |
| „ 2—Scotland, North and North-East Counties | „ | 10 | 11 |
| „ 5—North-East Coast | „ | — | — |
| „ 24—Eastern Counties | „ | — | — |
| „ 25—Essex and Kent | „ | — | 1 |
| May 1—Eastern Counties and Scottish Border | „ | — | — |
| „ 2—East Coast | „ | 9 | 27 |
| „ 19—Kent Coast | (A) | — | — |
| „ 20—Norfolk and Lincolnshire | (Z) | — | — |
| „ 30—East and South-East Counties | „ | — | — |
| Aug. 9—Scotland | „ | 6 | 16 |
| „ 24—London Suburbs | „ | 8 | 21 |
| „ „—Eastern Counties | „ | — | — |
| Sept. 3—Eastern Counties and London (1 enemy machine destroyed) | „ | 2 | 11 |
| „ 23—London and Midlands (2 Zepps. brought down) | „ | 36 | 125 |
| „ 25—East Coast and Midlands | „ | 36 | 27 |
| **1916.** | | | |
| Oct. 1—Eastern Counties and North London | (Z) | 1 | 1 |
| „ 23—Margate, Sheerness | „ | — | — |
| Nov. 27—Yorks, Durham, Norfolk | „ | 1 | 11 |
| „ 28—London | (A) | — | 4 |
| **1917.** | | | |
| Mar. 1—Broadstairs | (A) | — | 1 |
| „ 16—Westgate | (A) & (Z) | — | — |
| April 5—Kentish Coast | (A) | — | — |
| May 7—North-East London | „ | 1 | 1 |
| „ 15—Zepp. L 29 nearing East Coast destroyed | | — | — |
| „ 24—East Anglia | (Z) | 1 | — |
| „ 26—Folkestone | (A) | 80 | 170 |
| June 5—Essex (10 enemy aeroplanes lost) | „ | 12 | 35 |
| „ 13—London | „ | 160 | 432 |
| „ 17—South East Coast and East Anglia (1 Zepp. destroyed) | (Z) | 3 | 25 |
| July 4—Harwich | (A) | 11 | 36 |
| „ 7—London and Thanet (4 enemy aeroplanes lost) | „ | 59 | 193 |
| „ 22—Harwich and Folkestone (1 enemy aeroplane lost) | „ | 13 | 26 |
| Aug. 12—Southend and Margate (1 enemy aeroplane lost) | „ | 32 | 45 |
| „ 21—Yorkshire | (Z) | — | 1 |
| „ 22—Ramsgate, Margate, Dover | (A) | 14 | 19 |
| Sept. 2—Dover | „ | 1 | 6 |
| „ 3—Thanet, Sheerness, Chatham | „ | 147 | 92 |
| „ 4—London and South-East Coast | „ | 12 | 61 |
| „ 24—Yorks and Lincolnshire | (Z) | — | 3 |
| „ „—London, Essex and Kent | (A) | 16 | 69 |
| „ 25—London and South-East Coast | „ | 7 | 25 |
| „ 28—Kent, Essex and Suffolk (2 enemy machines lost) | „ | — | — |
| „ 29—London, Kent and Essex | „ | 11 | 82 |
| „ 30—London, Kent and Essex (1 enemy aeroplane lost) | „ | 9 | 42 |
| Oct. 1—London and Essex | „ | 10 | 38 |
| „ 19—London and East and North-East Counties (4 of the Zepps. brought down in France) | (Z) | 84 | 56 |
| „ 31—London and Kent (30 Gothas) | | 8 | 21 |
| Dec. 6—London and Kent | (A) | 7 | 22 |
| „ 18—London and Kent | „ | 10 | 70 |
| **1918.** | | | |
| Jan. 28—London | (A) | 58 | 173 |
| „ 29—London Outskirts | „ | 10 | 10 |
| Feb. 16—London | „ | 11 | 4 |
| „ 17—London | „ | 16 | 37 |
| „ 18—London Outskirts | „ | — | — |
| Mar. 7—London | „ | 20 | 45 |
| „ 12—Yorkshire | (Z) | — | — |
| „ 13—Hartlepool | „ | 8 | 22 |
| April 12—Midlands | „ | 5 | 15 |
| May 19—London | (A) | 44 | 179 |
| Aug. 5—East Coast | „ | — | — |

# FAMILIAR FOREIGN PHRASES AND CLASSICAL QUOTATIONS.

Fr., French. Gr., Greek. Ger., German. It., Italian. L., Latin. Sp., Spanish.

ab ante (L.), from before.
à bas (Fr.), down with!
à bâtons rompus (Fr.), by fits and starts.
abattu, fem., abattue (Fr.), cast down.
a bene placito (It.), at pleasure.
ab extra (L.), from without.
ab initio (L.), from the beginning.
ab intra (L.), from within.
à bon droit (Fr.), with justice.
à bon marché (Fr.), cheap.
ab origine (L.), from the beginning.
à bras ouverts (Fr.), with open arms.
absit omen (L.), may there be no ill omen.
ab uno disce omnes (L.), from one learn all.
ab urbe condita (L.), from the year of the foundation.
a capite ad calcem (L.), from head to heel.
Acherontis pabulum (L.), food for Acheron.
à compte (Fr.), on account.
à couvert (Fr.), under cover.
ad astra (L.), to the stars.
à demi (Fr.), by halves, half.
a Deo et rege (L.), from God and the king
ad hoc (L.), for this.
ad hominem (L.), to the man.
ad idem (L.), to the same.
ad infinitum (L.), without end.
ad interim (late L.), in the meantime.
ad libitum (L.), at pleasure.
ad misericordiam (L.), in pity.
ad nauseam (L.), disgusting.
ad referendum (L.), for further consideration.
ad valorem (L.), according to value.
affaire d'amour (Fr.), a love affair.
affaire de cœur (Fr.), an affair of the heart.
affaire d'honneur (Fr.), an affair of honour.
a fortiori (L.), with stronger reason.
à gauche (Fr.), to the left.
à genoux (Fr.), on the knees.
alter idem (L.), another exactly similar.
altum silentium (L.), deep silence.
amabilis insania (L.), a pleasing delusion.
amata bene (L.), well loved (fem.). [the least.
a maximis ad minima (L.), from the greatest to
à merveille (Fr.), wonderfully.
amicus curiæ (L.), a friend in court.
amor patriæ (L.), love of country.
amor sceleratus habendi (L.), the accursed love of possession.
amor vincit omnia (L.), love conquers all things.
ancien régime (Fr.), the old order of things.
Anglice (L.), in English.
anguis in herba (L.), snake in the grass.
anno Christi (L.), in the year of Christ.
anno Domini (L.), in the year of our Lord.
anno mundi (L.), in the year of the world.
anno salutis (L.), in the year of redemption
annus mirabilis (L.), year of wonders.
ante bellum (L.), before the war.
ante lucem (L.), before light.
ante meridiem (L.), before noon.
à outrance (Fr.), to the bitter end.
à pied (Fr.), on foot. [brave.
audaces fortuna Juvat (L.), fortune favours the
audax et cautus (L.), bold and cautious.
au désespoir (Fr.), in despair.
audi alteram partrem (L.), hear the other side.
au fait (Fr.), well acquainted with a matter; expert.
au fond (Fr.), at the bottom.
auf wiedersehen! (Ger.), till we meet again.
au mieux (Fr.), on the best of terms.
au pis aller (Fr.), at the worst.
au premier (Fr.), on the first [floor].
au revoir (Fr.), until we meet again.
auri sacra fames (L.), accursed hunger for gold.
au sérieux (Fr.), seriously.
aut Cæsar aut nullus (L.), Cæsar or nobody.
avant-coureur (Fr.), a forerunner.
avant goût (Fr.), a foretaste.
avec permission (Fr.), by consent.
a verbis ad verbera (L.), from words to blows.
a vinculo matrimonii (L.), from the bond of matrimony.
à volonté (Fr.), at pleasure.
a vostra beneplacito (It.), at your pleasure.
à votre santé (Fr.), to your health.
bona fides (L.), good faith. [own blessings.
bona si sua norint (L.), if they but knew their
bon gré, mal gré (Fr.), willing or unwilling.
bonhomie (Fr.), good nature.
bonne bouche (Fr.), a choice morsel.
bouleversement (Fr.), an overturning.
brevet d'invention (Fr.), a patent.
brûler la chandelle par les deux bouts (Fr.), to burn the candle at both ends.
brutem fulmen (L.), a forceless thunderbolt.
comme il faut (Fr.), as it should be.
compos mentis (L.), of sound mind.
compte rendu (Fr.), an account rendered.
con amore (It.), lovingly. [dition.
conditio sine qua non (L.), an indispensable con-
consensus facit legem (L.), consent constitutes law.
consilio et prudentia (L.), by wisdom and prudence.
con spirito (It.), with spirit.
contra bonos mores (L.), against good manners.
contretemps (Fr.), an unlucky occurrence.
copia verborum (L.), abundance of words.
coram domino rege (L.), before our lord the king.
coram nobis (L.), before us.
coram populo (L.), before the public.
cordon bleu (Fr.), blue ribbon.
corpus delicti (L.), the body of the offence.
corrigenda (L.), list of corrections.
coup de soleil (Fr.), sunstroke.
crême de la crême (Fr.), the very best.
crescit eundo (L.), it grows as it goes.
cucullus non facit monachum (L.), the cowl does not make the monk.
cui bono? (L.), for whose good?
culpa levis (L.), a small fault.
cum grano salis (L.), with a grain of salt.
cum privilegio (L.), with privilege.
currente calamo (L.), with the pen of a facile writer.
damnum absque injuria (L.), loss without injury.
de bon augure (Fr.), of good augury.
de bonne grâce (Fr.), willingly.
de die in diem (L.), from day to day.
de facto (L.), actually.
de haut en bas (Fr.), from top to bottom.
Dei gratia (L.), by the grace of God.
de jure (L.), in law.
delenda est Carthago (L.), Carthage must be destroyed [Cato's saying].
de mal en pis (Fr.), from bad to worse.
de novo (L.), anew.
dernier ressort (Fr.), a last resource.
deus ex machina (L.), the one who puts matters right at a critical moment.
eheu fugaces . . . labuntur anni! (L.), alas! the fleeting years slip by.
ein mal, kein mal (Ger.), just once doesn't count.
embarras de (du) choix (Fr.), embarrassment in
en avant! (Fr.), forward! [choice.
en passant (Fr.), in passing.
en plein jour (Fr.), in broad day.
en rapport (Fr.), in sympathy with.
en règle (Fr.), in order.
entente cordiale (Fr.), cordial understanding.
en tout (Fr.), wholly.
en tout cas (Fr.), in any case.
entre nous (Fr.), between ourselves.
e pluribus unum (Late L.), many in one.
errare humanum est (L.), to err is human.
exceptio probat regulam (L.), the exception proves the rule.
fait accompli (Fr.), something already achieved.
falsus in uno, falsus in omnibus (L.), false in one thing, false in all.
fama clamosa (L.), a current scandal. [rumour.
fama nihil est celerius (L.), nothing flies faster than
far niente (It.), doing nothing.
Fata obstant (L.), the Fates oppose. [a way.
Fata viam invenient (L.), the Fates will discover
faute de mieux (Fr.), for want of better.
faux pas (Fr.), a false step. [many friends.
felicitas multos habet amicos (L.), prosperity has
femme incomprise (Fr.), a woman misunderstood.
femme savante (Fr.), a learned woman.
fendre un cheveu en quatre (Fr.), to split a hair
festina lente (L.), hasten gently. [in four.

**fiat justitia, ruat cœlum** (L.), let justice be done though the heavens fall.
**fiat lux** (L.), let there be light.
**fide et amore** (L.), by faith and love.
**fide et fiducia** (L.), by faith and confidence.
**fide et fortitudine** (L.), by faith and fortitude.
**fidei defensor** (L.), defender of the faith.
**fide non armis** (L.), by faith, not by arms.
**fides et justitia** (L.), fidelity and justice.
**filius nullius** (L.), son of nobody; a bastard.
**finis coronat opus** (L.), the end crowns the work.
**flagrante delicto** (L.), in the very act.
**floreat** (L.), let it flourish.
**floscull sententiarum** (L.), flowers of wisdom.
**fons et origo** (L.), the source and origin.
**fons lacrimarum** (L.), fount of tears.
**force majeure** (Fr.), superior force.
**formaliter** (Late L.), formally.
**forti et fideli nihil difficile** (L.), to the brave and faithful nothing is difficult.
**fortis cadere, cedere non potest** (L.), the brave man may fall, he cannot yield.
**fortiter et recte** (L.), bravely and uprightly.
**fortiter, fideliter, feliciter** (L.), firmly, faithfully, felicitously.
**fortiter in re, suaviter in modo** (L.), forcibly in act, gently in manner.
**fortuna favet fatuis** (L.), fortune favours fools.
**fortuna favet fortibus** (L.), fortune favours the bold. [brave.
**fortuna fortes adjuvat** (L.), fortune favours the
**forum conscientiæ** (L.), the court of conscience.
**Heimweh** (Ger.), home-sickness.
**hic et ubique** (L.), here and everywhere.
**hic jacet** (L.), here lies. [the toll.
**hic labor, hoc opus est** (L.), this is the labour, this
**hic sepultus** (L.), here buried.
**hoc age** (L.), this do.
**hoc anno** (L.), in this year.
**hoc genus omne** (L.), and all that kind.
**hoc loco** (L.), in this place.
**hoc tempore** (L.), at this time. [morrow thine.
**hodie mihi, cras tibi** (L.), to-day is mine, to-
**hoi polloi** (Gr.), the rabble.
**hominibus plenum, amicis vacuum** (L.), full of men, empty of friends.
**hominis est errare** (L.), it belongs to man to err.
**homme d'esprit** (Fr.), a man of wit.
**homo alieni juris** (L.), one under another's control.
**homo homini lupus** (L.), man is a wolf to man.
**homo multarum litterarum** (L.), a man of many literary accomplishments.
**homo nullius coloris** (L.), a man of no colour.
**homo sui juris** (L.), one who is his own master.
**honi soit qui mal y pense** (O. Fr.), evil to him who evil thinks.
**honneur et patrie** (Fr.), honour and country.
**honores mutant mores** (L.), honours alter manners.
**honoris causa** (L.), for honour's sake. [of virtue.
**honor virtutis præmium** (L.), honour is the reward
**honos alit artes** (L.), honour nourishes the arts.
**horæ subsecivæ** (L.), leisure hours.
**hora fugit** (L.), the hour flies.
**hors de combat** (Fr.), disabled.
**hors concours** (Fr.), out of the contest.
**hors de propos** (Fr.), away from the purpose.
**humanum est errare** (L.), to err is human.
**ich dien** (Ger.), I serve.
**idée fixe** (Fr.), a fixed idea.
**idem sonans** (L.), sounding the same.
**idem velle atque idem nolle** (L.), to like and to dislike the same things.
**id est** (L.), that is.
**id genus omne** (L.), all that kind. [is no desire.
**ignoti nulla cupido** (L.), for a thing unknown there
**i gran dolori sono muti** (It.), great griefs are silent.
**il dolci far niente** (It.), the sweet state of do-
**il penseroso** (It.), the pensive man. [nothing.
**impayable** (Fr.), invaluable.
**imperium et libertas** (L.), empire and liberty.
**imperium in imperio** (L.), a government within another.
**lapeus memoriæ** (L.), a slip of the memory.
**lares et penates** (L.), household gods. [times.
**laudator temporis acti** (L.), one who praises past
**laus Deo** (L.), praise to God.
**l'avenir** (Fr.), the future.
**leitmotif** (Ger.), a musical phrase denoting a certain person or idea, in an opera or oratorio.
**le jeu ne vaut pas la chandelle** (Fr.), the game is not worth the candle.
**le style est l'homme même** (Fr.), the style is the man himself [from Buffon].

**lettre de cachet** (Fr.), a sealed letter.
**lever de rideau** (Fr.), to raise the curtain.
**lex non scripta** (L.), unwritten law.
**lex scripta** (L.), statute law.
**lex talionis** (L.), the law of revenge.
**licentia vatum** (L.), poetic licence. [permanent.
**litera scripta manet** (L.), what is written down is
**locum tenens** (L.), a deputy.
**locus pœnitentiæ** (L.), room for repentance.
**locus standi** (L.), a right to interfere.
**lucri causa** (L.), for the sake of gain.
**lusus naturæ** (L.), a freak of nature.
**magna est veritas et prævalet** (L.), truth is great and will prevail. [mighty name.
**magni nominis umbra** (L.), the mere shadow of a
**magnum bonum** (L.), a great good.
**magnum opus** (L.), a master work.
**maladie du pays** (Fr.), home-sickness.
**mala fide** (L.), with bad faith.
**mal à propos** (Fr.), ill-timed.
**malgré nous** (Fr.), in spite of us.
**mandamus** (L.), a command issued by a higher court to a lower. [venience.
**mariage de convenance** (Fr.), marriage for con-
**materfamilias** (L.), the mother of a family.
**materia medica** (L.), medicines generally.
**matinée** (Fr.), morning performance.
**matre pulchra filia pulchrior** (L.), a daughter fairer than her fair mother.
**mauvaise honte** (Fr.), bashfulness.
**mauvais sujet** (Fr.), a worthless fellow.
**mea culpa** (Late L.), by my own fault. [safest.
**medio tutissimus ibis** (L.), the middle course is
**memento mori** (L.), remember that you must die.
**memorabilia** (L.), things to be remembered.
**mens sana in corpore sano** (L.), a sound mind in a sound body. [rectitude.
**mens sibi conscia recti** (L.), a mind conscious of
**meo periculo** (L.), at my own risk. [station.
**mésalliance** (Fr.), marriage with one of lower
**meum et tuum** (L.), mine and thine.
**mirabile dictu** (L.), wonderful to relate.
**mirabile visu** (L.), wonderful to see.
**mirabilia** (L.), wonders.
**modus** (L.), manner.
**modus operandi** (L.), plan of working.
**modus vivendi** (L.), a way of living or agreeing.
**more suo** (L.), in his own way.
**motu proprio** (L.), of his own accord.
**multum in parvo** (L.), much in little.
**particeps criminis** (L.), an accomplice.
**pater patriæ** (L.), the father of his country.
**per aspera ad astra** (L.), to the stars by rough ways.
**per fas et nefas** (L.), through right and wrong.
**personnel** (Fr.), persons employed.
**pia desideria** (L.), pious regrets.
**pia fraus** (L.), pious fraud.
**pièce de résistance** (Fr.), the substantial joint.
**pied-à-terre** (Fr.), temporary lodging.
**pis aller** (Fr.), the last shift.
**pleno jure** (L.), with full authority. [made.
**poeta nascitur, non fit** (L.), the poet is born, not
**point d'appui** (Fr.), point of support. [fooled.
**populus vult decipi** (L.), the people wish to be
**post mortem** (L.), after death.
**post obitum** (L.), after death.
**pour passer le temps** (Fr.), to pass the time.
**pour prendre congé**, or **P.p.c.** (Fr.), to take leave.
**prescriptum** (L.), a thing prescribed.
**preux chevalier** (Fr.), a brave knight.
**prima facie** (L.), at the first glance.
**pro aris et focis** (L.), for faith and home.
**profanum vulgus** (L.), the rabble.
**proh pudor!** (L.), oh, for shame!
**pro patria** (L.), for our country.
**pro tanto** (L.), for so much.
**pro tempore** (L.), for the time being. [shadow.
**pulvis et umbra sumus** (L.), we are dust and a
**quære** (L.), inquire.
**quæritur** (L.), the question is asked.
**qualis ab incepto** (L.), as from the beginning.
**quid rides?** (L.), why do you laugh?
**quieta non movere** (L.), let sleeping dogs lie.
**quis custodiet ipsos custodes?** (L.), who will watch the watchers? [self accuses himself.
**qui s'excuse s'accuse** (Fr.), he who excuses him-
**quis separabit?** (L.), who shall separate?
**qui tacet consentit** (L.), who is silent consents.
**qui va là?** (Fr.), who goes there?
**quod avertat Deus!** (L.), which may God avert!
**quod bonum, felix, faustumque sit** (L.), may this be right, happy, and of good omen.

quod erat demonstrandum (L.), or Q.E.D., which was to be demonstrated. [to be done.
quod erat faciendum (L.), or Q.E.F., which was
quod hoc sibi vult? (L.), what does this mean?
quod vide (L.), which see.
quo jure? (L.), by what right.
rara avis (L.), a rare bird, a prodigy.
réchauffé (Fr.), warmed up again.
reculer pour mieux sauter (Fr.), to draw back to take a better leap.
religio loci (L.), the religious spirit of the place.
répondez, s'il vous plaît, or R.S.V.P. (Fr.), reply, if you please. [peace!
requiescat in pace! or R.I.P. (L.), may he rest in
respice finem (L.), look to the end.
résumé (Fr.), an abstract.
resurgam (L.), I shall rise again. [subject.
revenons à nos moutons (Fr.), let us return to our
ubique (L.), everywhere. [kings.
ultima ratio regum (L.), the last argument of
ultima thule (L.), the utmost limit.
ultra vires (L.), beyond one's powers.
usque ad nauseam (L.), to disgust.
utile dulci (L.), the useful with the pleasing.
ut infra (L.), as below.
ut supra (L.), as above.
vade in pace (L.), go in peace.
vade mecum (L.), a constant companion.
væ victis! (L.), woe to the conquered!
vale (L.), farewell.
variæ lectiones (L.), various readings.
variorum notæ (L.), the notes of various authors.
verbum sapienti sat est (L.), a word is enough for a wise man.
veritas odium parit (L.), truth begets hatred.
versus or v. (L.), against.
via media (L.), a middle course. [safest.
via trita, via tuta (L.), the beaten path is the
vice (L.), in the place of.
vice versa (L.), the terms being exchanged.
videlicet (L.), namely.
vi et armis (L.), by force and arms; by main force.
vigilate et orate (L.), watch and pray.
virginibus puerisque (L.), for young people.
vis comica (L.), comic power.
vis inertiæ (L.), passive resistance.
vita brevis, ars longa (L.), life is short, art is long.
vivat regina! (L.), long live the queen.
vivat rex! (L.), long live the king!
viva voce (L.), by the living voice.
vive, valeque! (L.), life and health to you!
voila tout (Fr.), that is all.
volo, non valeo (L.), I am willing, but unable.
vox, et præterea nihil (L.), a voice and nothing else. [is the voice of God.
vox populi, vox Dei (L.), the voice of the people

# ABBREVIATIONS
## IN COMMON USE IN WRITTEN AND PRINTED MATTER

A1.—First class (at Lloyd's).
A.A. and Q.M.G.—Assistant Adjutant and Quartermaster-General.
A.B.—Able Seaman.
Abp.—Archbishop.
Ac.—Acre.
A/c.—acct. (account).
A.C.A.—Associate of Chartered Accountants.
Acad.—Academy.
A.D.—Anno Domini.
A.D.C.—Aide-de-Camp.
Ad eund.—*Ad eundem gradum* (admitted to the same degree).
Ad fin.—*Ad finem* (to the end).
Adj.—Adjutant.
Ad. Lib.—*Ad libitum* (at discretion).
Adm.—Admiral.
Adv.—Advocate.
Advt.—Advertisement.
ÆT., Ætat.—*Ætatis* (aged).
A.F.A.—Associate Faculty of Actuaries.
A.G.—Accountant-General.
A.H.—*Anno Hegira* (the year of the Flight).
A.L.S.—Associate of the Linnean Society.
A.M.—*Anno Mundi* (Year of the World); *Ante Meridiem* (before midday); Master of Arts (*Artium Magister*).
A.M.Inst.C.E.—Associate Member of Institution of Civil Engineers.
A.M.Inst.E.E.—Associate Member of Institution of Electrical Engineers.
Anon.—Anonymous.
Ans.—Answer.
A.O.D.—Ancient Order of Druids.
A.O.F.—Ancient Order of Foresters.
A.R.A.—Associate of the Royal Academy.
A.R.A.M.—Associate of the Royal Academy of Music.
A.R.C.O.—Associate of Royal College of Organists.
A.R.I.B.A.—Associate of the Royal Institute of British Architects.
A.R.S.A.—Associate of Royal Scottish Academy.
A.R.W.S.—Associate of Royal Society of Water-Colours.
A.S.—Anglo-Saxon; Academy of Science.
A.S.C.—Army Service Corps.
Atty. Gen.—Attorney-General.
A.U.C.—*Anno urbis conditæ*, "from the foundation of the city" (Rome).
A.V.—Authorised Version.
Avoird.—Avoirdupois.
b.—born.
B.A.—Bachelor of Arts.
Bar.—Barrister.
B.Arch.—Bachelor of Architecture.
Bart. or Bt.—Baronet.
Batt.—Battalion.
B.B.C.—British Broadcasting Corporation.
B.C.—Before Christ; British Columbia.
B.Ch.D.—Bachelor of Dental Surgery.
B.C.L.—Bachelor of Civil Law.
B.Com.—Bachelor of Commerce.
B.D.—Bachelor of Divinity.
B. Eng.—Bachelor of Engineering.
B.Litt.—Bachelor of Literature.
B.M.—Bachelor of Medicine.
B.M.A.—British Medical Association.
B.Mus.—Bachelor of Music.
Bp.—Bishop.
B.Pharm.—Bachelor of Pharmacy.
brev.—Brevet.
Brig.—Brigade; Brigadier.
Brit. Ass.—British Association.
Brit. Mus.—British Museum.
B.S.—Bachelor of Surgery
B.Sc.—Bachelor of Science.
B.Sc.Tech.—Bachelor of Science Technology.
B.Th.—Bachelor of Theology.
B.V.M.—Blessed Virgin Mary.
B.V.Sc.—Bachelor of Veterinary Science
c.—Cents; centimes; centigrade.
C.—Roman numeral for 100.
C.A.—Chartered Accountant.
Cantab.—Of Cambridge University.
Cantuar.—Of Canterbury.
Cap.—Chapter (Latin, *caput*).
Capt.—Captain.
C.B.—Companion of the (Order of the) Bath.
C.B.E.—Commander of Order of British Empire.
C.C.—County Councillor.
C.E.—Civil Engineer.
C.E.T.S.—Church of England Temperance Society.
C.F.—Chaplain to the Forces.
Cf.—*confer* (compare).
C.H.—Companion of Honour.
Ch. Ch.—Christ Church.
Ch.J.—Chief Justice.
C.I.—Imperial Order of the Crown of India.
C.I.E.—Companion of the Order of the Indian Empire.
C.I.F.—Cost, Insurance and Freight.
Circ.—*Circa*, about.
C.M.—Certificated Master.
C.M.G.—Companion of St. Michael and St. George.
C.M.S.—Church Missionary Society.
C.O.—Commanding Officer; Colonial Office.
Co.—County; Company.
C.O.D.—Cash on Delivery.
Col.—Colonel, Colony, or Colonial.
Col.-Sergt.—Colour-Sergeant.

Com.-in-Chf.—Commander-in-Chief.
Comm.—Commander.
Corp.—Corporal.
C.P.R.—Canadian Pacific Railway.
Cr.—Creditor; crown; created.
Cres.—Crescent.
C.S.—Civil Service.
C.S.I.—Companion of the Order of the Star of India.
C.T.C.—Cyclists' Touring Club.
C.U.—Cambridge University.
C.U.A.C.—Cambridge University Athletic Club.
C.U.F.C.—Cambridge University Football Club.
C.V.O.—Commander of the Royal Victorian Order.
Cwt.—Hundredweight.
D.—Duke; 500 (Roman numerals).
d.—Pence (Lat. *denarius*); also died.
D.A.A.G.—Deputy Assistant Adjutant-General.
D.B.E.—Dame of Order of British Empire.
D.C.L.—Doctor of Civil Law.
D.D.—Doctor of Divinity.
D.D.S.—Doctor of Dental Surgery.
deg.—Degree.
del.—(L. *delineavit*) he drew.
Dele, or d.—*Delete*, cancel.
D.Eng.—Doctor of Engineering.
D.G.—(*Dei Gratia*), by the Grace of God; also Dragoon Guards.
Dioc.—Diocese; Diocesan.
Ditto or do.—The same.
D.L.—Deputy-Lieutenant.
D.L.I.—Durham Light Infantry.
D.Litt. or D.Lit.—Doctor of Literature.
D.Mus.—Doctor of Music.
Dol. or $.—Dollar.
D.O.M.—*Deo Optimo Maximo*, To God, the best, the greatest.
Dom.—Dominus.
D.O.R.A.—Defence of the Realm Act.
Dr.—Doctor; debtor.
dr.—Drachm.
D.Sc.—Doctor of Science.
D.S.O.—Companion of the Distinguished Service Order.
D.Theol.—Doctor of Theology.
D.V.—(L. *Deo volente*), God willing.
Eccl.—Ecclesiastical.
E.C.U.—English Church Union.
Edin.—Edinburgh.
e.g.—(L. *exempli gratia*), for example.
E.I.—East Indian.
Ency. Brit.—Encyclopædia Britannica.
Eng.—England; Engineer.
Et al.—*Et alibi*, "and elsewhere."
Etc., &c.—*Et cetera*, "and other things."
Et seq.—and the following.
f.—fathom; franc.
F.A.—Football Association.
Fahr.—Fahrenheit.
F.A.I.—Fellow of the Auctioneers' Institute.
F.A.S.—Fellow of the Antiquarian Society.
F.B.A.—Fellow of the British Academy.
F.B.S.—Fellow of the Botanical Society.
F.C.A.—Fellow of Institute of Chartered Accountants.
Fcp.—Foolscap.
F.C.P.—Fellow of the College of Preceptors.
F.C.S.—Fellow of the Chemical Society.
F.D.—*Fidei Defensor*, "Defender of the Faith."
F.E.S.—Fellow of the Entomological Society.
F.F.A.—Fellow of the Faculty of Actuaries.
F.G.S.—Fellow of the Geological Society.
F.I.A.—Fellow of the Institute of Actuaries.
F.I.A.A.—Fellow Incorporated Association Architects.
F.I.A.S.—Fellow Incorporated Association Surveyors.
F.I.C.—Fellow of the Institute of Chemistry.
F.I.Inst.—Fellow of the Imperial Institute.
F.J.I.—Fellow of the Institute of Journalists.
F.L.S.—Fellow of the Linnean Society.
F.M.—Field Marshal.
Fo.—Folio (one sheet).
F.O.—Foreign Office; also Field Officer.
f.o.b.—Free on Board.
F.R.A.M.—Fellow of the Royal Academy of Music.
F.R.A.S.—Fellow of the Royal Astronomical Society; or of the Royal Asiatic Society.
F.R.C.O.—Fellow of the Royal College of Organists.
F.R.C.P.—Fellow of the Royal College of Physicians.
F.R.C.S.—Fellow of the Royal College of Surgeons.
F.R.C.V.S.—Fellow of the Royal College of Veterinary Surgeons.
F.R.G.S.—Fellow of the Royal Geographical Society.
F.R.Hort.S.—Fellow of the Royal Horticultural Society.
F.R.I.B.A.—Fellow of the Royal Institute of British Architects.
F.R.M.S.—Fellow of the Royal Microscopical Society.
F.R.Met.S.—Fellow of the Royal Meteorological Society.
F.R.S.—Fellow of the Royal Society.
F.R.S.E.—Fellow of the Royal Society of Edinburgh.
F.R.S.L.—Fellow of the Royal Society of Literature.
F.S.A.—Fellow of the Society of Antiquaries.
F.S.A.A.—Fellow Society Incorporated Accountants and Auditors.
F.S.I.—Fellow of the Surveyors' Institution.
F.S.S.—Fellow of the Statistical Society.
F.S.Sc.A.—Fellow Society Science and Art, Lond.
F.Z.S.—Fellow of the Zoological Society.
G.C.B.—Knight Grand Cross of the Bath.
G.C.I.E.—Knight Grand Cross of the Indian Empire.
G.C.L.H.—Grand Cross of the Legion of Honour.
G.C.M.G.—Knight Grand Cross of St. Michael and St. George.
G.C.R.—Great Central Railway (L. & N. E. Ry.).
G.C.S.I.—Knight Grand Cross of the Star of India.
G.C.V.O.—Knight Grand Cross of Royal Victorian Order.
gen.—*genus*, kind.
Gen.—General.
Gib.—Gibraltar.
G.L.—Grand Lodge (Masonic).
G.M.—Grand Master.
G.M.I.E.—Grand Master of the Order of the Indian Empire.
G.M.S.I.—Grand Master of the Star of India.
Goth.—Gothic.
Govt.—Government.
G.P.O.—General Post Office.
Gr.—Greek.
H.A.C.—Honourable Artillery Company.
H.B.C.—Hudson Bay Company.
H.B.M.—His Britannic Majesty.
H.C.—House of Commons.
H.C.M.—His (or Her) Catholic Majesty.
H.E.—His Excellency; His Eminence.
Heb.—Hebrew.
H.E.I.C.—Honourable East India Company.
Heir app.—Heir apparent.
Heir pres.—Heir presumptive.
H.H.—His (or Her) Highness.
Hhd.—Hogshead.
H.I.H.—His (or Her) Imperial Highness.
H.I.M.—His (or Her) Imperial Majesty.
H.L.I.—Highland Light Infantry.
H.M.—His (or Her) Majesty.
H.M.C.—His (or Her) Majesty's Customs.
H.M.I.—His Majesty's Inspector.
H.M.S.—His Majesty's Ship; or Service.
Hon.—Honourable.
(Hon.).—Honorary.
h.p.—horse-power (or half-pay).
H.Q.—Headquarters.
H.R.H.—His (or Her) Royal Highness.
H.R.I.—Holy Roman Empire.
H.S.H.—His Serene Highness.
Hum.—Humanity (Latin).
H.W.M.—High Water Mark.
I.—*Imperator*, or *Imperatrix*, Emperor or Empress.
Ia.—Iowa (U.S.A.).
Ib. or Ibid.—*ibidem* (in the same place).
I.C.S.—Indian Civil Service.
Id.—*idem* (the same).
I.D.B.—illicit diamond buying.
I.F.S.—Irish Free State.
Ign.—*ignotus* (unknown).
I.H.S.—*Jesus Hominum Salvator* (Jesus the Saviour of Men).
I.L.P.—Independent Labour Party.
Imp.—Imperial.
In.—inch.
Incog.—*Incognito* (in secret).
Inf.—*infra*, below.
Insp.—Inspector.
Inst.—Instant; Institute; Institution.
Int.—Interest.

inv. (*invenit*).—He designed.
I.O.M.—Isle of Man.
I.O.G.T.—Independent Order of Good Templars.
I.O.O.F.—Independent Order of Odd Fellows.
I.O.U.—I owe you.
i.q.—*Idem quod* (the same as).
I.R.—Inland Revenue.
I.S.O.—Imperial Service Order.
Ital. or It.—Italian; Italics; Italy.
I.W.—Isle of Wight.
J.A.—Judge-Advocate.
J.P.—Justice of the Peace.
Jun.—Junior.
K.B.—Knight of the Bath; Knight Bachelor.
K.B.E.—Knight British Empire.
K.C.—King's Counsel.
K.C.B.—Knight Commander of the Bath.
K.C.I.E.—Knight Commander of the Indian Empire.
K.C.M.G.—Knight Commander of St. Michael and St. George.
K.C.S.I.—Knight Commander of the Star of India.
K.C.V.O.—Knight Commander of the Royal Victorian Order.
K.D.G.—King's Dragoon Guards.
K.G.—Knight of the Order of the Garter.
Kil.—Kilometre.
Kilo.—Kilogramme.
K.O.S.B.—King's Own Scottish Borderers.
K.P.—Knight of the Order of St. Patrick.
K.R.R.—King's Royal Rifles.
K.T.—Knight of the Order of the Thistle.
Kt. (or Knt.).—Knight.
L.—50 (Roman numerals).
L.A.C.—London Athletic Club.
L.A.C.—Licentiate of the Apothecaries' Company.
L.-Corp., or Lance-Corp.—Lance-Corporal.
lat.—Latitude.
Lat.—Latin.
lb.—pound (weight).
L.C.C.—London County Council.
L.Ch.—Licentiate in Surgery (Chirurgery).
L.C.J.—Lord Chief Justice.
L.C.P.—Licentiate of the College of Preceptors.
L.D.S.—Licentiate in Dental Surgery.
L.F.P.S.—Licentiate of the Faculty of Physicians and Surgeons.
L.G.—Life Guards.
L.I.—Light Infantry.
Lic. Med.—Licentiate in Medicine.
lit.—Literature; Literary.
Lit. Hum.—Classics.
Litt.D.—Doctor of Letters.
L.J.—Lord Justice.
L.L.—Lord-Lieutenant.
LL.B.—Bachelor of Laws.
LL.D.—Doctor of Laws.
LL.M.—Master of Laws.
long.—Longitude.
Loq.—*Loquitur* (speaks).
L.P.—Lord Provost.
L.R.C.P.—Licentiate of the Royal College of Physicians.
L.R.C.S.—Licentiate of the Royal College of Surgeons.
L.R.C.V.S.—Licentiate of the Royal College of Veterinary Surgeons.
L.S.—*Locus sigilli*, place for the seal.
L.S.A.—Licentiate of the Society of Apothecaries.
Lt. or Lieut.—Lieutenant.
Lt.-Col.—Lieutenant-Colonel.
Ltd.—Limited.
Lt.-Gen.—Lieutenant-General.
L.W.M.—Low-water mark.
M.—Member; Monsieur; 1000.
M.A.—Master of Arts.
M.A.B.—Metropolitan Asylums Board.
M.B.B.S.—Bachelor of Medicine; Bachelor of Surgery.
M.B.Ch.B.—Bachelor of Medicine; Bachelor of Surgery.
Maj.-Gen.—Major-General.
M.Arch.—Master of Architecture.
Marq.—Marquis.
Math.—Mathematics; Mathematical.
M.B.—Bachelor of Medicine.
M.B.E.—Member of British Empire.
M.C.—Master of Ceremonies.
M.C.C.—Marylebone Cricket Club.
M.Ch.—Master of Surgery.
M.Ch.Orth.—Master of Orthopedic Surgery.
M.Com.—Master of Commerce.
M.D.—Doctor of Medicine.
M.D.S.—Master of Dental Surgery.
Me.—Maine (U.S.).
M.E.—Mining Engineer.
Mem.—Memorandum.
M.Eng.—Master of Engineering.
Met.R.—Metropolitan Railway.
M.F.H.—Master of Foxhounds.
M. Inst. C.E.—Member of Institution of Civil Engineers.
M.J.I.—Member of Institute of Journalists.
M.Litt.—Master of Literature.
Mlle.—*Mademoiselle* (Miss).
mm.—Millimetres.
MM.—Messieurs; Gentlemen.
Mme.—Madame.
Mngr.—Monsignor.
mo.—month.
Mods.—Moderations; First public exam. at Oxford.
M.P.—Member of Parliament.
M.P.S.—Member of Pharmaceutical Society.
M.R.A.S.—Member of the Royal Asiatic Society.
M.R.C.P.Lond.—Member of the Royal College of Physicians, London.
M.R.C.S.—Member of the Royal College of Surgeons.
M.R.C.S.E.—Member of the Royal College of Surgeons, Edinburgh.
M.R.C.V.S.—Member of the Royal College of Veterinary Surgeons.
M.R.I.—Member of the Royal Institution.
M.R.I.A.—Member of the Royal Irish Academy.
M.S.—Master of Surgery.
M.S.A.—Member of the Society of Arts.
MS., MSS.—Manuscript, Manuscripts.
M.Sc.—Master of Science.
M.Sc.Tech.—Master of Science Technology.
Mt.—Mountain.
Mus.B.—Bachelor of Music.
Mus.D.—Doctor of Music.
M.V.O.—Member of the Royal Victorian Order.
M.V.Sc.—Master of Veterinary Science.
n.—noun; nephew.
N.B.—North Britain; (L. *Nota Bene*), note well; New Brunswick.
N.C.U.—National Cyclists' Union.
N.E.—North-east.
Nem. Con.—*Nemine contradicente* (no one contradicting; unanimously).
Nem. diss.—*Nemine dissentiente* (no person disagreeing; unanimous).
Net. Nett.—(It.) *Netto* (free from all deductions).
N.F.—Newfoundland.
N.L.F.—National Liberal Federation.
N.N.E.—North-north-east.
N.N.W.—North-north-west.
No.—*Numero*, number.
Non seq.—*Non sequitur* (it does not follow).
N.P.—Notary Public.
N.R.A.—National Rifle Association.
N.S.—Nova Scotia; New Style in the Calendar (in Great Britain since 1752); National Society.
N.S.A.—National Skating Association.
N.S.P.C.C.—National Society for Prevention of Cruelty to Children.
N.T.—New Testament; Northern Territory of South Australia.
N.U.T.—National Union of Teachers.
N.W.P.—North-western Provinces.
N.W.T.—North-western Territories.
N.Z.—New Zealand.
%.—per cent.; or in the hundred.
Ob.—Died.
Obs.—Obsolete.
O.B.E.—Officer British Empire.
O.H.M.S.—On his Majesty's Service.
O.K.—Slang term for all correct (orl krekt).
O.M.—Order of Merit.
O.P.—*Ordinis Prædicatorum*—of the Order of Preachers (Dominican ecclesiastical title).
O.P.—Opposite to prompter; stage term.
O.S.—Old style in the Calendar (of Great Britain before 1752); ordinary seaman.
O.S.N.C.—Orient Steam Navigation Co.
O.T.—Old Testament.
O.U.—Oxford University.
O.U.A.C.—Oxford University Athletic Club.
O.U.B.C.—Oxford University Boating Club.
Oxon.—Oxfordshire; of Oxford.
oz.—Ounce.
Parl. Agt.—Parliamentary agent.
P.C.—Privy Councillor; Police Constable; Perpetual Curate.

p.c.—*per centum* (by the hundred); postcard.
P.E.I.—Prince Edward Island.
Per pro.—Per procuration.
Ph.D.—Doctor of Philosophy.
pinx.—(He) painted it.
Pl.—Place; Plural.
P.M.—*Post Meridiem* (after midday); Pacific Mail.
P.M.G.—Postmaster-General.
P.M.O.—Principal Medical Officer.
P. & O.—Peninsular and Oriental Steamship Co.
P.O.O.—Post Office Order.
Pop.—Population.
P.P.—Parish Priest.
Pp.—pages.
P.P.C.—Fr. *Pour prendre congé* (To take leave).
P.P.S.—Further postscript.
P.R.A.—President of the Royal Academy.
Preb.—Prebendary.
Pres.—President.
P.R.I.—President of the Royal Institute of Painters in Water Colours.
Prof.—Professor.
Pro tem.—*Pro tempore* (for the time being).
Prov.—Provost.
Prox.—*Proximo* (next).
P.R.S.—President of the Royal Society.
P.S.—*Postscriptum* (postscript).
P.S.N.C.—Pacific Steam Navigation Co.
Pte.—Private (soldier).
P.T.O.—Please turn over.
P.W.D.—Public Works Department (roads, buildings, Government railways, telegraphs, etc.).
Q.—Queen.
Q.C.—Queen's (now K.C.—King's) Counsel.
Q.E.D.—*Quod erat demonstrandum* (which was to be demonstrated), applied to a theorem.
q.e.f.—*Quod erat faciendum* (which was to be done) applied to a problem.
Q.M.G.—Quartermaster-General.
Qto.—Quarto (folded in four).
Quant. suff.—*Quantum sufficit*, a sufficient quantity.
q.v.—*quod vide* (which see).
R.—Réaumur.
R.A.—Royal Academician; Royal Artillery.
R.A.C.—Royal Agricultural College.
R.A.F.—Royal Air Force.
R.A.M.—Royal Academy of Music.
R.A.M.C.—Royal Army Medical Corps.
R.A.S.—Royal Astronomical, or Asiatic, Society.
R.B.—Rifle Brigade.
R.B.A.—Royal Society of British Arts.
R.C.—Roman Catholic.
R.C.V.S.—Royal College of Veterinary Surgeons.
R.D.—Rural Dean; Refer to Drawer.
R.E.—Royal Engineers; Royal Society of Painter Etchers.
Rear-Adm.—Rear-Admiral.
Rec.—Recorder.
Rect.—Rector.
Reg. Prof.—Regius Professor.
Regt.—Regiment; Regent.
Res.—Resigned; reserve.
Rev.—Reverend.
R.F.A.—Royal Field Artillery.
R.G.A.—Royal Garrison Artillery.
R.H.A.—Royal Horse Artillery.
R.H.G.—Royal Horse Guards.
R.H.S.—Royal Humane Society.
R.I.—Royal Institute of Painters in Water Colours.
R.I.B.A.—Royal Institute of British Architects.
R.I.C.—Royal Irish Constabulary.
R.I.P.—*Requiescat in pace* (may he or she rest in peace).
R.L.O.—Returned Letter Office.
R.M.—Royal Marines.
R.M.A.—Royal Marine Artillery; Royal Military Academy, Woolwich.
R.M.C.—Royal Military College, Sandhurst.
R.M.L.I.—Royal Marine Light Infantry.
R.M.S.—Royal Microscopical Society; Royal Meteorological Society; Royal Mail Steamers.
R.N.—Royal Navy.
R.N.R.—Royal Naval Reserve.
Rock, The.—Gibraltar.
R.S.A.—Royal Scottish Academy.
R.S.E.—Royal Society of Edinburgh.
R.S.I.—Royal Sanitary Institute.
R.S.L.—Royal Society of Literature.
R.S.P.C.A.—Royal Society for Prevention of Cruelty to Animals.
R.S.V.P.—Fr. *Répondez s'il vous plaît* (please answer).
R.S.W.—Royal Scottish Water Colour Society.
R.T.S.—Religious Tract Society; Royal Toxophilite Society.
Rt. Hon.—Right Honourable.
Rt. Rev.—Right Reverend (of a Bishop).
R.U.—Rugby Union.
R.V.—Revised Version.
R.W.S.—Royal Society of Water Colours.
R.Y.S.—Royal Yacht Squadron.
s.—succeeded; son; shilling.
S.—South; Saints.
S.A.—South Australia; South Africa.
Sarum.—Salisbury.
Sc.—*Scilicet*, to make known; to wit.
scr.—scruple.
sculps.—*sculpsit* (he engraved).
Sculpt.—Sculptor.
S.D.F.—Social Democratic Federation.
S.E.—South-east.
Sec.—Secretary.
Serjt.—Serjeant.
S.G.—Solicitor-General.
S.J.—Society of Jesus (Jesuits).
S.L.—Serjeant-at-Law.
S.M.—Sergeant-Major.
S.M.E.—School of Military Engineering.
S.O.—Sub Office (Postal).
S.P.C.C.—Society for the Prevention of Cruelty to Children.
S.P.C.K.—Society for Promoting Christian Knowledge.
S.P.G.—Society for the Propagation of the Gospel.
S.P.Q.R.—*Senatus Populusque Romanus* (The Senate and People of Rome).
Sq.—Square.
S.S.—Steamships; Saints.
St.—Street; Saint.
Stip.—Stipend; Stipendiary.
Supt.—Superintendent.
S.W.—South-west.
Syn.—Synonymous; synonym.
Tasm.—Tasmania.
Temp.—Temperature; Temporary.
Tn.—Ton.
tr.—Transpose.
T.R.C.—Thames Rowing Club; Tithe Rent Charge.
Trin.—Trinity.
T.Y.C.—Thames Yacht Club; Two Year Old (or Thousand Yards) Course.
(U.).—Unionist.
U.K.A.—Ulster King at Arms.
U.K.—United Kingdom.
Ult.—*Ultimo* (last).
Univ.—University.
U.S.A.—United States of America.
U.S.C.—United States of Colombia.
U.S.N.—United States Navy.
v.—*Versus* (against).
V.—Five (Roman numeral); Version; Vicar; Viscount; Vice.
v. or vid.—*Vide* (see).
V.A.—Victoria and Albert.
V.C.—Victoria Cross.
V.D.L.—Van Diemen's Land.
Ven.—Venerable (of an Archdeacon).
Very Rev.—Very Reverend (of a Dean).
Vet.—Veterinary.
V.G.—Vicar-General.
Vice-Adm.—Vice-Admiral.
Vict.—Victoria.
Visc.—Viscount.
Viz.—*Videlicet* (namely).
V.P.—Vice-President.
V.R.—*Victoria Regina* (Queen Victoria).
V.R. et I.—*Victoria Regina et Imperatrix* (Victoria Queen and Empress).
Vol.—Volume.
W.—West.
W.A.—West Australia.
W.I.—West Indies.
W.O.—War Office.
W.S.—Writer to the Signet.
X.—Ten (Roman numerals).
Xmas.—Christmas.
yds.—yards.
Y.M.C.A.—Young Men's Christian Association.
Y.W.C.A.—Young Women's Christian Association.

# COLOURS OF HOODS OF ACADEMIC GOWNS

| | Birmingham. | Bristol. | Cambridge. | Durham. | Leeds. |
|---|---|---|---|---|---|
| B.A. | Black and Blue | Red and Pale Red | Black and Fur | Black and Fur | Dark Green |
| B.Mus. | Black and Orange | | Cherry and Fur | Palatinate and Brocaded Satin | |
| B.Sc. | Black and Grey | Red and Salmon | Black and Fur | Palatinate, Fur and Scarlet | Middle Green |
| D.D. | | | Scarlet, Pink and Violet | Scarlet and Palatinate | |
| D.Litt. | Scarlet and Electric Blue | Red and Salmon | Scarlet and Scarlet | Scarlet and Gold | Scarlet and Dark Green |
| D.Mus. | | | Damask White and Cherry. | Brocaded Satin and Palatinate | |
| D.Sc. | | Red and Salmon | Scarlet, Pink and Blue | Palatinate and Scarlet | Scarlet and Middle Green |
| LL.B. | | | Black and Fur | | Light Green |
| LL.D. | | Red and Salmon | Scarlet and Pink | | Scarlet and Light Green |
| M.A. | Black and Blue | Red and White | Black and White | Black and Palatinate | Dark Green and White |
| M.B. | Black and Cardinal | Red, Red and White | Black and Cerise | Scarlet, Palatinate and Fur | Dark and Light Green |
| M.D. | Scarlet and Cardinal | Red and Salmon | Scarlet and Cerise | Scarlet, Scarlet and Palatinate | |
| Ph.D. | Crimson and Faculty Colour | Red and Violet | Black and Scarlet | Scarlet, Scarlet and Palatinate | Green, Green and Scarlet |

| | Liverpool. | London. | Manchester. | Oxford. | Sheffield. | Wales. |
|---|---|---|---|---|---|---|
| B.A. | Black, Apple-Blossom and Fur | Black and Brown | Black, Blue and Fur | Black and Fur | Green, Fur and Strawberry | Black and Green Shot Blue |
| B.Mus. | | Blue and White | Dark and Light Blue | Lilac and Fur | | Blue and Pearl |
| B.Sc. | Black, Blue and Fur | Black and Gold | Black, Salmon and Fur | Blue and Fur | Green, Fur and Apricot | Black and Black Shot Yellow |
| D.D. | | | Gold and Gold | Scarlet and Black | | |
| D.Litt. | Scarlet and Apple-Blossom | Scarlet and Brown | Gold and Gold | Scarlet and Grey | Red and Strawberry | Scarlet and Green Shot Blue |
| D.Mus. | | Scarlet and White | Gold and Gold | Cream and Cherry | | Scarlet and Pearl |
| D.Sc. | Scarlet and Blue | Scarlet and Gold | Gold and Gold | Scarlet and Grey | Red and Apricot | Scarlet and Black Shot Yellow |
| LL.B. | Black, Bronze and Fur | Black and Blue | Black and Violet | | Green, Fur and Green | Black and Purple Shot Red |
| LL.D. | Scarlet and Bronze | Scarlet and Blue | Gold and Gold | | Red and Green | Scarlet and Purple Shot Red |
| M.A. | Black and Apple-Blossom | Black and Brown | Black and Blue | Black and Red | Green and Strawberry | Black and Green Shot Blue |
| M.B. | Black, Lavender and Fur | Black and Violet | Black and Red | Blue and Fur | Green, Fur and Red | Black and Black Shot Green and White |
| M.D | Scarlet and Lavender | Scarlet and Violet | Gold and Gold | Scarlet and Crimson | Red and Red | Scarlet and Black Shot Green and White |
| Ph.D. | Scarlet, Black and Velvet | Claret, Claret and Faculty Colour | Gold and Gold | Scarlet and Blue | Red and Green | Crimson and Faculty Colour |

*By kind permission of*
*Messrs. Ede & Ravenscroft of Chancery Lane, W.C., the authority on Academic robes.*

# SOME FAMOUS BRIDGES

| | Feet. | | Feet. |
|---|---|---|---|
| Tay Bridge, Scotland (Water Span) | 10,200 | Brooklyn, N.Y. | 3,400 |
| Forth ,, ,, | 8,200 | Manhattan, ,, | 3,000 |
| Rio Salado, Argentine | 6,600 | Sydney Harbour, N.S.W. | 3,750 |
| Hardinge, India | 5,400 | Tyne Bridge, Newcastle | 1,845 |
| Victoria, Canada | 5,200 | | |

## DISCOUNT TABLE.

| Per cent. | In the £ s. | d. | Per cent. | In the £ s. | d. |
|---|---|---|---|---|---|
| 2½ | 0 | 6 | 20 | 4 | 0 |
| 3 | 0 | 7·2 | 25 | 5 | 0 |
| 4 | 0 | 9·6 | 30 | 6 | 0 |
| 5 | 1 | 0 | 40 | 8 | 0 |
| 6 | 1 | 2·4 | 50 | 10 | 0 |
| 7½ | 1 | 6 | 75 | 15 | 0 |
| 10 | 2 | 0 | 80 | 16 | 0 |
| 15 | 3 | 0 | | | |

Intermediate Rates are obtained by addition.

## INTEREST TABLE.

For £100 at 2½, 3, 3½, 4, 4½, and 5 per cent.

| Days | 2½ per cent. | | 3 per cent. | | 3½ per cent. | | 4 per cent. | | 4½ per cent. | | 5 per cent. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | s. | d. | s. | d. | s. | d. | s. | d. | s. | d. | s. | d. |
| 1 | 0 | 1½ | 0 | 2 | 0 | 2½ | 0 | 2½ | 0 | 3 | 0 | 3½ |
| 2 | 0 | 3½ | 0 | 4 | 0 | 4½ | 0 | 5½ | 0 | 6 | 0 | 6½ |
| 3 | 0 | 5 | 0 | 6 | 0 | 7 | 0 | 8 | 0 | 9 | 0 | 9½ |
| 4 | 0 | 6½ | 0 | 8 | 0 | 9½ | 0 | 10½ | 0 | 11½ | 1 | 1½ |
| 5 | 0 | 8½ | 0 | 9½ | 0 | 11½ | 1 | 1½ | 1 | 2½ | 1 | 4½ |
| 6 | 0 | 9½ | 0 | 11½ | 1 | 1½ | 1 | 3½ | 1 | 5½ | 1 | 7½ |
| 7 | 0 | 11½ | 1 | 1½ | 1 | 4 | 1 | 6½ | 1 | 8½ | 1 | 11 |
| 8 | 1 | 1½ | 1 | 3½ | 1 | 6½ | 1 | 9 | 1 | 11½ | 2 | 2½ |
| 9 | 1 | 2½ | 1 | 5½ | 1 | 8½ | 1 | 11½ | 2 | 2½ | 2 | 5½ |
| 10 | 1 | 4½ | 1 | 7½ | 1 | 11 | 2 | 2½ | 2 | 5½ | 2 | 9 |
| 20 | 2 | 9 | 3 | 3½ | 3 | 10 | 4 | 4½ | 4 | 11½ | 5 | 5½ |
| 25 | 3 | 5 | 4 | 1½ | 4 | 9½ | 5 | 5½ | 6 | 2 | 6 | 10½ |
| 30 | 4 | 1½ | 4 | 11½ | 5 | 9 | 6 | 7 | 7 | 4½ | 8 | 2½ |
| 40 | 5 | 5½ | 6 | 7 | 7 | 8 | 8 | 9½ | 9 | 10½ | 10 | 11½ |
| 50 | 6 | 10½ | 8 | 2½ | 9 | 7 | 10 | 11½ | 12 | 4 | 13 | 8½ |
| 60 | 8 | 2½ | 9 | 10½ | 11 | 6 | 13 | 1½ | 14 | 9½ | 16 | 5½ |
| 70 | 9 | 7 | 11 | 6 | 13 | 5 | 15 | 4 | 17 | 3½ | 19 | 2½ |
| 80 | 10 | 11½ | 13 | 1½ | 15 | 4 | 17 | 6½ | 19 | 8½ | 21 | 11 |
| 90 | 12 | 4 | 14 | 9½ | 17 | 3 | 19 | 8½ | 22 | 2½ | 24 | 8 |
| 100 | 13 | 8½ | 16 | 5½ | 19 | 2 | 21 | 11 | 24 | 8 | 27 | 4½ |
| 120 | 16 | 5½ | 19 | 8½ | 23 | 0½ | 26 | 3½ | 29 | 7 | 32 | 10½ |
| 140 | 19 | 2½ | 23 | 0½ | 26 | 10½ | 30 | 8½ | 34 | 6½ | 38 | 4½ |
| 150 | 20 | 6½ | 24 | 8 | 28 | 9½ | 32 | 10½ | 36 | 11½ | 41 | 1½ |

The amount of interest accruing in connection with other sums at any of these rates, and for any number of days, can be reckoned by very simple calculation.

## WAGES TABLE.

| Per Year. | Per Quarter. | | | Per Month. | | | Per Week. | | | Per Day. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| £ | £ | s. | d. | £ | s. | d. | £ | s. | d. | £ | s. | d. |
| 1 | 0 | 5 | 0 | 0 | 1 | 8 | 0 | 0 | 4½ | 0 | 0 | 0¾ |
| 2 | 0 | 10 | 0 | 0 | 3 | 4 | 0 | 0 | 9½ | 0 | 0 | 1½ |
| 3 | 0 | 15 | 0 | 0 | 5 | 0 | 0 | 1 | 1½ | 0 | 0 | 2 |
| 4 | 1 | 0 | 0 | 0 | 6 | 8 | 0 | 1 | 6½ | 0 | 0 | 2¾ |
| 5 | 1 | 5 | 0 | 0 | 8 | 4 | 0 | 1 | 11 | 0 | 0 | 3½ |
| 6 | 1 | 10 | 0 | 0 | 10 | 0 | 0 | 2 | 3½ | 0 | 0 | 4 |
| 7 | 1 | 15 | 0 | 0 | 11 | 8 | 0 | 2 | 8½ | 0 | 0 | 4¾ |
| 8 | 2 | 0 | 0 | 0 | 13 | 4 | 0 | 3 | 1 | 0 | 0 | 5½ |
| 9 | 2 | 5 | 0 | 0 | 15 | 0 | 0 | 3 | 5½ | 0 | 0 | 6 |
| 10 | 2 | 10 | 0 | 0 | 16 | 8 | 0 | 3 | 10½ | 0 | 0 | 6¾ |
| 11 | 2 | 15 | 0 | 0 | 18 | 4 | 0 | 4 | 2½ | 0 | 0 | 7½ |
| 12 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 7½ | 0 | 0 | 8 |
| 13 | 3 | 5 | 0 | 1 | 1 | 8 | 0 | 5 | 0 | 0 | 0 | 8¾ |
| 14 | 3 | 10 | 0 | 1 | 3 | 4 | 0 | 5 | 4½ | 0 | 0 | 9½ |
| 15 | 3 | 15 | 0 | 1 | 5 | 0 | 0 | 5 | 9½ | 0 | 0 | 9¾ |
| 16 | 4 | 0 | 0 | 1 | 6 | 8 | 0 | 6 | 1½ | 0 | 0 | 10½ |
| 17 | 4 | 5 | 0 | 1 | 8 | 4 | 0 | 6 | 6½ | 0 | 0 | 11¼ |
| 18 | 4 | 10 | 0 | 1 | 10 | 0 | 0 | 6 | 11 | 0 | 0 | 11¾ |
| 19 | 4 | 15 | 0 | 1 | 11 | 8 | 0 | 7 | 3½ | 0 | 1 | 0¼ |
| 20 | 5 | 0 | 0 | 1 | 13 | 4 | 0 | 7 | 8½ | 0 | 1 | 1¼ |
| 22 | 5 | 10 | 0 | 1 | 16 | 8 | 0 | 8 | 5½ | 0 | 1 | 2¼ |
| 24 | 6 | 0 | 0 | 2 | 0 | 0 | 0 | 9 | 2½ | 0 | 1 | 3¼ |
| 25 | 6 | 5 | 0 | 2 | 1 | 8 | 0 | 9 | 7½ | 0 | 1 | 4¼ |
| 28 | 7 | 0 | 0 | 2 | 6 | 8 | 0 | 10 | 9½ | 0 | 1 | 6¼ |
| 30 | 7 | 10 | 0 | 2 | 10 | 0 | 0 | 11 | 6½ | 0 | 1 | 7½ |
| 35 | 8 | 15 | 0 | 2 | 18 | 4 | 0 | 13 | 5½ | 0 | 1 | 11 |
| 40 | 10 | 0 | 0 | 3 | 6 | 8 | 0 | 15 | 4½ | 0 | 2 | 2¼ |
| 45 | 11 | 5 | 0 | 3 | 15 | 0 | 0 | 17 | 3½ | 0 | 2 | 5½ |
| 50 | 12 | 10 | 0 | 4 | 3 | 4 | 0 | 19 | 2½ | 0 | 2 | 9 |

Variant annual rates of salary may be worked out to their quarterly or other proportions with ease by employment of the figures here tabulated.

## ENGLISH MONEY AND ITS NOMINAL FOREIGN EQUIVALENTS.

| Denominations. | United States Value. | | French, Belgian, Swiss, Italian, and Greek Value. | | German Value. | |
|---|---|---|---|---|---|---|
| | *Dols.* | *Cents.* | *Frs.* | *Cents.* | *Mks.* | *Pfgs.* |
| Sovereign | 4 | 84 | 25 | 15 | 20 | 0 |
| Half-Sovereign | 2 | 42 | 12 | 57 | 10 | 0 |
| Crown (5s.) | 1 | 21 | 6 | 28 | 5 | 0 |
| Four-Shilling piece | 0 | 96 | 5 | 3 | 4 | 0 |
| Half-Crown | 0 | 60 | 3 | 16 | 2 | 50 |
| Florin | 0 | 48 | 2 | 51 | 2 | 0 |
| Shilling | 0 | 24 | 1 | 25 | 1 | 0 |
| Sixpence | 0 | 12 | 0 | 63 | 0 | 50 |
| Threepence | 0 | 6 | 0 | 31 | 0 | 25 |
| Penny | 0 | 2 | 0 | 10 | 0 | 8 |
| Halfpenny | 0 | 1 | 0 | 5 | 0 | 4 |
| Farthing | 0 | 0½ | 0 | 2½ | 0 | 2 |

The above were approximate values before the War. At the present time the abnormal conditions of foreign exchange cause wide departure from these figures.

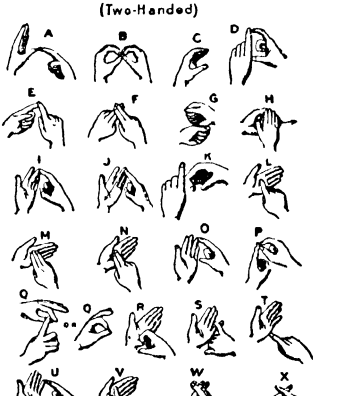
On Oct. 1, 1931 the relative values were :—

| | |
|---|---|
| U.S.A. Dollars | 3·94 to £ |
| French Francs | 99·50 ,, |
| Swiss ,, | 20·00 ,, |
| German Mark | 16·75 ,, |
| Belgian Belga (5 Francs) | 27·50–29·00 ,, |
| Greek Drachma | 300·00 ,, |
| Italian Lire | 77·00 ,, |
| Spanish Peseta | 43·75 ,, |

In 1929 the franc was stabilized at 124·21 to £.

## DEAF AND DUMB ALPHABET.

(Two-Handed)




*By permission of Mr. B. H. Payne.*

# THE LONGEST RIVERS

| River. | Outflow. | Length in Miles. | River. | Outflow. | Length in Miles. |
|---|---|---|---|---|---|
| Amazon | Atlantic | 4,000 | Mackenzie | Beaufort Sea | 2,300 |
| Nile | Mediterranean | 3,600 | La Plata | South Atlantic | 2,300 |
| Yangtse | North Pacific | 3,400 | Yukon | Behring Sea | 2,000 |
| Yenisei | Arctic Sea | 3,300 | Arkansas | Mississippi | 2,000 |
| Missouri | Mississippi River | 3,000 | Madeira | Amazon | 2,000 |
| Congo | Atlantic | 3,000 | St. Lawrence | Gulf of St. Lawrence | 1,800 |
| Niger | Gulf of Guinea | 3,000 | Rio del Norte | Gulf of Mexico | 1,800 |
| Obi | Arctic Sea | 2,700 | São Francisco | Atlantic | 1,800 |
| Hoangho | North Pacific | 2,600 | Danube | Black Sea | 1,725 |
| Lena | Arctic Sea | 2,600 | Euphrates | Persian Gulf | 1,700 |
| Amur | North Pacific | 2,500 | Indus | Arabian Sea | 1,700 |
| Mississippi | Gulf of Mexico | 2,486 | Brahmaputra | Bay of Bengal | 1,680 |
| Paraná | Atlantic | 2,450 | Zambesi | Mocambique | 1,600 |
| Volga | Caspian Sea | 2,400 | Ganges | Bay of Bengal | 1,500 |

# OTHER NOTABLE RIVERS

| | Outflow. | Length in Miles | | Outflow. | Length in Miles. |
|---|---|---|---|---|---|
| Rhine | North Sea | 800 | Thames | North Sea | 210 |
| Seine | English Channel | 475 | Severn | Bristol Channel | 220 |
| Murray, Murrumbidgee | N.S.W. | 1,150 | | | |

# THE WORLD'S LARGEST ISLANDS

| Name of Island. | Ocean. | Area in Sq. Miles. | Name of Island. | Ocean. | Area in Sq. Miles. |
|---|---|---|---|---|---|
| New Guinea (Brit.-Neth.) | Pacific | 330,000 | Novaya Zemlya (Russian) | Arctic | 30,000 |
| Borneo (Brit.-Netherlands) | ,, | 289,000 | Sakhalin (Russo-Japanese) | Pacific | 29,100 |
| Baffin Land (British) | Arctic | 236,000 | Haiti (Independent) | Atlantic | 28,200 |
| Madagascar (French) | Indian | 228,000 | Tasmania (British) | Pacific | 26,215 |
| Sumatra (Netherlands) | ,, | 178,330 | Ceylon (British) | Indian | 25,400 |
| Great Britain | Atlantic | 89,126 | Banks (British) | Arctic | 25,000 |
| Honshiu (Japan) | Pacific | 87,500 | North Devon (British) | ,, | 24,000 |
| Celebes (Netherlands) | Indian | 72,000 | Vancouver (British) | Pacific | 20,000 |
| Prince Albert, &c. (British) | Arctic | 60,000 | Melville Land (British) | Arctic | 20,000 |
| South Island, N.Z. (British) | Pacific | 58,500 | Tierra del Fuego (Argentine) | Atlantic | 18,500 |
| Java (Netherlands) | Indian | 48,400 | Southampton (British) | Arctic | 17,800 |
| North Island, N.Z. (British) | Pacific | 44,500 | West Spitzbergen (Norway) | ,, | 15,260 |
| Cuba (Independent) | Atlantic | 44,000 | Prince of Wales (British) | ,, | 15,000 |
| Newfoundland (British) | ,, | 42,750 | Formosa (Japanese) | Pacific | 13,500 |
| Luzon (U.S.A.) | Pacific | 41,000 | North Somerset (British) | Arctic | 12,000 |
| Iceland (Danish) | Atlantic | 40,437 | Sicily (Italian) | Medit. | 10,000 |
| Ellesmere (British) | Arctic | 40,000 | | | |
| Mindanao (U.S.A.) | Pacific | 37,000 | Australia | | 2,974,580 |
| Hokkaido (Japan) | ,, | 36,500 | Greenland | | 827,300 |
| Ireland | Atlantic | 32,600 | | | |

# THE HIGHEST MOUNTAINS

| Name. | Location. | Height in Feet. | Name. | Location. | Height in Feet. |
|---|---|---|---|---|---|
| Everest | Himalayas | 29,002 | Tolima | Cordilleras | 18,320 |
| Godwin-Austen (K 2) | ,, | 28,250 | Citlaltepetl | Mexico | 18,200 |
| Kanchanganga | ,, | 28,146 | Charles Louis | New Guinea | 18,000 |
| Makalu | ,, | 27,790 | * Mount Elias | Rockies | 18,000 |
| Tengri Khan | E. Turkestan | 24,000 | * Popocatepetl | Mexico | 17,540 |
| Chumalhari | Himalayas | 23,944 | Maipu | Andes | 17,421 |
| Aconcagua | Andes | 23,390 | * Sangay | Ecuador | 17,124 |
| Illampa (Sorata) | Andes | 21,490 | Koshtan Tau | Caucasus | 17,096 |
| * Sagama | Bolivia | 21,047 | Ararat | Armenia | 16,916 |
| Illimani | Andes | 21,031 | Ruwenzori | Uganda | 16,815 |
| Chimborazo | ,, | 20,498 | Kazbek | Caucasus | 16,546 |
| Lullialluco | ,, | 20,243 | Mont Blanc | Alps | 15,781 |
| Licancaur | ,, | 19,685 | | | |
| * Cotopaxi | ,, | 19,612 | | | |
| Mount Logan | Rockies | 19,539 | | | |
| Potro | Andes | 19,355 | | | |
| Kilima Njaro | E. Africa | 19,326 | | | |
| Elbruz | Caucasus | 18,464 | | | |
| Demavend | Persia | 18,464 | | | |

* *Volcanoes.* In addition to those marked, Vesuvius, Etna and Stromboli in Europe; Erebus and Terror in the Antarctic; Hecla and Skaptar Jokul in Iceland; Mauna Loa, Kea and Hualalai in Hawaii; Tomboro in Sunda Islands, East Indies, and Le Souffrier and La Pelée in the West Indies.

# HOME MOUNTAINS, FOR COMPARISON

| Name. | Location. | Height in Feet. | Name. | Location. | Height in Feet. |
|---|---|---|---|---|---|
| Ben Nevis | Scotland | 4,406 | Scawfell | England | 3,162 |
| Snowdon | Wales | 3,570 | Carrantuohill | Ireland | 3,414 |

# THE LARGEST CITIES OF THE WORLD WITH THEIR APPROXIMATE POPULATIONS IN 1931

| City. | Country. | Population | City. | Country. | Population. |
|---|---|---|---|---|---|
| London | England | 8,202,000 | Baltimore | U.S.A. | 805,000 |
| New York | U.S.A. | 7,000,000 | Boston | ,, | 781,000 |
| Berlin | Germany | 4,000,000 | Manchester | England | 766,000 |
| Chicago | U.S.A. | 3,380,000 | Madrid | Spain | 750,000 |
| Paris | France | 3,000,000 | Barcelona | Spain | 720,000 |
| Osaka | Japan | 2,450,000 | Amsterdam | Holland | 720,000 |
| Tokio | ,, | 2,070,000 | Athens | Greece | 700,000 |
| Shanghai (Est.) | China | 2,000,000 | Cologne | Germany | 700,000 |
| Philadelphia | U.S.A. | 1,950,000 | Munich | Bavaria | 685,000 |
| Buenos Ayres | Argentine | 1,860,000 | Prague | Czechoslovakia | 680,000 |
| Vienna | Austria | 1,850,000 | Leipzig | Germany | 680,000 |
| Moscow | U.S.S.R. | 1,750,000 | Kioto | Japan | 680,000 |
| Leningrad | ,, | 1,750,000 | Copenhagen | Denmark | 675,000 |
| Canton | China | 1,350,000 | Stamboul | Turkey | 675,000 |
| Calcutta | India | 1,330,000 | Kobe | Japan | 645,000 |
| Peking | China | 1,300,000 | San Francisco | U.S.A. | 635,000 |
| Los Angeles | U.S.A. | 1,240,000 | Dresden | Saxony | 620,000 |
| Budapest | Hungary | 1,200,000 | Mexico | Mexico | 616,000 |
| Bombay | India | 1,180,000 | Marseilles | France | 600,000 |
| Rio de Janeiro | Brazil | 1,160,000 | Genoa | Italy | 590,000 |
| Hamburg | Germany | 1,120,000 | Detroit | U.S.A. | 570,000 |
| Sydney | N.S.W. | 1,100,000 | Lyons | France | 570,000 |
| Glasgow | Scotland | 1,088,000 | Breslau | Germany | 555,000 |
| Cairo | Egypt | 1,050,000 | Rotterdam | Holland | 550,000 |
| Montreal | Canada | 1,035,000 | Santiago | Chili | 550,000 |
| Rome | Italy | 1,004,000 | Havana | Cuba | 530,000 |
| Birmingham | England | 1,002,000 | Madras | India | 527,000 |
| Warsaw | Poland | 1,000,000 | Toronto | Canada | 520,000 |
| Nanking | China | 1,000,000 | Singapore | Straits | 515,000 |
| Melbourne | Victoria | 950,000 | | | |
| Cleveland | U.S.A. | 900,000 | | | |
| Milan | Italy | 880,000 | | | |
| Naples | ,, | 860,000 | | | |
| Liverpool | England | 855,000 | | | |
| St. Louis | U.S.A. | 822,000 | | | |
| Brussels | Belgium | 805,000 | | | |
| Bucharest | Roumania | 805,000 | | | |

The Census of population is taken every 5 years in Great Britain from 1931, and in different years in different countries. The figures given above may therefore vary from the population shown in the Gazetteer.

# ROMAN NUMERALS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| I | 1 | XI | 11 | XXX | 30 | C | 100 | D | 500 |
| II | 2 | XII | 12 | XL | 40 | CX | 110 | DC | 600 |
| III | 3 | XIII | 13 | L | 50 | CXI | 111 | DCCC | 800 |
| IV | 4 | XIV | 14 | LV | 55 | CXC | 190 | DCCCLXXVI | 876 |
| V | 5 | XV | 15 | LX | 60 | CC | 200 | CM | 900 |
| VI | 6 | XVI | 16 | LXX | 70 | CCXX | 220 | CMXCIX | 999 |
| VII | 7 | XVII | 17 | LXXX | 80 | CCXXIV | 224 | M | 1000 |
| VIII | 8 | XVIII | 18 | LXXXVIII | 88 | CCC | 300 | MD | 1500 |
| IX | 9 | XIX | 19 | XC | 90 | CCCXX | 320 | MDCCC | 1800 |
| X | 10 | XX | 20 | XCIX | 99 | CD | 400 | MM | 2000 |

These have been used largely in printing the dates on the title-pages of books, especially old books, the headings of chapters and clauses, and on the dials of clocks and watches, etc. Put briefly, the following are the characters, with their relative values:—I = 1, V = 5, X = 10, L = 50, C = 100, D or I$\supset$ = 500, M or C$\supset$ = 1000. MCMXXXII = 1932. When a character is *followed* by another of less or equal value, the number expressed denotes the *sum* of their single values, but when *preceded* by one of *less* value it signifies the difference. For instance, III stands for 3, IV for 4, and VI for 6, XL for 40, LXX for 70, and so on. Our forefathers displayed considerable ingenuity and eccentricity in the arrangement of these symbols, so much so that they often prove a vexatious puzzle to our modern bibliographers; but the above simple explanation is sufficient for all purposes in these practical times.

# EXPECTATION OF LIFE

The following (based upon the Census of 1921 and deaths for 1910–1912) is compiled from a supplement to the Registrar-General's Annual Return, which refers to England and Wales only.

| Age. | Mean After-Lifetime (Expectation of Life). | |
|---|---|---|
| | Male. | Female. |
| 10 | 54·64 | 57·53 |
| 15 | 50·12 | 53·06 |
| 20 | 45·78 | 48·73 |
| 25 | 41·60 | 44·48 |
| 30 | 37·40 | 40·26 |
| 35 | 33·25 | 36·05 |
| 40 | 29·19 | 31·86 |
| 45 | 25·22 | 27·73 |
| 50 | 21·36 | 23·69 |

# THE FRENCH METRICAL SYSTEM

The above diagram illustrates the method of calculation adopted in working out the French Metrical System, which is based on the assumed length of the distance from the Equator to the North Pole. The 10,000,000th part of this distance is adopted as the unit of length and called a *metre*, and all other measurements are derived from this unit. Thus, the cube of the tenth part of the metre is the unit of capacity, called a *litre*, and the weight of a millilitre of water at a temperature of 4° Centigr. or 39 1/5 Fahr. is the unit of weight called a *gramme*. The unit of land measurement is 100 sq. metres, called an *are*. The multiples in Greek are :—

| 10 | 100 | 1,000 | 10,000 |
|---|---|---|---|
| *deca* | *hecto* | *kilo* | *myria* |

The subdivisions in Latin are :—

| 10th | 100th | 1,000th |
|---|---|---|
| *deci* | *centi* | *milli* |

# SYMBOLS USED IN MEDICINE AND PHARMACY

℈ Scruple; ℈i, one scruple; ℈ii, two scruples; ℈ss, half a scruple; ℈iss, a scruple and a half.
ʒ Dram or drachm; ʒi, one dram; ʒij, two drams; ʒss, half a dram; ʒiss, a dram and a half.
℥ Ounce; ℥i, one ounce; ℥ij, two ounces; ℥ss, half an ounce; ℥iss, an ounce and a half.
♏ A minim; a drop.
āā (Gr. *ana*), of each a like quantity.
℞ (L. *recipe*), take.

The above symbols are used almost always in medical prescriptions.

A SPECIMEN PRESCRIPTION.

| | |
|---|---|
| ℞ | Superscription. |
| (Basis) .....Pot. Acet. ʒv..... | Inscription. |
| (Adjuvant)...Tinct. Digitalis ʒi..... | |
| (Corrective) Syr. Aurantii ℥i ..... | |
| (Vehicle)...Dec. Scopar. ad ℥viii..... | |
| Misce, flat mist..... | Subscription. |
| Cpt. Cochl. mag. ii. 4ta. q.q. hora ex paul. aquæ..... | Signature. |

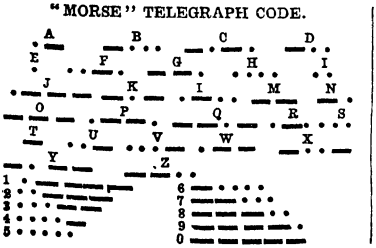
THE MEANING OF THE PRESCRIPTION, WHICH IS WRITTEN IN ABBREVIATED LATIN, WITHOUT ABBREVIATIONS OR CONTRACTIONS IS :

Recipe.
Potassii Acetatis drachmas quinque.
Tincturæ Digitalis drachmam unam.
Syrupi Aurantii unciam unam.
Decoctum Scoparii ad uncias octo.
Misce, flat mistura.
Capiat cochlearia duo magna quarta quaque hora ex paululo aquæ.

THE ENGLISH TRANSLATION OF WHICH IS :

Take thou (the dispenser).
Five drachms of acetate of potassium.
One drachm of the tincture of digitalis.
One ounce of syrup of orange-peel.
Decoction of broom up to eight ounces.
Mix, let a mixture be made.
Let him (the patient) take two large spoonfuls at each fourth hour, out of (in) a little water.

## "MORSE" TELEGRAPH CODE.




## NOTES ON ETIQUETTE.

In making an introduction the gentleman should be introduced to the lady, not the lady to the gentleman.

If both are of the same sex, present the inferior in social position to the superior.

Permission must always be obtained before a gentleman is presented to a lady.

# TABLES OF PHOTOGRAPHIC PLATE EXPOSURES

The following tables (which have been prepared by, and are the copyright of "Ilford," Ltd.), used in accordance with the instructions given, will be found useful in determining the exposure required under the varying conditions occurring in practice.

The Plate, Weather, Stop, and Subject Table should be first referred to. Find the variety of plate you are using and the weather conditions in a line with it. Then follow the column so arrived at downwards to the stop. In a straight line with the stop the exposure necessary for each subject will be found under its appropriate heading. After one or two trials this can be done at a glance. Multiply the exposure by the number given in the table of Relative Exposures at Different times of the Day and Year which follows below and the exposure required is obtained.

PLATE, WEATHER, STOP, AND SUBJECT TABLE.

| PLATE. | WEATHER. | | | | | | | | Sea and Sky, and Extreme Distance. | LANDSCAPES. | | | | | INTERIORS. | | PORTRAITS. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Slow | Very Dull. | Dull. | Cloudy. | Sunshine blue sky. | Sunshine white clouds. | — | — | — | | Open Landscape, light foreground. | Open Landscape with foreground, Cattle, etc. | Foreground, Buildings, Figures, Groups. | Landscape with very heavy foreground. | Under Trees may require up to | Bright Interiors require not less than | Dark Interiors, up to | By bright diffused light in the open air. | In well-lighted room. |
| Medium | — | Very Dull. | Dull. | Cloudy. | Sunshine blue sky. | Sunshine white clouds. | — | — | | | | | | | | | | |
| Fast | — | — | Very Dull. | Dull. | Cloudy. | Sunshine blue sky. | Sunshine white clouds. | — | | | | | | | | | | |
| Ultra-Rapid | — | — | — | Very Dull. | Dull. | Cloudy. | Sunshine blue sky. | Sunshine white clouds. | | | | | | | | | | |
| STOPS. | *f* | *f* | *f* | *f* | *f* | *f* | *f* | *f* | secs. | secs. | secs. | secs. | secs. | m. s. | m. s. | h. m. | secs. | m. s. |
| | — | — | — | — | — | — | — | 5·6 | 1/100 | 1/100 | 1/50 | 1/50 | 1/25 | 0 1 | 0 1 | 0 ½ | 1/50 | 0 ½ |
| | — | — | — | — | — | — | 5·6 | 8 | 1/50 | 1/50 | 1/25 | 1/25 | 1/12 | 0 2 | 0 2 | 0 1 | 1/25 | 0 1 |
| | — | — | — | — | — | 5·6 | 8 | 11 | 1/25 | 1/25 | 1/12 | 1/12 | 1/6 | 0 4 | 0 4 | 0 1 | 1/12 | 0 1½ |
| | — | — | — | — | 5·6 | 8 | 11 | 16 | 1/12 | 1/12 | 1/6 | 1/6 | 1/3 | 0 8 | 0 8 | 0 2 | 1/6 | 0 3 |
| | — | — | — | 5·6 | 8 | 11 | 16 | 22 | 1/6 | 1/6 | 1/3 | 1/3 | ½ | 0 16 | 0 16 | 0 4 | ⅓ | 1½ 0 6 |
| | — | — | 5·6 | 8 | 11 | 16 | 22 | 32 | 1/3 | ⅓ | ½ | ½ | 1 | 0 32 | 0 32 | 0 8 | ½ | 3 0 12 |
| | — | 5·6 | 8 | 11 | 16 | 22 | 32 | 45 | ½ | ½ | 1 | 1 | 2 | 1 4 | 1 4 | 0 16 | 1 | 6 0 24 |
| | 5·6 | 8 | 11 | 16 | 22 | 32 | 45 | 64 | 1 | 1 | 2 | 2 | 4 | 2 8 | 2 8 | 0 32 | 2 | 12·0 48 |
| | 8 | 11 | 16 | 22 | 32 | 45 | 64 | — | 2 | 2 | 4 | 4 | 8 | 4 16 | 4 16 | 1 0 | 5 | 24 1 40 |
| | 11 | 16 | 22 | 32 | 45 | 64 | — | — | 4 | 4 | 8 | 8 | 16 | 8 30 | 8 30 | 2 0 | 10 | 48·3 20 |
| | 16 | 22 | 32 | 45 | 64 | — | — | — | 8 | 8 | 16 | 16 | 32 | 17 0 | 17 0 | 4 0 | 20 | 96 6 40 |

RELATIVE EXPOSURES AT DIFFERENT TIMES OF THE DAY AND YEAR.

| Hour of Day. | | | June. | May. July. | April. August. | March. September. | February. October. | January. November. | December. |
|---|---|---|---|---|---|---|---|---|---|
| 12 N. | | | 1 | 1 | 1½ | 1½ | 2 | 3½ | 4 |
| a.m. | p.m. | | | | | | | | |
| 11 or | 1 | | 1 | 1 | 1½ | 1½ | 2½ | 4 | 5 |
| 10 ,, | 2 | | 1 | 1 | 1½ | 1½ | 3 | 5 | 6 |
| 9 ,, | 3 | | 1 | 1½ | 1½ | 2 | 4 | 12* | 16* |
| 8 ,, | 4 | | 1½ | 1½ | 2 | 3 | 10* | | |
| 7 ,, | 5 | | 2 | 2½ | 3* | 6* | | | |
| 6 ,, | 6 | | 2½ | 3* | 6* | | | | |
| 5 ,, | 7 | | 5* | 6* | | | | | |
| 4 ,, | 8 | | 12* | | | | | | |

This table is calculated for latitudes about 52° N., and is suitable for exposures in the British Isles (except the North of Scotland), Holland, Belgium, Denmark, Mid. Russia, Southern Canada and British Columbia.

N.B.—*These figures are too low if the sunset is a markedly yellow one, unless the Chromatic or Rapid Chromatic plate is being used, when they may be taken as sufficiently correct. Exposures with plates of altogether exceptional rapidity will be two-thirds of those given for Ultra-Rapid in the above table.

# SPEED RECORDS

| | | | |
|---|---|---|---|
| Motor Car | Sir Malcolm Campbell | 253·968 miles per hour. | |
| ,, Boat | Mr. Gar Wood | 111·72 | ,, ,, ,, |
| ,, Cycle | ,, J. S. Wright | 150·7 | ,, ,, ,, |
| ,, (Baby Car) | ,, George Eyston | 118·38 | ,, ,, ,, |
| Flying | Ft.-Lieut. Stainforth | 407·5 | ,, ,, ,, |
| Railway Train | Great Western Railway | 79·23 | ,, ,, ,, |

# GAZETTEER

PEARS—THE PURE SOAP

*For particulars of Pears Famous Toilet Preparations turn to end of Book*

# Pears' Gazetteer of the World

*In this section are set forth the names and brief descriptions of the principal countries, states, cities, towns, seas, mountains, rivers, lakes and other geographical features of the world, together with notes of the chief historical and other events connected with those places. It will be found to include many places which have only come into prominence in recent years by the changeful course of events, and the spelling of the names of some Central European towns may vary from the local spelling. Brevity is a necessity of the compilation. The populations of the counties of the British Isles are of the Administrative Counties, and include the figures of the County Boroughs, which are also given separately.*

All population figures in Italics are taken from the 1931 Census returns.

THE ABBREVIATIONS ADOPTED ARE AS UNDER:

*agr.* = agriculture.
*alt.* = altitude.
*bor.* = borough.
*C.* = cape.
*c.* = city.
*cap.* = capital.
*co.* = county.
*co. bor.* = county borough.
*dep.* = department.
*dist.* = district.
*div.* = division.
*E.* = East.
*ft.* = feet.
*G.* = gulf.
*I.F.S.* = Irish Free State.
*isl.* = island.
*L.* = lake.
*m.* = miles.
*mftg.* = manufacturing.
*mkt.* = market.
*mtn.* = mountain.
*mun. bor.* = municipal borough.
*N.* = North.
*N.S.W.* = New South Wales.
*p.* = population.
*par.* = parish.
*parlt.* = parliament.
*parlv.* = parliamentary.
*prov.* = province.
*R.* = river.
*ry.stn.* = railway station.
*S.* = South.
*spt.* = seaport.
*sq. m.* = square miles.
*t.* = town.
*urb. dist.* = urban district.
*U.S.S.R.* = Union of Socialist Soviet Republics.
*vil.* = village.
*W.* = West.

**Aa,** the name given to numerous small streams in Germany, Switzerland, France, Baltic States, and Holland.

**Aachen.** (See **Aix-la-Chapelle.**)

**Aafjord,** Fiord 40 m. N. of Trondhjem, Norway.

**Aal,** *dist.* Hallingdal, Norway, p. 4,150. [71,613.

**Aalborg,** *c.* and *spt.* in Jutland, *prov.* Denmark, p.

**Aalbuc,** *mtn.* range in Wurtemberg, S.W. Germany.

**Aalen,** walled *t.* in Wurtemberg, p. 11,982.

**Aalesund,** *spt.* Norway, centre of herring fishery, p. 11,750.

**Aalsmeer,** *vil.* nr. Amsterdam, p. 5,000.

**Aalten,** *vil.* Netherlands, *prov.* Gelderland, p. 7,100.

**Aar,** *R.* in Switzerland, flows through the Brientz and Thun lakes, and thence into the Rhine.

**Aarau,** *t.* Switzerland, *cap.* canton Aargau, p.

**Aarburg,** *t.* on R. Aar, p. 2,150. [10,701.

**Aargau,** *canton* in N. Switzerland; area, 542 sq. m.; has extensive vineyards, p. 240,776.

**Aarhuus,** *c.* and principal *spt.* on E. coast of Jutland, Denmark; famous Gothic cathedral, p. 74,256.

**Aarlanderveen,** *t.* in S. Holland, p. 3,100.

**Aarmuhle,** *health resort,* canton Bern, Switzerland, p. 2,550.

**Abaco,** Great and Little, two of the Bahama Islands, the greater isl. (sometimes called Lucaya) has an area of 1,600 sq. m., p. 3,993; Little Abaco, lying to the N.W., is 28 miles long.

**Abadeh,** *t.* in Persia, p. 4,750.

**Abai,** *t.* and *harbour* on N.W. coast of Borneo; also *L.* and *R.* in Abyssinia.

**Abaite,** *R.* in Brazil, flowing in R. San Francisco.

**Abakan,** *R.* in Siberia, affluent of the Yenisei, from the Altai mtns.; also a fortified town on the R., p. 2,100.

**Abancay,** *t.* in Apurimac, Peru, in the silver mine dist., p. 6,550.

**Abano,** *t.* in N. Italy, prov. Padua, sulphur waters and mud baths, p. 4,800.

**Abar,** *mtns.* in Assam.—N.E. India.

**Abari,** *R.* in British Guiana.

**Abatamagomaw,** *L.* in N.W. Territory, Canada.

**Abazai,** fortified *vil.* N.W. India, on Swat R.

**Abba Yared,** *mtn.* in Abyssinia, one of the Samen range, 14,918 ft. high.

**Abbadia San Salvadore,** *t.* in N. Italy, p. 3,550.

**Abbazia,** *t.* and health resort on the Gulf of Fiume, Istria, Italy, p. 2,350.

**Abbeokuta,** *t.* in W. Africa, 50 m. north of Lagos, p. 160,000.

**Abbeville,** mftg. *c.* in N. France, on the R. Somme. Has large factories for the manufacture of black cloths, velvets cottons, linens, serges, hosiery, etc., station on the Northern Railway, and connected with Paris and Belgium by canals, p. 22,000.

**Abbeyfeale,** *par.* and *t.* Limerick, I.F.S., p. 947.

**Abbeygreen,** *vil.* in co. Lanark, Scotland, on the Nethan; sometimes called Lesmahagow, p. 2,250. [1,370.

**Abbeyleix,** *par.* and *t.* in Queen's co., I.F.S., p.

**Abbiategrasso,** *t.* N. Italy, prov. Milan. Has silk factories, p. 12,250.

**Abbitibbi,** *L.* and *R.* in N.W. Canada.

**Abbotabad,** *t.* India, headquarters of the Hazara dist. of the Punjab, p. 5,500.

**Abbotsford,** residence built by Sir Walter Scott, on the S. bank of the Tweed, about 3 m. from Melrose, co. Roxburgh.

**Abbot's-Langley,** *vil.* and *par.* in Herts, birthplace of Nicholas Breakspeare (Adrian IV.), the only Englishman ever raised to the Papacy.

**Abb's Head,** a promontory at the entrance to the Firth of Forth. [p. 500,000.

**Abda,** *prov.* W. Africa, on the Morocco Coast.

**Aberaeron,** *urb. dist., spt.* Cardigan, Wales, p. *1,155.*

**Aberavon,** *mun. bor.* in Glamorganshire, Wales; on R. Avon, 3 m. E. of Swansea; large coal and iron industries. Has a good harbour, Port Talbot. As one of the Swansea dist. boroughs returns a member to Parlt., p. 15,370.

**Abercarn,** *urb. dist.,* mining *t.* co. Monmouth. Ten m. N.W. of Newport, p. *20,554.*

**Aberchirder,** *par.* of Scotland, co. Banff, p. *858.*

**Aberconway**—(*See* **Conway.**)

**Abercorn,** *par.* in co. Linlithgow, Scotland, on the Forth. Roman wall built by Antoninus began here, and extended to Kirkpatrick on the Clyde, p. *775.*

**Aberdare,** *urb. dist.,* in Glamorganshire, Wales, on the R. Cynon, 4 m. S.W. of Merthyr Tydvil; valuable coal and iron industries; p. *43,751.*

**Aberdaron,** *par.* and *vil.* in Carnarvonshire, Wales, p. 3,400.

**Aberdeen,** *royal burgh* and *c.* of co. Aberdeen. Chief *spt.* N. of Scotland, "the granite city," famous for its University and fine buildings. Has large textile industries, p. *167,259.* Aberdeen *co.*, p. *300,430.*

**Aberdeen,** *t.* S. Dakota, U.S.A., p. 14,537; also *t.* of Washington, U.S.A., p. 15,337.

**Aberdeen,** *township* on Hunter R., 159 m. N. of Sydney, N.S.W.

**Aberdour.** There are two *pars.* and *vils.* of this name in Scotland, one in co. Aberdeen, the other in co. Fife. The latter is in repute for its seabathing, p. *1,108* and *2,055* resp.
**Aberdovey,** *spt.*, Merionethshire, Wales, p. 1,560.
**Aberfeldy,** *t.* in Perthshire, famed for its "birks," p. *1,505.*
**Aberffraw,** *par.* and *vil.* nr. Holyhead, Wales, p. 920.
**Aberford,** *vil.* nr. Tadcaster, p. 600.
**Aberfoyle,** *par.* and *ry. stn.* in Perthshire, p. *1,014.*
**Abergavenny,** *mun. bor. t.* in Monmouthshire on the R. Usk at a point where it is joined by a stream called the Gavenny, p. *8,608.*
**Abergeldie,** the name of a royal residence on Deeside, in Scotland.
**Abergele, and Pensarn,** *urb. dist.*, small watering-place in co. Denbigh, Wales, p. *2,651.*
**Aberlour,** *par.* and *ry. stn* , co. Banff, p. *2,327.*
**Abernethy,** *t.* in Perthshire on the right bank of the Tay, 7 m. below Perth; once the cap. of the Pictish kings, p. *595.*
**Abernethy,** *par.* in co. Inverness, Scotland, p. *1,123.*
**Abersychan,** *urb. dist.* Monmouth, nr. Pontypool, p. *25,627.*
**Abert,** *L.* in Oregon, U.S.A.
**Abertham,** *t.* Bohemia, p. 3,000.
**Abertillery,** *urb. dist.*, Monmouthshire, 16 m. N.N.W. of Newport, p. *31,799.*
**Aberystruth,** colliery and manufacturing *par.* of Monmouthshire, p. 15,600.
**Aberystwith,** *mun. bor.*, *mkt.* and *spt. t.* in Cardiganshire, Wales, municipal and parlv. bor., situated about the centre of the coast-line of Cardigan Bay, p. *9,474.*
**Abeshr,** *t.* Fr. Eq. Africa, cap. of Wadai, p. 10,000.
**Abingdon,** *mun. bor.* in Berkshire, on R. Thames, 7 m. S. of Oxford, p. *7,240.*
**Abington,** *vil.* in Scotland, co. Lanark. There are places of the same name in Northamptonshire and in Cambridgeshire (Great and Little Abington), and in cos. Limerick and Tipperary, Ireland; as well as in Plymouth co., Massachusetts and Washington co., Virginia, U.S.A.
**Abo,** *spt.* formerly capital of Republic of Finland; industries: timber, pitch, and tar, p. 59,914.
**Aboh,** *t.* on R. Niger, Africa, 80 m. from the est.; p. 8,550.
**Abomey,** *cap.* of Dahomey, West Africa, p. 60,000.
**Aboukir,** *t.* and *bay* on the coast of Egypt. Lord Nelson defeated the French fleet here in 1798.
**Aboyne and Glentanner,** *par.*, *vil.* and *ry. stn.* nr. Ballater, Aberdeenshire, p. *1,552.*
**Abraham, Plains of,** nr. Quebec; Wolfe's victory, 1759.
**Abram,** *urb. dist.* Lancs, Eng., p. *6,660.*
**Abrantes,** *t.* in Estremadura, Portugal, on the Tagus, p. 8,000. Here the French were gallantly resisted by Wellington in 1809.
**Abrudbanya,** *t.* in Rumania, famous for its gold mines, p. 5,020.
**Abruzzi and Molise,** a *dep.* of Italy on the Adriatic, including the provs. of Aquila, Teramo, Chieti, and Campobasso; p. 1,480,748.
**Abu,** famous *min. resort*, 5,650 ft. alt. in Rajputana, N. India. [Sea, p. 6,540.
**Abu-Arish,** *t.* in Arabia, on the borders of Red
**Abu-Klea,** *vil.* on R. Nile, in Sudan, British victory over Mahdists, Jan. 17th, 1885.
**Abury.** (*See* **Avebury.**)
**Abydos,** a ruined *c.* in upper Egypt, celebrated for its temple of Osiris; also an ancient castle *t.* in Asia Minor on the Dardanelles, which desperately resisted Philip of Macedon, and famous for the love story of Hero and Leander.
**Abyssinia,** a powerful *country* in Eastern Africa; part of ancient Ethiopia. Cap. Addis Ababa. The total area of the Abyssinian Empire, as reconstructed under the Emperor Menelik, is 320,000 sq. m., p. 9,000,000.
**Acadia,** or **Acadie,** old French name of Nova Scotia and New Brunswick.
**Acajutla,** *spt.* San Salvador, Central America.
**Acapulco,** *spt.* on Pacific coast, Mexico, p. 6,250.
**Acari,** *t.* and *R.* in Peru, p. of town 6,020.
**Acarnania, with Ætolia,** *prov.* of Greece, cap. Missolonghi, p. 195,571.
**Accadia,** *t.* in prov. of Avellino, S. Italy, p. 5,000.
**Accettura,** *t.* in Naples, nr. Potenza, p. 4,800.
**Accra,** *t.* and British settlement on the Gold Coast, W. Africa, seat of government of the Colony, p. 20,000.
**Accrington,** *mun. bor.* mftg. *t.* in Lancashire, 22 m. N. of Manchester, p. *42,973.*
**Acerra,** a very ancient *t.* in S. Italy, 10 m. N.E. of Naples, p. 14,500. [Patras.
**Achaia,** with Elis, *prov.* Greece, p. 271,672; chief *t.*
**Achoen,** *t.* and *state* N.W. of Sumatra, E. Indies; p. 36,000 (of town) and of State about 736,348.
**Acheron,** *R.* and post *t.*, 75 m. N.E. of Melbourne, Victoria.
**Achill,** *isl.* and *Head* off the W. Coast of I.F.S., co. Mayo, p. 4,670; Head, 2,192 ft. above sea level.
**Achiras,** *t.* Argentina, 300 miles N.W. Buenos Ayres in silver mining dist.
**Achonry,** *par.* in co. Sligo, I.F.S., p. 12,520.
**Achray Loch,** *L.* and small *t.* in Perthshire, Scotland, 17 m. N.W. of Stirling.
**Achtyrka,** *t.* nr. Kharkov, U.S.S.R., p. 25,000.
**Aci Reale,** *spt.* in Sicily, seat of See, at foot of Mt. Etna, p. 36,000.
**Acklin,** *isl.* Bahamas, W. Indies, p. 1,811.
**Ackworth,** *par.* and *ry. stn.* nr. Pontefract, Yorks. p. 4,220.
**Aconcagua,** *mtn.* one of the Andes of Chili, S. America, alt. 23,910 ft. Also a *prov.* of Chili, p. 458,189, cap. San Felipe.
**Aconquija,** *mtn. range* in Argentina between Catamarca and Tucuman.
**Acquaviva,** *t.* in S. Italy, prov. of Bari, p. 8,080.
**Acqui,** an ancient walled *t.* in N. Italy, prov. Alessandria, p. 14,000, famous for its cathedral.
**Acre,** *c.* and *spt.* of Syria, key of Palestine, famous for its many sieges during and since the Crusades, p. 11,500, principally Moslems.
**Acton,** *co. bur.*, Middlesex, Eng., residential suburb of London, p. *70,523.*
**Actopan,** *t.*, *R.* and *dist.* in Mexico, state of Hidalgo, p. 12,000.
**Adalia,** *spt.* and very ancient *t.* on S. coast of Asia Minor, p. 30,000.
**Adamawa,** *country* of W. Africa, divided between Brit. Northern Nigeria and the Cameroons; area 70,000 sq. m.
**Adam Bay,** N.W. coast of Australia.
**Adams,** mftg. *t.* in Mass , U.S.A., p. 12,697.
**Adam's Island,** one of the Marquesas group, just below the equator in the Pacific.
**Adam's Peak,** conical sacred *mtn.* in S. Ceylon, alt. 7,420 ft.
**Adamson Peak,** *mtn.* in Southern Tasmania.
**Adam's Run,** *t.* in Colleton co., S. Carolina, p. 5,000.
**Adamstown,** *vil.*, Northumberland co., N.S.W., 80 m. N. of Sydney.
**Adana,** *vilayet* in Asiatic Turkey, including the ancient Cilicia, p. 422,400: cap. Adana, p. 31,000.
**Adda,** *R.* in N. Italy, affluent of the Po.
**Addanki,** *t.* in India, Madras Pres., p. 6,550.
**Addingham,** *vil.* W. Riding of Yorks, p. 2,010.
**Addington,** a *co.* in the prov. of Ontario, Canada. Several parishes in England thus named; one, nr. Croydon, was seat of an Archi-episcopal palace.
**Addis Ababa,** *cap.* of Abyssinia, in Shoa; alt. 9,850 ft.; p. 79,000.
**Adeel, Lough,** in co. Westmeath, I.F.S.
**Adelaide,** *cap.* of S. Australia, on Torrens R., named in honour of Queen of William IV.; p. with suburbs 255,318. Possesses a fine University.
**Adelsburg,** *t.* in Carniola, 20 m. N.E. of Trieste; famous for its extensive grotto and stalactite cavern, p. 3,750.
**Aden** (with Perim), small *isl.* and important British coaling station on S. coast of Arabia at entrance of Red Sea, p. 54,923.
**Aderno,** *t.* at foot of Etna, Sicily, p. 26,000.
**Adige,** *R.* in W. Italy, enters Adriatic N. of Po.
**Adirondacks,** *mts.* in New York State. Highest peak, Mt. Marcy, 5,402 ft. Here rises the R. Hudson.
**Adjai,** *R.* in Bengal, India, joins the Bhagirathi.
**Adlington,** *urb. dist.*, nr. Chorley, Lancs, p. *4,179.*
**Admiralty G.,** N.W. of Western Australia.
**Admiralty Inlet,** Washington State, U.S.A., opening to Puget Sound.
**Admiralty Isls.,** S. Pacific Ocean, N.E. of New Guinea, comprise some 40 small islands, abound in coconut trees, p. 4,000.
**Ado,** *t.* on Slave Coast, W. Africa, p. 31,000.
**Adoni,** *t.* Madras, India, p. 26,500.
**Adony,** *t.* in Hungary, on R. Danube, p. 4,505.

**Adour**, *R.*, 180 m., in S.W. France, rises in Pyrenees, and after a course of 200 m. enters B. of Biscay below Bayonne.

**Adowa**, or **Adua**, *t.* Tigré, Abyssinia, alt. 6,000 ft.; 145 m. N.E. Gondar. Here the Italians were decisively defeated in 1896 by King Menelik, p. 5,000.

**Adra**, *spt. t.* in Spain on the Mediterranean, p. 12,500.

**Adramyti**, *spt.* of Asia Minor, nr. Smyrna; exports olives, wool, etc., p. about 5,000.

**Adria**, *spt.* Rovigno, Italy; formerly on coast, now 14 m. inland. An old Etruscan c., p. 16,550.

**Adrian**, *c.* in Michigan, U.S.A., 73 m. W. of Detroit, p. 13,500.

**Adrianople**, *c.* Turkey in Europe, on the left bank of the Maritza, greatly developed by Hadrian, in 125. From 1366 to 1453 residence of the Sultans, p. of prov. 610,000, of city 70,000.

**Adriatic Sea** (area 52,000 sq. m., length 450 m.), a branch of the Mediterranean, between Italy and the Balkan Peninsula. Forms the G. of Venice on the N.; chief trading ports, Venice, Trieste, and Ancona on the N., and Brindisi on the S.

**Adrigool**, *par.*, co. Galway, nr. Dunmore, I F.S., p. 2,015.

**Adullam**, *dist.*, Palestine, S.E. Jerusalem. Here was formerly the Canaanite city and cave which furnished David with his hiding place from King Saul.

**Adur**, *R.*, 20 m. in Sussex, flowing into English Channel.

**Adventure, B.**, on the E. Coast of Bruné Isl., nr. the S.E. coast of Tasmania.

**Advocate Harbour**, *spt.*, Nova Scotia, on Minas Channel.

**Adwalton**, *hamlet* 5 m. S.W. of Leeds, W.R. Yorks. On Adwalton Moor, Fairfax was defeated by the Royalist forces in 1643.

**Adwick le Street**, *urb. dist.*, W.R. Yorks, Eng., p. *20,257*.

**Aegades**, group of rocky *isls.* off W. coast of Sicily, chief *t.* Favignana, on isl. of that name, p. 5,250.

**Aegean Sea**, a branch of the Mediterranean, studded with isls., between Greece and Asia Minor, called the Grecian Archipelago.

**Aegina**, *isl.* of Greece, in G. of same name, p. 5,500.

**Aeroe**, *isl.* in the Baltic, off Denmark, p. 11,750.

**Aerschot**, *t.* in Belgium, prov. S. Brabant, p. 4,850.

**Ætolia.** (*See* **Acarnania.**)

**Afghanistan**, mountainous *country* of Asia, between Persia and India. Important as "buffer" state between British and Russ. dominions. Chief towns, Kabul, Herat, and Kandahar. The principal rivers are the Kabul and Helmund, 500 m. N. to S., 600 miles from Herat frontier to Khaibar Pass; 245,000 sq. m.; p. 6,380,500.

**Aflun-Kara-Hissar**, *c.* important trade centre of Asia Minor, p. 20,200.

**Afragola**, mftng. *t.* (straw hats, etc.) of Italy, nr. Naples, p. 20,500.

**Africa**, the second largest *continent*, area 11,500,000 sq. m. The Mediterranean separates it from Europe on the N., the Red Sea and the Indian Ocean lie on the E., the Southern Ocean on the S., and the Atlantic on the W. Adjoins Asia at the Isthmus of Suez. Nearly the whole of this continent has been partitioned among various European Powers. England is the dominant power in the S., centre, and E., and France in the N. and W., p. estimated about 200,000,000. The only independent states in Africa are Abyssinia and Morocco. All kinds of big game except the tiger are found in Africa.

**Agades**, *cap.* of Air or Asben oasis, Sahara, p. 18,000.

**Agadir**, *spt.* S. coast of Morocco. It was here that a German war cruiser anchored in 1911 as a protest against French intervention, p. 1,500.

**Agar**, *t.* state of Gwallor, India, 41 m. N.E. of Ujjain, p. 28,000.

**Agarpara**, *t.* nr. Calcutta in India, called also Barrackpur, p. 27,000.

**Agassiz**, *vil.* and *rly. stn.* on Central Pacific Line, Canada, 380 m. W. of Donald.

**Agde**, *spt. t.* in France, dept. Hérault, p. 11,000.

**Agden**, two separate parishes in Cheshire, one nr. Knutsford, the other nr. Malpas.

**Agen**, *t.* on R. Garonne, cap. dept. Lot-et-Garonne, 85 m. from Bordeaux, p. 23,000.

**Agerœ**, a Norwegian *isl.* of the West Coast, prov. Trondhjem, p. 4,800.

**Aghabog** *par.* in co. Monaghan, N. Ireland, p. 5,020.

**Aghery, Lough**, in co. Down, N. Ireland.

**Aghrim**, or **Aughrim**, *par.* co. Galway, I.F.S.; site of battle between troops of James II. and William III., 1601.

**Agincourt**, *vil.* in the dept. of Pas-de-Calais, France, famed for battle in 1415 between English, led by Henry V., and French under d'Albert.

**Agira**, or **San Filippo d'Agira**, *t.* Sicily, p. 18,000.

**Agnes, St.**, *par.* nr. Truro, co. Cornwall, once famous for its "Holy" well, p. 3,900.

**Agnone**, *t.* in S. Italy, prov. Campobasso, p. 10,550.

**Agra**, *c.* on Jumna R. in United Provs. of Agra and Oudh, India, 115 m. S.S.E. of Delhi, formerly cap. of Mogul Empire, p. 185,946.

**Agram**, or **Zagreb**, *c.*, cap. of Croatia, Jugo-Slavia, on R. Save, has important manufactures, and a University; p. 80,000.

**Aguadilla**, *spt.* in Porto Rico, p. 8,000.

**Aguas Calientes**, *c.* and State in Mexico, 6,000 ft. above sea, famous for hot springs, p. (of city) 56,000.

**Aguilas**, *t.* and port of Spain on the Mediterranean, p. 13,250.

**Agulhas**, *c.* 100 m. E. of Cape of Good Hope, [most southerly pt. of Africa.

**Ahmedabad**, *c.* and *dist*, Gujarat, India, 290 m. from Bombay, p. (of c.) 274,202.

**Ahmednagar**, or **Dowlatabad**, *c.* in Deccan, 120 m. E. of Bombay; large trade in cotton and silk goods, p. 45,500.

**Ahmedpur**, *t.* in Punjab, India, p. 31,000.

**Ahmedpur-Barra**, *t.* in Bahawalpur, N. India, p. 36,000.

**Aidin**, or **Guzel-Hissar**, *t* in Asia Minor, 81 m. from Smyrna. Exports raisins, figs, etc , p. 38,000.

**Aidone**, *t.* in Sicily, prov. Catania, p. 8,250.

**Aiguillon**, *t.* in France, dep. Lot-et-Garonne, p. 2,500.

**Aigun**, *t.* of Manchuria, China, on bank of Amur R.; centre of "Boxer" rising in 1900, p. 21,926.

**Ailsa Craig**, rocky *isl.* off Ayrshire coast, alt. 1,114 ft.

**Ain**, *R.* and dept. of E. France, mainly agricultural, p. 315,757.

**Ainsty**, *dist.* W.R. Yorks.

**Aintab**, *t.* on N. frontier of Syria, military centre in the Middle Ages, many Armenians massacred there in 1895, p. 70,000.

**Aintree**, a suburban *dist.* of Liverpool with a well-known racecourse.

**Air**, or **Asben**, *oasis* in Sudan, cap. Agades.

**Airdrie**, *mun. bor.*, mftg. *t.* in N.E. Lanark, 10 m. E. of Glasgow, p. *29,954*.

**Airds Moss**, in S. Ayrshire, battle of Covenanters fought on the moor, 1680.

**Aire** *R.* (70 m.), in W.R. Yorks, trib. of Ouse.

**Aire**, two *t.'s* in France, one, episcopal, dep. Landes, p. 5,050; the other, fortified dep. Pas-de Calais, p. 9,750. [Earls of Airlie, p. *687*.

**Airlie**, *t.* in Forfar, Scotland, castled seat of the

**Airth**, *par.* in co. Stirling, on R. Forth, p. *2,226*.

**Aisne**, (150 m.), *R.* in N.E. France, trib. of Oise; also sugar-growing and agr. dep., p. 421,515.

**Aix**, mftg. *t.*, France, 17 m. N. of Marseilles, p. 31,000.

**Aix-la-Chapelle** (**Aachen**), cathedral *c.* Rhen. Prussia, 44 m. from Cologne, celebrated for its baths, p. 145,746.

**Aix-les-Bains**, health resort, Savoy, France, residential, p. 5,500. [1769, p. 22,000.

**Ajaccio**, *cap.* of Corsica, birthplace of Napoleon,

**Ajmer-Merwara**, *c.* and *prov.* in Rajputana, India, p. (of c.) 86,500; (of prov.) 495,899.

**Ajuruoca**, *t.* in Brazil, prov. Minas Geraes, p. 18,750.

**Akabah**, *harb.* and *G.* at N.E. of Red Sea.

**Akerman**, *t.* Bessarabia, Rumania, on Black Sea, at mouth of Dniester, p. 30,000, or, including suburbs, 45,000.

**Akhaltsykh**, fortified *t.* Georgia, Transcaucasia, p. 15,000, mainly Armenian.

**Ak-Hissar**, *t.* in Asia Minor, 50 m. N.E. Smyrna, p. 13,500.

**Akron**, mftg. *c.* Ohio, cap. Summit co., p. 257,000.

**Ak-Shehr**, *t.* in Asia Minor (Philomelion) p. 8,000.

**Ak-Su**, *t.* and R. in Sin-Kiang, China. The town is walled, and forms an important trading centre on the caravan route, p. 30,000. The R. Ak-Su, rising in the Tian-shan mtns., runs into the Tarim.

**Akyab**, *spt.* Burma, at the mouth of the Kuladan R., p. 44,500.
**Alabama**, *state*, U.S.A., cap. Montgomery, chief port, Mobile, minerals, cotton, sugar, 51,279 sq. m., p. 2,550,000.
**Alabama**, *R.* in N. America, length over 600 m.; Montgomery, the State cap. of Alabama, is situated on its banks. Navigable for half its length.
**Alagoas**, maritime *prov.* Brazil, p. 990,278, *anc.* c. is also named Alagoas, p. 5,000; present c. Macayo or Maceio, *q.v.*
**Alais**, *t.* in Cevennes dist., dep. of Gard, France, extensively engaged in sericulture, p. 26,500.
**Alajuela**, *c.* and *prov.* of Costa Rica, p. (of cap.) 8,000.
**Alameda**, *c.* Cal, U.S.A., p. 35,050; also an old Andalusian t. in Spain, p. 4,500.
**Aland Isles**, a group belonging to Finland at the entrance of the Gulf of Bothnia, p. of group, 27,351.
**Ala-Shehr**, *t.* in Asia Minor, anciently called Philadelphia, p. 22,000.
**Alaska**, U.S.A., *terr.*, 590,884 sq. m.; bought from Russia in 1867; chief settlement Sitka, largest t. Juneau on U.S. route to Klondike, p. 55,036.
**Alassio**, *spt.* in Genoa, N. Italy, p. 5,300.
**Ala-tau**, *mtn.* ranges in Asiatic Russia.
**Alatri**, *t.* in Italy, prov. Rome, p. 15,500.
**Alatyr**, *t.* on the Sura (a trib. of the Volga) in U.S.S.R., p. 12,750.
**Alava**, a Basque *prov.* in N. Spain, chief t. Vitoria, p. 96,922.
**Alba**, *t.* in prov. of Cuneo, N. Italy, p. 12,750; also a t. in Aquila, Italy, p. 7,250.
**Albacete**, *t.* and *prov.* in S.E. Spain, p. (of t.) 22,500, (of prov.) 288,871.
**Albania**, independent country, formerly Turkey, on W. side of Balkan Pen.; warlike, half-civilised people, 11,000 sq. m., p. 1,400,000.
**Albano**, *c.* nr. Rome, Italy, has saline springs and mud baths.
**Albany**, State *cap.* of New York, U.S.A., situated on R. Hudson, p. 128,000, also c. Oregon, U.S.A., p. 5,400; also t. Georgia, U.S.A.; also R. (320 m.) N.W. Canada, falls into James Bay; also E. div. of Cape of Good Hope, S. Africa; also spt. t. in West Australia, p. 3,980.
**Albay**, *t.* Luzon, Philippine Isls., p. 43,000.
**Albemarle Isle**, the largest of the Galapagos in the Pacific Ocean; alt. summit, 5,020 above sea-level.
**Albemarle Sound** (60 m.), inlet, N. Carolina coast.
**Albert** (200 m.), *R.* in N. Queensland.
**Alberta** (255,285 sq. m.), *prov.* in N.W. Canada sep. from Brit. Col. by Rocky Mtns.; p. 727,492.
**Albert Edward Nyanza**, one of the Nile basin lakes of Equatorial Africa. Drained by Semlike R. Length 50 m., width 30 m., alt. 3,200 ft. True position made known by Stanley, 1889.
**Albert Lea**, *c.* Freeborn co., Minnesota, U.S.A., rwy. cent., p. 10,200.
**Albert Nyanza**, another great reservoir of the White Nile, extreme length 100 m., genl. breadth 20 m., alt. 2,100 ft. Greater part of shores of this L. fall to Uganda Protectorate, Kenya Col.
**Alberton** and **Queenstown**, *suburb* of Adelaide, S. Australia.
**Albi**, *cap.* of Tarn dep., France, p. 22,000.
**Albion**, *t.* in Michigan, U.S.A., p. 8,500.
**Albox**, *t.* Spain, prov. Almeria, p. 11,000.
**Albuera**, *vil.* nr. Badajos, in Estremadura, Spain, French def. by Brit. 1811.
**Albufeira**, *spt.* Portugal, prov. Algarve, p. 5,050.
**Albunol**, *t.* in S. Spain, 40 m. S.E. Granada, p. 10,250.
**Albuquerque**, *t.* in Spain, 25 m. N. of Badajoz, p. 8,500; also *t.* of New Mexico, U.S.A., on Rio Grande R., p. 27,000.
**Albury**, *t.* on Murray R., N.S.W., p. 7,000; there are also English parishes of this name, in the co.'s of Surrey, Oxford, and Hertford.
**Alcala de Guadaira**, *t.* nr. Seville, Spain, p. 16,500.
**Alcala de Henares**, *t.* in Spain, 20 m. E. of Madrid, p. 14,150.
**Alcala de los Gazules**, *t.* in Spain, 32 m. E. by S. [of Cadiz, p. 11,200.
**Alcala la Real**, *t.* in Andalusia, Spain, p. 16,500.
**Alcamo**, *t.* in Sicily, 50 m. S. of Palermo. Originally a Saracenic *t.* producing wines, p. 52,100.
**Alcantara**, fortified *t.* in Spain on the Tagus, p. 4,000.
**Alcazar de San Juan**, *t.* nr. Ciudad Real, Spain, p. 12,150.
**Alcester**, *t.* in Warwickshire, Eng. Needle and fish-hook mfcrs., p. 2,230.
**Alcira**, *t.* in Spain, 20 m. S. of Valencia, p. 21,000.
**Alcoy**, *t.* 25 m. N. of Alicante, Spain, p. 33,896.
**Aldan**, navigable *R.* (300 m.) of Siberia, and mtn. range surrounding sea of Okotsk, average alt. 4,000 ft.
**Aldborough**, *vil.* in W.R. Yorks, nr. Boroughbridge, the Isurium of the Romans, also par. in Holderness, E.R. Yorks; also township in N.R. Yorks, nr. Richmond; also par. nr. Aylsham, co. Norfolk.
**Aldeburgh**, *mun. bor.*, wat. place in Suffolk, 30 m. from Ipswich, p. *2,480*.
**Alderley Edge**, *urb. dist.*, Cheshire, Eng., p. *3,141*.
**Alderney**, most N. of the Channel Islands, 8 m. in circumference, 55 m. off English coast, and 10 m. W. of C. La Hogue, p. 2,600.
**Aldershot**, *urb. dist.*, Hants. prin. milt. camp in England, p. *34,231*.
**Aldston Moor**, place in Cumberland on Northumberland border.
**Alemtejo**, maritime *prov.* of Portugal, 9,219 sq. m.; p. 478,584.
**Alençon**, *cap.* Orne dep., France, on R. Garthe, Famous for its lace, p. 20,100.
**Aleppi**, *spt.* S. India, state of Travancore, p. 12,000.
**Aleppo**, *c.* chief trade centre in N. Syria. Earthquake in 1882 killed 20,00 persons, p. 250,000.
**Alessandria**, *c.* in N. Italy; cap. of the prov. of the same name on the Tanaro, 46 m. E. of Turin, near Marengo; Napoleon's victory in 1800 over Austrians; p. 78,159.
**Aleutian Isls.**, chain of isles between C. Alaska and Kamchatka. The Fox Islands form a portion.
**Alexandra**, mining *t.* on Goulburn R., Victoria, 90 m. N.E. of Melbourne.
**Alexandra Nile**, *R.* of Equatorial Africa, affluent of Victoria Nyanza, one of the chief feeders of the Nile, traverses a lake of the same name.
**Alexandretta**, prin. *port* of the Aleppo vilayet, p. 8,000.
**Alexandria**, chief *port* of Egypt. The city was founded by Alexander the Great in 332 B.C. Forts destroyed by English Fleet in 1882, p. 444,617; also *t.* Scotland, Dumbartonshire; also in U.S.A. *c.* on R. Potomac, Virginia, p. 24,500.
**Alexandropol**, *t.* in Erivan, Transcaucasia, p. 31,000.
**Alexandrov**, *t.* in Vladimir, U.S.S.R., p. 7,250.
**Alexandrovsk**, fortified *t.* on the Dnieper, Ukraine, p. 16,750.
**Alford**, *urb. dist.*, Lincolnshire, Eng., p. *2,227*; also *par.* Aberdeenshire, Scotland, p. *1,336*.
**Alfortville**, *t.* in France, dep. Seine, p. 11,400.
**Alfred Port**, in C. of Good Hope, 28 m. S.E. of Grahamstown.
**Alfreton**, *urb. dist.*, Derbyshire, Eng., p. *21,232*.
**Algarve**, most southerly *prov.* of Portugal, area 1,937 sq. m., p. 274,122.
**Algeciras**, *t.* in Spain, prov. Cadiz, on Gibraltar Bay, p. 15,500.
**Algeria**, N. African *prov.* of France, bounded on the N. by the Mediterranean, W. by Morocco, S. by the Sahara, and E. by Tunis; area 222,580 sq. m., p. 5,563,828.
**Algiers**, *cap.* and naval *pt.* of Algeria, strongly fortified; great trade centre, p. 206,595.
**Algoa Bay**, about 425 m. E. of Cape of Good Hope, Port Elizabeth, chief seaport.
**Algoma**, *dist.* Ontario on L. Superior and Huron.
**Alhama**, *c.* in the *prov.* of Granada, Spain; noted for its hot springs, p. 8,600. Also *t.* in the prov. of Murcia, p. 8,450.
**Alhambra**, famous Moorish Palace and citadel near Granada, Spain.
**Alicante**, *t.* and *prov.* E. Spain, noted for its wine, fruits, and minerals; p. (prov.) 497,001, (of t.) 55,730.
**Aligarh**, *dist.* Meerut, India, between Ganges and Jumna, p. 1,203,047. Chf. c. Aligarh (also known as Koil), 876 m. from Calcutta, p. 64,825.
**Alijos**, *Isls.* in the Pacific, W. of Lower Carolina.
**Alima**, *R.*, Central Africa, trib. of Congo, discovered by Brazza, 1878.
**Aliwal, North and South**, *tns.* of Cape of G. Hope. N. Aliwal is on the Orange R., and S. Aliwal on Mossel Bay, p. of Aliwal N. (whites), *2,675*.
**Aliwal**, *t.* in Punjab, India, Brit. victory over Sikhs, 1846.

**Alkmaar,** *t.* on N. Holland Canal, 20 m. from Amsterdam, p. 24,097.

**Alkrington,** *vil.* 5 m. N.E. of Manchester, Eng.

**Allahabad,** *cap.* of United Provs., India, 130 m. from Delhi, 560 m. from Calcutta, p. 155,970. Allahabad dist. contains close upon 1¼ million souls, and covers an area of 2,852 sq. m.; entire division comprises 17,265 sq. m., with a total p. of nearly 6 millions.

**Allan, Bridge of,** *vil.* in co. Perth, Scotland.

**Alleghany,** *R.*, U.S.A., joins the Ohio R., Pittsburg, Pa., 350 m. long.

**Alleghany, or Allegheny,** iron and steel mfg. *t.* of Pennsylvania, U.S.A., on Alleghany R., opposite Pittsburg (*q.v.*).

**Alleghany, or Appalachian Mtns.,** a series of parallel ranges between Atlantic and Mississippi. Highest peaks, Black Dome, 6,707 ft., and Mt. Washington, 6,288 ft.

**Allen, Bog of,** a group of peat morasses in Kildare and Queen's co.'s, I.F.S., 372 sq. m. in extent. Isl. of Allen is a village 3½ m. N. of Kildare, and Allen Lough, a *L.* with an area of 8,000 acres, in co. Leitrim, one of the sources of the R. Shannon.

**Allendale,** min. *t.* Northumberland, Eng., p. 2,250.

**Allenstein,** *t.* on the Alle R. in E. Prussia, 63 m. S. of Königsberg, p. 24,750.

**Allentown,** *t.* on Lehigh R., Pennsylvania, U.S.A., p. 92,600.

**Allequash,** *R.* in Northern Maine, U.S.A., branch of the St. John.

**Aller,** *t.* in Spain, prov. Oviedo, p. 12,150.

**Alliance,** *t.*, Ohio, U.S.A., p. 23,500.

**Allier,** *dep.* France, centrally situated, occupied by mining industry, a. 2,848 sq. m., p. 370,950.

**Allier,** (230 m.), *R.* in Cent. France, trib. of Loire.

**Alligator Swamp,** marsh in N. Carolina, U.S.A., area 3,000 sq. m.

**Alloa,** *mfg.* and *spt.* *t.* on R. Forth, Scotland, chief *t.* of Clackmannanshire, p. *18,244*.

**Alloway,** *par.* with ruined kirk, S. Ayrshire, Scotland, made famous by Burns in "Tam o' Shanter."

**All Saints' Bay,** *harbour* on Bahia coast, Brazil.

**Alma,** *R.* in Crimea. Great victory over Russia by Allies, 1854; also villages in S. Australia (nr. Adelaide) and Victoria (nr. Melbourne); also isl. in Saguenay R. Canada.

**Almada,** *t.* on Tagus, opposite Lisbon, founded by English Crusaders, p. 8,150.

**Almaden,** *t.* in Sierra Morena, Spain. The ancient Sisapon, famous for its quicksilver mines, p. 9,200.

**Almagro,** lace mfg. *t.* Spain, 12 m. E. of Ciudad Real, p. 9,150.

**Almansa,** *t.* in Albacete prov., Spain, p. 10,200.

**Almeida,** Portug. fort on Span. frontier, prov. Beira, p. 2,550. Captured by French in 1810 and retaken by Wellington.

**Almendralejo,** *t.* in Spain, prov. Badajos; wine and brandy industry, p. 12,250.

**Almeria,** *t.* and *mt. prov.* of E. Spain; p. (prov.) 387,349, (of town) 49,707.

**Almodovar,** *t.* prov. of Ciudad Real, Spain, p. 13,750; also a small Spanish *t.* on the River Guadalquivir, near Cordova.

**Almond,** *R.* in Scotland, trib. of Tay; also a second Scottish R. falling to the Forth.

**Almondbury,** populous *par.* adjoining Huddersfield, W.R. Yorks, woollen mfg., p. 15,750.

**Almonte,** *stn.* on C. P. Ry., Canada, 35 m. W. of Ottawa.

**Almora,** *t.* in United Provs., India, p. 8,000; Almora dist. is in the Kumaun div. and lies among the mts. between the upper waters of the Ganges and the Gogra, area 5,416 sq. m., p. 470,000.

**Almunecar,** *spt.* in Spain, on Meditern., p. 8,750.

**Alney,** an *isl.* in R. Severn, nr. Gloucester, battle between Canute and Edmund Ironside, 1016.

**Alnmouth,** watering place on Northumbrian coast, midway between Newcastle and Berwick, p. 550.

**Alnwick,** *urb. dist.*, Northumberland, Eng., p. *6,882*.

**Alora,** *t.* in Spain, old prov. of Andalusia, p. 11,200.

**Alost,** *t.* of Belgium, 17 m. S.E. of Ghent, p. 36,160. [11,101.

**Alpena,** *c.* on Thunder Bay, Mich., U.S.A., p.

**Alpes-Basses,** Frontier *dept.* in S.E. France, chief *t.* Digne, p. 91,882. [Basses, p. 89,275.

**Alpes-Hautes,** S.E. *dept.* France, adjoining Alpes-

**Alpes-Maritimes,** S.E. *dept.* France; formerly Nice, ceded by Italy in 1860, chief. *t.* Nice; p. 357,759.

**Alps,** highest *mts.* in Europe; 600 m. long from G. of Genoa to near Vienna; 130 m. broad in Tyrol. The principal peaks are Mont Blanc (15,784 ft.); Mont Rosa (15,217 ft.); and Mont Cervin (14,771 ft.).

**Alps, Australian,** *mtn.* range between E. Victoria and N.S.W.; highest peak, Mt. Townsend, 7,350 ft.

**Alps, Southern,** *mtn.* ridge between Westland and Canterbury, New Zealand.

**Alresford,** *mkt. tn.* in Hants. Eng., p. 2,200.

**Alsace-Lorraine,** *prov.* France, total area, 5,601 sq. m. Taken from France in 1871, retroceded 1919. It is now divided into the deps. of Bas-Rhin (1,848 sq. m. and p. 651,586); Haut-Rhin (1,354 sq. m. and p. 468,943); and Moselle (2,403 sq. m. and p. 589,120).

**Alsager,** *urb. dist.*, Cheshire, Eng., p. *2,852*.

**Alsen,** *isl.* on coast of Denmark, in the Little Belt, area 130 sq. m., p. 25,500.

**Alster,** *R.* in Prussia, it joins the Elbe.

**Alston,** market *t.* in Cumberland, Eng., p. 3090.

**Alstonville,** post *t.* in N.S.W., 367 m. E.N.E. from Sydney.

**Alt** (or **Aluta**), *R.*, an affluent of the Danube, in Hungary (300 m.); also a *R.* in Lancashire, Eng., falling into the Irish Sea.

**Altai,** *mts.* S. boundary of Siberia, from sources of Obi to Pacific, and extending more than 2,500 m. Bieluka Peak, alt. 12,796 ft.

**Altamaah,** *R.* in Georgia, U.S.A., flowing into Atlantic, 130 m.

**Altamont,** the name given to twelve different towns in as many States of the U.S.A.

**Altamura,** *t.* in Bari, Italy, at foot of the Apennines, p. 20,150.

**Altar,** sm. *t.* and *R.* in Mexico, latter flowing into G. of California; also volcano in Eastern Andes of Ecuador, alt. 17,730 ft.

**Altena,** *t.* in Prussia, prov. Westphalia, p. 18,750.

**Altenburg,** *t.*, *cap.* of Saxe-Altenburg, N. Germany, p. 38,150.

**Altenburg,** commune of Prussia on the Rhine, embracing colonies of Krupp's workpeople, incorporated in 1901 with Essen.

**Altofts,** *urb. dist.*, W.R. Yorks, Eng., p. *4,980*.

**Alton,** *c.* Illinois, U.S.A., p. 31,000; also *urb. dist.*, Hants, Eng., p. *6,172*.

**Altona,** *spt.* and commercial *t.* Prussia, on the Elbe, adjoining Hamburg, p. 168,729.

**Altoona,** *c.* Penn., U.S.A., Blair Co., p. 82,100

**Altorf,** *t.* Switzerland, cap. of the canton of Url, on R. Reuss; here William Tell won independence for Switzerland, p. 3,000.

**Altrincham,** *urb. dist.*, Cheshire, Eng., 8 m. S.W. Manchester, p. *21,356*.

**Altvater Mts.,** in Northern Moravia; highest in group, Gross Altvater, alt. 4,850 ft.

**Altwasser,** industl. *t.* Prussia, prov. Silesia, p. 13,000.

**Altyre,** *par.* in Scotland, co. Elgin, in midst of peat morass. [20,100.

**Alt-Zabeze,** iron mfg. *t.* nr. Gleiwitz, Prussia, p.

**Alva,** *par.* and *t.* in Scotland, co. Clackmannan, among the Ochil hills, p. *4,853*.

**Alva,** *par.* in Scotland, co. Banff, beautifully situated on the R. Deveron, nr. the lofty hill of Alva, p. *1,101*.

**Alvaston and Boulton,** *urb. dist.*, Derby, Eng., p. *3,280*.

**Alverstoke,** *par.* Hants, Eng., including the town of Gosport (*q.v.*). [Yorks.

**Alverthorpe,** populous suburb of Wakefield, W.R.

**Alves,** *par* in Scotland, nr. Elgin, p. *888*.

**Alwar,** native state in India in Rajputana agency, area 3,141 sq. m., p. 708,982; cap. (same name), p. 44,862.

**Alyth,** *par.* and mftg. *t.* in Scotland, co. Perth, p. *2,629*. [m. long.

**Amadeus,** large salt *L.* in W. of S. Australia, 150

**Amakusa,** *isl.* of Japan, prov. Higo, producing kaolin.

**Amalfi,** *t.* of Italy, prov. Salerno, p. 7,500.

**Amara,** *t.* on the Tigris, Iraq., p. 10,000.

**Amarapura,** formerly cap. of the Burmese Empire, on E. bank of Irawadi, now a subdivision of the Mandalay dist. Contains many pagodas and ruined dwellings, p. of div. 62,310.

**Amatongaland, Brit.** *dist.* S.E. Africa, N. of Zululand, incorporated with Prov. of Natal, 1897.

, spt. *t.* and *cap.* of Santa Maura, one of the Ionian Islands, p. 6,750.

**Amazon,** *R.*, S. America, largest basin and extent of water of any river in the world; rises among the Andes and flows 4,000 m. to the Atlantic. One of its affluents, the Madeira is 1,800 m. long. Drains nearly three million sq. m.

**Amazonas,** most N. *prov.* of Brazil, area 731,363 sq. m.; p. 499,448; also an interior dept. of Peru, area, 13,943 sq. m., p. 72,520; also a territory in Venezuela, with few civilised inhabitants.

**Ambala** (or **Umbala**), *dist.* Punjab, India, area 4,014 sq. m., p. two millions. Also the name of the cap. c., p. 76,497.

**Ambalema,** *t.* on Magdalena R., Colombia, p. 23,000.

**Ambas Bay,** Bight of Biafra, W. Africa.

**Ambasamudram,** *t.* India, Madras Pres., p. 9,750.

**Ambato,** *t.* in Ecuador, S. of Quito, on slope of Mt. Chimborazo; alt. 8,859 ft., p. 22,000.

**Amberg,** *t.* in Bavaria, p. 26,009.

**Ambert,** *t.* in France, dep. Puy-de-Dôme, p. 10,050.

**Amble,** *urb. dist.*, Northumberland, Eng., p. *4,208.*

**Amblecote,** *urb. dist.*, Staffs., Eng., p. *3,099.*

**Ambleside,** *urb. dist.*, in lake dist., Westmorland, nr. L. Windermere, p. *2,343.*

**Amboise,** *t.* of Indre-et-Loire, France, 15 m. E. of Tours; famous for its castle and prison, p. 5,030.

**Amboyna,** Dutch, *t.* and *isl.* in the Moluccas or Spice Isls., E. India; area of Residency, 13,118 sq. m., p. 243,543; cap. protected by Fort Victoria, p. 10,000.

**Ambriz,** coast *t.* and *dist.* in Angola, Port. W. Africa, p. 6,500. [galore, p. 12,550.

**Ambur,** *t.* in India, Madras Pres., 79 m. N. of Ban-

**America,** (area 16½ million sq. m., p. 170,000,000). The two vast divs. of this continent are joined by the narrow Isthmus of Panama. The most N. point, Murchison Pen., is over 9,000 m. distant from C. Horn, the extreme S. point. N. America has an area of 8,600,000 sq. m., being about 5,600 miles in length, and varying in breadth from 200 to 3,000 m. The three main divisions of N. Am. are the Pacific Slope, the Atlantic Slope, and the great central plain dividing them. S. America has an area of over 7,000,000 sq. m., and extends from north to south 4,500 m., and at its widest part has a breadth of 3,200 m.

**Amersfoort,** *t.* on Ems R., Holland, p. 31,043.

**Amersham,** *t.* in Bucks, England, p. 3,450.

**Amesbury,** *t.* in Mass., U.S.A., 40 m. N. Boston, p. 12,000; also *par.* in Wilts, Eng., within the confines of which lie the ancient British monuments of Stonehenge, p. 1,270.

**Amhara,** cent. *prov.* Abyssinia, cap. Gondar.

**Amherst,** spt. *t.* and *dist.* in Tennasserim prov. of Lower Burma; also spt. *t.* in Nova Scotia (p. *7,406*); also t. in Victoria; also a t. (with State Agricultural College) in Hampshire co., Mass., U.S.A., p. 6,000.

**Amiens,** on R. Somme, N. France; famous for its fine cathedral and velvet mfts., p. 92,780.

**Amirante Is.,** Brit. group in the Indian Ocean, S.W. of Seychelles.

**Amite,** *R.*, running from Mississippi to Louisiana, U.S.A., 160 m. [Wales, p. *2,561.*

**Amlwch,** *urb. dist.*, on N. coast of Anglesey,

**Ammanford,** *urb. dist.*, Carmarthen, Wales, p. *7,160.*

**Ammer,** *R.*, Wurtemberg, joins Neckar nr. Tubingen.

**Ammergau.**—(*See* **Ober-Ammergau.**)

**Amoy,** *t.* and *treaty-port* on isl. of Hlamun, prov. of Fuhkion, China, E. of Canton, imp. trade, p. 400,000 natives, 350 foreign residents.

**Ampthill,** *urb. dist.*, Beds., Eng., p. *2,167.*

**Amraoti,** *t.* and *dist.* in Berar, India, p. of t., 36,000.

**Amravati,** *vil.* of India Madras Pres.; contains ruins of finest Buddhist temple in India.

**Amritsar,** *c.* in Punjab, India. Holy city of the Sikhs, p. 160,409.

**Amrom,** *isl.* Prussia, prov. Schleswig, area, 11 sq. m., p. 750.

**Amstel,** sml. *R.* Holland, flowing through cap. c.

**Amsterdam,** Cap. of Holland, at junction of R. Amstel and the Y. It is built on 96 isls. joined by 300 bridges, harbour can hold 1,000 ships; p. 720,000; also *t.* in N.Y. State, p. 34,900; also isl. about midway between the Cape and Tasmania, in S. Indian Ocean, uninhabited.

**Amu Daria,** *dist.* of Russian Central Asia, area 37,000 sq. m., p. 250,000. This name is also applied to the R. Oxus, flowing through Bokhara and Khiva, 1,500 m., into Sea of Aral.

**Amur** (or **Sakhalin**) *R.* 3,000 m. flows from Mongolia between Manchuria and E. Siberia into the Pacific, opposite the isl. of Saghalien; also a prov. in Manchuria, E. Asia, area 203,000 sq. m., comprising country N. of the Amur R., and S. of the Yablanoi mtns., p. 1,500,000.

**Anatolia,** W. part of Asia Minor.

**Ancholme,** *R.* in Eng. rises in Lincolnshire and joins the Humber.

**Ancon,** spt. *c.* Peru, 31 m. N. of Lima.

**Ancona,** *prov.* and *spt.* in Central Italy, on the Adriatic Sea, founded by Dorians, 1500 B.C., area 748 sq. m., p. 333,381; p. of t. 68,430.

**Ancud,** *spt.* Chili, p. 3,800.

**Andalusia,** one of the old divisions of S. Spain; also vil. in Alabama.

**Andamans** and **Nicobars,** group of 19 *isls.* in Bay of Bengal, area 3,143 sq. m.; penal settlement of the Indian Govt. There are about 27,000 inhabitants.

**Andenne,** *t.* in Belgium, in Namur prov., on the Meuse, p. 8,050.

**Andermatt,** *vil.* at foot of Gothard, canton Uri, Switzerland, p. 860.

**Anderlecht,** S.W. sub. of Brussels, Belgium.

**Andernach,** *t.* in Rhenish Prussia, on the Rhine, 70 m. N.W. of Coblenz, p. 7,750.

**Anderson,** *cap.* of Madison co., Ind., U.S.A., p. 40,000; also t. S. Carolina, U.S.A.; also mtn. N. of W. Australia.

**Anderson Lake,** Brit. Columbia, Cariboo dist.

**Anderson's Springs,** Lake co., California.

**Andes,** great mtn. system of S. America, 4,500 m. long; from Panama to C. Horn, 40 m. broad; volcanic; several of the peaks are over 20,000 ft. high.

**Andes, Los,** a former state of Venezuela.

**Andijan,** *t.* in Russian Turkestan, formerly residence of Khans of Khokan, p. 49,100.

**Andorra,** 191 sq. m., small *rep.* in E. Pyrenees, indep. since A.D. 790, p. 5,231.

**Andover,** *mun. bor.*, Hants, Eng., 66 m. S.W. of London, p. *9,692*; also t. in Mass., U.S.A., on the Merrimac.

**Andreanov Isls.,** Alaska, centre of Aleutian Isls.

**Andrews, St.,** Royal Burgh, co. Fife, Scotland, seat of University, p. *9,987.*

**Andria,** *c.* in S. Italy, p. 48,000.

**Andros,** *Isl.* in Greek Arch., p. 25,000; also a small isl. group in the Bahamas.

**Androscoggin,** *R.* New Hampsh., and Maine, affluent of Kennebec, 175 m.

**Andujar,** *t.* on Guadalquivir R., Spain, p. 16,250.

**Anegada,** northernmost of the Virgin Is., West Indies; area 13 sq. m.

**Angara,** *R.* in Siberia, chief trib. of Yenisei, 1,300 m.; navigable almost its entire length, rises nr. and flows through L. Baikal.

**Angeles, Los,** *t.* California, p. 300,000.

**Angerman,** *R.*, Sweden, falls into G. of Bothnia, 200 m.

**Angermunde,** *t.* in Prussia, 40 m. N.E. Berlin, p. 7,150. [86,158.

**Angers,** *c.* on Sarthe R., 215 m. S.W. of Paris, p.

**Angle,** *par.* co. Pembroke, Wales, on Milford Haven, p. 530.

**Anglesey,** *isl.* and *co.*, in N. Wales, separated from Carnarvon by Menai Straits, 302 sq. m., p. *49,025.*

**Angol,** *t.* Chili, 112 m. S.E. of Concepcion, p. 6,550.

**Angola** (area, 484,370 sq. m., p. 4,200,000), Portug. possession in W. Africa; cap. St. Paul de Loanda; also vil. in Indiana.

**Angora,** vilayet, including most of the ancient Galatia, famous for its goats, p. 932,800. **Angora,** capital of Turkey, stands on the Sakarta R., p. 30,000. Constantinople (Istambul), port at S. entrance of the Bosphorus, p. about 700,000.

**Angornou,** *t.* nr. Chad, Central Africa, p. 30,000.

**Angostura,** or Ciudad Bolivar, Venezuela, *t.* on Orinoco R., p. 12,500.

**Angoulême,** *mfg. t.* on R. Charente, France. Suffered during Huguenot wars. Fine cathedral, p. 36,500.

**Angoy,** territory in Lower Guinea, bounded S. by Congo R. and W. Atlantic. [10,057.

**Angra,** *port* on Terceira Isl., cap. of Azores, p.

**Angri**, *t.* Italy, prov. Salerno, p. 12,250.
**Anguilla**, *isl.* in W. I. Leeward Group, area 35 sq. m., p. 4,075.
**Angus**, *co.*, Scot., p. *270,190*; also vil. Ontario; also mtn. in Victoria, Australia.
**Anhalt**, State, Germany; 888 sq. m., p. 331,258, chief t., Dessau.
**Anholt**, in Cattegat, Denmark.
**Anhwei**, *prov.* of China, p. 14,075,000.
**Ani**, a ruined Armenian c., Georgia, Transcaucasia. [7,250.
**Aniches**, industrial *t.* in France, dep. Nord, p.
**Anizeh**, trade centre in Nejd, Arabia, p. 30,000.
**Anjar**, *t.* India Cutch State, p. 14,000.
**Anjor**, *spt.* on Sunda Str., Java; destroyed by inundation caused by eruption of Krakatoa in 1883.
**Anklam**, *t.* Prussia, prov. Pomerania, iron foundries and factories, p. 14,750.
**Annaberg**, mining *t.* Saxony, nr. Chemnitz, p. 16,200.
**Annalong**, *vil.* and *harb.*, co. Down, N. Ireland, nr. Kilkeel.
**Annam** (area of old state proper 27,000 sq. m., p. 3½ millions). In the eastern part of the Indo-Chinese peninsula. Until 1885 an indep. empire, then declared a French Protectorate; cap. Hué.
**Annambo**, *spt.* and *Brit. Station* in W. Africa, nr. Cape Coast Castle, p. 5,000.
**Annan**, *roy.* and *mun.* burgh, in Dumfries, Scotland (p. *6,302*), stands on E. bank of R. Annan, which flows to Solway Firth.
**Annandale**, *valley* of R. Annan, Dumfries, 30 m. long.
**Annapolis**, *port* on Bay of Fundy, in Nova Scotia, p. 3,000; also cap. of Maryland, U.S.A., p. 11,500.
**Ann Arbor**, *c.* in Michigan, U.S.A., on the Huron; University of Michigan; p. 30,000.
**Annecy**, industrial *t.* in France, dep. of Haute-Savoie, p. 13,500.
**Annfield Plain**, *urb. dist.*, Durham, Eng., p. *15,922*.
**Anniston**, *c.* in iron-mining region of Alabama, U.S.A.; p. 22,340.
**Annobon**, Span, *isl.* in Bight of Biafra, W. Africa.
**Annonay**, mftg. *t.* in France, dep. Ardèche, p. 17,525.
**Anoka**, *c.* Minn., U.S.A., on Rum R., p. 4,900; also *t.* in Indiana; and also *t.* in New York, U.S.A.
**Anson Bay**, 22 m. broad, 12 m. long, S. Australia.
**Ansonia**, *c.* in New Haven, co. Connecticut, U.S.A.; clock-making industry, p. 19,900.
**Anspach**, or Ansbach, *t.* in Bavaria, 31 miles from Nuremberg. [Fife, Scotland, p. *1,275*.
**Anstruther** (Easter and Wester), fishery *t.* in co
**Ansus Isl.**, in the Pacific, off the coast of New Guinea.
**Antananarivo**, *cap.* of Madagascar p. (with suburbs) 63,115.
**Antarctic Ocean**, expanse round S. Pole; it contains Enderby Land, Adelie Land, Victoria Land, and other undefined land masses; with volcanoes, Mt. Erebus (12,000 ft.), and Mt. Terror (10,000 ft.); also several isles.
**Antelope**, the name given to several towns in various parts of the U.S.A.; also to a station on the C.P. Ry. in Canada, nr. Winnipeg; to numerous creeks, rivers, plains, springs, hills, and a mtn. range (Nevada) in America.
**Antibes**, *spt.* France, dep. Alpes-Maritimes, p. 8,000.
**Anticosti**, barren *isl.* in the N. of R. St. Lawrence, British N. America. Now used as a game preserve.
**Antietam Creek**, Maryland. Falls into Potomac R., nr. Harper's Ferry. Here a great battle was fought (Sharpsburg) in 1866 between the Federal and Confederate Forces.
**Antigua**, one of the Leeward Group of the Brit. W. Indian Isls. St. John is the cap.; sugar, molasses, rum; area 108 sq. m.; p. 32,369.
**Antilles**, great chain of *isls.*, West Indies, comprising the Archipelago enclosing the Caribbean Sea and G. of Mexico.
**Antioch**, ancient *c.*, Syria, on R. Orontes; earthquake in 1872 reduced p. from 18,000 to 4,000. Present p. 30,000.
**Antioquia**, *dep.* of Republic of Colombia; area 22,752 sq. m., p. 823,226; Medellin.
**Antiparos**, *isl.* one of the Cyclades, Greece, between Paros and Siphanto. [habited.
**Antipodes**, a group of *isls.* in S. Pacific, unin-
**Anti-Taurus Mtns., Asiatic Turkey**, a range running parallel to the Taurus.
**Antivari**, *t.* in Montenegro, nr. the Adriatic, p. 2,500.
**Antofagasta**, *t.* and *prov.* Chili, on Pacific Coast, p. of cap. 52,250. Area of prov. 46,408 sq. m., p. 171,129.
**Antrim**, maritime *co.* in the extreme N.E. of N. Ireland; Belfast, co. t.; famous Giant's Causeway is on the N. coast; p. 478,603. Antrim t. on the Six-Mile Water, p. 1,825.
**Antwerp**, *spt.* Belgium, on R. Scheldt, famous Gothic cathedral, spire 366 ft., contains works of Rubens. Vandyck born here in 1599. Great trading port, p. 333,882.
**Anuradhupura**, chief *t.* in N. Central prov. of Ceylon, p. 3,200.
**Anzin**, *t.* in dep. Nord, France; extensive metal industries, p. 14,650.
**Anzuan**, *isl.*, one of the Comoro group, in the Indian Ocean.
**Aomori**, *t.* of Honshiu, Japan, on bay of same name, p. 45,017.
**Aosta**, *t.* in prov. of Turin, N. Italy, p. 7,770.
**Apamea**, anc. *c.* of Syria, on R. Orontes, 50 m. S.E. of Antioch, overthrown by an earthquake in 1152.
**Aparri**, spt. *t.* Luzon, Philippines, p. 3,250.
**Apeldoorn**, mftg. and ry. junction nr. Zutphen, Holland, p. 47,807.
**Apennines**, the mtn. "backbone" of Italy. Length, 800 m.; width, 70 to 80 m. Highest pt. Mt. Corno, in Gran Sasso d'Italia, 9,585 ft.
**Apenrade**, *spt.* in Schleswig-Holstein, on fjord of same name, p. 6,060.
**Apia**, ch. *t.* of Upolu, Samoa Isls.; p. 5,100.
**Apolda**, *t.* in Saxe-Weimar, Germ., p. 22,500.
**Apollonia**, *dist.*, *c.* and *fort.* on Gold Coast, Brit. W. Africa.
**Appalache**, *R.* in Georgia, U.S.A., 80 m.
**Appalachian Mts.** (*See* Alleghany Mts.)
**Appalachicola**, *port* and *R.* on coast of Florida.
**Appenzell**, *t.* and canton in N.E. Switzerland; p. (of t.) 5,000; of canton (with inner Rhoden), 69,968.
**Appin**, coast *vil.*, co. Argyll, Scotland, nr. Oban; p. 600; also t. N.S.W., nr. Sydney, p. 1,200.
**Appleby**, *mun. bor.*, Westmorland, on R. Eden, p. *1,618*.
**Applecross**, *par.* and *ham.*, Scotland, p. *1,033*.
**Appledore**, *par.* co. Devon, England, nr. Bideford, p. 2,640; also sm. t. nr. Tenderden, Kent.
**Appleton**, *c.* in Wisconsin, U.S.A., p. 25,300; also vil. Minnesota.
**Appomatox R.**, Virginia, joins James R., at City Point, 150 m. At the vil. of the same name on R. bank, Genl. Lee surrendered to Genl. Grant on April 9th, 1865.
**Apsheron**, *pen.* on W. side of the Caspian, noted for petroleum wells (nr. Baku) and mud volcanoes.
**Apulia**, 7,376 sq. m., p. 2,237,791, S.E. div of Italy; a treeless, pastoral plain.
**Apure**, *R.* (1,000 sq. m.), Venezuela, S. America, trib. of Orinoco.
**Apurimac**, *R.* (500 m.), and *prov.* of Peru; area of prov. 8,187 sq. m., p. 180,500.
**Aquila**, *t.* and *prov.* in the Central Apennines, Italy; p. (of t.) 22,050; (of prov.) 422,634.
**Arabia**, the most W. of the three great pen. of Asia. Area about 1,000,000 sq. m.; p. (approximately) 6,000,000.
**Arabian Sea**, N. part of Indian Ocean, between Arabia and India.
**Arabistan**, *prov.* of Persia, (formerly known as Khuzistan), p. 200,000, mostly Arabs.
**Aracan**, or **Arakan**, the N. part of Lower Burma, cap. Akyab.
**Aracati**, *t.* and commercial shipping centre of Brazil, p. 18,000.
**Arad**, Old and New, *tns.* on Maros R., Rumania; p. of O. Arad, 63,166; of N. Arad, 6,250.
**Arafura Sea**, N. of Australia, S.W. of Papua, and E. of Timor.
**Aragona**, *t.* Sicily, prov. Girgenti, p. 12,250.
**Araguay**, (1,000 m.), *R.* in Brazil, trib. of Tocatins.
**Aral Sea**, 26,166 sq. m.; large salt L. in Russ. Cent. Asia; receiving the Amu and Syr Daria rivers; no outlet, alt. 160 ft. above ocean level.
**Aran**, *isl.* group in Galway B., I.F.S.; 11,287 acres, p. 3,015.
**Aranjues**, *t.* on R. Tagus, Spain, p. 10,150.
**Aransas Bay**, arm of Gulf of Mexico. [13,520 ft.
**Arapahoe, Peak** *mtn.* in Colorado, U.S.A., alt.

**Ararat**, *mt.*, Armenia, supposed resting place of Noah's ark; also *t.* in Victoria, Australia, p. 4,657.
**Aras R.** (the ancient Araxes), rising in Armenia, and flowing through Transcaucasia to the Kur, 500 m.
**Araucania**, Ind. *terr.* in S. of Chili; inhabited by about 20,000 warlike natives.
**Arauco**, *fort* and *t.* of Chili, south of Concepcion, p. 4,000. [5,650 ft.
**Aravalli Mts.**, range in Rajputana, India; Mt. Abu,
**Arawan**, trading *t.* in Sahara dest., N. Timbuctoo, p. 5,250.
**Araxa**, *t.* Brazil, prov. of Minas Geraes, p. 14,250.
**Arbela**, *t.* in Iraq. E. of the Tigris (modern Erbil), p. 4,400.
**Arboga**, *t.* Sweden, nr. Westeras, p. 5,050.
**Arbois**, *t.* France, dep. Jura, p. 6,075.
**Arbroath**, *t.* mftg., Forfarshire, Scotland; royal and parliamentary burgh, p. *19,437*.
**Arcachon**, popular watering place in France, dep. Gironde, p. 8,100.
**Arcadia**, *div.* of Peloponnesus, Greece, p. 155,883; also spt. p. 3,200. There are numerous sm. t.'s in U.S.A. called Arcadia, and one in Nova Scotia.
**Archangel**, *prov.* U.S.S.R., includes Nova Zembla, p. 347,589; also spt. (extensive fisheries), p. 22,500.
**Archer**, *R.*, Cape York Peninsula, Queensland, Australia.
**Archidona**, *t.* Andalusia, Spain, p. 8,550.
**Archipelago**, *isls.* in Ægean Sea between Greece and Asia Minor.
**Arcos**, *t.* in Spain, prov. Cadiz, p. 18,000.
**Arcot**, *t.* India, 65 m. W. of Madras, memorable for its defence by Clive in 1751; p. 13,000. N. and S. Arcot are two dists. of the Madras Pres. with a conjoint p. of 5,000,000.
**Arctic Ocean**, the waters in the N. polar area, opening into the Atlantic by Davis Str., etc., and into the Pacific by Behring Sea.
**Arcueil**, *t.* in France, dep. Seine, p. 6,520.
**Ardagh**, *t.* in I.F.S., co. Longford, p. 2,215.
**Ardebil** (or **Ardabil**), *t.* prov. Azerbaijan, N.W. Persia, p. 20,000; its prosperity has declined.
**Ardeche**, *dep.* S. France; area, 2,145 sq. m., p. 294,308.
**Ardee**, *t.* in co. Louth, I.F.S.; p. 1,890.
**Ardennes**, *dep.* N.E. France, cap. Mézières, area, 2,027 sq. m., p. 277,811; also forest extending from S.E. Belgium to N. France.
**Arderry, Lough**, in I.F.S., co. Galway.
**Ardersier**, *par.* on Moray Firth, Inverness, Scotland, p. *1,760*.
**Ardingly**, *par.* nr. Cuckfield, co. Sussex, England, p. 1,350.
**Ardmore**, sm. watering place in co. Waterford, I.F.S., p. 769; also t. of Chickasaw Nation, Okla, U.S.A., p. 14,700.
**Ardnamurchan**, most westerly point of Scotland, on Argyle coast; lighthouse, p. *1,137*.
**Ardrah**, *t.* Dahomey, 20 m. inland, p. 20,000.
**Ardres**, *t.* France, dep. Pas-de-Calais, p. 2,240; nr. here was the "Field of the Cloth of Gold," where Henry VIII. and Francis I. met in 1520.
**Ardrishaig**, *spt.* in Argyllshire, p. 1,280.
**Ardrossan**, *spt.* Ayr coast, Scotland; 30 m. S.W. Glasgow, p *13,736*.
**Ardsley**, *urb. dist.*, W.R. Yorks, Eng., p. 7,058.
**Ardsley, East and West**, *urb. dist.*, W.R. Yorks, Eng., p. *9,215*.
**Ardwick**, populous suburb of Manchester, England.
**Arecibo**, *c.* on coast of Porto Rico, p. 10,150.
**Arendal**, *spt.* in Norway, on coast of Christiansand, p. 10,358.
**Arensburg**, *spt. isl.* of Œsel, Esthonia, p. 3,900.
**Arequipa**, a *dep.* in the S. of Peru, between the Pacific and Bolivia, area, 21,947 sq. m., p. 240,000; *t.* cap. of dep., at foot of volcano (20,320 ft.) ruined by earthquake in 1868; p. 37,000.
**Arewa**, *dist.* of Nigeria, W. Africa.
**Arezzo**, *dep.* of Italy, in Tuscany; area, 1,274 sq., m.; p. 292,763; *t.* cap. of dep., p. 50,903.
**Argao**, *t.* on E. Coast of Cebu, Philippine Isls., p. 34,000.
**Argentau**, *t.* dep. Orne, France, p. 6,300.
**Argenteuil**, *t.* in France, dep. Seine-et-Oise, p. 17,350.
**Argentina**, (1,153,119 sq. m., p. 11,000,000), Rep. in S. America; formerly called La Plata (River of Silver); cap. Buenos Aires.
**Argenton**, *t.* in France, dep. Indre, p. 6,290.
**Argolis and Corinthia**, *prov.* in N.E. Morea, Greece, p. 158,528.
**Argos**, *t.* Greece, on the Argolic Gulf, the leading Dorian city prior to the 8th centy.; p. 10,100.
**Argostoli**, *cap.* of Cephalonia Isl., Greece, p. 10,050.
**Arguin R.** (1,000 m.) of Chinese Territory, joins the Shilka, to form the Amur.
**Argyllshire**, (3,165 sq. m.), p. *63,014*. Largest co. in W. Scotland.
**Argyro Kastron** (or **Ergero**), *t.* in Albania, p. 12,000.
**Ariano**, *t.* in Italy, prov. Avellino, p. 17,250.
**Arica**, *t.* and *port* in N. Chili, p. 13,500.
**Arichat**, *spt.* on Madame Isl. off Cape Breton Isl., Nova Scotia.
**Arid**, *C.* on the great Australian Bight.
**Ariège**, *R.* (90 m.) and dep. in S. France; area of prov. 1,893 sq. m., p. 172, 851, Foix, cap.
**Arinos**, (700 m.), *R.* in Brazil, trib. of Tapajos, Amazon.
**Arish**, or **El Araish**, *port* in Morocco; also sm. t. on S.W. border of Palestine.
**Arispe** or **Arizpe**, *t.* on Sonora R., Mexico, p. 4,050.
**Arizona**, *state*, U.S.A., bordering on Mexico, area 113,810 sq. m., p. 460,000.
**Arkansas**, *state*, U.S.A., 52,525 sq. m.; p. 1,923,500. State cap., Little Rock.
**Arkansas City**, in Kansas, Cowley co., U.S.A., p. 14,000.
**Arkansas Post**, *vil.* on the R. of that name, S.E. of Little Rock.
**Arkansas R.**, 2,000 m., navigable 800 m.; 2nd largest trib. of the Mississippi.
**Arklow**, *spt.* in co. Wicklow, 50 m. S. of Dublin, I.F.S., p. 4,190.
**Arlberg Mts.**, part of Rhætian Alps, pass difficult, by tunnel, 6,720 yards long.
**Arlecdon and Frizington**, *urb. dist.*, co. Cumberland, Eng., p. *4,332*.
**Arles**, anc. Rom. c. on the Rhone, in dep. of Bouches-de-Rhône, France, p. 29,150.
**Arlington**, *t.* in Middlesex co., Mass., U.S.A., also U.S.A. national soldiers' cemetery, in Virginia, opposite Washington, containing remains of 16,000 victims of American Civil War, p. 37,000.
**Arlon** or **Arel**, cap. Belgian Luxemburg, p. 10,150.
**Armadale**, min. *t.* in co. Linlithgow, Scotland, p. *4,854*.
**Armagh**, *co.* and *c.* in Ulster, N. Ireland, p. (of co.) 119,625, (of city), 7,569.
**Armagh**, *par.* in co. Kerry, I.F.S., p. 1,510; also sm. isl. off coast of Mayo.
**Armancon**, *R.* in France, 100 m., joins the Yonne.
**Armavir**, the old ruined *cap.* of Armenia, on the slope of the extinct volcano Ala-ghoz.
**Armenia**, ind. *state* between Asia Minor and the Caucasus and the Caspian, formerly divided between Turkey and Russia. Armenian p. cruelly treated by Turks and Kurds. Estimated number of Armenians, nearly 1½ millions.
**Armentières**, *mftg. t.* in N. France, 10 m. W. of Lille, base of British operations against Lille in Great War, p. 29,750.
**Armidale**, *t.* in N.S.W., 260 m. from Newcastle, p. 5,550; also a fishing stn. on Scottish coast, co. Sutherland.
**Armori**, *t.* India, Central Prov. dist. Chanda, p. 6,100.
**Arnhem**, ch. *t.* of Gelderland prov., Holland, p. 70,714.
**Arni**, *t.* in India, N. Arcot dist. Madras p. 5,250.
**Arno**, *R.* in Central Italy, flows past Florence and Pisa into Mediterranean, 75 m.; Val d'Arno is the fruitful valley of the r.
**Arnold**, *urb. dist.* nr. Sherwood Forest, Nottinghamshire, Eng., p. *14,470*.
**Arnprior**, *stn.* on C.P.Ry. in Canada, Ontario div., 51 m. W. Ottawa.
**Arnsberg**, *c.* Westphalia, Prussia, 44 m. E. Munster, p. 8,500.
**Arnstadt**, *t.* in Schwarzburg-Sondershausen, Thuringia, p. 19,374.
**Arnswalde**, *t.* in Brandenburg, Prussia, nr. Stargard, p. 8,750.
**Arona**, *t.* in Italy, prov. Novara, p. 3,050.
**Arpad**, *c.* in Northern Syria, 15 m. N. of Aleppo, the modern Tel Erfad.
**Arpino**, *t.* in S. Italy, prov. of Caserta, p. 12,500.
**Arrah**, *t.* in Bengal, India, famous in the Mutiny, p. 50,000.

**Arran,** *isl.* co. Bute, Firth of Clyde, Scotland; p. 4,650; area, 165 sq. m.; also N. group of isls. of Donegal, Ireland; sm. isls. at entrance of Galway Bay, containing many remains of Druidical times.

**Arras,** *t.* in France, *cap.* of the dep. Pas-de-Calais, famous for tapestry, p. 23,650.

**Arreton,** *par.* in Isle of Wight, with extensive Down, p. 940.

**Arroo,** or **Aru,** *isls.* in Indian Archipelago, S.W. Papua, p. 25,000. [flows past Autun.

**Arroux,** *R.* in France, trib. of the Loire, 75 m.;

**Arrow,** *R.* Wales and England; flows into Lugg nr. Leominster; also R. and lough co. Sligo, I.F.S.; also lakes, expansions of Columbia R., Brit. Columbia; also R. and peak in Montana, U.S.A.

**Arrowsmith,** *mtns.* W. Australia, 200 m. E. Perth; also mtn. in Vancouver Isl., Canada, alt. 5,870 ft.

**Arta,** *dist.* and *t.* Thessaly in Greece, on R. Arta, p. 8,100; also gulf between Albania and Greece, nr. which the battle of Actium was fought, 29 B.C.

**Arth,** *t.* in Switzerland, canton Schwyz, starting point of ry. up the Rigi; also R. in Cardigan co., Wales falls into Irish Sea.

**Arthur,** *t.* Ontario, Canada, dist. Wellington, p. 1,600; also *t.* on Sauris R., co. Manitoba, p. 3,020.

**Arthur,** *mtn.* New Zealand, S. Isl., alt. 8,000 ft.; also Arthur, Ben., mtn. Scotland, co. Argyll, alt. 2,891 ft.

**Arthur, Port,** Manchuria. (See **Port Arthur.**)

**Arthur's Seat,** famous *hill,* Edinburgh, Scotd., 822 ft.

**Artois,** old *prov.* of France, now known as the dep. of Pas-de-Calais.

**Artro,** *R.* in Wales, co. Merioneth, falls into the Lanbeder. [Channel at Littlehampton.

**Arun,** *R.* Sussex, Eng., 40 m., flows into Eng.

**Arundel,** *mun. bor.,* market *t.* W. Sussex, Eng., on the Arun, p. *2,489.* Arundel Castle, seat of Duke of Norfolk.

**Aruwimi,** *R.* (1,800 m.) Central Africa, an affluent of the Congo. Stanley's famous forest march in 1887 ran along this river; station of Belgian

**Arve,** *R.* in France, dep. of Haute-Savoie; falls into Rhone, nr. Geneva, 45 m.

**Arveyron,** *R.,* trib. of the Arve, which it joins in the valley of Chamonix.

**Arvi,** *t.* in the Central Provs., India, p. 8,750.

**Asaba,** *t.* in Southern Nigeria, W. Africa, former administrative centre of the Royal Niger Company, p. 7,500. [alt. 8,200 ft.

**Asama-Yama,** volcano in Japan, N.W. of Tokio.

**Ascension,** settlement, 12 m. S. of border line of New Mexico.

**Ascension Bay,** sm. inlet on E. coast of Yucatan.

**Ascension Isl.,** S. Atlantic, 760 m. N.W. of St. Helens, so named because discovered on Ascension Day, 1501; British; Georgetown is the port; p. 250.

**Asch,** mftg. *t.* in Bohemia, p. 19,000.

**Aschaffenburg,** *t.* Bavaria, on the Maine; manuf. coloured paper, cellulose, etc., p. 32,199.

**Aschersleben,** *t.* in Saxony, nr. Halle, famous for its brine baths, p. 28,500.

**Ascoli Piceno,** cathedral *c.* in Central Italy, cap. of prov. of same name, p. (of *c.*) 32,254, (of prov.) 261,835.

**Ascot,** *t.* in Sherbrooke co., Quebec, p. 4,030; also *par.* in Victoria, nr. Ballarat; also *pars.* in co.'s Warwick and Oxford, Eng.

**Ascot Heath,** famous Eng. racecourse, Berks.; 6 m. S.W. of Windsor.

**Ash,** *pars.* in co.'s Derby, Kent, Surrey, and Hants, Eng.

**Ashanti** (p. 2,029,750), Brit. Prot., W. Africa (Gold Coast), formerly powerful native state; cap. Coomassie (Kumasi).

**Ashbourne,** *urb. dist.,* in N. Derbyshire, nr. Dovedale, Eng., p. *4,507.*

**Ashburnham,** *par.* nr. Battle, co. Sussex, Eng., p. 600.

**Ashburton,** *urb. dist.,* Dartmoor, Devon, p. *2,505;* also t. S. Island, New Zealand, p. 2,750; also R. and gold field dist. in W. Australia; and mtn. range in S. Australia.

**Ashby,** name of 4 *pars.* in co. Lincoln, 2 in Norfolk, and in Suffolk, Eng.

**Ashby-de-la-Zouch,** *urb. dist.* in Leicestershire, Eng.; ruined castle in which **Mary Q. of Scots** was imprisoned; p. *5,093.*

**Ashby Woulds,** *urb. dist.,* Leicester, p. *3,351.*

**Ashcroft,** *t.* Brit. Columbia, p. 2,000, also stn. on C.P. Ry., 253 m. W. of Donald.

**Ashdod,** anc. Philistine *c.,* 20 m. S. of **Jaffa,** Palestine. [40,000.

**A-she-ho,** *c.* in Manchuria, S. of Sungari R., p.

**Asheville,** *t.* and winter health resort in N. Car., U.S.A.; p. 50,200.

**Ashfield,** *pars.* in Suffolk, Eng.; in co. Leitrim, I.F.S.; and suburb of Sydney, N.S.W.

**Ashford,** *urb. dist.,* ry. *t.,* Kent, Eng., p. *15,239;* also *par.* nr. Staines, Middlesex; also t. co. Arrawata, N.S.W. [*29,418.*

**Ashington,** *urb. dist.,* Northumberland, Eng., p.

**Ashland,** *t.* Pennsylvania, p. 7,200; *c.* in Kentucky, p. 30,000; also *c.* in Wisconsin, U.S.A., p. 10,700.

**Ashtabula,** *t.* Ohio, U.S.A., nr. L. Erie, p. 23,400.

**Ashton,** name of numerous *pars.* and *vils.* in Eng. and townships in U.S.A.

**Ashton-in-Makerfield,** *urb. dist.,* nr. Wigan, Lancashire, p. *20,541.*

**Ashton-under-Lyne,** *mun. bor.,* mftg. *t.* nr. Manchester, p. *51,573.*

**Ashuapmouchouan,** *L.* in Quebec, Canada, outlet A. R. (170 m.).

**Ashwanipi** or **Hamilton** *R.* (600 m.) in Labrador, flows to Atlantic.

**Ashwell,** *pars.* in co.'s Herts, Rutland, and Norfolk, Eng.

**Asia,** the largest of the five *continents.* Area, 17½ mill. sq. m. (five times the size of Europe), p. 850 mill. Larger portion held by three Powers —Britain, Russia, and China. Principal countries comprised in Asia:—Turkey, Arabia, Persia, Afghanistan, Baluchistan, India, Burma, China, Annam, Siam, Corea, Japan, Asiatic Russia, and Turkestan, *q.v.*

**Asiago,** *t.* in Italy, prov. Vicenza, p. 2,120.

**Asia Minor,** W. portion of Asia, part of Asiatic Turkey; area 199,272 sq. m., p. 10,186,900; chief *c.* Smyrna, most important pt. of the Levant.

**Asinara,** *isl.* off the N.W. coast of Sardinia, 11 m. long, the ancient isl. of Hercules; G. of A., an arm of the Mediterranean.

**Askabad,** capital of Transcaspian Territory, Central Asia, p. 20,000.

**Asnières,** *t.* on Seine, 2 m. N.W. of Paris, p. 31,150.

**Aspatria,** *urb. dist.,* nr. Cockermouth, co. Cumberland, Eng., p. *3,239.*

**Asperg,** *t.* nr. Stuttgart, in Wurtemberg, p. 2,200.

**Aspinwall,** or **Colon,** *spt.* of the repub. of Panama and Atlantic terminal *pt.* of Panama Canal, p. 26,076.

**Aspull,** *urb. dist.* nr. Wigan, Lancashire, p. *7,193.*

**Assab B.,** Ital. *stn.* on Red Sea coast, 50 m. N. of Perim.

**Assal,** *L.,* Abyssinia, nr. G. of Tajurrah, 600 ft. below sea-level, salt water.

**Assalia,** *t.* on Nile, above Khartum.

**Assam,** *prov.* Brit. India, area 53,000 sq. m. Brahmaputra R. flows through it; extensive tea plantations; p. over 7½ millions. Chief town, Shillong.

**Assaye,** *vil.* Nizam of Hyderabad's Dominions, S. India. Wellington's victory over Mahrattas, 1803.

**Assche,** *t.* in Belgium, prov. Brabant, p. 8,600.

**Assen,** *t.* in the Netherlands, cap. of prov. of Drenthe, p. 11,575.

**Assens,** *t.* in isl. of Fünen, Denmark, on the Little Belt, p. 4,600.

**Assiniboia,** former *prov.* in Dominion of Canada, W. of Manitoba, Canadian Pacific Rly. runs through it; p. 67,385; cap. Regina.

**Assiniboine,** *R.* (1,500 m.) in Manitoba, Canada, joins Red R. at Winnipeg.

**Assinie,** French Colonial Settlement in W. Africa, on R. Assinie, which divides Ivory and Gold Coasts.

**Assisi,** *t.* in Perugia, Central Italy, birthplace of St. Francis. Fine cathedral and old castle, p. 17,400.

**Assiut,** administrative *cap.* of Upper Egypt, 248 m. S. of Cairo, p. 51,431. Famous for red and white pottery.

**Assouan, Assuan,** or **Aswan,** frontier *t.* on Nile at 1st Cataract, Upper Egypt; ancient name Syene. Near it are famous ruins, temples, catacombs, etc. Great Nile barrage works immediately above t.; p. 11,293. Popular as a winter resort.

**Assteague,** *B.* and *isl.* on E. coast of Virginia, U.S.A.
**Assuay,** *dep.* of Ecuador, S. America. (See **Azuay.**)
**Assumption,** or **Asuncion,** *cap.* of Paraguay, p. 99,836.
**Assynt,** Sutherland, Scot.; Loch Assynt (7 m. long) is in the N. part, p. *1,342.*
**Astara,** *spt.* on the Caspian, at Persian frontier; important trading centre.
**Astbury,** industrial *par.* nr. Congleton, in co. Cheshire, Eng.; silk factories; p. 700.
**Asten,** *t.* in Netherlands, N. Brabant, p. 3,550.
**Asti,** wine *t.* in Alessandria prov., Italy; fine cathedral, p. 39,500.
**Aston,** many *pars.* of this name in Eng.
**Aston Manor,** *parl. bor.* of Birmingham, Eng.
**Astorga,** *t.* in Spain, nr. Leon, p. 5,400.
**Astoria,** salmon-canning *t.* in Oregon, U.S.A., p. 10,400; also former vil. of Long Island, New York, now part of the bor. of Queen's, N.Y. City.
**Astrabad,** *c.* in N. Persia (*p.* 25,000), chief t. of the prov. of that name, which has p. of 80,000, mostly Turcomans.
**Astrakan,** govt. U.S.S.R. on Volga, area 91,237 sq. m.; p. over 1,000,000; also *c.* on isl. 30 m. from mouth of Volga, p. 120,000. Has university.
**Astrolabe B.,** on N.E. coast of New Guinea, an arm of the Pacific Ocean. [its sponges.
**Astropalia,** *isl.* in S. part of Ægean Sea, noted for
**Astura,** *R.* S. of Rome, falling into Mediterranean; and *sm* t. at its mouth. [of Biscay.
**Asturias,** old *prov.* in N. Spain, now Oviedo, on B.
**Atacama,** *prov.* and *desert* in N. Chili, area, 30,711 sq. m., p. 61,869; cap. Copiapo.
**Atbara,** *R.* in Abyssinia, trib. and last affluent of Nile, length 500 m.
**Atchinsk,** *t.* in Siberia, p. 7,150.
**Atchison,** *c.* in Kansas, cap. of co. on the Missouri, p. 12,630.
**Ath,** *t.* in Belgium, prov. of Hainault, p. 10,800.
**Athabasca,** *R.* (740 m.) and *L.* (area 3,085 sq. m.), in N.W.T. Canada, both navigable by steamers, save at Grand Rapids, nr. mouth of Clearwater R.
**Athboy,** *t.* in co. Meath, I.F.S., on R. Athboy, p. 2,500.
**Athelney,** *isl.* or marsh nr. Taunton, Somerset, Eng., between the R.'s Tone and Parret; King Alfred's hiding place.
**Athenry,** *t.* in Ireland, co. Galway, I.F.S.; old Dominican monastery, p. 915.
**Athens,** *cap.* of Greece, most renowned *c.* in antiquity; anc. centre of Greek art and learning; p. 300,701; also name of seven towns in U.S.A., t. in Clark co., Georgia, being the site of a University.
**Atherstone,** *t.* nr. Tamworth, co. Warwick, Eng., p. 5,650. [Manchester, p. *19,985.*
**Atherton,** *urb. dist.*, Lancashire, Eng., 13 m., N.W.
**Athis,** *t.* in dep. Orne, France, nr. Paris, p. 3,740.
**Athlone,** milit. *sta.* on Shannon 80 m. W. of Dublin, I.F.S., p. 6,620.
**Athol,** *t.* Worcester co., Mass., U.S.A., p. 10,700.
**Athole,** *dist.* in N. Perthshire, Scot., area 450 sq. m., extensive deer forest.
**Athos,** *mtn.* in Greece, known as the "Holy Mountain," and the "Monks' Peninsula"; 3,000 recluses, with as many servants.
**Athy,** co. *t.* of Kildare, I.F.S., on R. Barrow, p. 4,010.
**Atitlan,** *L.*, *t.* and volcanic *mtns.* in Central America, nr. Guatemala; alt. of mtn., 12,500 ft.
**Atkarsk,** *t.*, U.S.S.R., in old govt. of Saratov, p. 7,070.
**Atlanta,** *cap.* and largest *c.* of Georgia, U.S.A., p. 271,000.
**Atlantic City,** summer resort, New Jersey, U.S.A.; p. 66,500; also cap. of Cass co., Iowa, p. 5,329.
**Atlantic Ocean,** the most important of the three great oceans, lies between the Old and New Worlds. It is 9,000 m. long, and from 1,600 to 5,000 m. broad. Total area (est.) 33,000,000 sq. m. Greatest depth yet found, 27,360 ft. in the Porto Rico Deep.
**Atlas,** great *mtn.* range of N.W. Africa, extending 1,500 m. through Morocco and Algeria to Tunis. Highest point, Tizi-n-Tamjurt, 15,000 ft.; Jebel Ajashi is 14,600 ft. high.
**Atna** (or **Copper**), *R.* in Alaska, flowing to Pacific, W. of Mt. S. Elias.
**Atrato,** *R.* 275 m. in Colombia, S. America, flowing to G. of Darien.
**Atrauli,** *t.* in United Provs., India, 16 m. from Aligarh; p. 16,500.
**Atrek** or **Attruck,** *R.* in Persia, forming div. from Rus. Turkestan (250 m.), enters Caspian Sea.
**Atri,** *c.* S. Italy, prov. Terama (the ancient Hadri), p. 13,750.
**Atsuta,** *t.* Japan, prov. Owari, nr. Nagoya, p. 25,500.
**Attack,** *isl.*, Brit. ter., New Guinea.
**Attercliffe,** *sub. of* Sheffield, W. R. Yorks, Eng.
**Attica,** anc. *state* in Greece, cap. Athens.
**Attleborough,** *t.* Bristol co., S.E. Mass., U.S.A., p. 22,000; also *par.* in Norfolk co., Eng., p. 2,540.
**Attock,** *fort* on Indus R., Rawal Pindi dist., Punjab, p. 3,100.
**Atur,** *t.* India, in Madras, p. 9,000.
**Aube,** *R.* (trib. Seine, length 125 m.) and **dept.** in N.E. France, area of dept. 2,327 sq. m., p. 227,839.
**Aubenas,** *t.* in France, dep. Ardèche, p. 8,175.
**Aubervilliers,** French industrial *t.* 5 m. N. of **Paris,** p. 31,115.
**Aubin,** or **Albin,** *t.* France, dep. Aveyron, p. 9,300.
**Aubin, St.,** sm. *t.* in Isle of Jersey.
**Auburn,** Goldsmith's "Deserted Village," co. Westmeath, I.F.S., 10 m. from Athlone, nr. Lough Rea.
**Auburn,** *t.* nr. L. Owasco, Cayuga co., New York, U.S.A., p. 36,700; also t. in N.S.W., p. 11,910.
**Auch,** industrial *t.*, cap. Gers dep., France, p. 13,970.
**Auchinleck,** *par.* Scot., nr. Ayr, p. *6,624.*
**Auchmill,** *t.* Scot., co. Aberdeen.
**Auchterarder,** *t.* 15 m. S. of Perth, Scot., p. *3,098.*
**Auchtermuchty,** *par.* co. Fife, Scot., p. *1,748.*
**Auckland,** *spt.* in N. isl. of and largest *c.* in N.Z., cap. of Colony till 1865; extensive trade and shipping; p. 180,800, (of prov.) 369,618.
**Auckland.** (See **Bishop Auckland.**)
**Auckland Isls.,** uninhabited group in Southern Ocean, 200 m. off N.Z., discovered by British in 1806.
**Audenshaw,** *urb. dist.*, Lancash., Eng., p. *8,469.*
**Audley,** *urb. dist.*, Staffordsh., Eng., nr. Newcastle-under-Lyme, p. *13,619.*
**Aue,** *t.* in Saxony, nr. Zwickau, p. 16,150.
**Aughrim.** (See **Aghrim.**)
**Auglaize,** *R.* in W. Ohio, U.S.A., trib. of the Maine.
**Augsburg,** anc. *c.* in Bavaria; founded by Emp. Augustus, 12 B.C.; p. 154,555. [Croce, p. 16,900.
**Augusta,** fortified *spt.* in Sicily, on isl. off C. Santa
**Augusta,** *t.* on Savannah R., Georgia, U.S.A., p. 61,000. [p. 14,114.
**Augusta,** *t.* on Kennebec R., cap. of Maine, U.S.A.,
**Augustowo,** *t.* of Poland, on Suwalki canal, p. 12,850.
**Aumale,** *t.* in Seine-Inférieure dep., France, p. 2,380; also *t.* in Algeria, p. 5,500.
**Aurangabad,** *t.* in Hyderabad, India, p. 27,000 (of div., same name, over a million). Suffered severely in famine, 1889-1890. [6,490.
**Auray,** or **Alrac,** *t.* in Morbihan dep., Brittany, p.
**Aurich,** *t.* in Hanover, nr. Emden, p. 6,159.
**Aurillac,** mftg. *t.*, France, cap. dep. Cantal; named from Emperor Aurelian, p. 17,560.
**Aurora,** ry. *c.* in Kane co., Illinois, U.S.A., p. 47,000; also *c.* in Lawrence, Missouri, mining region, p. 3,900.
**Au Sable,** *R.*, New York, U.S.A., flows from the Adirondack Mts. to L. Champlain; also R. in Michigan, emptying into L. Huron. [40,500.
**Aussig,** *t.* and *R. port* in Bohemia, on the Elbe, p.
**Austell, St.** (See **St. Austell.**)
**Austerlitz,** *t.* Moravia, Czecho-Slovakia, where Napoleon gained a decisive victory over Austria and Russia in 1805, p. 3,820.
**Austin,** *cap. c.* of Texas, U.S.A., on R. Colorado, p. 53,200; also the name of many other towns in U.S.A.
**Austral Archipelago,** or **Tubuai Isles,** a volcanic group in Polynesia, S. Pacific; French Protectorate, p. 2,010.
**Australasia,** *div.* of Oceania comprehending Australia, Tasmania, New Zealand, and a number of adjacent isles.
**Australia,** *isl.* largest in the world, length, E. to W. 2,500 m., breadth, 1,950 m.; total area, 2,974,581 sq. m.; first visit by Europeans in 1606, then called New Holland; Cook formally took possession for Britain in 1770. The five political divs. are New S. Wales, Queensland, Victoria, S. Australia, and Western Australia;

there are besides the Northern Terr. and Federal Terr. Tasmania was included, but New Zealand did not come into the compass of the Commonwealth inaugurated in 1901. The entire population of Australia is 5,875,000.

**Australia, S.** (See **South Australia.**)

**Australia, Western,** formerly known as the Swan R. Settlement; occupies the entire Western part of Australia. From north to south it extends 1,480 miles, and from east to west about 1,000 miles. Chief t. Perth, on the Swan R.; p. (of State) 364,000, area 975,920 sq. m. The chief products of the State are gold, wool, pearls, timber, fruit, wheat, coal, frozen meat, etc.

**Australian Alps,** *mtn. range* in E. of Victoria and N.S.W., running nearly parallel with coast; Mt. Kosciusko, 7,336 ft.

**Australian Bight, Great,** an indentation on Australian S. coast, between C. Catastrophe and C. Arid.

**Australian Pyrenees,** the western part of the Australian Alps, in Victoria, are sometimes so called.

**Austria-Hungary,** formerly an extensive empire in Central Europe. After 1867, Austria and Hungary were united under one sovereign, but each had its own laws, parliament, and ministers. Dismembered by Treaty of Versailles 1919, as Austria, Czecho-Slovakia, Hungary, and Jugo-Slavia, etc., (*q.v.*). Area of Austria, now a rep. of 8 provs., is 30,766 sq. m., p. 6,131,445.

**Autun,** *c.* France, the ancient Augustodunum, dep. Saone-et-Loire, Roman remains, p. 15,520.

**Auvergne,** old French *prov.*, forming the present deps. of Puy-de-Dôme, Cantal, and a small part of Haute-Loire.

**Auvergne Mtns.,** branch of Cevennes in above region; highest peak, Mt. Dor, 6,188 ft.

**Aux Cayes,** *t.* Hayti, W. Indies, p. 9,200. [18,750.

**Auxerre,** industrial *c.* France, cap. dep. Yonne, p.

**Auxonne,** fortified *t.* France, dep. Côte d'Or, on R. Saone, p. 6,680.

**Ava,** *c.* on the Irawadi R., Burma, Asia, formerly cap.; many pagodas, now ruins, p. 8,200; also *t.* on Shikoku Isl., Japan, fine harbour.

**Avalon,** *t.* in France, dep. Yonne, p. 6,470.

**Avebury (Abury),** *par.* and *vil.* of Wilts., nr. Marlborough, famous for its Druidical remains, p. 650.

**Aveiro,** *spt. t.* Portugal, wine-producing prov. of Beira, p. 11,523; of prov. 336,243.

**Aveley,** *par.* nr. Purfleet, co. Essex, Eng., formerly a mkt. t., p. 1,230.

**Avellaneda,** *t.* of Argentina, p. 293,000.

**Avellino,** *t.* Italy, cap. of prov. of same name, containing monastery resorted to by pilgrims to image of Virgin Mary, p. (of t.) 24,620, (of prov.) 411,813. [extinct volcano.

**Averno,** *L.* in Italy, 10 m. W. of Naples, crater of

**Averno,** an Alpine *valley* of Switzerland, W. of the Engadine; also a trib. to the Hinter-Rhein.

**Aversa,** garrison *t.* in Italy, prov. of Caserta, p. 23,477.

**Aves (Bird Isls.),** a group in the Caribbean Sea, belonging to Venezuela.

**Aveyron,** *dep.* S. France, on rim of Central Plateau, watered by Rivers Lot, Aveyron, and Tarn, cap. Rodez; 3,385 sq. m., p. 332,940.

**Avigliano,** *t.* in S. Italy, prov. Potenza, on the Bianco R., p. 18,750.

**Avignon,** on Rhone, chf. t. in dep. Vaucluse, S.E. France. Residence of Popes from 1309–1378, and anti-Popes 1378–1418; p. 49,120.

**Avila,** *t.* on R. Adaja, Spain (p. 11,800); in prov. of same name; area, 3,042 sq. m., p. 210,649.

**Aviles,** *port* in prov. of Oviedo, Spain, p. 12,800.

**Avlona,** or **Valona,** nearest *spt.* in Albania to Italy, p. 6,100.

**Avoca,** or **Ovoca,** picturesque *R.* and *vale* in co. Wicklow, I.F.S.; R. enters Irish Sea nr. Arklow.

**Avola,** *spt.* on E. coast Sicily, nr. Syracuse, p. 16,200.

**Avon,** *R.* in Wilts. and Hants, Eng., 65 m.; also R. enters Bristol Chanl., after flowing 80 m., 7 m. W. of Bristol; also R. flowing from Northants through Warwick, Leicester, and Worcester to Severn at Tewkesbury; also R. in Monmouth and R. in Glamorgan, Wales, falling into Swansea Bay; also sm. R.'s in Scotland, affl. of Annan, Clyde, Spey, and Firth of Forth.

**Avondale,** *par.* in Scotland, co. Lanark, contains Strathavon, t., p. *5,529*; also suburb of Cincinnati, Ohio, U.S.A.

**Avonmouth,** *outport* of Bristol.

**Avon Plains,** *agr. township* of Victoria, 175 m. N.W. of Melbourne.

**Awaji,** *mtns. isl.* (Japanese) at entry of Inland Sea, area 219 sq. m., p. 200,000; highest peak, Yurimbayama, 1,998 ft.

**Awe,** *Loch* (16 sq. m.), Argyllsh., Scotland, 8 m. W. of Inveraray, bordered by Ben Cruachan.

**Awre,** *urb. dist.*, Gloucester, Eng., p. *1,032*.

**Axar,** *fiord*, N. Iceland. [1,020.

**Axbridge,** *par.* co. Somerset, Eng. nr. Wells, p.

**Axe,** *R.* in Somerset, rising in the Mendip Hills and falling into the Severn; also *R.* rising nr. Childington, Dorset, and entering the English Channel at Axmouth in Devon.

**Axholme,** *Isle of*, in N.W. Lincs., Eng., formed by Rivers Trent, Don, and Idle, and comprising seven parishes, including Epworth.

**Axim,** *t.* on Gold Coast, Brit. W. Africa, 73 m. W. of Cape Coast Castle.

**Axminster,** *urb dist.*, Devon, Eng., p. *2,327*; formerly famous for its carpets.

**Axum,** anc. *t.* in Tigré, Abyssinia, formerly the cap., p. 5,000.

**Ayacucho,** *t.* in Peru. Founded by Pizarro in 1539, p. 21,000; cap. of dep. of same name (area 18,185 sq. m., p. 302,469).

**Aylesbury,** *mun. bor., cap.* of Bucks, Eng., noted for lace and straw mnfrs., p. *13,382*.

**Aylesford,** *t.* Kent, Eng., p. 2,600.

**Aylsham,** *mkt. t.* Norfolk, Eng., p. 2,670.

**Ayr,** co. *t.* at mouth of R. Ayr, 40 m. S. Glasgow, Burns born near here, 1759; p. *40,412*. One of the Ayr Burghs. [S.W. Scotland.

**Ayrshire,** (1,142 sq. m., p. *285,182*), maritime *co.* in

**Ayuthia,** or **Yuthia,** former *cap.* of Siam, on R. Menam, 50 m. N. of Bangkok, p. 50,000.

**Azamgarh,** or **Azimgarh,** *t.* and *dist.* in United Provs., India, p. (of t.) 20,000, (of dist.) 1,500,000; extensive indigo factories.

**Azemmour,** *spt.* at mouth of R. Morbeya, Morocco, p. 25,444.

**Azerbaijan,** Soviet rep., consists mainly of two former Russian provs. of Baku and Yelisavetpol; area, 33,970 sq. m., p. 2,096,973.

**Azores,** or **Western Isls.,** Portug. group in mid-Atlantic, 1,500 m. S.W. of Ireland, and 1,700 E. of Nova Scotia, area 922 sq. m., p. 242,613; cap. Angra, on Terceira I.

**Azov,** or **Azof,** U.S.S.R., *sea* and *pt.* on R. Don near its mouth, p. 27,500. Length of the Azov Sea (which communicates with the Black Sea), 220 m.

**Azpeitia,** *t.* in Spain, prov. Guipuzcoa, p. 7,500.

**Azuay,** *prov.* of Ecuador, area 3,870 sq. m., p. 190,000 cap. Cuenca.

**Azul,** Italian *col.* in S. Argentina, prov. Buenos Ayres, p. 60,000.

**Azurara do Beira** (or **Mangualde**), *t.* in Portugal, p. 4,300

## B

**Baalbek,** *c.* Syria, foot of Anti-Lebanon, known as the ancient Heliopolis; ruins of "Temple of the Sun," built by Antoninus Pius, p. 4,500.

**Baba,** promontory on W. coast of Asia Minor.

**Bab-el-Mandeb,** Strait of ("Gate of Tears"), uniting Red Sea to Indian Ocean, 20 m. broad. In it is the Isl. of Perim (Brit.).

**Babuyan Isls.,** group in Pacific Oc. N. of Luzon, in the Philippines, p. 9,000.

**Babylon,** anc. *cap.* of the Assyrian Empire in the Euphrates Valley, about 60 m. S. of Bagdad; Hillah now occupies a portion of its site.

**Back Bay,** the expansion of Charles R., now largely filled in and forming wealthy suburb of Boston, Mass., U.S.A.

**Back,** or **Back's R.** (called also Great Fish R.), 360 m. long, in Brit. N. America, falls into Arctic Ocean.

**Bacup,** *mun. bor.*, mftg. *t.* in S.E. Lancashire, Eng., 20 m. from Manchester, p. *20,606*.

**Badagry,** *t.* nr. Lagos, W. Africa, on the G. of Benin, formerly a great slave port, p. 10,000.

**Badajoz,** fortified *t.* on Guadiana R., Spain; stormed by British under Wellington in 1812; p. 34,450, prov. on S.W. frontier of Spain, 8,451 sq. m., p. 650,339.

**Badakshan,** sm. Afghan *state* between Hindu Kush and upper Oxus, cap. Faizabad. Estimated p. 100,000.

**Badalona,** *t.* in Spain, prov. Barcelona, p. 19,165.

**Baden,** State of S.W. Germany, 5,817 sq. m., p. 2,208,503; mines, mineral springs, two universities (Heidelberg and Freiburg); chf. t. Carlsruhe.

**Baden,** or **Oberbaden,** watering place in Aargau, Switz., p. 4,100; also watering place (Baden-bei-Wien), 14 m. S.W. of Vienna, p. 15,000.

**Baden-Baden,** famous Spa in Black Forest, Germany, noted for its mineral springs; p. 25,444.

**Badenoch,** extensive barren mountainous dist. in Inverness-shire, Scotl., 33 m. long, 27 m. wide.

**Badenweiler,** watering place in Baden, western end of Black Forest, resident p. 1,050; visited by 5,000 people annually.

**Badminton,** *vil.* and seat of Duke of Beaufort, in Gloucestershire.

**Badong,** *spt.* of Bali, Malay Archip., p. 130,000.

**Badulla,** *cap.* of Uva, Ceylon, in tea-planting dist., p. 6,000.

**Baena,** *t.* in Spain, prov. of Cordova, p. 14,500.

**Baeza,** *t.* in Spain, 22 m. N.E. of Jaen; p. 16,150.

**Baffin** (or **Baffin's**) **Bay,** great gulf west of Greenland, communicating with the Atlantic by Davis Strait, and by Smith Sound with the Arctic Ocean; explored by Baffin, an Englishman, in 1616; open four months in the year (June–Sept.). Baffin's Land, a promontory of barren land W. of the Bay.

**Bagamoyo,** *spt.* and tradg. *t.* in Tanganyika Terr., on E. African coast, nr. Zanzibar, p. 18,000.

**Bagdad,** famous *c.* on R. Tigris, Iraq, 500 m. from the sea, cap. of anc. Saracen empire, p. 120,000. The vilayet of Bagdad, between Persia and the Syrian Desert, includes some of the most fertile lands in the valleys of the Tigris and Euphrates, and has a p. of 250,000.

**Bagenalstown** or **Bagull's Town,** *t.*, co. Carlow, on the R. Barrow, I.F.S., p. 2,160.

**Bagenbun Head,** co. Wexford, I.F.S. where Strongbow landed. [p. 15,500.

**Bagharia** or **Bagheria,** *t.* in Sicily, nr. Palermo.

**Baghelhand** or **Bhagelkand,** dist. of Central India, E. of Bundalkhand, area, 11,324 sq. m., p. 1,600,000. Poor soil, suffers from famine.

**Bagnacavallo,** *t.* in Italy, prov. Ravenna, p. 15,250.

**Bagnara,** *t.* S. Italy, prov. Reggio; wine, honey, p. 11,210.

**Bagnères de Bigorre,** watering place, French Pyrenees; mineral springs and hot baths, p. 10,500.

**Bagnères de Luchon,** *t.* dep. Haute Garonne, France; noted for its thermal springs; p. 4,110.

**Bagnes de Chable,** watering place in canton Valais, Switzerland, p. 5, 100. [12,350.

**Bagni de Lucca,** *t.* in Italy, 11 m. N. of Lucca, p.

**Bagno-a-Ripoli,** suburb of Florence, Italy, p. 10,500. [14,010.

**Bagnoles,** *t.* dep. of Orne, France, mineral baths, p.

**Bagolino,** *t.*, N. Italy, prov. Brescia, sulphur springs, p. 4,150.

**Bagot,** *stn.* in Canada on C.P.Ry., 71 m. W. of Winnipeg.

**Bagshot,** *vil.* in Surrey, Eng., adjoining the famous heath which runs along the Berkshire border.

**Bahamas,** Brit. chain of *isls.*, W. Indies; first land in New World sighted by Columbus, extending 780 m., from Florida to Turk's Isls.; area 4,404 sq. m., p. 60,000; they have a collective cap., Nassau, New Providence.

**Bahawalpur,** nat. *t.* and *state* on Sutlej R., Punjab, India; area of state, 15,000 sq. m., p. 781,114; cap. 63 m. from Mooltan, p. 20,000.

**Bahia,** or **San Salvador,** second largest *c.* in Brazil, great spt. and trading centre, p. 332,000; cap. of State of the same name covering 164,601 sq. m., and containing p. of 3,372,901.

**Bahia Blanca,** *t.*, Argentina, on N. coast of a bay of its own name, p. 156,000.

**Bahia Honda,** coaling stn. on N. coast of Cuba, W. of Havana.

**Bahraich,** *t.* in United Provs., India, p. 27,000; Bahraich dist.

**Bahrein Isls.,** group in Persian G., under British protection, p. 110,000. Famous pearl fisheries; cap. Manama.

**Bahr-el-Abiad,** the White Nile. [Nile.

**Bahr-el-Ghazal,** one of the chief *trib.* of the White

**Bahr-el-Hulch,** "the waters of Merom," *L.* on Upper R. Jordan, Palestine.

**Baikal,** Siberian fresh-water *L.* (13,700 sq. m.) sixth largest in the world. Frozen Nov.–May; 40 m. wide, skirted by Trans-Siberian Ry.; separates Irkutsk prov. from Transbaikalia.

**Baildon,** *urb. dist.*, nr. Bradford, W.R.Yorks, Eng.,

**Bailleul,** *t.* of Nord, France, p. 14,950. [p. 7,794.

**Baillieston,** or **Crosshill,** *t.* in Scotland, co. Lanark, mining, p. 5,650.

**Baireuth.** (See **Bayreuth.**)

**Bairut.** (See **Beyrout.**)

**Baitool,** or **Betul,** *dist.* and *t.*, Central Provs., India.

**Baja,** *t.* on Danube, 90 m. S. of Budapest, p. 21,000.

**Bajaur,** *dist.*, S. of Hindu Kush, in Brit. sphere of influence, p. 120,000. [21,000.

**Bakau,** or **Bacau,** *t.* in Moldavia, Rumania, p.

**Bakchiseral,** or **Bakhtcheserai,** old *cap.* of Tartar Khans in Crimea, p. 16,650.

**Baker Isl.,** Polynesia, Pacific Ocean, belongs to U.S.; Baker Mts., 7 m. N. frontier of Washington terr., U.S.A.; alt. 10,700 ft.

**Bakewell,** *urb. dist.*, on R. Wye, nr. Chatsworth and Haddon Hall, Derbysh., Eng., p. *3,012.*

**Bakony-Wald,** *mtn* range and *forest* in Hungary, S. and W. of the Danube, formerly resorted to by robbers.

**Baku,** Transcaucasian petroleum *t.* and *port* on Caspian Sea, p. 250,000; part of Azerbaijan.

**Bala,** *urb. dist.*, nr. Denbigh, and *L.* in Merioneth, N. Wales, emptying into the Dee; p. of t., *1,395.*

**Balaklava,** *port* on Crimean coast. Famous charge of the Light Brigade, Oct. 25th, 1854; p. 770.

**Balakovo,** river *port* on the Volga, U.S.S.R., p. 16,220.

**Balapur,** *t.* in India, Akola dist., Behar; p. 12,500.

**Balasor Mt.,** isolated mtns. in Malabar dist. of India, alt., 6,762 ft.

**Balasor,** *port* in Orissa, Bengal India, p. 21,200; cap. of State of same name, area 2,066 sq. m., p. 1,100,000.

**Balaton Lake,** or **Platten See,** the largest *L.* in Hungary, 50 m. S.W. of Budapest. Length 48 m., average breadth 4 m., empties into the Danube.

**Balayan,** *t.* at head of G. at Balayan, Luzon, Philippine Isls., p. 24,700.

**Balby,** *t.* Eng., nr. Doncaster, W.R. Yorks, p. 11,620.

**Balclutha,** *t.* nr. Dunedin, N. Zealand.

**Bald Hills,** *t.* in Victoria, 115 m. E. of Melbourne, p. 850; Bald Head Peak, Victoria alt. 4,625 ft., highest pt. in Dividing Range; Bald Mtn., peak in Front Range, Colorado, U.S.A., alt. 12,000 ft.

**Baldock,** *urb. dist.*, Herts., Eng., p. *3,171.*

**Balearic Isls.,** 1,935 sq. m., p. 331,195, group in Mediterranean off East. coast of Spain; cap. Palma, on Majorca. [Ganges to B. of Bengal.

**Baleswar R.,** one of the chief distributaries of the

**Balfrush,** trading *t.* in Mazandaran, Persia, nr. Caspian Coast, p. 50,000.

**Balgonie,** *stn.* on C.P. Ry. in Canada, 341 m. W. Winnipeg.

**Bali,** *isl.* E. of Java, in Dutch E. Indies, area 2,240 sq. m., p. (including Lombok) 523,585, mainly engaged in agriculture. [of Marmora, p. 21,000.

**Balikisri,** trading *t.* in Asia Minor, above the Sea

**Balkans,** *mtn.* range between Danube and Ægean Sea, highest pt. 7,800 ft.; chief passes, Nadir-Derbend, Karnabad, Shipka, and Trajan.

**Balkan Peninsula,** the easternmost of the three great southern peninsulas of Europe, between the Adriatic and Ionian seas on the W., and the Black Sea, Sea of Marmora and the Ægean Sea on the E., with an area of, roughly, 200,000 sq. m.

**Balkash,** fresh water *L.*, U.S.S.R., nr. frontier of Western Mongolia; called also Tenghiz. Receives the Ili R., but has no outlet, length 345 m., by 55 m. wide.

**Balkh,** *dist.* of Afghan Turkestan, between the Kabul and the Oxus; corresponding to the ancient Bactria; rival of Nineveh and Babylon. The chief *c.* Balkh (pres. p. 8,000), associated with Zoroaster, called the "Mother of Cities," Jenghiz Khan destroyed it in 1220.

**Ballach Loch,** Scotland, co. Perth.

**Ballachulish,** *vil.*, Scotland, on S. shore of L. Leven, N.E. of Oban, co. Argyll, slate quarries nr., p. 900.

**Ballaghadereen,** *t.* in I.F.S., co. Mayo, nr. Castlereagh, p. 1,520. [*1,076.*

**Ballantrae,** maritime *par.*, Scotland, co. Ayr, p.

**Ballapali,** forest reserve, India, Cuddapah dist., Madras.

**Ballarat,** *c.* Victoria, 70 m. N.W. Melbourne, important goldfield dist., p. app. 90,000.

**Ballater,** *vil.*, Aberdeenshire, Scotland, nr. the Royal Highland residence of Balmoral, p. *1,198.*
**Balleen,** *par.* in co. Kilkenny, I.F.S. p. 1,515.
**Ballenstadt,** *t.* of Anhalt, at foot of Lower Harz, Germany, p. 5,050.
**Ballina,** *spt.* on Moy R., co. Mayo, I.F.S., p. 4,560; also *t.* on Richmond R., co. Rous, N.S.W.
**Ballinamuck,** *vil.* co. Longford, I.F.S., nr. Killala; here French surrendered to Lord Cornwallis in 1798.
**Ballinasloe,** *t.* I.F.S., in co.'s Galway and Roscommon; large cattle fair, p. 4,970.
**Ballinderry,** *R.* N. Ireland., co. Londonderry falls into Lough Neagh; also *par.* on its banks, p. 2,420.
**Ballingry,** *par.* Scotl., co. Fife, p. *10,353*, nr. Loch Gelly.
**Ballinrobe,** *mkt. t.* I.F.S., on R. Robe, co. Mayo, p. 2,850.
**Ballon d'Alsace,** *mtns.* (4,101 *ft.*) in Vosges, France; Ballon de Guebwiller, highest peak of Vosges, Upper Alsace, 4,690 ft.
**Ball's Bluff,** on the Potomac R., Virginia, U.S.A., where Confederates gained a victory in 1861.
**Ballston Spa,** *wat. pl.* Saratoga co., New York, U.S.A.
**Bally Lough,** I.F.S., co. Roscommon, nr. Castlereagh; (a very large number of Irish pars. have this prefix, which means a town or place).
**Ballycastle,** *spt.* and *mkt. t.*, N. Ireland, co. Antrim, p. 1,480. [I.F.S.
**Ballycottin Isl.,** in Ballycottin Bay, co. Cork,
**Ballydehober,** or **Kilroan,** *par.* co. Cork, I.F.S., p. 1,160.
**Ballydonagan Bay,** I.F.S., co. Cork, nr. Castletown; fishing vil. on bank. [Derg.
**Ballyfinboy,** *R.* I.F.S., co. Clare, flows into Lough
**Ballymena,** mkt. *t.* N. Ireland, co. Antrim, on the R. Braid; linen trade, p. 11,450.
**Ballymoney,** mkt. *t.* N. Ireland, co. Antrim, 40 m. N.W. of Belfast, p. 3,150.
**Ballymote,** mkt. *t.* I.F.S., co. Sligo, p. 1,520.
**Ballynahinch,** *par.* and *L.* and *R.*, I.F.S., co. Galway; also *t.* co. Down, N. Ireland, p. 1,340.
**Ballyness Bay,** I.F.S. co. Donegal.
**Ballyshannon,** *spt.* I.F.S., co. Donegal, mouth of R. Erne; salmon fishery, p. 3,020.
**Balmaz-Ujvaros,** *t.* Hungary, 14 m. W. of Debreczin, p. 11,000. Has lignite deposits.
**Balmerino,** *par.* Scotland, on R. Tay, N. Fife, p. *599.*
**Balmoral,** *vil.* Victoria, Dundas co., 204 m. W. Melbourne. [Aberdeenshire.
**Balmoral,** *royal residence*, on R. Dee, Scotland, W.
**Balotra,** *t.* in Jodhpur, Rajputana, India, p. 7,320.
**Balquhidder,** *par.* Scotland, co. Perth (includes vil. of Lochearn Head), p. *619.*
**Balrampur,** *t.* India, Gonda dist. of Oudh, loyal during the Mutiny, p. 15,000.
**Balranald,** *t.* N.S.W., on Murrumbidgee R.
**Balsall Heath,** *t.* Worcestershire, Eng. (suburb of Birmingham.) [of Uist.
**Balta,** one of the Shetland *Isls.*, Scotland, to the E.
**Baltic and North Sea Canal,** from the Elbe to the North Sea at Kiel, constructed by Germany, at a cost of £8,000,000, between 1887 and 1895 for strategic use. [Finland.
**Baltic Port,** sm. *spt.* in Esthonia, nr. Gulf of
**Baltic Provinces,** former Russian Govts. of Courland, Esthonia, and Livonia; various languages are spoken, though the borderland was much Russianised in years before war.
**Baltic Sea,** inland sea, Europe, an arm of the Atlantic enclosed by Russia, Germany, Sweden, Denmark, Finland, Esthonia, Latvia, Lithuania and Poland, 900 m. long, greatest width 200 m., area 180,000 sq. m.
**Baltimore,** sm. *spt.* I.F.S., co. Cork, nr. C. Clear; also c. and spt. in Maryland, U.S.A., nr. head of Chesapeake Bay; fine harbour; extensive trade; p. 805,000; also 10 other townships in various parts of the U.S.A.; also *t.* in Northumberland co., Ontario.
**Baltinglass,** mkt. *t.* I.F.S., on R. Slaney, co. Wicklow, p. 1,110. [Indus, p. 60,000.
**Baltistan,** or **Little Tibet,** *prov.* Kashmir, Upper
**Baluchistan,** country, Asia, S. of Afghanistan, between India and Persia, officially included in the Empire of India. It is largely a desert, cap. Khelat. Estimated area 54,228 sq. m., p. 421,679. Brit. garrison at Quetta.
**Balvano,** *t.* in Potenza prov., Italy, p. 3,850.
**Balvag,** *R.*, co. Perth, flowing to Loch Lubnaig.
**Bamangwato,** tribe, Bechuanaland, S. Africa, p. 35,000.
**Bambeque,** *t.* France, dep. Nord., nr. Dunkirk, p. 1,045.
**Bamberg,** *t.* in Bavaria on R. Regnitz, p. 49,179.
**Bamborough,** *vil.* and castle on Northumbrian coast, Eng., 16 m. S.E. of Berwick.
**Bambuk** or **Bambouk,** gold and iron *dist.* in Senegambia, W. Africa, has French stations, inhabitants Mandingoes.
**Bamian,** *t.* and *mtn. pass*, Afghanistan, N.W. of Cabul. Rock-cut caves and colossal Buddhist statues.
**Bammako, Bomoko, Bammaku,** or **Bammakou,** French *stn.* on Upper Niger, W. Africa, formerly an important native town of the Bambara State.
**Bamoni,** *t.* in Rangpur dis., Bengal, India, p. 7,000.
**Bampton,** *urb. dist.*, nr. Tiverton, co. Devon, p. *1,392*; mkt. *t.* nr. Witney, co. Oxford; and vil. on R. Lowther, co. Westmorland, Eng.
**Banana,** *t.* and *port* nr. mouth of Congo R., Africa; also sm. t. in Ferguson co., Queensland, 320 m. N. of Brisbane.
**Banana Isls.,** sm. group nr. Sierra Leone, N.W. Africa, belonging to Gt. Brit. [width 50 m.
**Bananal Isl.,** on R. Araguay, Brazil, length 220 m.,
**Banas,** *R.* in Rajputana, India, 300 m.
**Banat,** *dist.* formerly Hungary, now Rumania, chf. t. Temesvar. [N. Ireland, p. 5,100.
**Banbridge,** linen mftg. *t.* on Bann R., co. Down.
**Banbury,** *mun. bor.*, Oxfordsh. 80 m. from London, famous for its Cross, cakes, ale and cheese, p. *13,953.*
**Banca,** famous tin *isl.* in Dutch E. Indies, off coast of Sumatra, 4,446 sq. m., p. 154,114.
**Banchory,** *t.* in co. Kincardine, Scotl., p. *4,670.*
**Banda,** *t.*, United Provs. India, Allahabad div.
**Banda Isls.,** group in Moluccas, D.E. Indies, produce nutmets and mace, p. 7,000.
**Banda Oriental.** (See **Uruguay.**)
**Banda Sea,** in Malay Archipelago, N. of Timor.
**Bandawe,** *miss. stn.* on Lake Nyassa, Central Africa.
**Bandelkhand,** or **Bundelkhand,** a group of native states in Central India.
**Bander Abbas,** *spt.* of Persia on P. Gulf, very insalubrious, p. 10,000.
**Bandon,** *t.* on Bandon R. co. Cork, I.F.S., p. 2,840.
**Baneros,** *t.* in Alicante, Spain, p. 3,295.
**Banff,** *cap.* of Banffshire, on Moray Firth, Scotland, 50 m. N. of Aberdeen, p. *4,136.*
**Banffshire,** (630 sq. m., p. *54,835*), maritime *co.* in N.E. Scotland.
**Bangalore,** *fort. t.* in Mysore, India, p. 238,111.
**Banganpalle,** *t.* in S. India, nr. Madras, cap. of a small native state, p. 36,646.
**Bangkok,** *cap.* of Siam, on Menam R., 20 m. from the sea. Great trade, p. 931,171.
**Bangor,** *mun. bor.* (one of the Carnarvon boroughs) on Menai Straits, N. Wales, port for Penrhyn slate quarries, p. *10,959*; also wat. pl. nr. Belfast, co. Down, N. Ireland, p. 5,910; also port on Penobscot R., Maine, U.S.A., p. 29,000; also *t.* (with slate quarries), Northampton co., Pennsylvania, U.S.A., p. 5,900.
**Bangweolo,** or **Bemba,** or **Bangweulu,** *L.* Brit. E. Cent. Africa, 150 m. long by 80 wide, contains three isls. Dr. Livingstone died at Illala, on S. shore of this L., in 1873.
**Banialuka,** or **Banjaluka,** *fort. t.* on N. frontier of Bosnia and bank of R. Verbas, p. 14,400.
**Banias,** *vil.* of Palestine nr. Damascus, with castled fort of the Crusaders.
**Banichal Pass,** over Himalayas, Kashmir, India.
**Banjarmassin,** or **Banjermassin,** *t.* and *dist.* on Tatas Isl., chief port of Dutch Borneo, formerly a Sultanate; p. 52,000.
**Banka,** *t.* in Formosa on R. Tamsui, p. 50,000.
**Bankot,** *spt.* of Ratnagari dist., Bombay, India.
**Banks Isls.,** group of sm. *isls.* in S. Pacific, N.E. of New Hebrides.
**Banks Land,** large *isl.* in Arctic Ocean, N.W. of Prince Albert Land, Brit. N. America. Banks Strait separates it from Melville Isl. [Zealand.
**Banks Peninsula,** on E. coast of S. Isl., New
**Banks Strait,** separating Furneaux group from Tasmania.
**Bankura,** *t.* in Bengal, Bardwan div., India, p. 30,000. Silk and indigo industries.
**Bann, Upper and Lower,** *R.*, N. Ireland, rises in co. Down, and flows through Lough Neagh to Atlantic (90 m.) nr. Coleraine.

**Bannockburn,** 3 m. S. of Stirling, Scotl.; Bruce's victory over Edward II., June 24th, 1314; p. 4,110; also mining *t.*, Vincent co. (156 m. from Dunedin), New Zealand.

**Bansda,** native *state* in prov. Gujerat, Bombay, India, p. 35,000.

**Banstead,** *t.* in Surrey, Eng., p. 6,800.

**Bantam,** Dutch *residency*, W. extremity of the Isl. of Java; suffered severely from fever and volcanic eruption; cap. Serang, p. 700,000.

**Bantry,** *stn.* on C. P. Ry., Canada, 713 m. W. of Winnipeg.

**Bantry,** *spt.* I.F.S., co. Cork, at head of Bantry Bay, p. 3,120. [Vyrnwy R.

**Banwy,** *R.* Wales, co. Montgomery, trib. of

**Baraba,** steppes of S.W. Siberia, comprising the Kainsk dist. of Tomsk, as well as Omsk and Tara of Tobolsk and many large Russian villages.

**Baraboo,** *t.* on R. B. Wisconsin, U.S.A., p. 5,540.

**Baracaldo,** *t.* in Spain, prov. Biscay, on Bilbao R.; ironworks, p. 14,200. [p. 5,000.

**Baracoa,** *spt.*, oldest *t.* in and first cap. of Cuba.

**Barada,** *R.*, Syria, in plain of Damascus (ancient Abana), falls into L. Shirkiyeh.

**Baradine,** *t.*, 240 m. N. of Sydney, N.S.W.

**Barak (or Surma),** *R.* Assam, India, joins Brahmaputra.

**Barbacena,** *t.* in Minas Geraes, Brazil, p. 6,500.

**Barbados,** *isl.*, most east. of Brit. W. Ind. Is.; sugar, ginger, etc.; 166 sq. m.; p. 155,000, cap. Bridgetown.

**Barbary,** N. part of Africa, includes Morocco, Algeria, Tunis, Tripoli, Barca, and Fezzan, 2,600 m. long; Mohammedan p. 11,000,000.

**Barbastro,** *t.* on the Cinca, in Huesca, Spain, p. 8,600.

**Barberino,** two *towns* in Italy, prov. Tuscany, one 16 m. N., the other 16 m. S.W. of Florence, both over 10,000 inhab.

**Barberton,** mining *t.* in Transvaal, S. Africa De Kaap Goldfields, p. *1,029*.

**Barbuda,** *isl.*, one of the Brit. W. India Isls. to the N. of Antigua, area 75 sq. m., p. (about) 850.

**Barby,** *t.* on Elbe, in Saxony, p. 5,750.

**Barca,** dep. of Eritrea, Ital. Somaliland; area 12,700 sq. m., p. 38,540; cap. Agordat.

**Barcaldine Downs,** *sta.* Queensland, Australia, 370 m. W. Rockhampton.

**Barcarrota,** *t.* in Spain, nr. Badajoz, p. 5,050.

**Barcellona,** Sicilian *t.*, prov. Messina, Italy, p. 17,000.

**Barcelona,** *spt.* in Spain, cap. Barcelona prov.; founded by Hamilcar Barca, the Carthaginian; p. (of city, including suburbs) 582,220 (of prov.) 1,196,727.

**Barcelona,** *t.*, cap. of Anzoategui state, Venezuela, p. 17,000.

**Bardi,** *t.* in prov. of Piacenza, Italy, p. 6,690.

**Bardonnechia,** Turin, Italy, entrance of Mt. Cenis tunnel.

**Bardowick,** sml. *t.* (with ruined cathedral) on R. Ilmenau, Hanover, once chief trading t. of N. Germ.

**Bardsey,** *isl.* in Bardsey Sound, off coast of Wales, nr. N. point of Cardigan Bay, retreat of Welsh bards; lighthouse; also sml. par. W.R. of Yorks. nr. Wetherby.

**Bardwan,** or **Burdwan,** *div. dist.* and *t.* in Bengal, India; total area of div. 2,689 sq. m., p. 1½ millions. Bardwan, the chief t., is 67 m. N.W. of Calcutta, and contains the Maharajah's palace, p. (of t.) 26,000.

**Barèges,** *wat. pl.* in the Hautes Pyrénées, France.

**Bareilly,** *c.* of United Provs., India, in the Rohilkhand div., p. (of c.), 127,939. [5,070.

**Barentin,** *t.* in France, dep. Seine-Inférieure, p.

**Barents Sea,** that part of Arctic Ocean E. of Spitzbergen to North Cape.

**Barfleur,** fishing *vil.* France, dep. La Manche, 15 m. E. of Cherbourg, p. 1,120.

**Barga,** *t.* in Italy, prov. Lucca, p. 8,150.

**Barge,** *t.* Italy, Cuneo prov., p. 10,120.

**Bargeddie and Dykehead,** *vil.* nr. Coatbridge, Lanark co., Scot., p. 2,760. [Maine, U.S.A.

**Bar Harbour,** *summer resort* in Hancock co.,

**Bari,** *prov.* and *spt.* S. Italy, on Adriatic, 69 m. N.W. of Brindisi, p. (of t.) 109,218; (of prov.) 935,982.

**Baringhup,** *t.* of Talbot co., Victoria.

**Barking Town,** *urb. dist.*, on Roding R., Essex, Eng., gunpowder plot concocted here; now manufacturing dist., p. *51,277*.

**Barkisland,** *urb. dist.*, nr. Halifax, W.R. Yorks, p. *1,552*.

**Barkly,** mining *t.* Kara co., Victoria, 146 m. N.W. Melbourne.

**Barkly East,** *t.* prov. C. of Good Hope, 34 m. from Aliwal North on Kraal R., p. *1,008* (whites).

**Barkly West,** *t.* on Vaal R., prov. C. of Good Hope; diamond diggings, now almost exhausted, p. *466* (whites).

**Barkul,** *t.* and *L.*, E. Turkestan.

**Barle,** *R.*, rising in Exmoor, Somerset, Eng., trib. of the Exe.

**Bar-le-Duc,** *cap.* of Meuse dep., 125 m. E. Paris; cotton mftg., p. 16,500. [mftg., p. 46,250.

**Barletta,** *spt.* in S. Italy, prov., Bari; tartaric acid

**Barmen,** important *mftg. t.* in Rhenish Prussia adjoining Elberfeld, p. 156,326.

**Barmouth,** *urb. dist.*, *wat. pl.* Merionethshire, N. Wales, p. *2,491*. [p. 1,913.

**Barnack,** *urb. dist.*, Soke of Peterborough, Eng.

**Barnard Castle,** *urb. dist.*, mkt. *t.* Durham, Eng., on R. Tees, p. *3,883*.

**Barnaul,** *t.* Tomsk, W. Siberia, mining; p. 30,000.

**Barnes,** *urb. dist.*, *suburb* of London, on the Thames, Eng., p. *42,139*.

**Barnet,** 2 *urb. dists.*, Herts. 10 m. N.W. London, divided into 3 dists., Chipping Barnet, or High Barnet, East Barnet and New Barnet, p. (of urban dist. of Barnet) *14,721*; (of E. B. Valley urban dist.), *18,542*.

**Barneveld,** *t.* in Gelderland prov., Netherlands, nr. Arnhem, p. 7,775. [*11,915*.

**Barnoldswick,** *urb. dist.*, W.R. Yorks, Eng., p.

**Barnsley,** *co. bor.*, mftg. *t.* W.R. Yorks, Eng., p. *71,522*.

**Barnstaple,** *mun. bor.*, mkt. *t.* and *port* on R. Taw, N. Devon, p. *14,693*.

**Baroda,** native *state*, Western India; area 8,182 sq. m., p. over 2,121,875; *t.* in Bombay Pres., p. 94,742; cap. of territory of the Gaekwar, 250 m. N. of Bombay.

**Barotse,** country of N. Rhodesia, Africa, on the Upper Zambesi.

**Barquisimeto,** the *cap.* of Lara state, Venezuela, important trade centre, p. 25,500.

**Barr,** *t.* in dept. of Bas-Rhin, France, at foot of Vosges p. 6,020.

**Barra Isls.,** southerly groups, Outer Hebrides, Scotl., area 348 sq. m., lighthouse on Barra Head, p. *2,250*.

**Barraba,** *t.* in Darling co., N.S.W., 311 m. N. of Sydney, p. 700.

**Barrackpur,** *t.* on R. Hoogli, 15 m. above Calcutta, India. Park contains country residence of Viceroy, p. 21,500.

**Barrafranca,** *t.* in Sicily, in the Italian prov. of Caltanissetta; sulphur springs and mines, p. 11,250.

**Barrage,** *vil.* in Egypt, on Nile, 35 m. N. of Cairo, p. 7,700.

**Barranquilla,** *port* on Magdalena R. in Atlantico dep. of Colombia, S. America, rivals Cartagena as commercial centre of the republic, p. 105,000.

**Barre,** *c.* of Washington co., Vermont, U.S.A., p. 11,500.

**Barren Isl.,** volcano in B. of Bengal.

**Barren R.,** in Kentucky (120 m.), U.S.A., joins Green R., N.W. of Bowling Green.

**Barrhead,** mftg. *t.*, Renfrewshire, Scot., 7 m. S.W. of Glasgow, p. *12,208*.

**Barrier Ranges,** boundary of S. Australia and N.S.W. alt., 2,000 ft.

**Barrier Reef, Great,** coral reef extending for 1,200 m., 10 to 150 m. N.E. from coast of Australia.

**Barringun,** township of N.S.W., 640 m. N.W. of Sydney.

**Barrosa,** *vil.* in Spain, 16 m. S.E. of Cadiz; Brit. victory, 1811.

**Barrow,** many parishes of this name in Eng. and Ireland; also in Canada, U.S.A.

**Barrow,** *C.* on Coronation G., north coast of Brit. N. America.

**Barrow,** *R.*, Leinster, I.F.S., rises in Slieve Bloom Mtns. and flows (100 m.) to Waterford Harbour.

**Barrow Falls,** nr. Keswick, Cumberland.

**Barrowford,** *urb. dist.*, Lancs. Eng., p. *5,299*.

**Barrow-in-Furness,** *co. bor.*, iron and steel *t.* and *port* N. Lancs., Eng., p. *66,366*.

**Barrow-on-Soar,** *t.*, N. Leicestershire, Eng., p. 2,490.

**Barrow, Point,** most northerly headland in Alaska; also headland in S. Madagascar. [*38,916*.

**Barry,** *urb. dist.*, "outport" of Cardiff, Wales, p.

**Barry, coast** *par.* nr. Carnoustie, Forfar, Scotl., p. *4,508*. [21,000.
**Barsi,** *t.* in Sholapur dist., Bombay, India, p.
**Bar-sur-Aube,** *t.* of France, dep. Aube, p. 5,010.
**Bar-sur-Seine,** *t.* in France, dep. Aube, on bank of Seine, p. 3,350.
**Barth,** *spt.* of Prussia, prov. Pomerania, p. 7,150.
**Bartholomew Bayou,** *R.* (275 m.) in Arkansas, U.S.A.
**Barton-on-Humber,** *urb. dist.*, Lincs., Eng., p. *6,330*.
**Barton-on-Irwell,** mftg. *t.*, 5 m. W. of Manchester, Eng., p. 5,700. [p. *5,876*.
**Barvas,** *par.* in the Hebrides, Isle of Lewis, Scotl.,
**Basel** or **Bâle,** one of the Swiss cantons, divided into Baselstadt and Basel Landschaft; area 177 sq. m., p. 221,098. Basel or Bâle city, the cap., is a centre of missionary enterprise, p. 135,976.
**Bashan,** hill country, E. of Jordan, Palestine.
**Bashurat,** *t.* in Bengal, India, p. 15,600.
**Basim,** *t.* and *dist.* in Berar, India, p. (of t.) 12,500.
**Basingstoke,** *urb. dist.*, mftg. *t.* in N. Hants., Eng., 50 m. W. London, p. *13,862*.
**Basle.** (See **Basel** or **Bâle.**)
**Baslow** and **Bubnell,** *urb. dist.*, Derbyshire, Eng., nr. Bakewell, p. *854*.
**Basque Provinces,** in N. Spain (Pyrenees), subdivided into (1) Alva; (2) Biscaya; (3) Guipuzcoa. Total area 2,958 sq. m., p. (about) 400,000.
**Basra** or **Bassora,** *prov.* on Euphrates, Iraq, 60 m. from the sea, p. 30,000; cap. of vilayet of same name, including the great marshy dist. of the Lower Euphrates and Tigris, with a p. of nearly a million.
**Bass Rock,** in Firth of Forth, opposite Tantallon Castle, nr. N. Berwick, a mile round.
**Bass Strait,** between Victoria and Tasmania; length abt. 200 m., breadth about 140.
**Bassa,** *spt.* Upper Guinea, W. Africa.
**Bassam** or **Grand Bassam,** French *t.* in Africa on Gold Coast.
**Bassano,** *t.* N. Italy, prov. Vicenza, at foot of Venetian Alps, p. 15,250. [Bombay, p. 11,500.
**Bassein,** *t.* in Thana dist. of India, 20 m. N. of
**Bassenthwaite Water,** picturesque *L.* in Cumberland, Eng., 4 m. long, nr. Keswick.
**Basse-Terre,** chief *t.* of St. Christopher, one of the West India Isls., p. 7,736; also cap. of Guadeloupe Isl., French West Indies, p. 8,318.
**Bassorah.** (See **Basra.**)
**Bastad,** *t.* in Sweden, on Cattegat, p. 1,140.
**Bastar,** state in the Cent. Provs., India, area 13,062 sq. m., p. 464,137. [p. 30,150.
**Bastia,** *spt.* and fortified *t.* of Corsica, N.E. coasts,
**Basuto Land,** *prov.* Brit. South Africa, at head of Orange R., and enclosed on S. by the Drakenberg Mtns.; area 11,716 sq. m., p. about 500,000. Sometimes styled the "Switzerland of South Africa."
**Batala,** *t.* in Brit. India; Gurdaspur div. of the Punjab; import. trade centre, p. 27,500.
**Batalha,** *t.* in Portugal, nr. Leiria, p. 3,820.
**Batavia,** *spt.* on N.E. coast of Java; cap. Dutch E. Indies, p. 120,000; also mftg. t. N. York, U.S.A., p. 17,500.
**Bateman's Bay,** N.S.W., 142 m. S.W. of Port Jackson; also spt. on Clyde R., co. St. Vincent, N.S.W., 200 m. S. of Sydney.
**Batesar,** *t.* in India, Agra dist., on the Jumna R.; important commercial centre.
**Batesford,** post *t.*, co. Grant, Victoria, 48 m. S.W. of Melbourne.
**Bath,** *co. bor.*, Somerset, Eng., on R. Avon, hot springs; p. *68,801*; also spt. Maine, U.S.A., p. 9,200.
**Bathampton,** *sub.* of Bath, Somerset, on the Avon.
**Bathgate,** *t.* Linlithgow co., Scotl., mining and oil works; p. *18,064*.
**Bathurst,** *t.* N.S.W., Australia, in gold mining dist., p. 9,100; also British spt. at mouth of Gambia, W. Africa, p. 7,150; also t. Canada, prov. N. Brunswick, N. coast; also isl. off coast of Australia, 30 m. long; also large isl. in Arctic Ocean, discovered by Parry. [Trincomali, p. 6,200.
**Batticalo,** *spt.* E. coast of Ceylon, 68 m. S.E. of
**Batiscan,** *R.*, Quebec (50 m.); also t. (117 m. N.E. of Montreal) on bank of R.; Batiscan Bridge is a smaller township nr. the junction with the St. Lawrence.
**Batley,** *mun. bor.*, heavy woollen mftg. *t.*, W.R. Yorkshire, Eng., 8 m. from Leeds, p. *34,573*.
**Baton Rouge,** *cap.* of Louisiana State, U.S.A., on Mississippi, p. 30,800. Scene of heavy fighting in the Civil War, 1862.
**Batoum** or **Batum, Armenia,** *free port*, on E. coast of Black Sea, p. 28,500. [phur baths, p. 3,850.
**Battagila,** Venetian *t.* prov. Padua, Italy; hot sul-
**Battambang,** chf. *t.* of prov. of same name in French Cambodia; p. of t. 5,000, of prov. 50,000.
**Battam Isl.,** Malay Archip., 20 m. S. of Singapore.
**Battenheim.** *vil.* in Alsace, France, nr. Mulhausen, p. 1,200. [of R. Thames, p. *159,542*.
**Battersea,** *sub.* and *met. bor.* of London, on S. bank
**Battle,** *urb. dist.*, in Sussex, Eng.; battle of Hastings fought here, 1066; p. *3,490*; also R. in Canada, affl. of Saskatchewan, rising in Alberta.
**Battle Creek,** *c.* on Kalamazoo R., Calhoun co., Michigan, U.S.A., engineering and woollen manuf., p. 36,164.
**Battlefield,** *par.* Shropshire, Eng., nr. Shrewsbury, where Hotspur was slain in 1403.
**Battleford,** *t.* Canada, at junction of Battle R. with Saskatchewan, formerly cap. of N.W. Terr., p. 6,000.
**Battle Harbour,** nr. Strait of Belle Isle, Labrador.
**Battock,** *mtn.* Scotl., in the Grampians, Kincardinesh., alt. 2,558 ft.
**Baturin,** *t.* U.S.S.R., 63 m. E. of Chernigov, p. 3,770. [30,000.
**Bauang,** *t.* in Luzon, Philippine Isles., fine ch., p.
**Baud,** *t.* in France, dep. Morbihan, p. 4,500.
**Baul,** *t.* in Venezuela, prov. Zamora, p. 10,500.
**Baures,** *R.* in E. Bolivia, flowing from L. Guazamire to R. Guapore, 300 m. long.
**Bautzen,** easternmost *prov.* of Saxony, area 953 sq. m., p. 433,011; cap. Bautzen, on *R.* Spree, 33 m. N.E. of Dresden, p. 34,993.
**Bavaria,** (20,501 sq. m., p. 7,140,500, second largest *state* in Germany; cap. Munich.
**Bawtry,** mkt. *t.* in W.R. Yorks, Eng., on Notts border, p. 1,120. [16,500.
**Baxar,** or **Buxar,** sacred *c.* of Bengal, India, p.
**Bayazid,** or **Bayezid,** fortified *t.* Armenia, 15 m. S. of Ararat, p. 5,500.
**Bay Bay,** *t.* in Leyte, Philippine Isls., important commercial port, p. 24,000.
**Bay City,** mftg. *t.* on Saginaw R., Mich., U.S.A., 108 m. N.W. of Detroit, p. 47,360.
**Bayeux,** *c.* in Normandy, France, 17 m. from Caen, famous for tapestry, p. 8,150.
**Bay Is.,** group in Gulf of Honduras, Central America; largest, Ruatan, total p. 5,150.
**Baylen,** or **Baulen,** *t.* in Spain, 56 m. N. Granada, p. 10,041.
**Bay of Islands,** inlet and harbour on North Isl., New Zealand; also settlement on W. coast of Newfoundland, 55 m. N.E. of Cape St. George.
**Bayonne,** fort. *t.* dep. Basses-Pyrénées, S.W. France, noted for fine hams and for the invention of bayonet, p. 27,575; also chemical mftg. *t.* in New Jersey, U.S.A., 6 m. from New York, p. 89,000.
**Bayreuth,** *c.* Bavaria, home of Wagner. Famous for musical festivals in magnif. national theatre, p. 33,128. [Eng.
**Bayswater,** populous W. district of London,
**Bay Verte,** on S. side Northumberland Strait, between Nova Scotia and New Brunswick.
**Bazardjik,** *t.* in Bulgaria, 27 m. N. of Varna; captured by Russians in 1774 and 1810, p. 10,250.
**Beachy Head,** 575 ft. high, on Sussex coast, loftiest headland South of Eng.
**Beaconsfield,** *urb. dist.* in Bucks, 10m. N. of Windsor, Eng., p. *4,343*; also t. in Tasmania, 33 m. N.W. Launceston; also t. in Diamond Fields, nr. Kimberley, S. Africa.
**Bear Isl.,** in Arctic Oc., 315 m. S. of Spitzbergen; also groups of isls. N. of Siberia.
**Bear Lake,** on border of Idaho and Utah, from which Bear R. flows to Great Salt Lake.
**Bear Lake, Great** (14,000 sq. m.), N.W.T., Canada; has its outlet through the Great Bear R., into the Mackenzie. [U.S.A.
**Bear Mt.,** a hill (750 ft.) in Dauphin co., Penn.,
**Bearn,** old name of French prov. now called Basses-Pyrénées.
**Beas,** or **Bias,** *R.* of the Punjab, one of the affits. (290 m.) of the Sutlej; rises in Kullu mts., 13,326 ft. above the sea.
**Beatrice,** health resort on Big Blue R., Gage co., Neb., U.S.A., p. 103,000.
**Beaucaire,** *t.* on Rhone R., S.E. France, dep. Gard, noted for its fair, p. 9,650.

**Beaucourt**, *t.* (copper and iron mfts.) in France, 10 m. S.E. Belfort, p. 4,750.
**Beaufort**, the names of several towns and villages in England, U.S.A., France, and Australia.
**Beaufort West**, *dist.* and *t.* in prov. of C. of Good Hope, S. Africa, p. (of town) *3,337*.
**Beaujolais**, old French *prov.*, now the wine-growing dist. of deps. Loire and Rhône.
**Beaulieu**, *par.* in co. Hants, Eng., 6 m. N.E. of Lymington, p. 990; also *t.* in France, dep. Corrèze, on the Dordogne, p. 2,220.
**Beauly**, *R.* and *vil.* 10 m. W. from Inverness, Scotland; R. flows to Beauly Loch.
**Beaumaris**, *mun. bor.*, *wat. pl.* on Menai Str.; cap. of Anglesey, Wales, p. *1,708*.
**Beaumont**, *t.* of Texas, U.S.A., p. 59,000.
**Beaune**, *t.* in Côte d'Or dep., France, extensive trade in Burgundy wine, p. 14,125.
**Beautiful Valley**, or **Wilmington**, co. Frome, S. Australia.
**Beauvais**, *cap.* of Oise dep., France, 55 m. N. of Paris, noteworthy cathedral, 13th century architecture, p. 20,130. [sea, p. 2,400.
**Beauvoir-sur-Mer**, *t.* in Vendée, France, 3 m. from
**Beaver City**, *cap.* of Beaver co., Oklahoma, U.S.A.
**Beaver Creek**, *R.* in N.W. Kansas and S. Nebraska, trib. of the Republican R., length 200 m.
**Beaverdam**, *c.* of Wisconsin, Dodge co., U.S.A., summer resort on Beaverdam L., p. 10,000.
**Beaver Falls**, *t.* in Penn., U.S.A., coal and natural gas region, p. 17,600.
**Beaver Islands**, group in N. part of L. Michigan, Manitou co., U.S.A.; largest, Big Beaver, 24 m. long.
**Beaver R.**, in W. Penn., U.S.A., formed by union of Mahoning and Shenango R.'s, joins the Ohio nr Beaver Falls. [Birkenhead, p. 1,764.
**Bebington Higher**, *urb. dist.*, Cheshire, Eng., nr.
**Bebington, Lower**, *urb. dist.*, Cheshire, Eng., nr. Birkenhead, p. *26,742*.
**Bécancour**, *t.* in Quebec, Canada, cap. Nicolet co.; p. 2,550, on R. Bécancour (70 m.), affit. of St. Lawrence.
**Beccles**, *mun. bor.*, Suffolk, Eng., on R. Waveney, 17 m. S.E. of Norwich, p. *6,544*.
**Bechuanaland**, Brit. Protectorate in S. Africa, stretching from Orange R. to the Zambesi, and merging westward in the Kalahari desert; divided into N. and S. Bechuanaland; total area 275,000 sq. m.; p. 152,983.
**Beckenham**, *urb. dist.*, Kent, and residential suburb of London, Eng., p. *43,834*.
**Beckum**, *t.* in Westphalia, nr. Munster, p. 4,350.
**Becse (New and Old)**, two *tns.* in Hungary, (N.) 40 m. S.E. of Zombar, p. 7,350; (O) 50 m. S. of Szegedin, p. 15,500. [allerton, p. 1,200.
**Bedale**, mkt. *t.* N.R. of Yorks, Eng., nr. North-
**Beddgelert**, *vil.* N. Wales, co.'s of Carnarvon and Merioneth; tourist resort, p. 1,250.
**Beddington and Wallington**, *urb. dist.*, Surrey, Eng., nr. Croydon, p. *26,249*.
**Bedeguna**, fortified *t.* in Bornu, Africa.
**Bedford**, *mun. bor.*, on R. Ouse, 50 m. N. of London, Eng.; Bunyan (born at Elstow, adjacent vil.) wrote *Pilgrim's Progress* in Bed. jail; p. *40,573*; also t. in Lancashire, Eng., nr. Leigh; also t. Pa. U.S.A.; c. Indiana; c. Virginia; also name of county in each of the U.S. Pa., Ten., Va.; also div. and t. of C. Colony.
**Bedfordshire**, agricul. S. Midland co., Eng., 484 sq. m., p. *220,474*.
**Bedford Level**, marshy *dist.*, area 750,000 acres, in co.'s Suffolk, Huntingdon, Norfolk, Northampton, Lincoln, and the Isle of Ely. The draining was begun by the then Earl of Bedford in 1634.
**Bedikarfi**, large fortified native *t.* in Bornu, Africa.
**Bedlington**, *urb. dist.*, Northumberland, Eng., nr. Morpeth, iron and coal; p. *27,315*.
**Bedminster**, *t.* Somerset, Eng., suburb of Bristol.
**Bedonia**, *t.* in Italy, prov. Parma, p. 8,250.
**Bedouin**, *t.* in dep. of Vaucluse, France, p. 2,250.
**Bedum**, *t.* in Gröningen, Holland, p. 5,570.
**Bedwas and Machen**, *urb. dist.*, Monmouth, Eng., p. *9,190*.
**Bedwellty**, *urb. dist.*, on Welsh border of co. Monmouth; coal and iron works, p. *30,069*.
**Bedworth**, colliery *t.* Warwick, Eng., 3 m. S. Nuneaton, p. *12,058*. [Australia, p. 5,900.
**Beechworth**, ch. *t.*, Ovens goldfield dist., Victoria,
**Beechy Point**, *C.*, N.E. coast, Alaska.
**Beemaning Mtn., highest peak Blue Mtns., N.S.W.**, alt. 4,100 *ft.*
**Beenleigh**, *t.* Queensland, 24 m. S. Brisbane, p. 970.
**Beerberg**, highest *mtn.* of the Thuringerwald, nr. Meiningen, Germany, alt. 3,226 ft.
**Beerfelden**, *vil.* in Hesse, Germany, p. 2,650.
**Beernem**, *t.* of West Flanders, Belgium, nr. Bruges, p. 5,150. [Palestine.
**Beersheba**, ruined anct. frontier post in S. of
**Beerta**, *t.* in prov. of E. Gröningen, Holland, p. 5,050. [Prussia, p. 4,270.
**Beeskow**, *t.* in prov. of Brandenburg, on R. Spree,
**Beeston**, *urb. dist.*, Nottingham (sub. of city), Eng., p. *16,016*; also outlying sub. of Leeds, W.R. Yorks.
**Beg, Lough**, co. Antrim, N. Ireland, above Lough Neagh.
**Bega**, *t.* on R. Bega, co. Auckland, New South Wales, 255 m. S.W. of Sydney; cheese factories; also R. and canal in S. Hungary, trib. to R. Theiss.
**Begharmi** or **Baghirmi**, country of Central Sudan S. of L. Chad, N. Africa; cap. Masenia.
**Begles**, mftg. *t.* dep. Gironde, France, nr. Bordeaux, p. 12,750.
**Bed-Shehr** or **Bey-Shehr**, *L.* [25 m. long) and sm. *t.* on bank, in Konieh vilayet, Asiatic Turkey.
**Behar and Orissa**, new *prov.* India, comprising Behar, Orissa, and Chota-Nagpur (formerly part of Bengal), as well as the Sambalpur district; total area 83,000 sq. m., pop. 35,000,000. Patna, the chief city, has pop. of 120,109.
**Behbehan** or **Babahan**, *t.* in Fars prov., Persia; p. 11,000.
**Behring Isl.** or **Bering Isl.**, the most W. of the Aleutian group in the N. Pacific.
**Behring Sea**, part of N. Pacific Ocean between the Aleutian Isls, and Behring Str., upwards of 1,600 m., also called the Sea of Kamchatka; Behring Str. is the narrow sea which separates Asia (Siberia) from N. America (Alaska); 36 m. wide at narrowest part.
**Beilan**, *t.* and *mtn. pass* in Syria, E. of G. of Iskanderoon; the anc. Amanus or "Syrian Gates." Here the Egyptians under Ibrahim Pasha defeated the Turks in 1832; p. of modern t., 6,200.
**Beilen**, *t.* Drenthe, Holland, nr. Assen, on Haveltor R., p. 5,000. [p. 1,950.
**Beilngries**, sm. *t.* in Bavaria, on Ludwig's Canal.
**Beira**, *prov.* Portugal on Spanish border; area, 9,208 sq. m., p. 1,626,484, cap. Coimbra: also port at mouth of Pungwe R., Portuguese E. Africa, p. 3,420.
**Beit-el-Fakih**, *t.* Yemen, Arabia, on Red Sea, N. of Mocha; coffee trade; p. 8,000. [Scotl., p. *5,977*.
**Beith**, industl. *t.* N. Ayr, 20 m. from Glasgow,
**Beitstad**, *t.* Norway, 55 m. N.E. Trondhjem, on Beitstad Fjord, p. 5,250.
**Beja**, *t.* in Alemtejo prov., Portugal, the Roman "Pax Julia," p. 10,113, in pig-breeding dist.
**Bejar**, *t.* prov. Salamanca, Spain; cloth mfts., p. 12,050.
**Bejucal**, *t.* Cuba, 15 m. from Havana, p. 8,120.
**Békéscsaba**, *t.* Hungary, at junction of Black and White Koros R., p. 46,679.
**Bela**, or **Lus Bela**, *cap.* of sml. Ind. state, S. of Kalat, Baluchistan, p. (of t.) 5,050. Also a t. of Brit. Ind., admin. hdqrs. of Partabgarh dist. of Oudh, 80 m., from Benares, p. 9,200. Also a tn. in Czecho-Slovakia, nr. Kesmark, p. 2,820.
**Belalcazar**, *t.* Spain, 45 m. N.N.W. Cordova, woollen mfts., p. 7,800.
**Belbeys** or **Belbeis**, *t.* Egypt, 28 m. N.E. Cairo, impt. trade centre on Nile, p. 12,100.
**Belcher Isls.**, two sml. groups in Hudson Bay.
**Belchite**, *t.* Spain, 20 m. S. Saragossa, p. 4,120.
**Beled-el-Jerid**, region of N. Africa, S. of Algeria, "the country of dates."
**Belem**, *cap.* of Pará state, Brazil, p. 275,167.
**Belem**, suburb of Lisbon, fine church and monastery.
**Belen**, *t.* in prov. Catamarca, Argentina, p. 3,215.
**Belfast**, *c.* and *spt.* on B. Lough, co. Antrim, and partly co. Down, largest c. in N. Ireland, 100 m. N. of Dublin; linen mft., shipbuilding, p. 393,000; also c. Maine, U.S.A., on Penobscot B., p. 5,000; also spt. of Victoria (sometimes called Port Fairy), 180 m. W.S.W. of Melbourne, p. 2,600.
**Belford**, *t.* Northumberland, Eng., 15 m. S.E. Berwick, p. 5,020; also *t.* N.S.W., 138 m. N. Sydney.
**Belfort**, *t.* in E. France, in the prov. of Haut-Rhin, between Jura and the Vosges, strongly fortified, p. 32,000.
**Belfort**, terr. of France, area 235 sq. m., p. 94,338.

**Belgaum,** *cap.* of dist. Carantic, Bombay Pres., India; cotton-weaving centre, p. 27,000. Belgaum dist. has area 4,657 sq. m., p. about a million, mainly engaged in growing millet, rice, grain, cotton, etc.

**Belgian Congo,** formerly Congo Free State, Africa, under the sovereignty of the King of the Belgians. Area, 909,654 sq. m.; p. (of Bantu origin), 11,000,000; (whites), 8,221. Chief tns., Boma, Leopoldville, Stanleyville, and Elisabethville.

**Belgium,** (11,744 s. m.), p. *8,129,821.* Small, but industrially imp. European co., enclosed by France, Holland, Germany, and the North Sea; cap. Brussels, chief p. Antwerp; universities at Ghent, Liège, Louvain, and the cap.

**Belgorod,** or **Bielgorod** (" the white city "), *t.* of Kursk, U.S.S.R., on Donetz R., p. 23,500.

**Belgrade,** *c.* cap. of Serbia, Jugo-Slavia, at junc. of Save R. and the Danube; taken by Austria, 1914, recaptured December in same year, finally fell Oct. 1915; p. 120,000.

**Belgravia,** S.W. *dist.* of London, Eng., mainly residential, once a Thames-side marsh. [p. 1,080.

**Belhaven,** *par.* nr. Dunbar, Haddington co., Scott.,

**Belize,** or **Balize,** *cap.* of Brit. Honduras, Cent. America, exports mahogany, etc., p. 14,150.

**Bella,** *t.* in prov. Potenza, Italy, p. 6,200.

**Bellaggio,** picturesque *vil.* on L. Como, Italy, p. 9,620.

**Bellaire,** mftg. *t.* on Ohio R., U.S.A., 5 m. S. of Wheeling, p. *13,000.*

**Bellary,** or **Bellari,** *fort. c.* in Bellary dist., India. Here Boer prisoners of war were sent in 1901; p. 34,956.

**Belle Fontaine,** *vil.* in the Vosges, nr. Epinal, France, p. 1,884.

**Bellegarde,** French *fort* on Spanish frontier; also *t.* in deps. Ain and Gard, France.

**Belle Isle,** *isl.* and *str.* between Newfoundland and Labrador, in Conception B.

**Bellenden Ker Hills,** *mtn.* range in N. Queensland.

**Belleville,** univ. *t.* on L. Ontario, Canada, p. *13,798;* also a populous N.E. suburb of Paris; also *t.* in dep. Rhone, nr. Lyons, France, p. 3,100; also cap. c. of St. Clair co., Ill., U.S.A., p. 24,741.

**Bellevue,** *goldfield centre* on Woolgar R., Queensland, Australia.

**Bellingham,** *par.* nr. Hexham, Northumberland co., Eng., p. 1,370; also *t.* of Washington, U.S.A., p. 31,250. [10,232.

**Bellinzona,** *t.* on R. Ticino, Switz., nr. Lugano, p.

**Bello Horizonte,** *cap.* of Minas Geraes state, Brazil, 50 m. N.W. of Ouro Preto; p. about 57,500.

**Bellot Str.,** *channel* on Arctic coast, N. America; separates Boothia and N. Somerset.

**Bell Rock,** or **Inchcape,** famous rock and lighthouse on E. coast Scott., 12 m. S.E. of Arbroath.

**Bellshill,** mining *t.* in Scott., co. Lanark, nr Glasgow, p. 8,800.

**Belluno,** *c.* and *prov.* in Venetia, N. Italy; area of prov. 1,276 sq. m., p. 203,723; cap. c. has a fine cathedral, and p. 22,261.

**Belmont,** *stn.* on Cape Ry., S. Africa, 56 m. S. of Kimberley; battle Nov. 23rd, 1899.

**Belmont,** *t.* in France, dep. Loire, 24 m. N.E. Roanne, p. 3,750. There are in the U.S.A. no less than 27 places called Belmont, mostly sm. towns or villages; 5 also in Eng., one each in N.S.W., Victoria, Nova Scotia, and Ontario; and one in Barbadoes in the W. Indies.

**Belmonte,** *t.* on the Mediterranean, nr. Cosenza, Italy, p. 4,250; also *t.* in Spain, nr. Cuenca, p. 2,550.

**Belmullet,** fish. *vil.* in co. Mayo, I.F.S., nr. Ballina, p. 855.

**Beloit,** *c.* on Rock R., Wisconsin, U.S.A., p. 23,750.

**Belper,** *urb. dist.* on Derwent R., co. Derby, Eng., p. *13,023.* [Adelaide.

**Beltana,** *t.* S. Australia, co. Frome, 382 m. N. of

**Belt, Great** (37 m.) and **Little** (30 m.), two *channels* leading from the Baltic to the Kattegat and the North Sea. [p. 1,860.

**Belturbet,** mkt. *t.* on R. Erne, co. Cavan, I.F.S.,

**Baluchistan.** (See Baluchistan.)

**Belvedere,** two *t.'s* in Italy, one on the Marches, W. of Ancona, p. 2,400; the other on the Mediterranean, 32 m. N.W. of Cosenza, p. 5,250.

**Belvidere,** *t.* in Illinois, cap. of Boone co., p. 8,200; also *t.* nr. Adelaide, S. Australia.

**Belvoir Castle** (Duke of Rutland), nr. Grantham, on Lincoln and Leicester border, Eng.

**Bembatoka,** *bay* on N. coast, Madagascar.

**Ben Alder,** *mtn.* of Grampian Range, Scotl., nr. Loch Erich, alt. 3,757 ft. [dist., p. 9,200.

**Benalla,** *t.* Victoria, 122 m. N.E. Melbourne, in fruit

**Benares,** or **Varanosi,** famous sacred *c.* on the Ganges, 420 m. N.W. of Calcutta. Great pilgrim resort, p. 199,413. Benares district, on both sides of the Ganges, covers an area of 865 sq. m., p. 362,735.

**Ben Arthur,** *mtn.* in co. Argyll, Scotl., alt. 2,891 ft.

**Ben Attow,** *mtn.* in co.'s Ross and Inverness, Scotl., alt. 3,383 ft.

**Ben Avon,** *mtn.* in co. Aberdeen, Scotl., alt. 3,843ft.

**Benbecula,** (36 sq. m.), *isl.* of the Outer Hebrides, Scotl., included in co. Inverness, p. 1,390; Benbecula Sound is the passage between the isl. and South Uist.

**Bencoolen,** or **Benkoelen,** Dutch *residency* in Sumatra; area 9,399 m., p. 204,269. Produces pepper, rice, tobacco, etc.

**Ben Cruachan,** *mtn.* co. Argyll, Scotl., nr. Oban, alt. 3,689 ft.

**Bender,** fort. *t.* on Dniester R., Bessarabia, Rum., 61 m. W. of Odessa, p. 45,000.

**Bender Abbasi.** (See Bander Abbas).

**Bendigo,** mining *dist.* co. Vincent, New Zealand, 175 m. N.W. of Dunedin.

**Bendigo** (otherwise Sandhurst), *c.* of Bendigo co., Victoria, Australia; centre of gold mining dist., which also produces wine and grain largely, p. 26,693. [Angus, p. *504.*

**Bendochy,** *par.* Perthshire, Scotl., nr. Coupar

**Ben Doran,** or **Doireann,** *mtn.* co. Argyll, Scotl., alt. 3,523 ft.

**Bendzin,** *t.* nr. Cracow, in Poland, p. 11,000.

**Benevento,** *c.* of Italy, p. 25,123, cap. of prov. of the same name, area 819 sq. m., p. 265,487, containing many Roman remains.

**Benfieldside,** *urb. dist.,* on Derwent R., co. Durham, Eng., p. *9,193.*

**Benfleet,** Essex, Eng. p. *12,091.*

**Bengal,** *pres.,* the newly-constituted province comprises 78,699 sq. m. The population (Hindus and Mohammedans in nearly equal proportions) is about 46,500,000. Calcutta is the chief city.

**Bengal, Bay of** (or **Gulf of**), part of Indian Ocean washing E. shores of India and W. shores of the Indo-Chinese Peninsula. Receives waters of R. Krishna, Ganges, Brahmaputra, Irawadi, etc.

**Bengazi,** or **Ben-Ghazi,** *spt.* of Cyrenaica, N. Africa, belonging to Italy. On the G. of Sidra, it has a p. of 35,000. It is the starting-point for caravans to Egypt and the interior.

**Bengore Head,** *C.* on N. coast of N. Ireland, Antrim, E. of Giant's Causeway.

**Benguella,** coast *dist.,* Portuguese W. Africa, S. of Angola; p. 500,000, cap. São Filipe de Benguella, on Bay of same name, p. 2,500.

**Benha,** *t.* in Egypt, on railway, 29 m. N. of Cairo, p. 18,607.

**Benholm,** mediæval *par.* co. Kincardine, Scotl., anc. castle, p. *1,092.* [Hope, alt. 3,040 ft.

**Ben Hope,** *mtn.,* co. Sutherland, Scotl., on Loch

**Beni,** *dep.* in N.E. of Bolivia, S. America, area, 93,354 sq. m., p. 52,450; cap. Trinidad, on large R. (900 m.) same name (sometimes called Paro), which joins the Mamore to form the Madeira, affit. of Amazon.

**Benicarlo,** *spt.* in Spain, nr. Castellon, on the Medit., in wine growing dist., p. 8,200.

**Beni-Hassan,** *vil.* with catacombs, on Nile, Egypt, nr. Minieh.

**Benin,** former kingdom in Upper Guinea, W. Africa, traversed by Benin R.; up to 1897 under savage rule, but now incorporated in Southern Nigeria, under British administration, p. estimated about 15,000 (5,000 of whom reside in or around Benin, the chief t.).

**Benin, Bight of,** N. portion of Gulf of Guinea, W. of the Niger Delta, W. Africa.

**Beni-Suef,** *t.* (cap. of prov.) in Egypt, on l. bank of Nile, p. 31,986.

**Ben Ledi,** *mtn.,* co. Perth, Scotl., N.W. of Callander, alt. 2,875 ft.

**Ben Lomond,** *mtn.* co. Stirling, Scotl., E. side of L. Lomond, alt. 3,192 ft.; also highest peak of New Eng. range, N.S.W., 5,000 ft.; also *mtn.* in Tasmania, 5,010 ft.

**Ben Macdhui,** *mtn.* S.W. Aberdeensh., Scotl., Cairngorm grp.; second highest peak in Brit. Isls., 4,296 ft.

**Ben More,** *mtn.* S.W. Perthsh., Scotl., 10 m. W. of Loch Earn, 3,843 ft.; also mtns. in co. Sutherland, the Hebrides, and the Isl. of Mull.

**Benmore** (or **Fair Head**), *C.* on coast of Antrim, north-easternmost point of N. Ireland, stands 636 ft. above sea.
**Ben Nevis**, *mtn.* co. Inverness, Scotl., at Lochiel, highest peak in Brit. Isles, observatory 4,406 ft.; also mtns. in Otago, New Zealand (9,125 ft.); in co. Cornwall, Tasmania (3,910 ft.); and range in Arizona, U.S.A.
**Bennington**, *t.* in S.E. Vermont, U.S.A., 34 m. N.E. of Albany; here British were repelled and defeated by Americans in 1777, p. 7,400.
**Benoni**, *t.*, Transvaal, S. Africa, p. *17,612* (whites).
**Ben Rhydding**, health and hydropathic resort, nr. Ilkley, W.R. Yorks., Eng.
**Bensberg**, *t.* nr. Cologne, Rhenish Prussia, p. 10,750
**Bentham**, mkt. *t.* in N. of W.R. Yorks, Eng., nr. Settle, p. 2,490. [p. *16,458.*
**Bentley, with Arskey**, *urb. dist.*, W.R. Yorks., Eng.,
**Benton Harbour**, *t.* on L. Michigan, U.S.A., p. 15,500. There are about fifty difft. places in U.S.A. (mostly sm. t.'s) called Benton.
**Benue** or **Binue**, *R.* W. Africa, chief trib. of Niger.
**Ben Venue**, *mtn.* nr. Loch Katrine, Perth, Scotl., alt. 2,393 ft.
**Ben Vorlich**, *mtn.* W. of Loch Lomond, alt. 3,092 ft.; also mtn. S. of Loch Earn, Perth, Scotl., alt. 3,224 ft.
**Benwell**, *t.* co. Northumberland, Eng. (sub. of Newcastle), p. 27,800. [3,429 ft.
**Ben Wyvis**, *mtn.* nr. Dingwall, co. Ross, Scotl., alt.
**Ben-y-Gloe**, *mtn.* in Glen Tilt, Perthsh., Scotl., alt. 3,671 ft. [Indies.
**Bequia** or **Bacoya**, most N. isl. in Grenadines, W.
**Berar.** (See **Central Provinces** and **Berar.**)
**Berat**, *t.* in S. Albania, p. 8,500.
**Beraun**, old industl. *t.* in Bohemia, Czecho-Slovakia, p. (Czechs) 10,100.
**Berber**, *t.* between the Atbara R. mouth and the Fifth Cataract of the Nile, Nubia. Taken by Mahdists in 1884, p. (estimated) 20,000, connected by rail with Cairo and Khartum, also with the Red Sea port of Suakin.
**Berbera**, *cap.* of Brit. Somali Prot., important port on G. of Aden, big. mkt. pl. for inland trade, in "the land of incense" of the ancts., p. 30,000.
**Berbice**, settlement, Brit. Guiana; formerly a Dutch col., p. 30,000; Berbice *t.* (sometimes called New Amsterdam) is a port on the R. Berbice, nr. its entrance to the Atlantic.
**Berceto**, *t.* in Italy, 25 m. S.W. Parma, p. 7,250.
**Berck-sur-Mer**, *wat. pl.* in France, on Eng. Chnl., p. 7,460.
**Berdichev**, *t.* in U.S.S.R., 90 m. W. Kiev, large trade in wine, honey, and cattle, p. 55,000.
**Berdyansk**, *p.* on S. of Azov, U.S.S.R., a centre of salt industry, p. 38,000.
**Bere Regis**, mkt. *t.* in Dorset, Eng., p. 1,070.
**Beresina**, (350 m.), *R.* U.S.S.R., trib. of Dnieper; French disaster on the retreat from Moscow, 1812.
**Berezov**, *t.* on Sosva R., Siberia, in Tobolsk govt.; prison place of political offenders, p. 3,000.
**Berezovsky Zavod**, *t.* on the Ural slope, U.S.S.R., govt. of Perm, p. 10,250.
**Berga**, *t.* in Spain, prov. Barcelona, with a mediæval castle, p. 5,500.
**Bergama**, *c.* 42 m. N.E. of Smyrna; ancient Pergamos, int. remains, p. 5,600.
**Bergamo**, *c.* Italy, 34 m. N.E. Milan, fine cathedral and academy, p. 58,470; cap. of Bergamo prov. on Tyrol frontier; silk industry; area 1,076 sq. m., p. 541,615. [burg, p. 11,000.
**Bergedorf**, mftg. *t.* of Germany, 10 m. E. of Ham-
**Bergen**, *spt.* and fortified *c.* on W. coast Norway, now most important commercial pt. in kingdom, p. 91,081; also *t.* in Holland, prov. Brabant (Bergen-op-Zoom), p. 14,750; also another Netherlands *t.* nr. Limburg, on Meuse, p. 5,050; also several sm. t.'s in Germany; and stn. on C. P. Ry., prov. Manitoba, nr. Winnipeg.
**Bergerac**, *t.* on Dordogne R., S. France, anct. Huguenot stronghold, p. 16,250.
**Berhampur**, or **Berhampoor**, milit. *stn.* Madras, India, headquarters, Ganjam dist., p. 26,000; also cap. Murshidabad dist., Bengal, p. 27,000.
**Beri**, *t.* Punjab, India, Rohtak dist., p. 10,250.
**Berislav**, *t.* in Ukraine, govt. Kherson; flour mills, p. 12,500. [dist., p. 14,100.
**Berja**, *t.* in Spain, prov. Almeria, wine and fruit
**Berkeley**, *t.* on Avon R., Gloucester, Eng., p. 830; also university, c. Alameda co., California, nr. San Francisco, U.S.A., suffered in earthquake disaster of 1906, p. 182,150; also *t.* (and county) in Virginia, U.S.A.
**Berkhamsted**, mkt. *t.* Herts, 30 m. N.W. London, Eng., chemical factory, p. *3,053.*
**Berkshire**, area 722 sq. m., p. *311,334*, agr. *co.* S. of the Thames, Eng., co. t. Reading.
**Bêrlad**, or **Berlat**, chf. *t.* of Tutova dist., Rumania, horse fair and soap factories; p. 25,367 (one-fourth Jews).
**Berlin**, *c.* cap. of Germany, on R. Spree; third c. on continent of Europe for population, which, with suburbs, now reaches 3,801,235; the prov. has an area of 338 sq. m., and a p. of 3,803,770; also a t. of New Hampshire, U.S.A., p. 20,100.
**Bermeo**, *spt.* Spain, nr. Bilbao, on Bay of Biscay.
**Bermondsey**, *met. bor.*, of London, Eng., chiefly occupied by tanneries, wharves, wool stores, and warehouses, p. *111,526.*
**Bermudas**, Brit. group coralline *isls.* (360 in number) N. Atlantic, about 600 miles E. of S. Carolina, U.S.A., total area 20 sq. m.; Hamilton, on Long Island, is the chf. t.; naval station; potatoes, onions, lily bulbs; p. (of the entire group) 30,000, of whom two-thirds are coloured people.
**Bermudez**, a former *state* of Venezuela, now divided into Barcelona and Sucre.
**Bern**, or **Berne**, *cap.* of canton of same name in Switzd., on R. Aar; seat of Swiss Govt. since 1848; university, p. 104,626. The canton of Bern covers 2,657 sq. m. (2,172 productive, the rest occupied by lakes and glaciers), p. 674,394. Alps in this canton called the "Bernese Oberland."
**Bernard, Great St.**, one of the Alps in the S. of the Valais, Switzerland, highest pt. 11,116 ft., height of mtn. pass between Italy and Switz., 8,108 ft. Famous hospice for travellers in monastery on mtn.
**Bernard, Little St.**, one of the Graian Alps in Savoy, S. of Mt. Blanc; alt. of convent above pass leading from France to Italy (traversed by Hannibal's army, 218 B.C.), 7,076 ft.
**Bernay**, *t.* Eure dep., France, nr. Rouen, impt. horse fair, p. 8,100. [Saale, p. 33,724.
**Bernburg**, mftg. *t.* in Anhalt, N. Germany, on the
**Bernera, Great** and **Little**, and **Berneray**, three sml. *isls.* of Outer Hebrides, co. Inverness, Scotl.
**Bernina**, *mtn.* (alt. 13,295 ft.) and *pass* in Rhætian Alps, height of pass (leading from Samaden in the Engadine to Tirano, Italy), 7,658 ft.
**Berri**, old *prov.* France, now comprises deps. Cher and Indre.
**Berrima**, *t.* in N.S.W., 80 m. S.W. Sydney.
**Bertinoro**, *t.* in prov. Forlì, Italy, 40 m. S.E. of Bologna, famous for wines, p. 7,600.
**Bervie**, or **Inverbervie**, *spt.* Kincardineshire, Scotl., one of the Montrose Burghs, p. *2,116.*
**Berwick**, *t.* and agricul. *dist.* in Victoria, 27 m. S.E. Melbourne, p. 8,300; also several pars. in Scotl. and Eng., and towns in U.S.A.
**Berwick-on-Tweed**, *mun. bor.*, *spt.* Northumberland, Eng., p. (including Tweedmouth and Spittal) *12,299.*
**Berwickshire**, maritime *co.* S.E. of Scotl., 464 sq. m., p. *26,601*, co. t. Greenlaw. [peak, 2,716 ft.
**Berwyn Mtns.**, range mid-Wales, alt. of highest
**Besançon**, watch and clock-making *t.*, with observatory and university, dep. Doubs, France, p. 55,652.
**Besika Bay**, W. coast Asia Minor, nr. isl. of Tenedos, and entrance to Dardanelles. [p. 15,000.
**Besni**, *t.* Asia Minor, 30 m. W.N.W. of Someisat.
**Bessarabia**, Rumania, area 17,146 sq. m., p. 2,344,800; taken by Russia from Turkey in 1812, and joined to Rumania in March, 1918. Very productive agricul. region, watered by the Danube, Pruth and Dniester. [p. 3,010.
**Bessbrook**, *t.* on Newry Canal, Armagh, N. Ireland,
**Besseges**, *t.* Gard dep., France, colliery dist., p. 10,120.
**Bessemer**, iron-smelting *t.* in Jefferson co., Alabama, U.S.A., p. 20,725; also sml. t.'s in Colorado and Michigan, U.S.A. [Java.
**Besuki**, mountainous *prov.* and *t.* in the E. end of
**Betanzos**, *t.* Spain, 10 m. S.E. Corunna, p. 8,575.
**Bet-Bet**, *t.* Victoria, mining and farming dist., 103 m. N.W. Melbourne, p. 4,600.
**Betchworth**, *par.*, Surrey, p. 1,940.
**Bethune**, fortd. *t.* in France, on R. Brete, dep., Pas-de-Calais, p. 4,540.
**Bethany**, *vil.* on Mt. of Olives, 2 m. from Jerusalem, now called El-Azariyeh.
**Bethany**, miss. *stn.*, S.W. Africa, on the Goab R. in Gt. Namaqualand.

**Bethel**, *t.* (ruined), 10 m. N. Jerusalem; the modern Beitin; also sm. t.'s in Maine, South Carolina, Connecticut, Alabama, and New York, U.S.A.

**Bethelsdorp**, *miss. stn.* nr. P. Elizabeth, C. of Good Hope.

**Bethesda**, *urb. dist.*, Carnarvonsh., Wales, nr. Penrhyn slate quarries, p. *4,476*; also township in York co., S. Carolina, U.S.A.

**Beth-Horon**, *vil.* nr. Jerusalem, Palestine, here Joshua defeated the Amorites.

**Bethlehem**, *t.* 5½ m. S.W. Jerusalem, Palestine; birthplace of Christ, modern Beit-Lahm, p. 8,020.

**Bethlehem**, *t.* U.S.A., 35 m. in Pennsylvania; iron-works, p. 58,000.

**Bethnal Green**, *met. bor.* of E. London, Eng., p. *108,178*.

**Bethphage**, former *vil.* on Mt. of Olives, above Bethany, Palestine, of which no trace exists.

**Bethsaida**, anc. *vil.* on W. side of S. of Galilee, Palestine.

**Bethulie**, *t.* in Orange Free State, S. Africa, p. *1,585* (whites).

**Bethune**, fort. *t.* N.E. France, coalfields, p. 12,400.

**Betsiamites**, *R.* in Quebec, trib. of the St. Lawrence.

**Bettia**, *t.* in Champaran dist., Bengal, India; fine Rajah's palace, p. 24,500.

**Bettys-y-Coed**, *urb. dist.*, tour. and artists' resort, Carnarvonsh., Wales, nr. Llanrwst, p. *912*.

**Betul**, *dist.* and *t.* of Cent. Provs., India.

**Betwa** (360 m.), *R.* of Bhopal, India, trib. of Jumna R.

**Beuthen** or **Oberbeuthen**, mining *t.*, Prussian Silesia, nr. Breslau, p. 71,187.

**Beuzeval**, *watering pl.* in Calvados dep., France, on the Eng. Chan. [p. 3,020.

**Beuzeville**, *t.*, Eure dep., France, nr. Pont-Audemer.

**Bevagna**, *t.*, Italy, 18 m. S.E. Perugia, p. 6,150.

**Bevedero**, large *L.* in prov. Mendoza, Argentina.

**Beveland**, N. (length 13 m.) and S. (23 m.), two *isls.* in estuary of Scheldt R. nr. Walcheren, Holland.

**Beveland**, *isl.* in S. Holland, between the Old Maas and Hollands Diep.

**Beveren**, *t.* in prov. E. Flanders, nr. Ghent, Belgium, p. 9,250.

**Beverley**, *mun. bor.*, mkt. *t.* E.R. Yorks, 9 m. from Hull, fine minster; p. *14,011*; also t. on R. Avon, W. Australia.

**Beverley**, *t.* Essex co., Mass., U.S.A., p. 25,100; also vil. on Delaware R., New Jersey, U.S.A.

**Beverwyk**, *t.* nr. Haarlem, North Holland, p. 4,010.

**Bewcastle**, *par.* in co. Cumberld., Eng., nr. Brampton, p. 625. [Eng., p. *2,868*.

**Bewdley**, *mun. bor.* on R. Severn, co. Worcester.

**Bex**, *t.* on R. Rhone, in canton Vaud, Switzerld., p. 4,750. [5 m. W. of Hastings, p. *21,229*.

**Bexhill**, *mun. bor.*, watering place, Sussex, Eng.,

**Bexley**, *urb. dist.*, W. Kent, 15 m. S.E. London, Eng., p. *32,940*.

**Beyed Mt.**, Tigre, Abyssinia, alt. 16,000 ft.

**Beymhurst**, a *hundred* of Berks. co. (on Thames side), Eng.

**Beyrout** or **Beirut**, *spt.* on Syrian coast, 57 m. W.N.W. Damascus, anc. and historic t., now a busy shipping and mercantile centre, p. 180,000.

**Béziers**, or **Béziers**, *t.* dep. Hérault, France, on R. Orb, brandy distilleries, p. 56,008.

**Beswada**, *t.* and irrigation headquarters on Kistna R., Madras, India, p. 24,000. [6,000.

**Bhabua**, *t.* in Shahabad dist., Bengal, India, p.

**Bhagalpur**, *t.* cap. of dist. of same name in Bengal, India, on the Ganges, the seat of an extensive trade, p. 68,833.

**Bhagirathi**, *R.* of Bengal, branch ("sacred" channel) of Ganges, joins Jalangi R. to form the Hooghli.

**Bhamo**, *t.* Upper Burma, on R. Irawadi; anc. cap. of Shan State of Manmaw. In rich teak forest dist. Steamer com. with Mandalay (200 m.), p. 8,750.

**Bhandara**, or **Bhandara**, cap. Bhandura, *dist.*, Cent. Provs., on Wainganga R., p. 14,500.

**Bhanpura**, *t.* on Rewa R., Indore State, India, p. 21,000.

**Bhartpur**, or **Bharatpur** (sometimes also written Bhurtpore), a native state in India, Rajputana Agency, area 1,961 sq. m., p. 496,437, cap. Bhartpur city, 34 m. W. of Agra, p. 50,414.

**Bhavnagar**, *state* and *t.* of Rajputana, India. Area of state, 2,860 sq. m., p. 425,956; p. of *t.*, 60,694.

**Bhera**, *t.* Shahpur dist., Punjab, on R. Jhelum, p. 18,750.

**Bhilwara**, collective name of 17 nat. states, Central India; also of t. in Udaipur State, Rajputana.

**Bhim Gora**, sacred pool, place of Hindu pilgrimage; Saharanpur dist., Cent. Provs., India.

**Bhiwani**, cotton mftg. and trading *t.*, Hissar dist.; Punjab, India, p. 39,000.

**Bhopal**, nat. *state*, Cent. India, Bengal Pres., area 6,902 sq. m., p. 691,299; cap. Bhopal, p. 55,054.

**Bhuj**, ch. *t.* of Cutch, Gujerat div. of Bombay, p. 26,750.

**Bhutan**, independent *state* in Eastern Himalayas; under Brit. protection since 1864, area (abt.) 20,000 sq. m., p. comparatively scanty, scattered and nomadic, (abt.) 250,000.

**Bhuvaneswar**, temple *c.* of Siva, Puri dist., Bengal; India, place of pilgrimage.

**Biafra**, Bight of, an inlet of the Atlantic on W. coast of Africa.

**Bialystok**, *t.*, Poland, nr. Grodno, leather and soap factories, cap. of prov., p. 76,971.

**Biancavilla**, *t.* in Sicily, N.W. Catania, famous for oranges, p. 13,700. [India; alt. 18,000 ft.

**Bians**, *pass.* of the Himalayas, Kumaon dist.,

**Bianze**, *t.* in prov. of Novara, Italy, nr. Turin, p. 4,250.

**Biarritz**, *t.* and bathing resort, dep. Basses-Pyrenées, on Bay of Biscay, France, p. 13,000.

**Bibbiano**, *t.* in Emilia, Italy, nr. Reggio, p. 6,120.

**Bibbiena**, *t.* in prov. Arezzo, Italy, p. 6,600.

**Biberach**, fort. *t.* on Reiss. R., Wurtemberg, p. 8,600.

**Bicester**, *urb. dist.*, mkt. *t.* Eng., 12 m. N.E. Oxford, p. *3,109*.

**Bida**, *cap* of Nupe country, Northern Nigeria, W. Africa, p. (of dist.) 80,000. [metal; p. 12,500.

**Bidar**, *t.* in Hyderabad dist., S. India, mfts Bidar-Brassoa, *R.* on Sp. and Fr. frontier, fl. (50 m.) into B. of Biscay. Here Wellington in 1813 defeated French under Soult.

**Biddeford**, *c.* Maine, U.S.A., cotton mfts., p. 18,008.

**Biddenden**, *par.* nr. Cranbrook, co. Kent, Eng., p. 1,120.

**Biddulph**, *urb. dist.*, nr. Leek, co. Stafford, Eng.; colliery and pottery dist., p. *8,246*.

**Bideford**, *mun. bor.*, on R. Torridge, N. Devon, Eng.; p. *8,782*.

**Biebrich**, mftg. *t.* and port on Rhine, nr. Wiesbaden, Prussia, p. 16,100.

**Biel** or **Bienne**, mftg. *t.* in canton Berne, Switz., technical schools, p. 34,599.

**Bielaya-Tserkov**, *t.* in Ukraine, nr. Kiev, extensive commerce p. 21,000.

**Bielefeld**, *t.* in Westphalia, Prus., ch. centre of linen industry, p. 79,049.

**Bielev**, anc. *t.* on Oka R., nr. Moscow, Russ.; p. 11,150.

**Bielgorod**, *t.* old govt. of Kursk, U.S.S.R., on R. Doneta, p. 23,000.

**Bielina**, *t.* of Svornik dist., Bosnia, p. 16,750.

**Bielitz**, *t.* in Poland, p. 17,500; woollen cloths.

**Biella**, textile *t.*, prov. Novara, Italy, p. 19,500.

**Bielopol**, brandy distilling *t.* 100 m. N.W. Kharkov, Ukraine, p. 15,000. [p. 10,000.

**Bielsk**, *t.* old Grodno govt., U.S.S.R. nr. Bialystok.

**Bieltzi**, *t.* in Bessarabia, Rum., nr. Kishenev, p. 10,750.

**Bien-Hoa**, or **Tale-Sab**, *L.* between Siam and Cambodia, 100 m. long by 30 m.

**Bien-Hoa**, *t.* in French Cochin China, 20 m. N. of Saigon, p. 21,000.

**Bienne**, *L.* of, 3 m. N.E. Neuchâtel, Switz., on which is *t.* of Bienne, or Biel (*q.v.*), length 9½ m. breadth 2½ m.

**Bies-Bosch**, marshy *L.* (area 8 sq. m.) between N. Brabant and S. Holland, formed by inundation of R. Meuse in 1421.

**Biga** (or **Bigha**), ind. Sanjak in Asia Minor, 2,550 sq. m., p. 129,500; the t., cap. of Sanjak, has a p. of about 10,000.

**Big Bethel**, *vil.* in E. Virginia, 10 m. N.W. of Fort Monroe, U.S.A.; Confederate victory here in 1861.

**Big Black R.** (200 m., navigable 50 m.), *trib.* at Mississippi R., U.S.A.; noted in Grant's campaign before Vicksburg, 1863.

**Big Blue R.** (300 m.), *trib.* of Kansas R., U.S.A.

**Big Bone Lick**, salt *spring* nr. Cincinnati, Kentucky, U.S.A., fossil deposits.

**Big Creek**, name of eighteen sml. rivers in various pts. of U.S.A., also of eight dif. towns on banks of same. [lake.

**Big Cypress R., Texas**, U.S.A., falls into Caddo

**Biggar**, *t.* in co. Lanark, Scotl., p. *2,074*.

**Biggay Isl.**, one of the smaller Shetlands, between Yell and the mainland. [London, p. *5,844.*

**Biggleswade**, *urb. dist.* Beds., Eng., 40 m. N.W.

**Big Horn Mts.**, in Wyoming and Montana, U.S.A., range of the Rockies, highest points alt. 12,000 ft.

**Big Horn R.** (450 m.), *trib.* of Yellowstone R., Wyoming and S. Montana, U.S.A., called Wind R. in upper reaches.

**Big Rapids**, *t. cap.* of Mecosta co., Michigan, U.S.A.

**Big Sandy Creek** (200 m.) *R.* joins the Arkansas R. nr. the Kansas frontier, U.S.A. There are thirteen Big Sandy Creeks or Rivers in dif. pts. of the U.S.

**Big Sioux R.**, S. Dakota, U.S.A. (300 m.), *trib.* Missouri R. [Minnesota, U.S.A.

**Big Stone Lake**, (25 m. long), S. Dakota and

**Bihar**, *t.* nr. Grosswardein, Rumania, p. 2,800.

**Bihar**, *prov.* Brit. Ind. (See **Behar.**)

**Bihe**, *t.* E. of Benguela, W. Africa, 5,800 ft. above sea.

**Bijapur**, *c.* formerly the cap. of the Mohammedan kingdom of same name, 250 m. S.E. of Bombay, has many interesting ruins, p. about 18,000.

**Bijawar**, nat. *state.* Cent. India, Bundelkhand agency; area, 974 sq. m., p. 140,000.

**Bijnaur, or Bijnor**, *dist.* N.W. Rohilkhand div., India, area 1,898 sq. m., p. 800,000; also *t.*, cap. of dist., p. 19,000.

**Bikanir, or Bikaner**, nat. *state*, Rajputana, India, area 23,315 sq. m., p. 660,656; also t., cap. State, p. 69,448.

**Bilaspur**, cap. of dist. of its own name, Cent. Provs., India, on the Urpa, p 20,000.

**Bilbao**, *spt.* N. Spain, cap. Basque prov. of Viscaya, formerly famous for rapier making, p. 98,904.

**Bildeston**, *par.* Suffolk, Eng., nr. Hadleigh, p. 740

**Bildt**, *t.* in prov. Friesland, nr. Leeuwardein, Netherlands, p. 9,250.

**Bilin**, *t.* Bohemia, Czecho-Slovakia, on Bela R., famous for its mineral waters, p. 8,250.

**Billabong, or Illabo**, goldfield *dist.*, co. Ashburnham, N.S.W.

**Billericay**, *t.* co. Essex, Eng., p. 1,550.

**Billinge**, *urb. dist.*, Lancs., Eng., p. *5,111.* [16,500.

**Billings**, *t.* Montana, U.S.A.; cattle raising; p.

**Billiton**, *isl.* of Dutch E. Indies, between Sumatra and Borneo; area, 1,863 sq. m., p. 36,858.

**Billom**, *t.* in dep. Puy-de-Dôme, France, nr. Clermont, p. 5,050. [of Colorado R.

**Bill Williams R.** (250 m.) in Arizona, U.S.A., affit.

**Bilma, or Hawar**, *t.* and *dist.* Wady Kawar, Sahara.

**Biloxi**, *c.* Harrison co., Mississippi, U.S.A., fashionable resort on coast, p. 14,900.

**Bilsen**, *t.* in Belgium, nr. Hasselt, on R. Demer, p. 3,800.

**Bilston**, *urb. dist.*, Staffordsh., Eng., coal and iron mines, nr. Wolverhampton, p. *31,248.*

**Bilton**, *par.* nr. Rugby, co. Warwick, Eng., p. 5,350.

**Bima**, *spt.* N. coast Sumbawa, Dutch E. Indies

**Bimlipatam**, *t.* in dist. Vizagapatam, India, formerly a Dutch factory, p. (abt.) 10,000.

**Binab**, *t.* in Azerbaijan, 55 m. S.W. Tabriz, p. 10,000.

**Binabola, or Bennebeola**, *mtns.*, co. Galway, Ireland, alt. 2,400 ft.; called also "Twelve Pins."

**Binalong**, *t.* N.S.W., co. Harden, 308 m. S.W. Sydney, p. (of dist.) 4,750.

**Biñan**, *t.* in Luzon, Philippine Isls., fertile rice-growing dist., p. 20,000.

**Binche**, *t.* in Hainault prov., 10 m. E. of Mons, Belgium; lace and other factories, p. 13,000.

**Bingen**, *t.* on Rhine R., Hesse Darmstadt, Germany; wine, beautiful scenery, p. 10,500.

**Bingera**, *t.* on Gwydir R., N.S.W. goldfields.

**Binghampton**, *c.* cap. of Broome co., New York, U.S.A.; on Susquehanna R.; boot factories, p. 77,500.

**Bingley**, *urb. dist.*, W.R. Yorks, 5 m. N.W. Bradford, on R. Aire, p. *20,553.*

**Bingol-Dagh**, *mtns.* Asia Minor, between Armenia and Kurdestan; alt. of highest peak, 12,310 ft.

**Binham**, *par.* nr. New Walsingham, co. Norfolk, Eng., p. 460.

**Binondo**, *suburb* of Manila, Philippine Isls.

**Bintang**, *isl.* Malay Archip. on Equator, Dutch E. Indies; noted for pepper and gum, p. 18,000.

**Binue**, *R.* (See **Benue.**)

**Biobio**, R. longest in Chili (300 m.), flows to Pacific, Biobio *prov.* in valley of R., area 5,353 sq. m., p. (abt.) 180,402, cap. Los Angeles.

**Bir, or Birejik**, walled *t.* of Syria on Euphrates R., the anc. Birtha or Bithra, p. 8,750. Many Armenians massacred here in 1895.

**Birbhum**, *dist.*, Burdwan div., Bengal, India, area 1,752 sq. m.; silk-weaving industry, p. 1,060,000; administrative hdqrs. Suri. [alt. 15,000 ft.

**Birchigaon Pass**, Himalaya Mtns., Kumaon dist.,

**Birchington**, *t.* Kent, Eng., 3 m. W. Margate, p. 2,350.

**Bird**, *isl.* in Strangford Lough, co. Down; also **Isl.** off Dunmanus Bay, co. Cork, Irel. [stream, Scotl.

**Birgham**, or **Brigham**, *vil.* co. Berwick, nr. Cold-

**Birkdale**, coast *t.* nr. Southport, Lancs., Eng., p. 16,100.

**Birkenfeld**, republic, Germany, belonging to Oldenburg, p. 51,263. [Eng., p. *147,946.*

**Birkenhead**, *co. bor.* on R. Mersey, opp. Liverpool.

**Birkenshaw**, *urb. dist.*, nr. Bradford, W.R. Yorks, Eng., p. *2,816.* [Cairo, Egypt.

**Birket-el-Hadji**, "Lake of Pilgrims," 10 m. N.E.

**Birket-el-Kurun**, "Lake of the Horns," in Fayum, Egypt, fed by Nile.

**Birmingham**, *co. bor.* industrl. *cap.* of the English Midlands, famous for its metal manuf., 110 m. N.W. London, 90 m. S.E. Liverpool, p. *1,002,413*; also cap. Jefferson co., iron mfts., Alabama, U.S.A., p. 259,677; also t. Conn., U.S.A., on Housatonic R.; also a suburb of Pittsburg, Pennsylvania, U.S.A., S. of Monongahela R.

**Birnagar**, *t.* and place of pilgrimage, Nadiya dist., Bengal.

**Birnam Wood**, nr. Dunkeld, Perth, Scotl., formerly a royal forest on a lofty hill range; referred to by Shakespeare in *Macbeth.*

**Birnbaumer Wald**, *plateau* in Carniola, N.E. of Trieste; the Roman station Ad Pirum on main rd. across Alps to Italy.

**Birni**, the former *cap.* of Bornu, in the Sudan.

**Birr, or Parsonstown**, mkt. *t.* King's co., I.F.S., on Lit. Brosna, p. 5,050. Lord Rosse's telescope in observatory nr. here.

**Birsk**, trading *t.* on Belaia R., U.S.S.R., old govt. of Ufa, S.E., p. 9,600.

**Birstal**, *urb. dist.*, W.R. Yorks, Eng., 7½ m. S.W. Leeds, p. *7,205.*

**Birtle**, *t.* in Shoal co., Manitoba, Canada.

**Birtley**, *par.* in co. Durham, Eng., 5 m. S.E. of Gateshead, p. 8,550.

**Bisaccia**, *t.* in prov Avellino, Italy, p. 8,000.

**Bisacquino**, *t.* 28 m. S. Palermo, Sicily, p. 10,120.

**Bisalnagar**, *t.* nr. Baroda, Bombay Pres., India, p. 21,000.

**Biscay, Biscaya, or Viscaya**, Spanish *prov.* on B. of Biscay, one of the Basque provs., area 836 sq. m. p. 282,347; mineral industries, shipping, etc., cap. Bilbao.

**Biscay, Bay of**, stormy arm of the Atlantic, W. of France and N. of Spain, extending from Ushant to Cape Ortegal. The Roman Sinus Aquitanicus.

**Bisceglie**, *spt.* Ital., on Adriatic, fortified, p. 31,500.

**Bischoff, Mtn.**, tin, min. *t.* in N. Tasmania, p. 2,400.

**Bischofsburg**, *t.* nr. Königsburg, E. Prussia, p. 5,350.

**Bischofswerda**, *t.* in Saxony, 29 m. E. of Dresden, on the R. Weseritz; battle between the Allies and Napoleon on his retreat from Moscow in 1813; p. 7,750.

**Bischweiler**, *t.* in Bas-Rhin, France, hop-growing dist., p. 8,200.

**Bisham**, *par.* in co. Berks, Eng., on Thames, p. 770.

**Bishnupur**, anc. *cap.* of Bankura dist., Bengal, p. 20,000.

**Bishop Auckland**, *urb. dist.*, on Wear and Gaunless R.; in co. Durham, Eng.; contains pal. of Bp. of Durham, p. *12,269.*

**Bishop's Castle**, *mun. bor.*, mkt. *t.* Shropshire, Eng., p. *1,352.*

**Bishop's Middleham**, *t.* nr. Durham, Eng., p. 690.

**Bishop's Stortford**, *urb. dist.*, mkt. *t.* on Stort R., Herts, Eng., p. *9,509.*

**Bishop's Waltham**, mkt. *t.* Hants, Eng., p. 2,550.

**Bishopstoke.** (See **Eastleigh.**)

**Bishopthorpe**, *par.* on the Ouse, nr. York, Eng., with palace of the Archbishop, p. 470.

**Bishop Wearmouth**, mftg. *t.* Durham, Eng.; p. included in Sunderland.

**Bisignano**, *t.* Italy, prov. Cosenza, p. 4,650.

**Biskra**, *t.* Algeria, French winter resort, p. 9,000.

**Bisley**, mkt, *t.* Gloucester, Eng., nr. Stroud, p. 1,970; also vol. rifle ra., Surrey, 3 m. W. Woking, in succession to Wimbledon.

**Bismarck**, *cap.* of Burleigh co., N. Dakota, U.S.A., on the Missouri R., p. 11,500.

**Bismarck Arch.**, three large and several small *isls.* off New Guinea, formerly German, now British. Total native p. 188,000.

**Bissagos**, group *isls.* off W. Africa; partly claimed by Portugal; prin. t. Bolama.
**Bissau**, chief port of Port. Guinea.
**Bistritz**, or **Nösen**, *t.* Transylvania, Rumania, on Bistritz R.; formerly an import. place, p. 11,500.
**Bitetto**, *t.* Italy, 10 m. S. from Bari, p. 6,075.
**Bithur**, *t.* on Ganges, 12 m. from Cawnpur, p. 7,000.
**Bitlis** or **Betlis**, *t.* Asiatic Turkey, S.W. L. Van; mineral dist.; massacre of Armenians, 1895, p. 40,000.
**Bitolj**, *t.* Serbia, Jugo-Slavia, p. 48,370.
**Bitonto**, *t.* Italy, 11 m. W.S.W. of Bari, the Roman Bituntum; fine cathedral, p. 30,500.
**Bitsch** or **Bitche**, formerly Kaltenhausen, *t.* fort., Alsace-Lorraine, 35 m. N Strasbourg, p. 3,750.
**Bitschoru**, mt., Valais, Switz., 12,966 ft.
**Bitterfeld**, mftg. *t.* on R. Mulde, Saxony, built 12th cent. by Dutch immigrants, p. 13,500.
**Bitter Lakes**, Isth. of Suez, now traversed by S. Canal.
**Bitton**, *t.* W. Gloucestersh., Eng., nr. Bristol, mining, p. 3,300.
**Biwa**, *L.* (area 180 sq. m.), prov. Kioto, Japan, 330 ft. above sea-level and 300 ft. deep, connected by canal with Osaka.
**Biyerre**, *R.* affit. of R. Congo, Africa.
**Bizerta**, or **Bizerto**, *spt.* Tunis, N. Africa, the anc. Hippo Zaritus, p. 10,000, mainly Arabs.
**Björneborg** (or **Pori**), *spt.* Finland, on Gulf of Bothnia, p. 17,045.
**Blackadder**, *R.* (20 m.), Berwicksh., Scotl., affit. of Whiteadder R.
**Black Bluff**, *mtn.* in N. Tasmania, alt. 4,381 ft.
**Blackboy**, goldfield *dist.*, Tasmania, 120 m. N. of Hobart. [*122,695.*
**Blackburn**, *co. bor.* Lancash., Eng., cotton mftg., .
**Black Cart**, *R.*, co. Renfrew, Scotl., affit. of Clyde.
**Black Combe**, *mtn.*, co. Cumberl., Eng., alt. 1,919 ft.
**Black Country**, S. Staffordsh., Eng., in Midlands, mining and iron works. [Canada.
**Blackfoot Crossing**, between Row and Deer R.'s,
**Blackford**, *par.* Perthsh., Scotl., nr. Dunblane, p. *1,399.*
**Black Forest** (Schwarzwald), *mtns.* region in Wurttemberg and Baden, S.W. Germany, area 1,844 sq. m.; highest peak Feldberg, alt. 4,900 ft., p. 583,524; cap. Reutlingen.
**Black Gang Chine**, picturesque *ravine* on S. coast of Isle of Wight, Eng. [U.S.A.
**Black Hawk**, mining *t.* in Rocky Mtns., Colorado,
**Blackheath**, open common, S.E. London, Eng., N.W. end of Kent, 70 acres.
**Black Hills**, *mtns.* between Dakota and Wyoming, U.S.A., highest Harney's Peak, 7,215 ft.
**Black Isle**, the *penins.* in N. Scotl., between Beauly Basin and Cromarty Firth. [20 m. long.
**Black Lake**, nr. Ogdensburg, New York, U.S.A.,
**Blacklarg**, *mtn.* in co.'s Ayr and Dumfries, Scotl., alt. 2,231 ft. [Manchester; dye works.
**Blackley**, *t.* S.W. Lancash., Eng., N. suburb of
**Black Mountains**, highest of the Appalachians. Mt. Mitchell, 6,711 ft.; also mtn. range in Brecknocksh., S. Wales, highest peak, Brecknock Van, 2,631 ft.
**Blackness Castle**, on Firth of Forth, Linlithgow, Scotl.; nr. Bo'ness; formerly State prison, now ammunition depot.
**Black, or Euxine, Sea**, inland *sea* between Russia and Asia Minor, 740 m. long, 390 broad, receives waters of Danube, Dnieper, Dniester, Don, Bug, and other rivers; communicates with Mediterranean by Strait of Bosphorus, Sea of Marmora, and Dardanelles. Neutralised by Treaty of Paris, 1856.
**Blackpool**, *co. bor.* and watering *pl.*, Lancash., Eng., p. *101,543.*
**Black River**, *affit.* of Arkansas R., U.S.A.; also R. in New York, emptying into Lake Ontario; also affit. of the Ottawa R., Quebec; also forty other rivers (chiefly in America) in diff. parts of the world.
**Blackrock**, *t.* I.F.S., suburb, 4 m. from Dublin, on the Bay, p. 9,090; also dist. of Buffalo, New York, on the R. Niagara, U.S.A., scene of fighting between British and Americans, 1812–14.
**Blackrod**, *urb. dist.*, Lancash. nr. Chorley, Eng., p. *3,599.*
**Blacknod Bay**, *coast* of co. Mayo, I.F.S.
**Blackstairs**, *mtns.* Leinster, I.F.S., highest peak, 2,610 ft. [4,700.
**Blackstone**, *t.* on Blackstone R., Mass., U.S.A., p.
**Blackwall**, riverside *dist.* of Lond., par. of Poplar, Middlesex, N. of Thames.
**Black Warrior R.** (300 m.) *trib.* of Tombigbee R., Alabama, U.S.A.
**Blackwater**, three rivers Ireland; two, Hants and Essex, Eng.; and three in U.S.A. (Montana, Florida, and Virginia).
**Blackwood**, *t.* in S. Australia, nr. Adelaide, p. 2,000.
**Blackwood**, W. Australia, 2,000 ft., South spur of Darling range, highest peak, 2,000 ft. Blackwood R. falls into Indian Ocean at Hardy Inlet.
**Blaenavon**, *urb. dist.*, iron mftg. *t.* Mon., Eng., on R. Avon, 5 m. N. Pontypool, p. *11,075.*
**Blagovestchensk**, important *t.* on Amur R. chief t. of the Amur prov., Manchuria, p. 40,000.
**Blain**, *t.* nr. Nantes, prov. Loire-Inférieure, France, p. 7,150.
**Blair-Atholl**, *par.* in Perthsh., Scotl., p. *1,557.*
**Blairgowrie**, *t.* 20 m. N. of Perth, Scotl., p. *4,049.*
**Blairsville**, *t.* in Penn. U.S.A. (p. 5,300); also t.'s in Georgia, S. Carolina and Indiana.
**Blakeney**, coast *par.* Norfolk, Eng., nr. Holt, p. 720.
**Blanc, Le**, old *t.* Indre dep., France, p. 7,150.
**Blanc, Mt.**, highest of the Alps, on French and Italian frontier, alt. 15,782 ft. Largest glacier, Mer de Glace; Valley of Chamounix at foot.
**Blanca, Peak**, highest *mtn.* in Colorado, U.S.A., 14,464 ft.
**Blanco, C.**, extreme N. of Africa, opposite Sardinia; also several other headlands, on African coast and elsewhere.
**Blandford**, or **Blandford Forum**, *mun. bor.*, mkt. *t.* in E. Dorset, p. *3,371.*
**Blane**, *R.* in Scotland, trib. of R. Endrick, and feeder of Loch Lomond.
**Blanes**, Medit. *pt.* of Spain, N.E. of Barcelona, p. 6,175.
**Blankenburg**, health resort in Harz Mtns., Brunswick, Germany, p. 12,100.
**Blantyre**, *par.* and mining *dist.* nr. Hamilton, Lanark co., Scotland; birthplace of Dr. Livingstone, p. *17,015.*
**Blantyre**, chief settlement of the Nyasaland Prot. (British) in the Shire highlands, p. about 8,000.
**Blanzy**, *t.* in dep. Saône-et-Loire, France, p. 5,150.
**Blarney**, *vil.* 4 m. N.W. Cork, I.F.S. Here are the famous castle and Blarney kissing-stone.
**Blasket**, or **Blasquet Is.**, group off S.W. coast of I.F.S., nr. Dingle, co. Kerry.
**Blavet**, *R.* in deps. Côtes du Nord and Morbihan, France (87 m.). Romantic scenery in upper reaches.
**Blaydon**, *urb. dist.*, mining and mftg. *t.* Durham, Eng., p. *32,259.*
**Blaye**, *spt.* on R. Gironde, nr. Bordeaux, S.W. France, the Roman Blavia, p. 5,750.
**Blayney**, *t.* N.S.W., 172 m. W. of Sydney, p. (of dist.) 1,650. [4,000.
**Bleiburg**, lead mining *t.* in Carinthia, Austria, p.
**Blenheim**, *vil.* on the Danube in Bavaria; Battle, Marlborough and Prince Eugene's "famous victory," 1704.
**Blenheim**, *cap.* of Marlborough dist., N.Z., p. 4,100.
**Blenheim Park**, castle palace of Duke of Marlborough, nr. Woodstock, Oxfordsh., Eng., built at cost of nation. [Ireland.
**Blessington**, mkt. *t.* in co. Wicklow, on R. Liffey,
**Bletchingley**, *vil.* in Surrey, Eng., nr. Reigate, p. 2,340.
**Bletchley**, *urb. dist.*, Bucks, Eng., p. *6,169*; also 2 sm. *t.'s* in S. Australia.
**Blida**, or **Blidah**, *t.* Algeria, nr. the cap. on the first slopes of the Atlas Mtns. Large orange-growing industry, p. 36,384.
**Block**, *isl.* summer resort off Rhode Isl., U.S.A., lighthouse.
**Bloemfontein**, *cap.* of Orange Free State, p. *23,441* whites, and 19,532 natives.
**Blois**, *c.* on R. Loire, France, historic castle, once a sumptuous royal palace; p. 23,750.
**Blood R.**, *trib.* of Buffalo R., Zululand.
**Bloody-Foreland**, *C.*, co. Donegal, N.W. coast of I.F.S.
**Bloomfield**, *t.* in Essex co., New Jersey, U.S.A., formerly known as Watsesson, p. 22,019. Several other smaller t.'s same name in U.S.A.
**Bloomington** c. and ry. centre, M'Lean co., Ill., U.S.A., p. 31,000; also *c.* on Mississippi R., Iowa, U.S.A.; also *t.* (with State University) in Indiana, U.S.A.

**Bloomsburg**, iron mftg. *t.* in Penn., U.S.A., on Susquehanna R., p. 9,100.
**Bluefields**, *R.* and *t.* in Nicaragua, Central America, p. 4,706.
**Blue Hills**, *range* in Norfolk co., Mass., U.S.A.
**Blue Island**, *sub.* of Chicago, Ill., U.S.A.
**Blue Mtns.**, E. part of Jamaica, alt. 7,000 ft.; also chain in N.S.W., highest peak 4,100 ft.; also long range (av. ht. 7,000 ft.) in Oregon, U.S.A.; also range nr. Chittagong, India, alt. 7,100 ft.; also second main ridge of the Appalachians in Penn. and New Jersey, U.S.A.
**Blue Nile, or Bahr-el-Azrek**, *R.* from the lofty tablelands of Abyssinia, comes into confluence with the White Nile at Khartum. Its periodic flooding is the great fertilising agency of Egypt.
**Blue Ridge**, south-easterly *range* of the Alleghanies, Virginia and N. Carolina, U.S.A.
**Bluff Harbour**, S. coast of S. Isl., New Zealand.
**Bluffton**, *c.* Indiana, U.S.A., on Wabash R.; also *t.* in S. Carolina, nr. Savannah.
**Blyth**, *urb. dist., spt.* (p. *31,808*) and *R.* in Northumberland, Eng.; also names of 4 other rivers in Eng.; also vil. S. Australia, 92 m. N. Adelaide.
**Boali, Bovali, or Loango**, *t.* and *dist.* in French Congo, West Africa. [Africa.
**Boavista, or Bonavista**, most E. of Cape Verde Isls.,
**Bobbio**, *t.* in prov. Pavia, Italy, p. 5,100.
**Bober**, *R.* in Germany (158 m.), joins R. Oder at Krossen; shallow stream in summer, torrential in winter.
**Boblingen**, *t.* Wurttemberg, nr. Stuttgart, p. 5,250.
**Bobrinets**, *t.* in Kherson, Ukraine, on ry. to Kiev; tobacco factories, p. 15,000.
**Bobruisk**, *fortress* and mftg. *t.* in Russia on R. Beresina.
**Bocholt**, *t.* in Westphalia, nr. Dutch frontier, cotton industry, p. 23,500.
**Bochum**, *t.* in Westphalia, 11 m. W. of Dortmund, centre of steel industry, p. 142,760.
**Bockenheim**, N.W. *sub.* of Frankfort-on-the-Main, Prussia.
**Bocking**, *par.* in Essex, nr. Braintree, Eng., p. 3,500.
**Bodalla**, *vil.* N.S.W., 212 m. S. of Sydney.
**Boddam**, fishing *vil.* Aberdeensh., Scotland, nr. Peterhead, p. 1,520.
**Bodega Bay**, 10 m. long, California, U.S.A.
**Bodenbach**, *t.* in Bohemia, Czecho-Slovakia, on the Elbe, import, trade centre, p. 11,750.
**Boden, See.** (*See* **Constance, Lake of.**)
**Bodmin**, *mun. bor.*, co. *t.* Cornwall, Eng., p. *5,526*
**Bœotia**, and **Attica** *prov.* in Greece, area 2,481 sq. m., p. 581,829.
**Bog, or Bug**, R., affit. (300 m.) of the Vistula R., Poland.
**Bogan, R.**, *trib.* of Darling R., N.S.W.
**Boggabri**, *t.* in N.S.W., 292 m. N.W. of Sydney.
**Boghaz, Keui**, sml. *vil.* in Asia Minor, remarkable for archæological remains and rock sculptures
**Bognor** (now **Bognor Regis**), *urb. dist.*, and *seaside resort*, Sussex, Eng., p. *13,510*.
**Bogodukhov**, *t.* Ukraine, old govt. of Kharkov, strongly fortified, p. 13,500.
**Bogong Mt.**, one of the dividing range, Victoria, Australia, alt. 6,508 ft.
**Bogorodsk**, *t.* of U.S.S.R., nr. Moscow, silk and woollen industries, p. 12,700.
**Bogota, or Santa Fé de Bogota**, *cap.* Republic of Colombia, S. America, stands on the San Francisco R. Many fine bldgs. and an import. University. Sometimes styled the Athens of S. America, p. 245,000.
**Bogra, or Bogura**, cap. of Bogra dist., Bengal, p. 8,000.
**Boguslav**, old trading *t.* Ukraine, govt. of Kiev, p. 13,250. [p. 7,020.
**Bohain**, *t.*, dep. Aisne, France, textile factories,
**Bohemia** (20,000 sq. m., p. 6,664,932), formerly part of Austria, now Czecho-Slovakia, chiefly agricultural, cap. Prague.
**Bohmerwald**, afforested mountain range between Bohemia and Bavaria, 150 m. long; highest points, Aber, 4,848 ft., Rachelberg, 4,743 ft.
**Böhmisch-Leipa**, industl. *t.* on R. Polzen, N. Bohemia, p. 11,500.
**Böhmisch-Trübau**, old Czech *t.* nr. the Moravian frontier of Bohemia. [sq. m., p. 230,000.
**Bohol**, one of the Philippine Isls., area 1,534
**Boise**, *cap.* of Idaho, U.S.A., p. 21,600; hot springs in neighbourhood.
**Bois Guillaume**, *t.* nr. Rouen, **France**, p. 5,100.
**Bois-le-Duc, or s'Hertogenbosch**, cap. of N. Brabant, Holland; cigar factories, p. 38,217.
**Bojador**, *c.* at extreme S. of coast of Morocco, W. Africa.
**Bojana**, *R.* outlet into the Adriatic of L. Scutari.
**Bojano**, *t.* in Italy, nr. Campobasso, p. 6,060.
**Bokhara or Bukhara**, U.S.S.R., in Central Asia, area 79,440 sq. m., p. 3,000,000. The capital, Bokhara, on the Zeraphshar R. (p. about 60,000), is reckoned the chief city in W. Asia for trade.
**Boksburg**, *t.*, Transvaal, S. Africa, p. *13,973*.
**Bolan Pass**, in *mtns.* of N.E. Baluchistan, from Lower Indus to Kandahar, S. Afghan., summit 5,000 ft.; now traversed by a British military ry.
**Bolbec**, *t.* of France, in the dep. of Seine-Inférieure, 21 m. N.E. of Le Havre, p. 12,000.
**Bolgrad**, *t.* in Bessarabia, Rumania, 30 m. E. of Izmail. Founded early in 19th cent. as a colony of Bulgarians, it is now an important corn depot, p. 14,000.
**Boli**, anc. *t.* in Kastamuni vilayet, Asia Minor, p. 11,000. Close by are ruins of Bithynium. At Ilija, S. of the town, are warm medicinal springs.
**Bolivar**, a *dep.* of the Republic of Colombia, South America, area 22,320 sq. m., p. 457,111, mainly whites; also a province of Ecuador, area 1,160 sq. m., p. 63,000; also a State of S. Venezuela, area 88,700 sq. m., p. 65,842; also the cap. of the latter state, a city on the Orinoco (formerly called Augostura), p. 19,712.
**Bolivia**, inland Republic, S. America, bounded by Brazil, Paraguay, the Argentine, Chili, and Peru (area 514,155 sq. m., p. 2,800,000); cap. Sucre, p. 29,686.
**Bolkhov**, anc. *t.* 35 m. N. Orel, Russia, on the Oka R.; important industries and trade with Moscow; famous monastery. Optina Pustyn, close by; p. 27,000.
**Bollène**, *t.* 20 m. N. Avignon, dep. Vaucluse, France, p. 5,990.
**Bollingen**, *vil.* N.E. Berne, Switzerland, with mineral baths.
**Bollington**, *urb. dist.* nr. Macclesfield, Chesh., **Eng.**, silk industry, p. *5,027*.
**Bolmen**, *L.* in Sweden (20 m. by 7 m.), nr. Christianstadt.
**Bolobo**, *sta.* in Belgian Congo, 40 m. above the Kouango.
**Bologna**, anc. *c.* of Italy, 80 m. N. Florence, in prov. of same name. Area of prov. 1,465 sq. m., p. 602,663. The city has p. 189,770 and many splendid bldgs. It was originally an Etruscan t. (Felsina), then a Roman t. (Bononia), and became united in 1860 to the kingdom of Italy.
**Bologoye**, *depot* and important junction on the Leningrad and Moscow Ry., U.S.S.R.
**Bolor Tagh**, *mtn.* range E. side Pamir plateau, Cent. Asia; highest pt. 20,000 ft.
**Bolsas**, R. (225 m.) in S.W. Mexico; enters Pacific at Zacatula.
**Bolsena**, *t.* (7 m. S.W. Orvieto, prov. Rome, p. 3,100) on L. (8 m. long), occupying site of an extinct volcano, the anc. Roman Lacus Volsiniensis.
**Bolsover**, *urb. dist.*, Derby, Eng., 6 m. E. of Chesterfield, p. *11,811*.
**Bolsward**, old *t.* Friesland, Holland, nr. Leeuwarden, p. 6,750.
**Bolt Head** (430 ft.), rugged *headland* on S. coast, Devon, Eng
**Bolton, or Bolton-le-Moors**, *co. bor.*, mftg. *t.*, S. Lancs., Eng., 10 m. N.W. Manchester, p. *177,253*.
**Bolton Abbey, or East Bolton**, on R. Wharfe, nr. Skipton, W.R. Yorks, Eng., famous for its fine ruined priory and beautiful surrounding scenery.
**Bolton-upon-Dearne**, *urb. dist.*, W.R. Yorks, **Eng.**, p. *14,242*.
**Bomaderry**, *vil.* in co. Camden, N.S.W., p. 1,020.
**Bomarsund**, formerly Russ. fort on Aland Is. in the the Baltic; destroyed in 1854 by English and French.
**Bombala**, *t.* in mining and timber dist., **N.S.W.**, 319 m. S.W. of Sydney.
**Bombay Presidency**, India; area, including Sind and Aden, 123,000 sq. m., p. 19,500,000; cap. c. Bombay, the chf. port of Western India, on Salsette Isl. in the Arabian S., the centre of cotton industry, p. 1,172,953.

**Bona, *spt.* of Algeria, on G. of B. in the Mediterranean, occupied by France in 1832. Seated in a fertile plain, p. 33,500 (12,000 French).**
**Bonaca, or Bonacca, one of the Bay Isls. in the Caribbean Sea, belonging to Honduras; 9 m. long.**
**Bonaventure, *R.* Quebec, Canada, falls into B. of Chaleurs.**
**Bonavista, chf. *t.* of dist. of same name on Bonavista B., E. coast of Newfoundland, p. 3,911.**
**Bonawe, pretty *vil.* on R. Awe, Argyllsh., Scotl., nr. Oban.**
**Bonchurch, picturesque *vil.* S.E. coast of Isle of Wight, Eng., adjoining Ventnor.**
**Bondeno, *t.* Italy, 11 m. from Ferrara, p. 16,000.**
**Bondou, or Bondu, *country*, French W. Africa, between the Senegal and the Gambia; explored first by Mungo Park.**
**Bondues, *t.* France, dep. Nord, nr. Lille, p. 3,406.**
**Bo'ness, or Borrowstounness, *spt.* Linlithgowsh., Scotl., p. 14,150.**
**Bonham, *t.* Texas (cap. of Fannin co.), U.S.A., important cotton dept. on Texas-Pacific Ry., p. 5,500.**
**Bonhill, *t.* Dumbartonsh., Scotl., on R. Leven, p. *15,565*.**
**Boni, or Bonè State, S.W. of Celebes, Dutch East Indies, area 2,548 sq. m., p. about 200,000. Ch. *t.* Boni, 80 m. N.E. of Macassar.**
**Bonifacio, *spt.* and fort. opposite Sardinia, on Str. of B., Corsica; cork-cutting industry, p. 4,750.**
**Bonin Isls., or Arzobispo Isls. Three groups N. Pacific, 500 m. from Japan, claimed by the Japanese; 20 isls. in all, of volcanic origin, half of them very small, p. 5,000.**
**Bonn, University *c.* of Germany, on the Rhine, 15 m. S.E. of Cologne, p. 91,410.**
**Bonnétable, *t.* nr. Le Mans, dep. Sarthe, France, p. 5,150.**
**Bonsall, *urb. dist.*, nr. Matlock, Derbysh., Eng., p. *1,173*.**
**Bonny, *t.* in S. part of Nigeria, British W. Africa, at the mouth of R. Bonny, Bight of Biafra, p. 10,000.**
**Bonnybridge, *vil.* co. Stirling, nr. Falkirk, Scotl., p. 5,620.**
**Bonnyrigg (since 1929 Bonnyrigg and Lasswade), *t.* Midlothian, 7 m. S. of Edinburgh, Scotl., p. *4,483*.**
**Bontuku, *t.* in French W. Africa, N. of Gold Coast, important stn. for trade with Upper Niger.**
**Boom, mftg. *t.* nr. Antwerp, Belgium, on R. Rupel; extensive breweries, p. 16,500.**
**Boone, *c.* on Des Moines R., Iowa, U.S.A., p. 11,900.**
**Booneville, *c.* in Missouri, nr. Jefferson, U.S.A., p. 5,000; also smaller towns in Indiana, Arkansas, Kentucky, Montana, and N.Y.**
**Boort, *t.* Victoria, co. Gladstone.**
**Booterstown, *t.* I.F.S.; 4 m. S.E. Dublin, p. 4,015.**
**Boothia, *penin.* (area 13,100 sq. m.) and G. on Arctic coast, Franklin dist., Brit. N. America.**
**Bootle, *co. bor.*, suburban to Liverpool, Lancash., Eng., N. of Mersey, p. *76,799*.**
**Boppard, on Rhine, *t.* 10 m. S. Coblenz, Prussia; the Roman Bodobriga, p. 6,060.**
**Boquet, *R.* (60 m.), New York, U.S.A., enters L. Champlain.**
**Borambil, *vil.* co. Bligh, N.S.W., 225 m. N.W. of Sydney.**
**Boras, *t.* on R. Wiske, nr. Gothenburg, S. Sweden, cotton spinning and weaving, p. 28,223.**
**Borbeck, industrl. commune in the Ruhr mining dist., nr. Essen, p. 52,000.**
**Bord-a-Plouffe, *t.* in Isle Jesus, nr. Montreal, Canada.**
**Bordeaux, great wine *port* on Garonne R., France, prov. Gironde, p. 267,409.**
**Bordelais, anc. name of French dist. round Bordeaux.**
**Bordighera, Riviera winter resort, between San Remo and Ventimiglia, Italy, p. 4,000.**
**Borger, *t.* nr. Assen, Drenthe, Holland, p. 6,120.**
**Borgerhout, E. *sub.* of Antwerp, Belgium, candle and tobacco factories, p. 38,500.**
**Borgetto, *t.* in Sicily, nr. Palermo, p. 8,250.**
**Borgia, *t.* in Catanzaro prov., Italy, p. 4,850.**
**Borgne G., on coast of Louisiana, U.S.A., outlet of L. Pontchartrain.**
**Borgo, *t.* on Brenta R., Tyrol, p. 5,500; also fur-trading t. of Finland, p. 4,600.**
**Borgo Manero, *t.* in Novara prov., Italy, p. 9,750.**
**Borgo Mozzano, *t.* nr. Lucca, Italy, p. 10,500.**
**Borgo San Domino, *t.* in Parma prov., Italy, the anc. Fidentia; grand Romanesque cathedral, p. 12,750.**
**Borgo San Lorenzo, *t.* Italy 20 m. N.E. Florence; olives and wine, p. 12,260. [p. 9,300.**
**Borgo San Sepolcro, mediæval *t.* in Tuscany, Italy.**
**Bori, or Boree, fortified *t.* in Afghanistan, in dist. same name. [36,000.**
**Borinage, colliery *dist.* of Hainault, Belgium, p.**
**Borisov, dist. *t.* of U.S.S.R., old govt. Minsk, anc. foundation; Napoleon defeated here in 1812, before his disastrous passage of R. Beresina, p. 16,000.**
**Borisovka, *t.* in Kursk, Russia; thriving trade, p. 18,250.**
**Borispol, *t.* Poltava, Ukraine, nr. Kiev, p. 6,060.**
**Borja, *vil.* in Ecuador, at head of Maranon (Amazon) R., p. 9,500.**
**Borkum, E., Frisian *isl.* (German summer resort) at mouth of R. Ems.**
**Bormio, *vil.* and Alpine resort in Lombardy, Italy, nr. Sondrio; anc. repute for its mineral springs, p. 2,030.**
**Borna, mftg. *t.* in Saxony, 20 m. S. of Leipzig, p. 10,150.**
**Borneo, mainly mountainous and large *isl.* in the middle of the E.I. Archip., area about 280,000 sq. m., p. nearly 2 millions. Three-fifths belong to the Dutch; Sarawak, N. Borneo, and Brunei under Brit. control. Produce timber, rubber, tobacco, cotton, spices, etc.**
**Bornheim, suburban quarter of Frankfort-on-Main, Germany.**
**Bornheim, Belgian *t.* on R. Scheldt, p. 6,130.**
**Bornholm, (210 sq. m., p. 33,000), Danish *isl.* in Baltic; produces porcelain clay; cap. Rönne.**
**Bornos, *t.* of Spain, on R. Guadalete, nr. Cadiz, p. 5,300.**
**Bornu, country of Central Sudan, Africa, S.W. Lake Tchad; formerly a negro kingdom now partly under French domination, and partly within Brit. Protectorate of Nigeria. Area 51,000 sq. m., p. (estimated) 5,000,000.**
**Borodino, *vil.* 72 m. W. Moscow, U.S.S.R.; great battle fought here in 1812 between Napoleon and the Russians. [p. 860.**
**Boroughbridge, *t.* on R. Ure, W.R. Yorks, Eng.,**
**Borovitchi, industl. *t.* in old govt. of Novgorod, U.S.S.R., p. 12,500.**
**Borrisoglebsk, industrl. *t.* in govt. Tambov, U.S.S.R., p. 13,000; also *t.* on R. Volga, in Yaroslav govt., p. 10,000.**
**Borozek, health resort in the Carpathians, E. Hungary, mineral springs.**
**Borrowdale, romantic *valley* in Cumberland, Eng., with the black-lead mines.**
**Borthwick, *par.* S.E. co. Edinburgh, with old castle nr. Fushiebridge, Scotl., p. *3,169*.**
**Borzhom, *wat. pl.* in Transcaucasia, called "the pearl of the Caucasus." Hot mineral springs and beautiful scenery.**
**Bosco Reale, *t.* at foot of Vesuvius, Italy, p. 9,000; Bosco-tre-case, *t.* on Vesuvius p. 10,500. These were the figures at the time of the terrible eruption of April, 1906, when the towns were wiped out.**
**Bosna, R. (150 m.), affl. of R. Save, Bosnia.**
**Bosnia and Herzegovina, formerly Austrian terr., now form a dist. in the Serb, Croat and Slovene state (Jugo-Slavia). Area 20,709 sq. m., p. 1,931,802. Cap. Sarajevo.**
**Bosphorus or Str. of Constantinople, between Black Sea and Sea of Marmora, separating Europe from Asia Minor.**
**Boston, *mun. bor.*, *spt.* in Lincolnsh., England, on R. Witham, p. *16, 597*.**
**Boston, *spt. c.* and *cap.* of Mass., U.S.A., second commercl. c. and most historic in America, also chf. centre of learning, p. 783,000 (with "Greater Boston" over a million).**
**Boston Spa, hydropathic resort on R. Wharfe, 9 m. S.E. Knaresboro', W.R. Yorks., Eng.**
**Bosworth or Market Bosworth, *t.* Leicestersh., Eng., memorable for battle between Richard III. and Richmond (Henry VII.), 1485.**
**Böszörmeny or Hadju-Böszörmeny, *t.* in Hungary, nr. Debreczin, famous for its fairs, p. 27,150.**
**Botany Bay, famous inlet, 5 m. S. of Sydney, N.S.W., discovered by Cook 1770, sometime an Eng. penal colony. [to Falkirk.**
**Bothkennar, *par.* in co. Stirling, Scotl., suburban**
**Bothnia, Gulf of, N. of Baltic, between Finland and Sweden, breadth (abt.) 160 m.**

**Bothwell**, *t.* Lanark, nr. Glasgow, on Clyde, p. *60,660*; also vil. and co. in Ontario, Canada, also pastoral dist. on R. Clyde, nr. Hobart in Tasmania.
**Botosani**, *t.* Rumania, N. Moldavia, in rich pastoral country, p. 32,874.
**Botzen**, *t.* in wine-growing dist., Tyrol, on the Eisach, p. 14,750.
**Bouches-du-Rhone**, prosperous *dep.* in S. France, area 2,026 sq. m., p. 841,996 cap. Marseilles.
**Bougainville**, *B.* in Patagonia, Str. of Magellan.
**Bougainville**, *O.* on coast off Timor Sea, W. Australia.
**Bougainville**, *isl.* in Solomon group, W. Pacific.
**Bougainville Mt.**, New Guinea, nr. Humboldt Bay.
**Bougainville, Strait**, New Hebrides Isls.
**Bougie**, *spt.* in Algeria, prov. Constantine (the Roman Saldæ) on B. of Bougie, impt. trade centre, p. 15,000.
**Bouillon**, *t.* and *fortress* in the Ardennes, Belg., on R. Semoy, p. 2,680 in dist. (formerly a Grand Duchy), now forming W. portion of prov. of Luxembourg.
**Boulak.** (*See* **Bulak.**) [dist.), p. 8,218.
**Boulder**, *t.* and *co.* Col., U.S.A. (important mining
**Boulogne (sur Seine)**, S.W. sub. of Paris.
**Boulogne (sur Mer)**, *wat. pl.* and *spt.* on N. coast, France, 25 m. from Calais, the Roman Bononia Gesoriacum; p. 55,336.
**Bounarbashi**, *vil.* in Asia Minor, supposed site of Troy.
**Bounty**, *isl.* off E. Cape, N.Z., uninhabited.
**Bouraville**, *t.* N.S.W. 349 m. N. of Sydney.
**Bourbon, Isle of.** (*See* **Reunion.**)
**Bourbon l'Archambaut**, *t.* dep. Allier, France, p. 4,500.
**Bourbonne-les-Bains**, *t.* in dep. Haute-Marne, France, the Roman Vervona Castrum, noted mineral springs; p. 5,160.
**Bourdeaux**, *t.* in France, dep. Drôme, p. 1,500.
**Bourg-en-Bresse**, *t.* cap. Ain dep., France, fine ch.; p. 18,020. [dep., France, p. 46,150.
**Bourges**, military and metallurgical *t.*, cap. Cher.
**Bourghas, or Bourgas**, *spt.* of Bulgaria, on Gulf of B., Black Sea, p. 22,272.
**Bourgogne.** (*See* **Burgundy.**)
**Bourgoin**, *t.* on Isère R., nr. La Tour-du-Pin, France, p. 7,300.
**Bourke**, *t.* on Darling R., copper ore dist., N.S.W., p 4,550.
**Bourlos, or Boorlos**, *lagoon* of Upper Egypt, 5 m. E. of Rosetta, in the Nile delta.
**Bourne**, *urb. dist.*, S. Lincs., Eng., nr. Spalding, p. *4,589*.
**Bournemouth**, *co. bor.*, *wat. pl.* on Poole B., Hants, Eng., p. *116,780*.
**Bournville**, model industl. *t.* (or "Garden City") nr. Birmingham, Eng., founded by Mr. Geo. Cadbury.
**Bouscat, Le**, *t.* (residential sub. of Bordeaux), dep. Gironde, France.
**Boussa**, or **Bussa**, *cap.* of Boussa country, Nigeria, Central Africa, p. 10,000; Mungo Park died here in 1805.
**Boussu**, *t.* in Belgium, nr. Mons., p. 10,280.
**Bouvines**, *vil.* Nord dep., nr. Lille, France; great battle (victory of French over Otto IV.) 1214.
**Bovey Tracey**, *vil.* E. Devon, Eng., nr. Moreton Hampstead, p. 2,820.
**Bovino**, *t.* in prov. of Foggia, Italy, p. 8,350.
**Bow**, E. *dist.* bor. of London, Eng., industl. (properly Stratford-at-Bow).
**Bow**, *R.* in Alberta, N.W. Can.; head of R. Saskatchewan.
**Bowden**, *t.* in S. Australia, suburb of Adelaide.
**Bowdon**, *urb. dist.*, Cheshire, Eng., p. *3,285*.
**Bowen**, *spt.* in N. Queensland, on Port Denison, 725 m. N.W. of Brisbane, in fine pastoral country.
**Bow (or Harp) Isls.**, Low Archipelago, S. Pacific.
**Bowling**, populous indust. *sub.* of Bradford, W.R. Yorks, Eng.
**Bowmanville**, *pt.* on L. Ontario, Can., nr. Toronto, p. 5,500.
**Bowness**, *t.* co. Westmorland, Eng., on L. Windermere, p. 2,900; also t. on Solway Firth, Cumberland, Eng., p. 1,100.
**Box Hill**, nr. Dorking, Surrey, Eng., picturesquely wooded, fine views.
**Boyacá**, *dep.* of Republic of Colombia, America, area 16,460 sq. m., p. 657,167, cap. Tunja.
**Boyana**, *t.* on Bay of B., N.W. Madagascar.
**Boyer R.** (130 m.), affit. of Missouri, Iowa, U.S.A.
**Boyle**, mkt. *t.* Roscommon co., I.F.S., on R. Boyle, p. 5,680.
**Boyne**, *R.*, Leinster, I.F.S., (80 m.), rises in Kildare and falls into the sea below Drogheda. Battle of B., 1690, nr. Drogheda.
**Bozrah**, anc. pl. nr. the Dead Sea in Edom, now El-Busireh; also in the Mishor, or plains of Moab, nr. Damascus, the modern Busra; many interesting archæological remains.
**Bozzolo**, *t.* in prov. Mantua, S. Italy, p. 4,750.
**Brabant**, N. *prov.* Holland, S. of Gelderland; upper half of former Duchy, area 1,920 sq. m., p. 732,035. Produces grain, hops, beetroot, etc., cap. s'Hertogenbosch (or Bois-le-Duc).
**Brabant**, S. cent. *prov.* of Belgium, lower half of former Duchy; area, 1,268 sq. m., p. 1,567,259. Fertile and wooded; many breweries and manufactures; cap. Brussels (*q.v.*).
**Brackley**, *mun. bor.*, mkt. *t.* Northamptonshire, Eng., on R. Ouse, p. *2,181*.
**Braddock**, ironworking *t.* in Pennsylvania, on Monongehela, R., nr. Pittsburg, p. 19,300.
**Bradford**, *co. bor.*, in W.R. Yorks, Eng., worsted, woollen and silk manufs., p. *298,041*.
**Bradford**, *t.* in petrol region, M'Kean co., Penn., U.S.A., p. 20,000; also several smaller t.'s in U.S.A., and one in Ontario, Canada.
**Bradford-on-Avon**, *urb. dist.*, mftg. *t.* Wilts., Eng. nr. Bath, p. *4,735*.
**Brading**, *par.* Isle of Wight, Eng., p. 1,600.
**Bradninch**, *t.* in Devon, Eng., nr. Exeter, p. 1,510.
**Bradona**, *R.* in Potenza, Italy (60 m.), flows to G. of Taranto.
**Braemar**, *par.* in the Grampians, Aberdeensh., Scotl., containing Balmoral (Royal castle) estate.
**Braeriach**, *mtn.* Scotl., co.'s Inverness and Aberdeen, alt. 4,248 ft.
**Braga**, *c.* cap. of Minho, prov. Portugal, nr. Oporto, in wine-growing dist., p. 24,647.
**Bragança, or Braganza**, *t.* with mediæval castle, in Tras-os-Montes prov., Portugal, p. 6,020; also spt. on Atlantic coast, Brazil, p. 6,150.
**Brahmapuri**, *t.* in Cent. Provs., India, Chandra dist., p. 5,150.
**Brahmaputra**, a great *R.* of Asia (total length about 1,800 m.); rising under the watershed of the Mariam La (alt. 15,500 ft.) it flows along the N. side of the Himalayas, through Tibet (where it is called the Sampo, and later the Dihong), emerging into the plains of Assam. Thence it winds through Bengal, joining the Ganges at Goulanda to form the estuaries, emptying ultimately in the Bay of Bengal. It is navigable to the enormous height (at Janglache) of 13,800 ft. above the sea level.
**Braila, Ibrail, or Brahilov**, *t.* on Danube, nr. Galatz, Rumania, gt. grain centre, p. 65,911 (one-tenth Jews).
**Braine-la-Leude**, *t.* nr. Brussels, Belgium, p. 8,250.
**Braintree**, *urb. dist.*, Essex, Eng., on Blackwater, p. *8,912*; also vil. nr. Boston, Mass., U.S.A., p. 15,800.
**Brampton and Walton**, *urb. dist.*, Derby, Eng., p. *2,323*; also mkt. t. nr. Carlisle, Cumberland, Eng., p. 2,400.
**Brancepeth**, large industrial *par.* on R. Wear, co. Durham, Eng.
**Brance**, *R.*, Brazil, prov. Bahia, affl. Rio Grande, 120 m.; also R. in N. Brazil (370 m.), flowing to Rio Negro.
**Brandenburg** (15,070 sq. m., p. over two and a half mills.), prosperous mining and agr. prov. of Prussia; cap. Brandenburg, on R. Havel (shipping), p. 52,972.
**Brandon**, *t.* Manitoba, Canada, p. *16,966*; also mkt. t. on Lit. Ouse, Suffolk, p. 2,420.
**Brandon Mt.**, nr. Tralee, co. Kerry, I.F.S., alt. 3,127 ft.
**Brandon and Byshottles**, *urb. dist.*, Durham, Eng., p. *17,099*.
**Brandywine Creek**, *R.* Chester co., Pa., U.S.A., joins the Delaware; battle in 1777 between British under Howe and Americans under Washington, latter defeated.
**Brantford**, *pt. of entry* on Grand R., Ontario, Canada, p. 26,400.
**Branxholme**, *t.* in co Normanby, Victoria; also t. nr. Launceston, Tasmania. [20 m.
**Bras d'Or**, *inlet*, C. Breton isl. arm of Sea, 50 m. by
**Brass**, *R.* and *t.* West Africa, in Guinea, arm of Niger delta.

**Bratislava,** *pt.* Czecho-Slovakia, with university, p. 93,329.
**Bratsberg,** *mtns.* forest dist. of Norway, between Oslo and Christiansand, area 5,844 sq. m.
**Brattleboro,** *t.* on Connecticut R., Vt., U.S.A., p. 8,850.
**Braunau,** *t.* Bohemia, Czecho-Slovakia; scene of much fighting in the Thirty Years' War, p. 8,000.
**Braunhirschen,** indust. *dist.* nr. Vienna, Lower Austria, p. 12,000.
**Braunsberg** *t.* (mftg.), nr. Konigsberg, Pruss., p. 13,250.
**Braunschweig.** (*See* **Brunswick.**)
**Braunton,** *par.* in N. Devon, Eng., at mouth of R. Taw, 2,340.
**Brava,** most S. *isl.* Cape Verde group, area 45 sq. m., p. 7,050.
**Bravo del Norte.** (*See* **Rio Grande.**)
**Bray,** *par.* co. Berks, Eng., nr. Maidenhead, p. 3,420; also t. in co. Wicklow, I.F.S., on R. Bray, now a pop. wat. pl. (the "Brighton of Ireland"), res. p. 7,520.
**Brazil** (3,275,510 sq. m., p. 40,275,000). Largest *state* in S. America, and very little less in area than Europe. Vast forests and productive plains; cap. of the Republic, Rio de Janeiro (*q.v.*).
**Brazos** (950 m.), *R.* in Texas, U.S.A., flowing from the Staked Plain to the G. of Mexico.
**Brazza,** fertile Dalmatian *isl.* in the Adriatic; silk-worm culture, p. 25,500.
**Brazzaville,** frontier *stn.* on Up. Congo R., Africa, nr. Stanley Pool.
**Breadalbane,** mountainous *dist.* in W. Perthshire, Scotl. [p. 2,360.
**Breage,** coast *par.* Cornwall, Eng., nr. Helston,
**Brechin,** *t.* with anc. cathedral, on S. Esk, Forfar, Scotl. (one of the Montrose Burghs), p. *8,201.*
**Brecknock Beacons** (highest peak, 2,910 ft.), *mtns.* in S. Wales, 5 m. S. of Brecon.
**Brecknockshire,** inland *co.* S. Wales, area 743 sq. m.; agricult., wooded, and mineral (anthracite coal), p. *57,771.*
**Brecknock,** or **Brecon,** *urb. dist.*, cap. of co. of Brecknocksh., on R. Usk, Wales, p *5,334.*
**Breda,** anc. *t.* Holland, 30 m. N. Antwerp, p. 29,647. Fortress, which has several times been besieged.
**Bredasdorp,** *div.* and *t.* C. of Good Hope, p. *1,106.*
**Bredbury,** *urb. dist.*, in Cheshire, Eng., adjoining Stockport, p. *10,878.*
**Bredow,** *t.* sub. of Stettin, Pruss.; (ship-building), p. 21,500.
**Breede** (60 m.), *R.* in S. Africa, flows into sea at Port Beaufort, St. Sebastian Bay.
**Bregenz,** *t.* cap. Vorarlberg, Austria, at E. end of L. Constance, the Roman Brigantium; industrial, p. 7,900.
**Breitenfeld,** *vil.* 5½ m. N.N.W. Leipzig, battle, 1631, also 1642, also "Battle of the Nations," 1813.
**Bremen,** free *state* of the German Empire, area 99 sq. m., p. 311,266; cap. c. Bremen, on R. Weser, one of the Hanse towns, a busy commercial centre, p. 257,923.
**Bremerhaven,** *outport* of Bremen, the chf. emigration port of Germany, p. 22,333.
**Brenta,** *R.* in Italy, flowing (108 m.) from the Tyrol to G. of Venice.
**Brentford,** *urb. dist.*, co. *t.* Middlx., Eng.
**Brentwood,** *urb. dist.*, mkt. *t.* nr. Chelmsford, co. Essex, Eng., p. *7,209.*
**Brescia,** industl. *t.* (with fine cathedral) in N. Italy, cap. of prov. same name, p. 89,622; area of prov. 1,823 sq. m., p. 619,858.
**Breslau,** *cap.* Silesia, Prussia on the Oder (p. 528,260); important industries, educational institutions, and military establishment.
**Bressay,** *isl.* in Shetland group, Scotl. p. *452.*
**Brest,** fortified naval *port*, N.W. France, dep. Finisterre, depot of fleet of the Republic, fine harbour, has seen much severe fighting, p. 73,960.
**Brest Litovski,** fort. *t.* in Grödno, Poland, p. 47,250.
**Bretagne,** or **Brittany,** old *prov.* of N.W. France.
**Breton, Cape,** *isl.* belonging to prov. Nova Scotia, separated from mainland by Gut of Canso. Fishery hdqrs., coal-producing and agricultl.; area 3,120 sq. m., chf. t. Sydney.
**Brianak,** *t.* 75 m. W. Orel, Russia, on the Desna R., important industries, p 24,000.
**Brianza,** *dist.* of Italy, nr. L. Como (area 170 sq. m.), fav. sum. resort, called "the Garden of Lombardy."
**Bridgend,** *urb. dist.*, mkt. *t.* Glam., S. Wales, p. *10,033.*
**Bridge of Allan,** *wat. pl.* on Allan Water, co. Stirling, Scotl., p. *2,897.*
**Bridgeport,** *spt.* Conn., U.S.A., extensive mftg., p. 146,800.
**Bridge's Pass,** over Rocky Mtns., Wyoming U.S.A.
**Bridgeton,** *spt.* Cumberland co., New Jersey, U.S.A., p. 15,700.
**Bridgetown,** *cap* (on W. coast) Barbados, W.I., p. 16,648.
**Bridgewater Canal** (38 m.), Manchester-Runcorn-Leigh. Passes over Manchester Ship Canal by swing bridge at Barton.
**Bridgnorth,** *mun. bor.*, Shropsh., Eng., on R. Severn, nr. Shrewsbury, castle several times besieged, p. *5,151.*
**Bridgwater,** mftg. *t.* Mass., U.S.A., nr. Boston, p. 9,100; also several smaller t.'s in U.S.A. and Canada.
**Bridgwater,** *mun. bor.* and *port* on R. Parret, Somerset, Eng. near where Battle of Sedgemoor was fought, p. *17,139.*
**Bridlington,** *mun. bor.*, (important fishery and water. pl.) on fine bay, E.R. Yorks, 16 m. S.E. of Scarborough, p. *19,704.*
**Bridport,** *mun. bor.*, mkt. *t.* and *port* on R. Brit, Dorset, Eng., rope-making, p *5,917.*
**Briec,** *t.* in dep. Finisterre, W. France, nr. Quimper, p. 6,010.
**Brieg,** cigar mftg. *t.* on R. Oder, Pruss., Silesia; military castle, p. 23,100.
**Briel,** or **Brill,** fortified *spt.* on Voorn Isl., R. Mass, S. Holland.
**Brienz** (p. 2,900), *t.* on Lake B. (length 8½ m., breadth 3 m.), canton Bern, Switz.
**Brierfield,** *urb. dist.*, in Lancs., Eng., nr. Burnley, p. *7,696.*
**Brierley Hill,** *urb. dist.*, mftg. *t.* Staff., Eng., on R. Stour, p. *14,344.*
**Brieuc, St.,** *c.* on Gouet R., dep. Côtes-du-Nord, France, p. 17,950.
**Brigantine Isl.,** *wat. pl.*, N.J., U.S.A., nr. Atlantic City.
**Brigg,** *urb. dist.*, mkt. *t.* Lincs., Eng., agricultl. dist., p. *4,019.*
**Brigham,** industl. *t.* on R. Derwent, Cumberland, Eng., p. 670; also *t.* in Utah, U.S.A.
**Brighouse,** *mun. bor.*, mftg. *t.* W.R. Yorks, nr. Huddersfield, p. *19,756*
**Bright,** *t.* in Victoria, co. Delatite, p. (dist.) 21,243.
**Brightlingsea,** *urb. dist.*, on R. Colne, Essex, Eng., p *4,145.*
**Brighton,** *co. bor., wat. pl.*, Sussex, Eng., 50 m. S. of London, p. *147,427.*
**Brighton,** *wat. pl.* on Port Philip Bay, nr. Melbourne, Victoria, p. 21,243. There are several other small towns of this name in various parts of the world.
**Brighton, New,** *wat. pl.* at mouth of R. Mersey, 3 m. from Liverpool, p. 8,700.
**Brindaban,** a "Holy City" on R. Jumna, Muttra dist. United P., India, p. 26,500.
**Brindisi,** *spt.* and cathedral *t.* in S. Italy, prov. of Lecce, on Adriatic, import. pt. of embarkation, on overland route to the East, p 22,750.
**Brisbane,** *cap.* of Queensland, Australia, on R. Brisbane, p. 202,699.
**Brisbane Downs,** N.S.W. (sometimes called Monaro Plains), 70 m. long, 2,000 ft. above sea.
**Brisbane Water,** *harbour* receiving R. Hawkesbury, nr. Sydney, N.S.W.
**Bristol,** *co. bor.*, and *spt.* Gloucestersh., Eng., on Lower Avon, great shipping trade, p. *396,918*; also several small towns in U.S.A.
**Bristol Channel,** an arm of the Atlantic, between S. coast of Wales and the co.'s of Somerset and Devon.
**Britain** (or **British Empire**) forms with its colonies, dependencies, protectorates, and spheres of influence the largest State in the world. Total area over twelve mil. sq. m.; p. 450,000,000.
**Britannia Isl.,** one of the Loyalty group in Pacific.
**British Baluchistan.** (*See* **Baluchistan.**)
**British Central Africa Protectorate.** (*See* **Nyasaland Protectorate.**)
**British Columbia,** colony in Brit. N. America, Western prov. of the Dominion of Canada, area 355,855 sq. m., p. 580,000, princ. t., Victoria, Vancouver Isl.

**British East Africa,** extensive terr. on E. coast of Africa, including Kenya Colony and Prot., Tanganyika Terr. (formerly German E. Africa), Uganda Prot., together with the islands of Zanzibar and Pemba, all dealt with under their respective headings.

**British Guiana,** on N. coast of S. America, area 89,480 sq. m.; p. 305,750, excluding aborigines; cap. Georgetown.

**British Honduras,** Brit. Col. in Central America, on B. of Honduras, area 8,598 sq. m., p. 50,000; cap. Belize.

**British India.** (*See* India.)

**British North America,** name formerly used for what is now known as Newfoundland and the Dominion of Canada (*q.v.*).

**British North Borneo,** protectorate, area 31,106 sq. m., p. over 200,000; ch. t. Sandakan.

**British South Africa.**—By the South Africa Act of 1909 effecting the Union of South Africa, the Cape of Good Hope, Natal, Zululand, the Transvaal, and the Orange Free State (*q.v.*), are joined in one legislative union, provision being made for the admission of Rhodesia and other territories later, p. *1,825,527* Europeans.

**British South-West Africa,** former German terr., S. of Port. W. Africa, now administered by the Union under a mandate from the League of Nations, dated December 17, 1920. Windhoek is the cap.

**British West Africa,** includes the Gambia, Sierra Leone, Lagos, Gold Coast, and Nigeria; parts of Togoland and Cameroons are included.

**Briton Ferry,** *urb. dist.*, *p.* at the mouth of R. Neath S. Wales, p. 9,176.

**British West Indies** (*See* Bahamas, Barbados, Jamaica, Leeward Is., Trinidad, Windward Is., etc.)

**Brittany,** *prov.* and former govt. of N.W. France, the Roman Armorica.

**Brive,** or **Brives,** *t.* in Corrèze dep., France, impt. truffles and straw-work trade, p. 18 000.

**Brixen,** fort. *t.* in Tyrol, on the Bremer Pass, silkworm and wine-growing dist., p. 6,250.

**Brixham,** *urb. dist.*, *wat. pl.* in S. Devon, Eng., p. *8,147*.

**Brixton,** S.W. residential *dist.* of London, Eng.

**Broach** or **Bharuch,** an ancient c. of Gujerat, India, p. 43,000.

**Broadford,** *vil.* in Isle of Skye, Scotl., on R. and Bay of same name; also t. in Victoria.

**Broad Mtns.,** a ridge in Penn., U.S.A., Schuylkill co., rich in coal.

**Broad River** (200 m.), in N. and S. Carolina, U.S.A.; rising in the Blue Ridge, and joining the Saluda at Columbia.

**Broadstairs,** *urb. dist.*, *seaside resort*, nr. Ramsgate, Kent, Eng., p. *12,748*.

**Brocken,** highest *pt.* (alt. 3,745) of Hartz mtns., Prussian Saxony, Germany; Roman Mons Bructerus; romantic witch legends and famous spectral illusion.

**Brockton,** busy boot mftg. *t.*, Mass., U.S.A., p. 64,000 (one-fourth foreign born).

**Brockville,** *t.* and port of entry on R. St. Lawrence, Ont. Can., p. *9,682*.

**Brod,** *t.* of Slavonia, Jugo-Slavia, nr. Save R., good transit trade, p. 7,950.

**Brodick,** *wat. pl.*, in Arran, Firth of Clyde, W. Scotl., p. 1,150.

**Brody,** important commercial *t.* in Galicia, Ukraine, p. 18,000.

**Broken Bay,** inlet of Pacific, 29 m. N. of Sydney, N.S.W.

**Broken Hill,** important silver mining *t.* in N.S.W.; 925 m. W. of Sydney; also commercial centre in N. Rhodesia.

**Bromberg,** iron-works *t.*, Poland, nr. the R. Vistula, p. 57,696.

**Bromborough,** *urb. dist.*, Cheshire, Eng., p. 2,650.

**Bromley,** *mun. bor.*, Kent, Eng., 6 m. E. of Croydon; a residential suburb of London, p. *45,348*.

**Brompton,** S.W. *sub. dist.*, of London.

**Bromsgrove,** *urb. dist.*, old mkt.*t.* 13 m. S.W. of Birmingham, in Worcestersh., Eng., button-making, p. *9,520*.

**Bromwich, West,** *co. bor.* mftg. *t.* Staffs., Eng., 4 m. N.W. Birmingham, p. *81,281*.

**Bromyard,** *urb. dist.*, mkt. *t.* on R. Frome, Herefordsh., Eng., p. *1,571*.

**Brookline,** subn. *t.* nr. Boston, Mass., U.S.A., numerous fine villas, p. 47,500.

**Brooklyn,** *c.* at W. end of Long Isl., U.S.A., opposite N.Y., with which it is connected by a susp. bridge across East R.; p. of the extended dist. of the c. formerly forming King's co., 2,018,356; Brooklyn is mainly residential, but has numerous mftg. and commercial interests.

**Broom,** *loch* on N.W. coast of Ross and Cromarty, Scotl.

**Broseley,** mkt. *t.* on R. Severn, Shropshire, Eng., 13 m., S.E. of Shrewsbury, p. 3,700.

**Brothers, The,** a group of rocky *islets* in G. of Aden, at entr. to Str. of Bab-el-mandeb.

**Brotton,** *t.* N.R. Yorks, Eng., nr. Guisborough, p. 3,730.

**Brough,** mkt. *t.* in Westmorland, Eng., nr. Kirkby-Stephen, p. 650.

**Broughton,** *urb. dist.*, Lincs., p. 1,744.

**Broughton Bay,** *inlet* on E. coast of Corea, N. of Port Lazaref and Gensan; also a bay at N. end of Simushi Isl., one of the Kuriles. [ney.

**Broughton Creek,** *t.* in N.S.W., 109 m., S. of Sydney.

**Broughton-in-Furness,** mkt. *t.* N.W. Lancs., nr. Ulverston; iron and copper mines; p. 1,100.

**Broughty Ferry,** *t.* and *wat. pl.* on Firth of Tay, 3½ m. E. Dundee, Scotl., p. 11,180.

**Brownhills,** *urb. dist.*, colliery and mftg. *t.* Staffs., 5 m. N. Walsall, Eng., p. *18,363*.

**Brown Mt.,** 16,000 ft., one of the "Rockies," Br. Columbia; also name of a sml. *t.* in pig and dairy farming dist., on Benbooka R., N.S.W., nr. Candelo.

**Brownsville,** *t.* and *port* on Rio Grande, Texas, U.S.A., p. 23,000.

**Broxburn,** min. *t.* Linlithgow Scotl., p. 7,820.

**Brozzi,** *t.* nr. Florence, on the Arno, Italy, p. 12,000.

**Bruar,** *R.* Perths., Scotl., with famous falls, an affit. R. Garry. [p. 1,760.

**Bruff,** mkt. *t.* nr. Kilmallock, co. Kerry, I.F.S.,

**Bruges,** *cap.* of W. Flanders, Belgium, 14 m. E. of Ostend; lace factories and many fine old bldgs., p. 54,308.

**Brugg,** *t.* in Switz., canton Aargau; the "Prophet's town" of the Reformation, p. 1,575.

**Brunei,** *state* in N.W. Borneo, former sultanate; area abt. 4,000 sq. m., p. abt. 25,454 of whom 10,000 live in the cap., also called Brunei. The State is now under British protection.

**Bruni,** *isl.* off S.E. Tasmania, area 140 sq. m.

**Brunn** (Brno), *cap.* of Czecho-Slovakia, fortified *t.* (cloth mftg.), 90 m. N. Vienna, on R. Schwartza, p. 221,422. Brunn has been many times besieged, and was occupied by Napoleon in 1805, and by the Prussians in 1866. [dist.

**Brunneston,** *t.* in S. isl. of New Zealand, colliery

**Brunswick,** *spt.* in Georgia, U.S.A., and the name of several sm. tns. in U.S.A. and Australia.

**Brunswick,** *t.*, Victoria, Australia, p. 44,476.

**Brunswick,** former German Duchy (1,418 sq. m., p. 480,599), agricultural, mineral, and afforested, with much mountainous country, including most of the Hartz range; cap. Brunswick, on R. Ocker, many manfts.; p. 139,539.

**Brunswick, New,** maritime *prov.* of Canada, area 27,985 sq. m., p. 388,092, cap. Fredericton, largest c. St. John (*q.v.*).

**Brusa,** or **Brussa,** *c.* in Asia Minor, 60 m. S. Constantinople, the anc. Pruss and present cap. of vilayet of Brusa; produces wines and fruits, and mftg. carpets and tapestry; p. 110,000. Was cap. of Bithynia just prior to the Christian Era, and later for a time of the Ottoman Empire; p. of the prov. 1,626,800, mainly Moslems. The dist. has great mineral wealth.

**Brussels,** *cap.* of Belgium, on R. Senne, 30 m. S. of Antwerp. Contains many imposing bldgs., and is of much indust. importance, its carpets, lace, and other textile products being world-famous, p. (with suburbs) 684,870.

**Brux,** *t.* 11 m. S.W. Teplitz, Bohemia, on rly. from Prague to Pilsen; many manfts., p. 22,500.

**Bryher,** one of the Scilly *isls.* (2 m. long) off the coast of Cornwall, Eng.

**Brynmawr,** *vil.* with famous ladies' coll. nr. Philadelphia, Penn., U.S.A.; also *urb. dist.* in E. Brecon, Wales, nr. Abergavenny (extensive iron works), p. *7,247*. [factories, p. *11,600*.

**Brzezany,** *t.* Galicia, Ukraine, garrison and leather

**Bua,** Dalmatian *isl.* in Adriatic Sea, opposite Trau, p. 4,000. The anc. Bœ or Bavo, a pl. of banishment under the Roman Emperors.

**Bucalan,** *t.*, Luzon, Philippines, 20 m. N.W. of Manila, p. 11,250.

**Bucaramanga,** *t.* in min. dist. of Santander, Colombia, p. 41,000.

**Buccaneer Archipelago,** group of *isls.* in the Indian Ocean, off N.W. coast of Australia.

**Buccleuch,** *glen* in co. Selkirk, Scotl., included in Ettrick par.

**Buchan, Bullers or Bollers of,** dangerous *rocks* on Aberdeensh. coast, Scotl., S. of Buchan Ness.

**Buchan Ness,** C. nr. Peterhead, E. Scotland.

**Bucharest,** or **Bukarest,** *cap.* of Rumania, on R. Dembovitza. Great commrcl. and rly. centre; one of the strongest fortresses in Europe, but has often suffered siege and capture, p. *631,288.*

**Buchola,** lace-making *t.* in Saxony, 18 m. S. of Chemnitz, p 8,500.

**Buckau,** industl. *t.* nr. Magdeburg, Saxony, p. 20,100.

**Buckfastleigh,** *urb. dist.,* S. Devon, nr. Totnes, Eng., p. *2,406.* [Fife, Scotl., p. *17,643.*

**Buckhaven, Methil,** etc., *t.* on Firth of Forth, co.

**Buckie,** fish. *t* co. Banff, Scotl., p. 8,020.

**Buckingham,** *mun. bor.,* Bucks, Eng., on R. Ouse; milk condensing, p. *3,082.*

**Buckinghamshire,** Eng., S. Midland agr. *co.,* area 746 sq. m., between Thames and Ouse R.'s, p. *271,565.*

**Buckley,** *urb. dist.,* Flint, Wales, p. *6,900.*

**Bucyrus,** *t.* on Sandusky R., Ohio, U.S.A. (machine mftg.), p. 9,900.

**Budapest,** twin-*cap.* of Hungary, Buda on right bank and Pest on left bank of Danube, 170 m. from Vienna; p. 1,184,166. Many fine buildings and institutions. Wine manuf. chief industry.

**Budaun,** *c.* United Provs., India, Rohilkhand div., has ruins of immense fort and mosque, p. 38,500.

**Budawang Mtns.** in Coast Range, N.S.W., alt. 3,800 ft.

**Bude,** or **Budehaven,** picturesque *vil.* E. Cornwall, Eng., p. 1,620. [Eng., p. *3,162.*

**Budleigh Salterton,** *urb. dist., wat. pl.* E. Devon,

**Budrio,** industrl. *t.* nr Bologna, Italy, p. 17,250.

**Budukhshan,** or **Badakhshan,** terr. in Afghan Turkestan, p. 65,000.

**Budweis,** or **Budejovice,** *t.* on Moldau R., E. Bohemia, Czecho-Slovakia; principal commercial centre of S. Bohemia, many manufactures, p. 43,961. [Chester, Eng.

**Budworth, Great,** *par.* adjoining Northwich, co.

**Buenaventura,** *spt.* in Colombia on Choco Bay, p. 10,150; also *t.* in Mexico, 140 m. N.W. of Chihuahua.

**Buena Vista,** *vil.* in State of Coahuila, Mexico, where American force under Gen. Taylor defeated Mexicans in 1847 with heavy slaughter.

**Bueu Ayre,** Dutch W.I., *isle* off Venezuelan coast.

**Buenos Ayres,** the Federal *cap.* of Argentina, is the largest *c.* in the S. hemisphere, p. 2,250,000. It is a great port on the W. side of the La Plata estuary. The prov. has an area of 117,777 sq. m. and a p. of 3,000,000. La Plata is the provincial cap.

**Buffalo,** *c.* on L. Erie, N.Y. State, of rapid growth and great commercial importance, p. 506,775; also R. in Natal and R. in Tennessee, U.S.A.; also mtn. of Dividing Range, Victoria, alt. 5,381 ft.

**Bug R.,** *trib.* of Dnieper (340 m. long) in Ukraine.

**Buga,** industrl. *t.* Colombia, Cauca State, p. 32,000.

**Buggiano,** mftg. *t.* 30 m. W. of Florence, Italy, p. 11,750.

**Buglawton,** *urb. dist.,* Cheshire, Eng., p. *1,651.*

**Bugle Ranges,** upland *dist. stn.* in S. Australia, nr. Adelaide, p. 2,500.

**Builth Wells,** *urb. dist.,* with medicinal springs, on R. Wye, N. Brecon, Wales, p. *1,663.*

**Buitenzorg,** *t.* and *prov.* Java, part of Dutch residency of Batavia, area 1,447 sq. m. In the t. usually resides the Gov.-Genl. of the Dutch E. Indies.

**Bujalance,** *c.* 25 m. E. of Cordova, Spain, p. 10,250.

**Bukhara.** (*See* Bokhara.)

**Bukken Fiord,** *inlet* on W. coast of Norway, with sml. isl. of same name.

**Bukkur,** fortified *isl.,* Sind, where ry. crosses R. Indus, in Shikapur dist.

**Bukowina,** front. *prov.* Rumania, area 4,030 sq. m., p. 800,098, cap. Czernowitz.

**Bulak,** *port* and *sub.* of Cairo, formerly contained the famous national Museum, now at Gizeh.

**Bulandshahr,** *t.,* United Provs., India, between R. Ganges and Jumna, in Meerut div.

**Bulawayo,** *t.* in S. Rhodesia, S. Africa, p. *11,226.*

**Buldana,** *t.* in Berar-Hyderabad div., India.

**Buldur,** or **Burdur,** *t.* in vilayet of Koni, Asia Minor, linen weaving and leather tanning, p. 12,200.

**Bulgaria,** area 40,656 sq. m., p. 4,861,440; situated between Serbia (Jugo-Slavia) and the Black Sea; independent kingdom. Produces cereals, tobacco and textiles. Cap. Sofia, ch. pt. Varna. First enemy country to surrender in the Great War, Sept. 30th, 1918.

**Bulkington,** *urb. dist.,* Warwick., Eng., p. *2,749.*

**Bulla,** *t.,* co. Bourke, Vict., p. (dist.) 2,598.

**Buller R.,** Nelson prov., South Isl., New Zealand, falls to Pacific at Westport; also mtn., one of Dividing Range in Victoria, alt. 5,934 ft.

**Bull Run R.** (affit. of Occoquan R.) in N.E. Virginia; two Confed. vict. 1861–1863.

**Buln Buln,** *t.,* 90 m. E. Melbourne, Vict., on Brandy Creek.

**Bulsar,** *t.* in Surat dist., Bombay, India, p. 13,350.

**Bultfontein,** diamond mine nr. Kimberley, S. Africa.

**Bulti,** name of part of Kashmir, also known as Little Tibet. [Tibet, alt. 11,300 ft.

**Bul-Tul,** *natu. pass* between Kashmir and Little

**Bunbury,** *spt.,* W. Australia, 112 m. S. Perth; p. 4,478. [sugar factories.

**Bundaberg,** industrl. *t.* on Burnett R., Queensland;

**Bundanoon,** *t.* in co. Canada, N.S.W., 95 m. S.W. of Sydney. [Sydney.

**Bundarra,** *t.,* Hardings co., N.S.W., 323 m. N.

**Bundelkhand,** *dist.,* partly Brit. partly nat., in N. India, between Jumna and Chambal R., area 20,559 sq. m., p. over 3,500,000. The native States are under the Central India Agency, the British in the United Provs. Govt.

**Bunder Abbas.** (*See* Bander Abbas.)

**Bundoran,** *wat. pl.* S.W. Donegal, I.F.S., p. 1,050.

**Bundroes,** fish. *vil.* co. Leitrim, nr. Bundoran, I.F.S.

**Bungaree,** *t.* co. Grant, Vict., p. (dist.) 3,013.

**Bungay,** *urb. dist.,* mkt. *t.* on Waveney R., Suffolk, Eng., p. *3,098.* [p. (dist.) 5,057.

**Buninyong,** *t.* co. Grant, Vict., 98 m. N. Melbourne,

**Bunker Hill,** Charlestown, now part of Boston, Mass., U.S.A.; Battle 17 June, 1775, between Amer. and Brit. [5,040.

**Buntingford,** mkt. *t.* Herts. on R. Rib. Eng., p.

**Bunzlau,** *t.* on R. Iser, Prussn. Silesia, nr. Liegnitz, noted for its brown pottery, p. 15,500.

**Burano,** *isl.* in Adriatic, 5 m. N.E. of Venice; t. on the lagoon, p. 7,300. [land B.

**Burdekin,** *R.,* in Queensland, flows into Cleve-

**Burdiehouse,** *vil.* in Scotl., nr. Edinburgh, lime

**Burdwan.** (*See* Bardwan.) [burning industry.

**Bure,** *R.,* Norfolk (50 m.) trib. of Yare.

**Burg,** cloth mftg. *t.* Prussn., Saxony, 13 m. from Magdeburg, industry founded by French Protestant exiles, p. 23,200.

**Burgas,** *port* on G. of B., Black Sea, coast of S. Bulgaria, fine harbour, good trade, p. 22,272.

**Burgess Hill,** *urb. dist.,* nr. Brighton, Sussex, Eng., p. *5,975.*

**Burghead,** fish. *t.* nr. Elgin, Scotl., p. *1,255.*

**Burghersdorp,** *t.* in Cape Colony, 930 m. N. of Cape Town, p. *1,999.*

**Burgh-in-the-Marsh,** mkt. *t.* nr. Spilsby, Linc., Eng., p. 1,300. [place of Tell.

**Burglen,** *vil.* nr. Altorf cant. Uri, Switz. Birth-

**Burgo-de-Osma,** *t.* nr. Soria in Spain, p. 3,400.

**Burgos,** *prov.* Old Castile, Spain, area 5,480 sq. m., p. 345,156; cap. Burgos city on Arianzon R.; fine cathedral; and good trade in paper, gloves, etc., p. 30,460.

**Burgundy,** famous wine *dist.* E. France; formerly a prov. (cap. Dijon).

**Burhanpur,** *t.* on Tapti R., Cent. Provs., India; important trade, p. 31,000.

**Buriganga,** *R.,* Bengal, Decca dist. formerly main chan. of Ganges.

**Burin,** *spt.* Newfoundland, W. of Placentia B.

**Burke,** extensive pastoral *dist.* Queensland, between Mitchell and West Kennedy dists.

**Burktown,** post *t.* on Albert R., N. Queensland, 1,500 m. N.W. of Brisbane.

**Burley-in-Wharfedale,** *urb. dist.* W.R. Yorks, Eng., nr. Otley, p. *3,960*; also par. on N.W. of Leeds, p. 3,850.

**Burlington,** *c.,* cap. Des Moines co., on bluffs of Mississippi R., Iowa, p. 27,000; also port on E. side L. Champlain, Vt., containing the State University, p. 25,000; also some thirty other small t.'s of same name in U.S.A. There is a village called Burlington, too, in Canada on L. Ontario.

**Burma,** India's largest *prov.*, having a total area of 230,839 sq. m. and a p. of 13,205,564, and forming most westerly part of Further India. Greatest R. the Irawadi; cap. (Lower Burma) Rangoon, (Upper Burma) Mandalay. Chief product rice; there are valuable expanses of teak forest; and precious stones, gold, silver and copper exist in places to a considerable extent.

**Burnham,** *par.* nr. Maidenhead, Berks, Eng. (p. 11,800); containing the picturesque public woodland, "Burnham Beeches"; also wat. pl. nr. Bridgwater on Somerset coast, p. (of par.) 3,970; also Burnham Thorpe, Nelson's birthplace, vil. in Norfolk, nr. Holkham; also numerous other parishes in different parts of Gt. Britain, and various smL t.'s in the U.S.A.; also dist. 20 m. fr. Christchurch, in the S. isl. of New Zealand.

**Burnham-on-Crouch,** *urb. dist.*, Essex, Eng., p. *3,395.* [*5,120.*

**Burnham-on-Sea,** *urb. dist.*, Somerset, Eng., p.

**Burnie,** *t.* in Tasmania, 100 m. N.W.of Launceston.

**Burnley,** *co. bor.*, mftg., weaving and iron-wkg. and colliery *t.*, 20 m. E. Preston, co. Lancaster, Eng., p. *98,259.*

**Burntisland,** *wat. pl.* on F. of Forth, East Fife, Scotl.; nr. Kirkaldy, p. *5,809.*

**Burntwood,** *t.* and industrl. *par.* nr. Lichfield, Staffs., Eng., p. 6,600.

**Burra, E.** and **W.,** two of Shetland Isls., Scotl., included in the par. of Bressay.

**Burra Burra,** copper mining dist. in S. Australia, 100 m., N. Adelaide.

**Burrard Inlet,** Brit. Colum., off G. of Georgia; on it is Vancouver, terminal port of C.P.R.

**Burray Isl.,** one of the Orkneys, Scotl., in South Ronaldshay par.

**Burriana,** *t.* on R. Bechia (nr. the sea), prov. Castellon, Spain, orange growing district, p. 12,360.

**Burrillville,** *t.* in Providence, Rhode Isl., U.S.A., p. 8,606. (Scotl.

**Burrow Head,** *C.* on S.E. coast of Wigtownsh.,

**Burrowa,** *dist.* in N.S.W., 225 m. S.W. of Sydney

**Burrumbeet Lake** (with sm. isl. settlement), in Ripon co., Vict., 113 m. N.W. of Melbourne.

**Burry Port,** *urb. dist.* on estuary or inlet of Carmarthen Bay, Wales, with lighthouse, p. *5,752.*

**Burscough,** *par.* nr. Liverpool, S.W. Lancs., Eng.; remains of Priory, p. 3,000. [p. 45,100.

**Burslem,** *t.* in great pottery centre, Staffs., Eng.,

**Burton-in-Kendal,** mkt. *t.* Westmorland, Eng., p. 2,840.

**Burton-on-Trent,** *co. bor.*, mftg. *t.* in S.W. Derby and E. Staffs., Eng.; immense breweries, p. *49,485.*

**Burtscheid,** mftg. *suburb* of Aix-la-Chapelle, Prussia, produces cloth, needles, etc., and has some famous mineral springs, p. 15,250.

**Burujird,** *t.* of Persia, in prov. of Irak-Ajemi, 92 m. S.E. of Hamadan, p. 21,000.

**Burwood,** *vil.* nr. Sydney, N.S.W., also t. nr. Newcastle, N.S.W., and vil. nr. Melbourne, Victoria.

**Bury,** *co. bor.*, cotton mftg. *t.* S.E. Lancs., 10 m. from Manchester, p. *56,186.*

**Bury St. Edmunds,** *mun. bor.*, anc. *t.* in I. of Ely, W. Suffolk, cap. of East Anglia, monastic remains, p. *16,708.*

**Busaco,** *hamlet* in Biera, nr. Coimbra, Portugal; battle 1810, Wellington defeated Massena.

**Busby,** *t.* 7 m. S. of Glasgow, on White Cart R., p. 2,420.

**Busca,** *t.* Piedmont, Italy, on R. Maira, p. 9,750.

**Bushey,** *urb. dist.*, Herts, Eng., p. *11,243*

**Bushire,** or **Bander Bushar,** *port* of Persia, on the Fars coast of Persian G., the seat of the governor of the Gulf ports, p. 22,000.

**Bushmills,** mkt. *t.* co. Antrim, N. Ireland, nr. Portrush and the Giant's Causeway, p. 1,325.

**Bussa,** or **Boussa,** native *t.* in Nigeria, British W. Africa, nr. where Mungo Park lost his life in 1805.

**Busselton,** or **Vasse,** *t.* in S.W. of W. Australia, 144 m. from Perth. (Italy, p. 8,550,

**Busseto,** industrl. *t.* nr. Parma, on R. Ongina.

**Bussorah.** (*See* Basra.)

**Bustard Bay,** inlet on Coast of Queensland, Australia, with lighthouse off Bustard Head, nr. Rockhampton.

**Bustehrad,** mkt. *t.* in Bohemia, Czecho-Slovakia, in coalfield dist. (extensive Imperial brewery), p. 3,570.

**Bute,** *isl.* in F. of Clyde, Scotl.; part of the insular co. inc. Bute, Arran, the two Cumbraes (Gt. and Little), Pladda, Inchmarnock, and Holy Isle. Bute proper is 16 m. long and 3 to 5 m. broad, p. 12,800, while the entire county has a p. of *18,822.* Rothesay (*q.v.*) is the cap. of Bute Isl. and the co. t. Kyles of Bute is the name of the strait between the isl. and Argyllsh.

**Butler,** *t.* 25 m. N. Pittsburg, Pa., U.S.A. (glass mftg.), p. 23,600.

**Butt of Lewis,** promontory with lighthouse at N. end of isl. of Lewis, Hebrides, Scotl.

**Butte,** largest *c.* in Montana, U.S.A., centre of greatest copper-mining region in the world, p. 39,400.

**Buttermere,** *vil.* and picturesque L., Cumberland, Eng. The L. is 1¼ m. long, and ½ m. wide.

**Butterworth,** *pl.* adjoining Rochdale, Lancs., Eng.

**Buttevant,** mkt. *t.* co. Cork, I.F.S., on R. Awbeg, p. 2,470.

**Buturlinovka,** busy tannery *t.* Voronezh govt. Russia, nr. Bobrov, on the great highway to Saratov, p. 25,000.

**Buxar,** or **Baxar,** fortified *t.* on Ganges, nr. Benares, Bengal, India; here in 1764 British force under Hector Munro defeated native army.

**Buxton,** *mun. bor.*, *wat. pl.* in the High Peak dist. of Derbysh., Eng., p. *15,353*; alt. 1,000 ft. above sea-level. Also t. in York co., Maine, U.S.A.; also pastoral dist. in Victoria, 60 m. N.E. of Melbourne.

**Buyukdere,** or **Bujukerdere,** summer resort on Bosphorus, 10 m. N. Constantinople.

**Buzeu,** *t.* in Rumania, ch. of dist. same name, 80 m. from Bucharest. Fine old cathedral, p. 29,483. [U.S.A.

**Buzzard's Bay,** inlet of the Atlantic, S.E. of Mass.,

**Byblos,** *t.* in Nile delta, Egypt, S. of Bubastis (the modern Tel-Basta).

**Byelostock,** *t.* Grodno, Lithuania, woollen factories, p. 65,000.

**Byers Green,** *par.* nr. Bishop Auckland, Durham, Eng., p. 2,900. (1,510.

**Byfleet,** *vil.* W. Surrey, nr. Guildford, Eng., p.

**Byron C.,** the most easterly pt. of Australia, on the Pacific coast of N.S.W., a little S. of the Queensland border line.

## C

**Cabagan,** *t.* in N. extremity of Luzon, Philippine Isls., 20 m. N.W. of Ilagan, p. 12,500.

**Cabatuan,** *t.* of Panay, Philippine Isls., p. 18,500.

**Cabes,** or **Gabes,** *spt.* of Tunis, on G. of Cabes, 200 m. S. of Tunis city, p. 12,250.

**Cabeza del Buey,** smL *t.* Spain, 86 m. E.S.E. of Badajos, p. 7,750.

**Cabo Frio,** *spt.* Brazil, nr. C. Frio, p. 5,520.

**Cabot Strait,** entrance to G. of S. Lawrence between C. Breton Isl. and Newfoundland.

**Cabra,** *t.* Spain, 30 m. S.E. of Cordova, with college and other import. institutions, p. 15,150.

**Cabrera,** one of Balearic Isls. in the Mediterranean, 9 m. S. of Majorca, a penal settlement.

**Cabriel,** *R.*, Spain (130 m.) trib. of Jucar in New Castile.

**Cabul.** (*See* Kabul.)

**Cacapon,** *R.*, W. Va., U.S.A. (130 m.), falls into the Potomac.

**Caceres,** *prov.* of W. Spain, area 7,667 sq. m., pastoral and silk rearing (decaying), cap. of same name; largest bull ring in Spain, p. (of prov.) 424,478, (of city) 13,500. The anc. Castra Cæcilia.

**Cachar,** *dist.* of Assam, India; most flourishing centre of tea-growing in India.

**Cachoeira,** *t.* nr. Bahia, Brazil, gold mines, p. 4,870.

**Cadder,** *t.* co. Lanark, Scotl., 5 m. N. of Glasgow, p. *19,192.*

**Caddo,** *L.* N. Texas, U.S.A., 20 m. long.

**Cadenabbia,** on L. of Como, Lombardy, beautiful *resort*, opposite Bellaggio.

**Cader Idris,** *mtn.* Merionethsh., Wales, alt. 2,929 ft.

**Caderousse,** *t.* on R. Rhône, Vaucluse dep., France, p. 3,300.

**Cadiz,** maritime *prov.* in S. Spain, area 2,834 sq. m., p. 475,593; cap. of same name, c. on isl. of Leon; sherry, cork, fruit, salt; p. 63,101.

**Cadore,** or **Pieve di Cadore,** *t.* N. Italy, nr. Belluno, birthplace of Titian, p. 4,050.

**Caen,** *c.* cap. dep. Calvados, France, fine church and abbey, tomb of William the Conqueror; iron ore extensively exported, p. 53,743.

**Caerwrle**, *t.* in Flint, Wales, nr. Wrexham, ruined castle, p. 1,520.
**Caerleon**, *urb. dist.*, Monmouthsh., Eng., on R. Rusk, p. *2,326*.
**Caerphilly**, *urb. dist.*, Glam., S. Wales, busy coal and iron centre, p. *35,760*.
**Caesarea**, *c.* of Cappadocia, Asia Minor, the modern Kaisariyeh, p. 50,000; once the residence of the Roman govr. of Palestine, now busy trade centre.
**Caffraria.** (*See* Kaffraria.)
**Cagayan**, *prov.* of Luzon, Philippine Isls., p. 95,000.
**Cagli**, *t.* Central Italy, prov. of Pesaro and Urbino, p. 10,250.
**Cagliari**, Italian *prov.*, comprising S. half of Sardinia, area 5,179 sq. m., p. 538,270; cap. on bay at S. end of isl., fine cathedral and university; p. 61,175.
**Cagsana**, *t.* in Albay prov., Luzon, Philippine Isls., p. 20,000. (pt. 2,249 ft.
**Caha Mtns.**, I.F.S., co.'s Cork and Kerry, highest
**Cahabon**, *t.* Guatemala, nr. Coban, p. 6,350.
**Caher**, mkt. *t.* co. Tipperary, I.F.S., on R. Suir; anc. castle and abbey; p. 2,520
**Caherconree**, *mtn.* co. Kerry, I.F.S., alt. 2,796 ft.
**Cahir**, *t.* on Valentia Harbour, co. Kerry, I.F.S., p. 2,130. [opposite Ballycarbery Castle.
**Cahirsiveen**, *vil.* on R. Valencia, nr. Cahir, I.F.S.,
**Cahors**, *t.* France, cap. of dep. Lot; dyeworks, distilleries, shoes factories; p. 14,040.
**Caibarien**, sugar-shipping port of central Cuba, p. 7,670.
**Caicos**, or **Caycos**, group of W. India Isls., dependency of Jamaica, total p. 5,250.
**Caillou**, *L.* in Louisiana, U.S.A., nr. Mexican Gulf.
**Cairnaple**, *mtn.* Linlithgow, Scotl., alt. 1,498 ft.
**Cairngorm**, *mtn.*, Inverness and Banff., Scotl., alt. 4,084.
**Cairnie**, *par.* in co. Aberdeen, Scotl., nr. Huntly, p. *1,017*.
**Cairns**, *spt.*, Queensland, on Trinity Bay, 900 m. N.W. of Brisbane; sugar, gold, tin, timber, p. 3,600.
**Cairntoul**, *mtn.*, Inverness and Aberdeensh., Scotl., alt. 4,241 ft.
**Cairo**, the busy *cap.* of modern Egypt on R. bank of Nile; p. 790,939; also t. Italy, nr. Savona; also c. Ill., U.S.A., confl. of Mississippi and Ohio, extensive traffic; p. 18,400.
**Caistor**, mkt. *t.* N. Lincolnsh., nr. Brigg, Eng., p. 7,500; also village (with ruined castle) nr. Yarmouth, on Norfolk coast, p. 2,060.
**Caithness**, *co.* Scotl., most northern part of mainland herring fishery, p. *25,656*, ch. t.'s Wick and Thurso (*q.v.*).
**Caivano**, Industl. *t.* Italy, 8 m. N.E. of Naples, p. 12,250.
**Cajamarca**, *dep.* of N. Peru, area 12,538 sq. m., mining and agricul., p. 450,000.
**Calabar**, *dist.* Upper Guinea, W. Africa, Nigeria Protectorate; very unhealthy.
**Calabar, New**, *R.* (branch of Niger at Delta), falls into B. of Biafra on W. African coast.
**Calabria**, *div.* extreme S.W. Italy, mountainous and fertile, area 5,819 sq. m., p. 1,471,780.
**Calahorra**, *t.* in prov. of Logrone, on R. Ebro, Spain, cathedral; p. 9,350.
**Calais**, *spt.*, France, great embarkation point for travellers; opposite to and 21 m. distant from Dover, p. 73,001; also c. Maine, U.S.A., on St. Croix R., sawmills and shipyards.
**Calamianes**, group of *isls.* in the Philippines, between Mindoro and Palawan; p. 17,500.
**Calarasi**, *t.* of Rumania, 65 m. S.E. of Bucharest, where Garibaldi defeated Neapolitan forces in 1860, wine trade; p. 11,150. [12,250.
**Calatayud**, *t.* Spain, 55 m. S.W. Saragossa, p.
**Calbayog**, *t.* on coast of Samar, Philippine Isls.; hemp trade, p. 15,000.
**Calcutta**, *c.* former cap. of India, on R. Hoogli, 80 m. from the sea, vast trade; c. of palaces; p. (with suburbs) 1,263,290.
**Calder**, *t.* nr. Airdrie, Lanark, Scotl.
**Calder**, two sml. *R.'s* in Eng.; one in W.R. of Yorksh., which falls into the Aire; the other, in Lanc., joins the Ribble.
**Calder, West**, *t.* 16 m. S.W. Edinburgh, Scotl., p. 2,620; also E. and Mid Calder, adj. pars.
**Caldera**, *spt.* Chili, prov. of Atacama, p. 3,520; also sml. spt. in Hayti, 50 m. from Santo Domingo.
**Caldew**, *R.* (25 m.), Cumberland, Eng., affit. of R. Eden.
**Caldwell**, industl. *t.* New Jersey, U.S.A., p. 5,200; also summer resort on L. George, New York, U.S.A.
**Caldy**, *isl.* off Pembroke coast, Wales, separated from mainland by Caldy Sound; lighthouse.
**Caledon**, mkt. *t.* Tyrone, I.F.S., on the Blackwater, p. 620.
**Caledonian Canal**, from Moray Firth to Loch Linnhe, Scotl., 62¼ m. long; opened in 1882.
**Calf of Man**, sml. *isl* to S.W. Isle of Man, Eng., area 620 acres.
**Calgary**, prin. *t.* of Alberta Territory, Canada, centre of ranching country, p. 63,117.
**Cali**, *t.* Cauca State, Colombia; fine bldg., p. 76,000.
**Calicut**, *spt.* and mftg. *t.* on Malabar coast of Madras, India, p. 81,995.
**California** (155,562 sq. m., p. 4,430,000). Most important of Pacific States, U.S.A.; fertile, salubrious, and minerally wealthy; cap. Sacramento; chief pt. and largest c. San Francisco (*q.v.*).
**California, Gulf of** (700 m. long), inlet of Pacific Ocean, W. coast of Mexico, between Lower California and the mainland.
**California, Lower, or Old** (58,338 sq. m., p. 54,000), Mex. Terr. and Penn., between G. of C. and Pacific, chiefly a sterile region, but possessing some mineral wealth. La Paz is the cap.
**Calimere Pt.**, most S. point of Coromandel Coast, India. [R., p. 1,520.
**Callan**, *t.* in co. Kilkenny, I.F.S., on the King's
**Callander**, mkt. *t.* on R. Teith, Perth., Scotl., "the gate of the Highlands," tourist resort, p. *2,423*; also a stn. on the C.P. Rly., in Canada, 224 m. W. of Ottawa.
**Callao**, *prov.* and *t.*, chief spt. of Peru, 6 m. W. of Lima, p. 77,500; also an isl. of Cochin China, with small port of same name.
**Callernish**, *vil.* with Druidical circles, on W. coast isl of Lewis, Scotl.
**Callington**, *urb. dist.*, Cornwall, Eng., p. *1,801*.
**Calmar**, *spt.* Sweden, on E. coast; match and tobacco factories, busy trade, p. 17,087.
**Calne**, *mun. bor.*, Wilts., Eng., 6 m. S.E. Chippenham, on R. Marlan, p. *3,463*.
**Caloto**, gold-field dist. *t.* in Colombia, nr. Popayan, p. 4,250. (p. 4,900.
**Calstock**, *t.* in E. Cornwall, Eng., nr. Tavistock,
**Caltagirone**, *c.* in prov. of Catania, Sicily; fine cathedral and many other public bldgs., important industries, p. 44,500.
**Caltanisetta**, fort. *c.* of Sicily, nr. Girgenti, cathedral, school of mines, etc., p. 42,670, cap. of prov. same name. [Scotl.
**Calton Hill**, the height to the N.E. of Edinburgh,
**Caluire-et-Cuire**, *t.* in France, dep. Rhône, nr. Lyons; hardware factories and distilleries, p. 11,450.
**Calumet**, copper min. *t.*, Mich., U.S.A., on pen. in L. Superior, p. 5,000.
**Calumet Island**, *t.* in Quebec, on the Ottawa R.
**Calumpit**, *t.* in Bulacan, Luzon, Philippine Isls., on fertile rice-growing plain, p. 15,750.
**Calvados**, dep. N.W. France, area 2,198 sq. m., p. 384,730. Live stock and husbandry, cap. Caen.
**Calvary**, the hill outside Jerusalem, Mt. Calvary, usually pointed out as where Christ was crucified; also a vil. in Wis., U.S.A.
**Calverley**, *urb. dist.*, W.R. of Yorks, Eng., adjoining Bradford, indust., p. *3,655*.
**Calvinia**, *dist.* C. of Good Hope, mainly unproductive and mountainous; cap. Calvinia, p. *1,087*.
**Cam** or **Granta**, *R.*, trib. of Ouse, Cambridgesh., Eng., flows (40 m.) past Cambridge c.
**Camajore**, *t.* Cent. Italy, standing at the foot of the Apuan Alps, in the prov. of Lucca, walled, old ch. and triumphal arch, p. 9,300. [p. 4,950.
**Camana**, *t.* of Peru on Pacific coast, nr. Arequipa.
**Camargue**, *isl.* at mouth of R. Rhône, dep. Bouches-du-Rhône, France, area 300 sq. m.
**Camatagua**, *t.* Venezuela, state of Aragua, p. 6,250.
**Cambay Gulf**, separates Kathiawar from Bombay estuary.
**Camberwell**, S.E. *met. bor.*, London, co. Surrey, Eng.; p. *251,373*; also t. of Victoria, Australia, p. 23,344.
**Cambodia**, *prov.* of Indo-China; a French Protectorate, area 38,610 sq. m., p. 1,500,000. Contains the great Tonle-sap L., which covers in the rainy season 770 sq. m., cap. Pnom-penh on R. Mekong.

**Camborne,** *urb. dist.*, in mining dist., Cornwall, Eng., 11 m. S.W. Truro, p. *14,157*.

**Cambrai or Cambray,** *c.* in France, dep. Nord, on R. Scheldt, mftg. chicory, sugar, and cambrics; Peace of Cambray ("The Ladies' Peace") concluded here in 1529; present p. 26,570.

**Cambridge,** *co.* in S.E. Midland dist., Eng., mainly pastoral or fenny, p. *140,004*; also *mun. bor.*, *c.* cap. of co. on R. Cam, seat of great University, p. *66,803*; also c. Mass., U.S.A., 3 m. from Boston, seat of Harvard Univ., p. 114,000; also c. Ohio, U.S.A.; also t. Maryland, U.S.A.; also t. N.Z., 100 m. S.E. Auckland.

**Cambuslang,** colliery and industl. *t.*, Lanarks., Scotl., on R. Clyde, nr. Glasgow, p. *27,128*.

**Cambusnethan,** *t.* Lanarksh., Scotl., on R. Nethan, incorp. with Wishaw, p. *36,596*.

**Camden,** mftg. and residl. *c.* of New Jersey, U.S.A., on Delaware R., suburban and opposite to Philadelphia, p. 118,900; also the name of several sm. tns. in U.S.A. and Australia.

**Camden Town,** industl. and residentl. *dist.* of London, Eng., to the N.E. of Regent's Park.

**Camel,** *R.* in E. Cornwall, Eng., flows (30 m.) into the Atlantic.

**Camerino,** *c.* Cent. Italy, prov. Macerata, in Apennines; the anc. Camerinum, annexed to Papal States in 16th century. Has "free" university, p. 12,260.

**Cameron,** *c.* in Texas, on Little R., U.S.A., p. 4,575.

**Cameroons (Kameruns),** region of West Africa, between Bight of Biafra and L. Tchad, formerly German colony; it is now divided between the British and French. The British portion has an area of 31,000 sq. m., and is attached to Nigeria. The French portion is included in French Eq. Africa. Also range of mtns. close to shore, 13,000 ft. at highest point.

**Camnau,** *t.*, *isl.*, and *bay*, prov. Bahia, Brazil.

**Camoghe,** *mtn.*, Switz., canton Ticino, nr. Lago di Lugano, alt. 8,800 ft.

**Campagna di Roma,** an old Italian *prov.* extending coastwise from the Pontine Marshes to Civita Vecchia and inland to the Sabine Hills and Alban Mtns. Once well cultivated, but lapsed into a neglected and malarious state; now being reclaimed. [7,100.

**Campanha,** industl. *c.* Minas Geraes, Brazil, p.

**Campania,** *dep.* S. Italy, to N. and S. of Naples, bordering on the Mediterranean, area 6,277 sq. m., p. 3,426,754; mainly agr. and fruit growing, with many popular coast resorts.

**Campaspe,** *R.* Victoria, flowing (152 m.) into Murray R. from Dividing Range Mtns.; also sm. *L.* on R. bank.

**Campbeltown,** name of several towns and vils. in Scotl., Canada, the U.S.A., Australia, and N. Zealand. [*7,928*.

**Campbeltown,** *spt.* Kintyre, Argyllsh., Scotl., p.

**Campden,** or **Chipping Campden,** *t.* E. Gloucestersh., Eng., p. 5,620.

**Campeachy,** *state* of Mexico, bounded by Tabasco, Guatemala, Yucatan, and the G. of Mexico, hot and unhealthy, area 18,089 sq. m., p. 86,700; cap. Campeche de Baranda, one of the finest cities on the G. of Mexico; p. about 20,000.

**Camperdown,** *vil.* on dunes N. Holland, off which was fought the battle of C., 1797; also t. Victoria; also W. sub. Sydney, N.S.W.; also vil. in Natal, 47 m. from Durban, p. *1,173*.

**Campi Bisenzio,** *t.* in Tuscany, Italy, nr. Florence, fine castle, p. 14,750.

**Campinas,** *t.* Brazil, 50 m. N. Sao Paulo, p. 155,000.

**Campine,** a *dist.* in provs. Limburg and Antwerp, Belgium.

**Campli,** *t.* prov. of Teramo, Italy, 9,500.

**Campobasso,** *dep.* of Italy, among the Apennines, area 1,692 sq. m., p. 356,800; also fort. *t.* 50 m. N.E. Naples, Italy, famous for cutlery and arms, p. 15,750.

**Campobello,** two *t.'s* in Sicily; Campobello di Licata, noted for sulphur mines, is in Girgenti prov., p. 12,500; Campobello di Massara, a famous quarry town, is in Trapani prov., p. 9,700.

**Campo Mayor,** *t.* in Alemtejo, Portugal, p. 6,050; also *t.* in Piauhy, Brazil, p. 6,215.

**Campos,** *c.* in prov. Rio Janeiro, Brazil, p. 80,000; also t. Majorca, 21 m. S.E. of Parma, p. 5,150.

**Campsie Fells** (highest pt. 1,894 ft.), range of hills in co. Stirlingsh., Scotl.; also par. of Campsie adjacent, p. *5,296*.

**Canada** (3,603,910 sq. m., p. over *10,300,000*), Dominion founded in 1867, and now incl. all Brit. N. Amer. except Newfoundland and Labrador. Provs. are New Brunswick, Prince Ed. Isl., Nova Sco., Queb., Ont., Man., Brit. Col., Saskatchewan, Alberta, the North West Territories, and the Yukon Territory; cap. Ottawa, on Ottawa R. (all of which see under headings.).

**Canadian R.** (900 m.), trib. (flowing from New Mexico) of Arkansas, R., U.S.A.

**Canary Islands,** or **Canaries** (8,342 sq. m., p. 506,414), Span. group in Atlantic, 60 m. off N.W. coast Africa, Peak of Teneriffe (alt. 12,198 ft.); cap. Las Palmas (*q.v.*).

**Canberra,** or **Yass Canberra,** site of federal cap. of Australia, in N.S.W.; area 910 sq. m.

**Cancale,** *wat. pl.* St. Michael's Bay, 8 m. E. of St. Malo, N. France, p. 7,020. [on Gulf of Siam.

**Cancao,** or **Kang-Kao,** *spt.* in French Cochin China

**Candahar.** (*See* **Kandahar.**)

**Candeish.** (*See* **Khandeish.**)

**Candelaria,** *t.* on Parana R., Argentina; also spt. in Teneriffe Isl., one of the Canary group.

**Candia,** *cap.* of the isl. of Candia, or Crete, in the Mediterr., p. 24,687.

**Candon,** *t.* nr. the W. coast of Luzon, Philippine Isls., weaving, p. 17,000.

**Canea,** ftd. *spt.* N.W. Crete, prob. the anc. Cydonia; chf. p. in the isl.; p. 23,934.

**Canelones,** *dep.* of Uruguay; area 1,834 sq. m., p. 175,000; produces wine.

**Caneva,** mkt. *t.* in prov. Udine, N. Italy, p. 5,610.

**Cangas,** industrl. *t.* in Pontevedra prov., Spain, p. 9,750.

**Cangas de Onis,** *t.* in Oviedo prov., once a royal residence, historic cave of King Pelayo; ruins, etc., p. 10,300.

**Cangas de Tineo,** *t.* in Oviedo prov., Spain, industrl., W. of Cangas de Onis, good trade, p. p. 24,050.

**Canicatti,** in fruit-growing *dist.* of Girgenti, Sicily, p. 24,720.

**Canigou,** *mtn.*, France, in the Pyrénées-Orientales, nr. Perpignan; alt. 9,137 ft.

**Caniza, La,** *t.* in prov. Pontevedra, Spain, p. 8,900.

**Canna,** sm. *isl.* Hebrides, Scotl., basaltic pillars.

**Cannanore,** or **Kananore,** *spt.* and military stn. in India, dist. of Malabar, Madras Pres., p. 31,000.

**Cannes,** *spt.* in France, dep. Alpes-Maritimes, famous winter resort, 20 m. S.W. Nice, 36,150.

**Cannibal Creek,** tin-mining locality in Palmer dist. of Queensland.

**Canning,** *spt.* in King's co., Nova Scotia, p. 4,250.

**Cannock,** *urb. dist.*, min. *t.* W. Stafford, Cannock Chase dist., Eng., p. *34,588*.

**Cannstatt,** or **Canstadt,** industrl. *t.* in Wurtemberg, on R. Neckar, nr. Stuttgart, warm springs, p. 27,500.

**Canosa,** *t.* in Bari, S. Italy; the Roman Canusium, an important Apulian city, p. 25,700.

**Canouan,** *isl.* of Grenadines group, W. Indies.

**Canso,** *spt.* Nova Scotia, on Chedabucto Bay.

**Cantabrians,** *mts.* N. Spain, from Pyrenees to Cape Finisterre, highest pk. Pena Vieja, alt. 8,786 ft.

**Cantal,** mountainous *dept.* in Cent. France, area 2,229 sq. m., p. 199,402; cap. Aurillac.

**Canteleu,** *t.* in France, dep. Seine-Inférieure, nr. Rouen, p. 3,730.

**Canterbury,** *co. bor.*, *c.* of co. Kent, Eng., on R. Stour; 60 m. from London, famous cathedral founded A.D. 597 by St. Augustine; Thomas à Becket murdered here before altar in 1170; p. *24,450*; also prov. dist. in S. Isl., N.Z., area 13,858 sq. m., p. 199,034; cap. Christchurch (*q.v.*).

**Canterbury Plains,** rich grazing dist. in S. Isl., N.Z.

**Cantire,** or **Kintyre,** *peninsula* S. end of Argyllsh., Scotl., length 40 m., greatest breadth 11 m.; S. point, the Mull of Cantire.

**Canton,** ch. *c.*, treaty port, and dep. of S. China, cap. of Kwangtung prov., 90 m. N.W. Hong Kong, p. 1,367,000; very important trade centre; also name of several *t.'s* in the U.S.A., the two principal being a mftg. centre in Illinois (p. 11,800), and an industl. and agricult. t. of Ohio, 105,000 inhabts.

**Capannori,** *t.* in Lucca prov., Italy, extensive silk industry, p. 49,050.

**Cape Breton,** *isl.* E. Canada, the E. point of isl. bears the same name, area 3,120 sq. m.

**Cape Clear,** *isl.* with lighthouse off S. coast of Ireland.

**Cape Coast Castle,** *t.* Gold Coast, Brit. W. Africa, p. 11,002.
**Cape Cod,** S.E. point of Mass. Bay, U.S.A., a peninsula with several t.'s, Provincetown being the extreme point.
**Cape Colonna,** S. point of Attica, Greece.
**Cape Province.** (*See* **Union of S. Africa.**)
**Cape Comorin,** S. extremity of India.
**Cape Delgado,** Mozambique, E. Afr.
**Cape Diamond** (with citadel), Quebec.
**Cape Elizabeth,** *t.* in Cumberland co., Maine, U.S.A., p. 2,500.
**Cape Farewell,** S. point of Greenland.
**Cape Fear,** point of the N. Carolina coast of the Atlantic, U.S.A., where estuary of Cape Fear R. discharges; sml. port also.
**Cape Finisterre,** Galicia, N.W. Spain.
**Cape Haytien,** important trade *port* on N. coast, Hayti; bombarded by British 1865; estimated p. 15,000.
**Cape Horn,** S. point of America (on isl. of Fuegian
**Cape Howe,** S.E. extremity of Australia. [Arch.).
**Cape La Hague,** point of *pen.* Cotentin, France. French fleet defeated here 1692.
**Cape Leeuwin,** S.W. extremity of Australia.
**Cape of Good Hope,** original *prov.* of the Union of S. Africa; area 276,966 sq. m., p. of the Colony proper and E. Griqualand, Transkei, Tembuland, Pondoland, Bechuanaland, and Walfisch Bay, 2,564,965, of whom 651,554 were whites; also a famous headland, 1,000 ft. high, S. Afr., 30 m. S. Cape Town, disc. by Diaz in 1486, originally called "Cape of Storms."
**Cape Prince of Wales,** most W. point of America, in Behring Sea.
**Capernaum,** in time of Christ an important pl. in Palestine, on the W. shore of the L. of Gahlee, identified by many archæologists with the modern ruins of Tel Hum.
**Cape Sable Isl.,** sub. *dist.* Nova Scotia.
**Cape St. Vincent,** S.W. Portugal; Spanish fleet defeated by British, 1797.
**Cape Severo,** most N. point of Asiatic Russia.
**Cape Spartel,** Morocco coast; entrance to Strait of Gibraltar.
**Cape Spartivento,** *isl.* of Sardinia, most S. point of Italy.
**Cape Town,** famous *port* on Table B., 30 m. N. of C. of Good Hope; cap. of prov. of C. of Good Hope, and legislative cap. of the S. African Union. Comm. by rail direct with Rhodesia, Transvaal, Orange and Natal, p. (whites) *137,218.*
**Cape Trafalgar,** S.W. coast Cadiz; Nelson's famous victory, 1805. [disc. in 1443.
**Cape Verde,** most W. pt. in Africa, Senegambia.
**Cape Verde Islands,** Portug. group in Atlantic, 350 m. W. of C. Verde, 14 isls. and islets, area, 1,480 sq. m., p. 149,793; agriculture, sugar and fruit-growing; chf. t. Porto Grande.
**Capiz,** *prov.* of Panay, Philippine group, flourishing industries, p. 240,000; cap. c. of above, p. 20,000.
**Capo d'Istria,** Italian *fort. pl.* on isl. in G. of Trieste, cathedral, p. 12,250.
**Cappoquin,** *t.* on R. Blackwater, co. Waterford, I.F.S., p. 1,750.
**Capraja,** *isl.* in the Mediter., 16 m. N. Corsica, anctly. called Capraria.
**Caprera,** *isl.* off N.E. Sardinia, where Garibaldi lived.
**Capri,** romantic *isl.* and *t.* nr. Naples, favourite tourist resort, residence of Augustus and Tiberius, the anc. Capreæ; p. (t.) 3,800; (isl.) 6,650; fine wines. [3,790.
**Capryke,** *t.* in E. Flanders, Belgium, nr. Ghent, p.
**Cap St. Ignace,** *t.* on R. St. Lawrence, Quebec, Can.
**Capua,** anc. fort. *c.* 20 m. N. of Naples, founded by the Etruscans, came under Roman rule, occupied by Hannibal, re-occupied by Romans, sacked by the Saracens; modern t. 2. m. N. on site of anc. Casilinum, now famous for fireworks-making, p. 14,950.
**Caracas,** *cap.* of Venezuela, 6 m. inland from its port, La Guayra; busy *c.* electrically lighted, p. 140,000. [Chili.
**Caracoles,** *t.* in silver-mining dist. of Atacama, N.
**Caramania.** (*See* **Karamania.**)
**Carapegua,** trade *t.* of Paraguay, in cotton and tobacco growing dist., p. 15,000.
**Caraquette,** *t.* and *port* of entry, New Brunswick, Canada, p. 5,020. [p. 6,500.
**Caratal,** *t.* Venezuela, on Yurnan R., Bolivar dist.,
**Caravaca,** industrial *t.* N.W. Murcia, Spain, p. 16,800. [Milan, p. 8,770.
**Caravaggio,** *t.* in N. Italy, prov. Bergamo, nr.
**Carballo,** industrial *t.* in Corunna, Spain, p. 11,950.
**Carbondale,** *t.* in anthracite coal-mining region, Lackawanna co., Penn., U.S.A., p. 20,100.
**Carbonear,** *spt.* on Conception Bay, Newfoundland, p. 3,540. [31,000.
**Carcar,** *t.* in Cebu, Philippine Isls., sugar ind., p.
**Carcassone,** *t.* in S. of France, cap. dep. Aude; historic citadel, sacked by the Black Prince in 1355; p. 31,020; cloth manfs.
**Carcoar,** *t.* in agricul. and gold-mining dist. of N.S.W.; 150 m. W. of Sydney. [p. 28,000.
**Cardenas,** *spt.* on N. side of Cuba; sugar exports;
**Cardiff,** *spt.* and *co. bor.*, Glam., S. Wales; docks, iron, tinplate works, shipbuilding; p. *223,648.*
**Cardigan,** *mun. bor.* and *co. t.* of Cardigansh., S. Wales; p. *3,309.*
**Cardigan Bay,** large *bay* on the W. of Cardigansh., S. Wales, 70 m. extent, N. and S.
**Cardiganshire,** maritime *co.* of S. Wales, enclosed by co.'s Montgomery, Radnor, Brecknock, Carmarthen, and Pembroke, and bounded on the W. by Cardigan Bay, area 688 sq. m.; mainly agricult., mines, and quarries; p. *55,164.*
**Cardinale,** *t.* in prov. Catanzaro, Italy, p. 3,570.
**Cardington,** *vil.* in Bedfordsh., Eng., nr. Bedford t., p. 1,430.
**Cardona,** fort. *t.* in Barcelona, Spain, on R. Cardenet; rock-salt hill near by; p. 5,050.
**Cardross,** industl. *dist.* and *vil.*, Dumbartonsh., Scotl., on R. Clyde; here King Robert Bruce died; p. *11,105.* [mining dist.
**Cardwell,** *t.* Queensland, Austr., fine harbour; gold-
**Caribbean Sea,** part of Atlantic between S. and Cent. America and the Isls. of Cuba, Hayti and Porto Rico.
**Caribbee Isls.** (or **Lesser Antilles**), E. portion of W. India Isls.; divided into Windward and Leeward group.
**Cariboo,** sub-div. of Brit. Columbia, on Fraser R., p. 300,500; also point N. shore L. Huron.
**Caribou,** *t.* Maine, U.S.A.; also several other *sm.* t.'s in U.S.A., and places in Nova Scotia and Canada.
**Carimata,** group of *isls.* in the E. Indian Arch., W. of Borneo.
**Carinthia,** agr. *prov.* of Austria, p. 366,589.
**Carisbrooke,** *vil.* Isle of Wight, Eng.; King Charles I. imprisoned in castle, p. 4,020. Canada.
**Carleton Place,** indust. *t.* in co. Lanark, Ontario,
**Carlingford,** *t.* co. Louth, I.F.S., on Carlingford Bay, p. 670.
**Carlingford Lough,** *inlet* of sea between co.'s Down and Louth, Ireland.
**Carlisle,** *co. bor.*, Cumberland, Eng., on R. Eden; important railway centre, anc. castle and cathedral, p. *57,107*; also *t.* Penn., U.S.A., college, etc.
**Carloforte,** *t.* in Italy, on San Pietro Isl., Sardinia; tunny-fishery, p. 7,570.
**Carlow,** *t.* and *co.* (languishing agricult.), I.F.S., p. (of t.) 7,040, (of co.) 36,200. [p. 9,600.
**Carlowitz,** famous Hungarian wine *t.* on R. Danube,
**Carlsbad or Kaiser Karlsbad,** *wat. pl.* in Bohemia; resid. p. 15,100; visitors 50,000 annually.
**Carlscrona or Karlscrona,** chf. naval station in Sweden, on the S. coast, p. 27,555.
**Carlshamn,** fort. *t.* and *p.* S. Sweden, p. 8,650.
**Carlsruhe,** *c.* 40 m. W. Stuttgart, cap. of Baden, headqrs. of German army corps; many impt. industries, p. 135,952.
**Carlstad,** on isl. nr. N. shore, L. Wener, Sweden, ironworks and match factories, p. 19,246.
**Carlstadt,** fort. *t.* Croatia, J.-Slavia, p. 6,500; also sml. *t.* in Lower Franconia, on R. Maine, Bavaria.
**Carlton,** *urb. dist.*, 3 m. E. Nottingham, Eng. p. *22,336*; also vil. in Dufferin co., Manitoba, Can.
**Carluke,** min. *t.* in fruit-growing dist. of co. Lanark, Scotl. 19 m. from Glasgow, p. (of par.) *10,507.*
**Carmagnola,** *mftg. t.* on R. Mella, N. Italy, p. 14,150.
**Carmarthen,** *mun. bor. co.* and *bay,* S. Wales, p. of t. on R. Towy, *10,310.* Area of co. 818 sq. m., p. of co. *179,063.* Mainly pastoral land; C. B. is 18 m. across. [glass mftg., p. 11,150.
**Carmaux,** *t.* in colliery dist., Tarn dep., France,
**Carmel, Mount** (alt. 1,887 ft.), running down to prom. on coast of Palestine, nr. Acre.
**Carmen,** *t.* Bolivar state, Colombia, p. 7,850; also spt. on Campêche Bay, Mexico, p. 7,960.

**Carmignano,** *t.* in Val d'Ombronne, Italy, nr. Florence, p. 12,340; straw-plait trade.
**Carmona,** old *t.* Andalusia, Spain, 18 m. N.E. of Seville, p. 18,740; Roman necropolis, many int. archæolog. remains.
**Carnarvon,** *mun. bor.*, Menai Strait, cap. of co. of C., p. *8,469.* Also name of b. between co. of C. and Anglesey; also township at mth. of Gascoigne R., W. Australia.
**Carnarvonshire,** mtns., marit. *co.* N. Wales, area 564 sq. m., p. *120,810.* Slate and stone quarries, lead mines; highest peak Snowdon (3,571 ft.); impt. towns, Carnarvon, Bangor, Conway, and Llandudno (*q.v.*). [coast, Madras, India.
**Carnatic,** *dist.* extending 550 m. on Coromandel
**Carnegie,** iron-smelting *t.* nr. Pittsburg, Penn., U.S.A., p. 12,500.
**Carnforth,** *urb. dist.*, Lancs., Eng., p. *3,193.*
**Carniola,** former crown *prov.* Austria; 782 sq. m. and a p. of 88,605, transferred to Italy by Treaty of St. Germain; cap., Laibach.
**Carnoustie,** summer resort, co. Forfar., Scotl., on North Sea, p. 5,450.
**Carnwath,** *par.* in ironworks dist. of co. Lanark, Scotl., p. *5,258.*
**Carolina,** industrl. *t.* Spain, prov. Jaen, p. 8,050.
**Carolina, North and South,** States of the U.S.A., N. Carolina (area 52,426 sq. m.), bord. N. by Virginia, S. by Georgia and S. Carolina, E. by the Atlantic, and W. by the Alleghany Mtns., and Tennessee, cap. Raleigh, ch. port Wilmington, p. 2,559,123. S. Carolina (area 30,989 sq. m.), bord. N. by N. Car., S.W. by Georgia, and S.E. by the sea; cap. Columbia, ch. port Charleston, p. 1,683,724. Products, cotton, rice, etc.
**Caroline Isls.,** arch. in W. Pacific, 500 in number, lying between the Philippines and the Marshall Group, formerly German, now administered by Japan as mandatory.
**Caroline Isls.,** a sm. Brit. atoll in Polynesia, between the Penrhyn and Marquesas groups.
**Caroni,** *R.* (400 m.), trib. Orinoco, S. America.
**Carovigne,** *t.* in Leech prov., S. Italy, nr. Brindisi, p. 6,070.
**Carpathian Mtns.,** a range which separates Czecho-Slovakia and Hungary from Galicia, and Transylvania from Moldavia, highest point, Mt. Butschetje, Transylvania, 9,528 ft.
**Carpathian Sea,** the anc. name for a sm. part of the Ægean Sea N. of the Carpathians.
**Carpentaria, Gulf of,** large inlet on N. coast of Australia, between Wessel Isl. and Cape York.
**Carpentras,** *c.* dep. Vaucluse, France, on R. Auzon, the anc. Carpentoracte; many antiquities, p. 10,570. [ing cathedral, p. 20,250.
**Carpi,** industrl. *t.* in Modena, Cent. Italy, interest-
**Carrantuohill,** or **Carrantuel,** *min.* co. Kerry, I.F.S., nr. Killarney, loftiest in Magillicuddy Reeks and all Ireland, alt. 3,414 ft.
**Carrara,** *t.* Cent. Italy, prov. of Massa-e-Carrara, famed for its white marble, p. 43,500.
**Carrick,** *dist.* of co. Ayr, Scotl., S. of R. Down.
**Carrickfergus,** *spt.* on Belfast Lough, otherwise Carrickfergus Bay, N. Ireland, p. 4,310.
**Carrickmacross,** mkt. *t.* co. Monaghan, I.F.S., p. (of par.) 7,050.
**Carrick-on-Shannon,** co. *t.* Leitrim, I.F.S., p. 1,540. [6,025.
**Carrick-on-Suir,** mkt. *t.*, co. Tipperary, I.F.S., p.
**Carrizal-Alto,** *t.* in Atacama prov., Chili, nr. rich copper mine, p. 7,750. Carrizal Bajo is the port, 25 m. W.
**Carron,** *R.* (20 m.) co. Stirlingsh., Scotl. trib. of Forth; also vil. with famous ironworks, nr. Falkirk Scotl., p. (of vil.) 1,920.
**Carse,** term applied to three fertile districts in Scotl.—Falkirk, Gowrie, and Stirling.
**Carshalton,** *urb. dist.* in Surrey, Eng., nr. Croydon, p. *28,769.* [mining dist., p. 2,500.
**Carson City,** State *cap.* of Nevada, U.S.A., silver-
**Carstairs,** *vil.* and *ry. junc.* co. Lanark, Scotl., p. *2,289.*
**Cart,** *R.* (formed by Black and White Cart, R.'s) trib. of Clyde, co. Renfrew, Scotl.
**Cartagena,** *spt.* (cap. of dep. Bolivar) on N. coast of Colombia, S. America, p. 87,500; also strong spt. and naval arsenal in Spain, prov. of Murcia, fine wharves and harbour, celebrated cathedral, p. 102,542.
**Cartago,** *t.* in Costa Rica, nr. San José, frequently disturbed by earthquakes, p. 16,200; also *t.* in Republic of Colombia, dep. Cauca, p. 22,500.
**Cartaxo,** *t.* nr. R. Tagus, dist. Santarem, Portugal, corn and wine, p. 7,070.
**Carterton,** *t.* in north isl. of New Zealand.
**Carthage,** *c.* N.E. Tunis, with ruins of anc. Carthage, destroyed by the Romans 146 B.C.; also several towns of the same name in U.S.A., the most impt. being in mining dist. of Jasper co., Missouri, p. 9,600.
**Cartmel,** mkt. and industrl. *t.* in N. Lancashire, Eng., nr. Ulverston, p. 6,680.
**Carupano,** *spt.* in Venezuela, State of Bermudez, nr. Cumana, p. 13,250.
**Casablanca,** *t.* in Chili, prov. Valparaiso, p. 11,719; also spt. in Morocco, otherwise called Dar el Baida.
**Casale Monferrato,** old industrl. *t.* on R. Po, prov. Alessandria, N. Italy, Lombard cathedral, p. 32,000.
**Casal Maggiore,** *t.* on R. Po, prov. Cremona, Italy, p. 16,500. [earthquake, 1883, p. 3,650.
**Casamicciola,** *wat. pl.* Ischia Isl., S. Italy, terrible
**Cascade Range,** N. America, between Rocky Mtns. and Pacific coast. Extends from Mount Shasta (14,440 ft.), in California, through Brit. Columbia to Alaska. [Launceston.
**Cascade R.,** tin-mining dist. of Tasmania, nr.
**Cascina,** *t.* in Pisa prov., on R. Arno, Italy; silk and other industries, p. 25,750.
**Caserta,** *t.* 16 m. N. of Naples, cap. of C. prov., Italy; magnifct. royal palace; p. (of t.) 32,856; of prov., 817,917; wine-growing dist.
**Cashel,** *c.* in co. Tipperary, 100 m. S.W. of Dublin, I.F.S.; cathedral (ruined) on Rock of Cashel, p. 3,020.
**Cashmere** or **Kashmir** (84,432 sq. m., p. 3,322,080), trib. native state in N. India. Traversed by ranges of the Himalayas; in vale of C., rich agric. dists., also noted for textile products; cap. Srinagar.
**Casiquiare,** *R.* Venezuela, joins Orinoco to the Rio Negro, a trib. of the Amazon.
**Casoli,** *t.* in prov. Chieti, Italy, on mtn. side, p. 6,910.
**Casoria,** industrl. *t.* nr. Naples, Italy, p. 11,250.
**Caspe,** *t.* on R. Guadalupe, 80 m. E. Saragossa, Spain, p. 9,610.
**Caspian Sea,** great salt lake, 700 m. long, 270 m. wide, area nearly 170,000 sq. m., between Asia and Europe; largest inland sea in the world. Surface 85 ft. below ocean level.
**Casquets,** dang. rocks, 7 m. W. of Alderney; lighthouse.
**Cassano,** *t.* in prov. Milan, Lombardy; Prince Eugene defeated by the French, 1705; p. 8,320.
**Cassel,** *c.* on R. Fulda, cap. of Hesse-Nassau, Germany; military depot, museums, library, many impt. industries, p. 162,390; also *t.* in dep. Nord, France, p. 4,120.
**Cassino,** *t.* in Campania, Italy (formerly called San Germano), the anc. Casinum; here Mark Antony stayed at M. Terentius Varro's villa; p. 13,550.
**Castelbuono,** *t.* Sicily, nr. Palermo, mnl. springs, p. 10,750.
**Castelfidardo,** *t.* nr. Loreto, prov. Ancona, Italy; battle between Papal troops and Italians, 1860, p. 6,810.
**Castelfiorentino,** *t.* Tuscany, nr. Florence, p. 9,025.
**Castelfranco,** *tns.* in Italy; (a) in prov. Avellino, nr. Benevento, p. 2,720; (b) in prov. Bologna, p. 6,820; (c) in prov. Treviso, on rly. to Verona, fine ch. and paintings, silk industry, p. 12,010.
**Castelgandolfo,** *vil.* on L. Albano, nr. Rome, summer resort of the Pope, p. 2,120.
**Castellamare,** *wat. pl.* and dockyard *t.* on Bay of Naples, p. 35,750; also spt. on G. of C., coast of Sicily, p. 14,900.
**Castellana,** *t.* prov. Bari, S. Italy, p. 11,460.
**Castello Branco,** *c.* of Portugal, cap. of dist., same name, p. (of c.) 6,870, (of dist.) 243,000.
**Castellon de la Plana,** *prov.* Spain, on Mediterranean, part of anc. Valencia, mainly mtns.; area 2,495 sq. m., p. 315,065, cap. Castellon, p. 31,913 (port El Grao, 4 m. off on coast).
**Castelnaudary,** *t.* in dep. Aude, France, on canal Languedoc; burned by Black Prince, 1355, p. 10,490.
**Castel San Pietro,** *t.* in prov. Bologna, Italy; saline springs, p. 14,020. [p. 25,750.
**Castelvetrano,** industrl. *t.* Sicily, prov. Trapani,
**Castiglione,** industrl. *t.* Sicily, nr. Catania, p. 10,250.

**Castiglione Fiorentino**, *t.* nr. Arezzo, Italy; sericulture, p. 13,870.
**Castile**, cent. part (formerly a kingdom) of Spain; now div. into Old and New Castile.
**Castlebar**, *t.* I.F.S., cap. of co. Mayo, p. 4,020; "Race of Castlebar" battle fought here in Rebellion of 1798.
**Castleblayney**, *t.* nr. Dundalk, co. Monaghan, I.F.S., p. 1,830.
**Castle Cary**, mkt. *t.* Somerset, Eng., nr. Yeovil, p. 2,160.
**Castlecomer**, mkt. *t.* co. Kilkenny, I.F.S., p. 1,220.
**Castle Donington**, *t.* Leicestershire, Eng., nr. Ashby-de-la-Zouch, p. 6,470.
**Castle Douglas**, *t.* Kirkcudbright, Scotl., cattle fairs, p. *3,003*.
**Castleford**, *urb. dist.*, W.R. Yorks, 10 m. S.E. of Leeds in glass-bottle and colliery dist., p. *21,781*.
**Castlemaine**, gold-mining *t.* 80 m. N. Melbourne, Victoria, p. 5,330.
**Castle Peak**, *mtn.* Nevada, Californian (alt. 13,000 ft.), also mtn. in Colorado, U.S.A. (alt. 14,115 ft.).
**Castlereagh**, *t.* in Roscommon, I.F.S., on R. Suck, p. 1,220; also *t.* in N.S.W., on R. Nepean, 40 m. from Sydney.
**Castleton**, the name of several sm. *t.'s* in Eng. and U.S.A.
**Castletown**, *t.* with castle (Castle Rushen), and garrison, Isle of Man; former cap. of isl., p. 2,015.
**Castletown Bearhaven**, *spt.* co. Cork, I.F.S., on Bantry Bay, p. 1,218.
**Castres**, *t.* Tarn dep., France, on R. Agoût, former Huguenot stronghold; cathdrl., textile mftg., p. 28,520.
**Castries**, *spt.* St. Lucia Isl., Brit. W. Indies, p. 7,650.
**Castro del Rio**, industrl. *t.* Andalusia, on R. Guadjo, Spain, p. 12,300.
**Castrogiovanni**, old *t.*, fort, Sicily, mineral springs, sulphur mines; p. 26,750.
**Castro Reale**, *c.* Sicily, nr. Milazzo, p. 10,150.
**Castro Urdiales**, *spt.* N. Spain, in mining dist. of Santander prov., p. 14,670.
**Castrovillari**, *t.* fort, Calabria, S. Italy, old Norman castle; olive oil ind.; p. 10,200.
**Cat Isl.** (or Guanahani), Bahamas, W. Indies, are 340 sq. m., p. 2,510.
**Catalina**, *spt.* Newfoundland, 60 m. N.W. of St. John's.
**Catalonia**, old *prov.* N.E. Spain, between Mediterranean and Pyrenees, now divided; rich in minerals but mountainous.
**Catamarca**, *prov.* and *t.* in N.W. Argentina, farming and mining; p. (of prov.) 121,500; (of t.) 15,500.
**Catanduanes**, *isl.* (40 m. long), nr. Luzon, one of the Philippine Isls.
**Catania**, *c.* and *prov.* on E. coast Sicily. City several times rebuilt in cons. of earthquakes; at ft. of Mt. Etna, p. 217,381; area of prov. 1,907 sq. m., p. 819,950.
**Catanzaro**, *c.* S. Italy, in prov. of same name, nr. the Ionian Sea; university and good trade, p. 37,836.
**Catastrophe Cape**, S. extremity of Eyre Pen., S. Australia. [In Blue Ridge Range.
**Catawba**, *R.* (800 m.) of N. Carolina, U.S.A., rising
**Cateau, Le** (or Cateau-Cambrésis), *mftg. t.* Nord dep., France, p. 12,470.
**Caterham**, *urb. dist.*, Surrey, Eng., p. *19,503*.
**Cathay**, old name for China and Eastn. Tartary.
**Cathcart**, *t.* in co. Wellesley, N.S.W.; also large industrl. par. nr. Glasgow, Scotl., p. *63,318*.
**Catmandoo**, or **Katmandu**, *cap.* of Nepal, India, p. 30,000.
**Catoche, Cape**, N.E. pt. of Yucatan, Mex.
**Catoroe**, large industrl. upland *t.* in Central Mexico, 125 m. of San Luis, Potosi, p. 26,000.
**Catrine**, cotton mftg. *t.* in co. Ayr, Scotl., p. 3,020.
**Catskill Mtns.**, *range* in N.Y. State, U.S.A., W. of the Hudson R., part of the Appalachian system; highest pt. Slide Mt., alt. 4,205 ft.
**Cattaro**, *spt.* on Dalmatian coast, J.-Slavia, p. 6,050.
**Cattegat**, or **Kattegat**, *chan.* between Jutland and Sweden, an arm of N. Sea.
**Cauca**, *R.* of Colombia (600 m.), trib. of Magdalena.
**Cauca**, *dept.* of Colombia Republic, area 20,403 sq. m., p. 238,799; cap. Popayan.
**Caucasia**, region between the Black Sea and the Caspian, divided by Caucasus Mtns. into Northern or Cis-Caucasia, and Trans-Caucasia.
**Caucasus**, lofty *mtn.* range between Caspian and Black S.; natural boundary between Europe and Asia, highest summits Mt. Elbruz (18,526 ft.) and Kasbek (16,546 ft.). Length of system abt. 800 m., greatest width 120 m. Many lofty passes and imposing glaciers.
**Caudebec**, anc. *t.* Seine-Inf. dep., France, on the Seine, p. 2,520.
**Caudete**, *t.* in Spain, Albacete prov., p. 5,500; also *t.* Teruel prov., Spain, 6,240.
**Caudry**, *t.* Nord dep., France, lace and tulle industry, p. 10,250.
**Caulfield**, *t.* nr. Melbourne, Victoria, fine racecourse, p. 40,692.
**Cauquenes**, *t.* in Chili, cap. of Maule, prov., p. 7,500.
**Cauterets**, *vil.* dep. Hautes-Pyrénées, France, mineral springs, p. 2,470.
**Cautin**, *prov.* of S. Chili, area 6,381 sq. m., p. 382,643, cap. Temuco, p. 28,546.
**Cauvery**, *R.* in S. India (475 m.), flows into B. of Bengal.
**Cava**, or **La Cava**, *t.* in Salerno, Italy; popular summer resort, p. 16,780.
**Cavalla**, *t.*, Crete, p. 22,964.
**Cavan**, inland *co.*, I.F.S., area 746 sq. m., p. 91,100; also its co. *t.*, 72 m. S.W. Belfast, p. 3,550.
**Cavarzere**, industrl. *t.* in prov. of Venice, on R. Adige, N. Italy, p. 18,670.
**Cave City**, *t.* in Kentucky, nr. the Mammoth Cave, Barren co., U.S.A.
**Caversham**, *t.* Oxfordsh., Eng., on R. Thames, p. 9,900.
**Cavite**, ftd. *spt.* on Isle of Luzon, one of the Philippines, p. 6,100.
**Cawnpore**, *cap.* of Cawnpore dist., United Provs., India, on the Ganges; massacre of the European residents in 1857, by order of Nana Sahib; p. 213,044.
**Caxamarca.** (*See* Cajamarca.) [alt. 19,535 ft.
**Cayambe**, *mtn.*, Andes, Ecuador, on the Equator.
**Cayenne**, *spt.*, cap. of French Guiana, South America, p. 14,000.
**Caymans**, or **Alligator Isls.**; 3 sm. isls. Brit. West Indies, in Caribbean Sea, nr. Jamaica.
**Cazembo's Country**, between L. Moero and L. Bangweolo; Brit. Centl. Africa, visited by Livingstone in 1868.
**Ceará**, *prov.* on Atlantic coast of N. Brazil, cap. Fortaleza (*q.v.*), area 40,241 sq. m., p. 1,436,309.
**Cebu**, one of the Philippine Isls., 135 m. long; here Magellan landed in 1521, p. 600,000; cap. Cebu, on the E. coast, p. 46,000.
**Cedar Creek**, Virginia, U.S.A.; branch of R. Shenandoah, Sheridan's victory over the Confederates, 1864. [7,450.
**Cedar Falls**, *c.* Iowa, in U.S.A., on Cedar R., p.
**Cedar Mountain**, a hill in Culpeper co., Virginia, U.S.A. Here Stonewall Jackson defeated Banks in 1862.
**Cedar Rapids**, *c.* of Linn. co., Iowa, U.S.A., ry. centre, p. 57,000.
**Cedar** (or **Red Cedar**) **R.** (400 m.) trib. of R. Iowa, Minnesota, and Iowa, U.S.A.
**Cefalu**, *spt.* prov. of Palermo, N. Sicily; sardine fishing, p. 16,450.
**Ceglie**, *c.* prov. Leece, S. Italy, nr. Brindisi; olive oil, bldg. stone, p. 14,230. [23,062.
**Celaya**, *mftg. t.* 150 m. N.W. of capital, Mexico, p.
**Celebes** (72,070 sq. m., p. over 3 millions), one of the four great Sunda Isls. in the Dutch E. Indies; chief *t.'s* Menado and Macassar (*q.v.*).
**Celle**, mftg. *t.* on R. Aller, prov. Hanover, Prussia, former cap. of the Dukes of Brunswick-Lüneburg, p. 21,000.
**Cenis, Mont**, *mtn.* and *pass*, 6,881 ft. high, in Graian Alps, between France and Italy. Tunnel made 1857–1870.
**Cento**, industrl. *t.* in Ferrara prov. Italy, nr. Modena, p. 20,450.
**Central Africa**, Protectorate (Brit.). (*See* **Nyasaland Protectorate.**)
**Central America**, the narrow portion of the New World between Mexico and S. America, from the Isthmus of Tehuantepec to that of Panama.
**Central Asia**, usually applied to regions between 30° and 40° N. lat. and 55° and 85° E. long. Russian C.A. is the dist. between China and Afghanistan and the Caspian now consisting of various Soviets.

**Central City**, *cap.* Gilpin co., Colorado, U.S.A., p. 5,020; also *sm.* t.'s in Neb. and Ky., U.S.A.
**Central Falls**, *t.* in Rhode Isl. nr. New Providence, U.S.A., p. 26,000.
**Centralia**, *c.* of Marion co., Illinois, U.S.A., colliery dist., p. 12,600; also t. Pennsylvania, U.S.A.
**Central India Agency**, a group of about 150 states lying between the Central and United Provs., India; area 81,631 sq. m., p. 9,245,656.
**Central Provinces and Berar**, governor-generalship, India; area about 100,000 sq. m., p. 7,500,000 (half Hindus).
**Centreville**, *t.* in Appanoose, co. Iowa, U.S.A., p. 8,486; coal-mining region; also other t.'s in U.S.A., Canada, and Nova Scotia.
**Centuripe**, *t.* in Catania prov., Sicily, the anc. Centoripa, many antiquities, p. 10,370.
**Cephalonia**, mtns. *isl.*, one of the Ionian Isls., Greece, area 315 sq. m., p. 64,775; cap. Argostoli.
**Ceram**, or **Sirang**, *isl.* in Malay Arch., Dutch E. Indies, N. of Amboyna, area 6,612 sq. m., p (estimated) 105,000 (4,000 perished in earthquake of 1899). Tobacco grown.
**Ceres**, health resort on Hex R., Cape Colony, 75 m. N.E. of Capetown, p. *1,252*.
**Cerignola**, industrl. *t.* Foggia prov., Italy, Spanish victory over French 1503, p. 27,000.
**Cerigo**, most S. Ionian Isls., the ancient Cytheria; area 107 sq. m., p. 15,750.
**Cerra del Cobre**, *min.* of the Andes, in Chili, alt. 18,320 feet.
**Cerro de Pasco**, or **Pasco**, *t.* Peru, dep. Junin, with famous silver and copper mines, p. 15,750.
**Cerro Gordo**, mtn. *pass* between Vera Cruz and Jalapa, Mexico; also mining camp in Inyo co., California, U.S.A.
**Cerro Gordo de Potasi**, *min.* in Bolivia.
**Cervin.** (*See* Matterhorn.)
**Cesena**, old indust. *t.* prov. Forlì, nr. Ravenna, Italy; cathedral, antiquities, sulphur mines; p. 43,000.
**Cette**, *spt.* dep. Hérault, France; exports, brandy and wine; first-class fortress; p. 33,200.
**Cettinje**, cap. of Montenegro, Serb, Croat, and Slovene State, old palaces and monastery, p. 4,050.
**Ceuta**, Spanish *spt.* on coast of Morocco, opposite to and 16 m. from Gibraltar; the anc. Abyla; p. 23,907.
**Cévennes**, *mtns.*, France, separating basins of Rhône, Loire, and Tarn; highest pt. Mt. Mezenc, alt. 5,794 ft.; also name of former French prov. in Languedoc dist.
**Ceylon**, Brit. *isl.* in Indian ocean, S.E. of India; area 25,481 sq. m.; p. 4,497,600; princ. products, rice, tea, cocoanuts, fruits and spices, Cap. Colombo, which is the chief port.
**Chablis**, *t.* dep. Yonne, France, nr. Auxerre, famous wine country, p. 3,020.
**Chacacomani**, *mtn.* of the Andes range, Bolivia, alt. 20,235 ft.
**Chaco**, *terr.* in N. of Argentine Republic; farming, and prairie land; area 52,741 sq. m., p. 79,000; also terr., about 100,000 sq. m., between the rivs. Pilcomayo, and Paraguay, claimed by Paraguay and Bolivia.
**Chad**, *L.*, large sheet of water of N. Cent. Africa; area 50,000 sq. m., when in flood; many Isls.; lies between the wooded region of the Sudan and the steppes leading to the Sahara desert.
**Chadderton**, *urb. dist.*, cotton mftg. *t.*, Lancs, nr. Manchester, Eng., p. *27,455*.
**Chagos Arch.**, group of *isls.* in Indian Ocean, administered from Mauritius, fine harbour in Diego Garcia.
**Chagres**, *spt.* Colombia, S. America, on N. side of Isthmus of Panama, p. 1,300; also R. along line of the Panama Canal.
**Chaleurs Bay**, an inlet between N. Brunswick and Gaspé Pen., Ont., Canada.
**Chalgrove**, *vil.*, Eng., 13 m. in S.E. Oxford; battle in which Hampden was mortally wounded, 1643; Prince Rupert victorious.
**Chalkis**, or **Chalcis**, *t.* on the Euripus, 34 m. N. of Athens, Greece, the modern Negropont, p. 13,280.
**Châlon-sur-Saône**, anc. industrl. *c.*, dep. Saône-et-Loire, E. France, p. 31,500.
**Châlons-sur-Marne**, *c.* on R. Marne, N.E. France; military centre, brewery industry, p. 26,520.
**Chamba**, hill *state*, Punjab, India; area, 3,126 sq. m.; p. 141,833; chf. t. same name, p. 6,000.
**Chambal**, *R.* of Centr. India (650 m.), trib. of R. Jumna, rising in Vindhya Hills.
**Chambersburg**, *t.* in Pennsylvania, U.S.A., in the Cumberland Valley, p. 13,800.
**Chambery**, *cap.* Savoy dep., S.E. France; passed into possession of France from Sardinia in 1860; p. 21,350.
**Chambesi**, *R.* S. Cent. Africa, flows into L. Bangweolo.
**Chambon, Le**, *t.* of France, dep. Loire, ironworks, etc., p. 12,020; anc. castle of Feugerolles noteworthy.
**Chamo-to**, or **Chiamdo**, *t.* in S.E. Tibet, p. 12,000.
**Chamounix**, French *vil.* at foot of Mont Blanc, in lovely valley drained by R. Arve, p. 2,550.
**Champagne**, old *prov.* N.E. France, famous for its wines, now subdivided.
**Champaign**, *c.* of Champaign co., Ill., U.S.A., university, p. 20,750.
**Champigny**, *t.* on R. Marne, dep. Seine, France; embroidery, piano-keys, p. 6,760.
**Champlain**, *L.*, on N. frontier of N.Y. State, U.S.A., area 488 sq. m., 100 m. long, discharges by R. Richelieu into the St. Lawrence.
**Chancellorsville**, *vil.*, Virginia, U.S.A.; battle 1863, when Gen. Lee defeated Gen. Hooker.
**Chanda**, *dist.*, Central Provs., India, with teak forests and coal and iron mines; the cap. is Chanda, a walled t., with anc. temples, p. 17,000.
**Chandarnagore**, or **Chundera**, French *c.* and *terr.* on Hoogli R., India, 20 m. N. of Calcutta, p. 25,423.
**Chandausi**, *t.* United Provs., India, cotton, sugar, p. 30,500.
**Chang-chu-fu**, *c.* in Fo-kien prov., China, nr. Amoy, centre of silk trade, p. (est.) 800,000.
**Changra**, *t.* in Kastamuni vilayet, Asia Minor, once the metropolitan see of Paphlagonia, p. 13,250.
**Chang-sha**, *cap.* of Hu-nan prov., China, on the Heng Kiang, p. 52,000.
**Channel Islands**, group off N. coast, France (Jersey, Guernsey, Alderney, and Sark), area 75 sq. m., p. *93,001*; self-governing Brit. poss. Chf. t. St. Heliers, in Jersey.
**Chantabun**, *spt.* on G. of Siam, occup. by the French since 1893; rubies, and other precious stones; p. 5,109.
**Chantenay**, *t.* nr. Nantes, prov. Loire-Inf., France; p. 20,750.
**Chantilly**, *t.* with famous racecourse, in Oise dep., France, 25 m. from Paris, p. 5,020.
**Chapada Diamantina**, *t.* in Brazil, Matto Grosso prov., p. 4,500; also *t.* in Minas Geraes prov., p. 3,160; and sml. *t.* in Maranhao prov., p. 2,250.
**Chapala**, *L.*, in Mexico, chiefly in Jalisco State, area 1,300 sq. m. [Eng., p. 1,663.
**Chapel-en-le-Frith**, *t.* in the High Peak, Derbysh.,
**Chapelhall**, *dist.*, nr. Airdrie, Lanark, Scotl., p. 2,020.
**Chapelizod**, *t.* on R. Liffey, nr. Dublin, I.F.S., p. 2,015.
**Chapelle-Saint-Denis**, *t.* in France, Seine dep.; chemicals, liqueurs, etc., p. 18,470.
**Chapeltown**, *dist.* nr. Sheffield, Yorks, Eng.
**Chapra**, *t.* on R. Ganges, 30 m. above Patna, Bengal, India; centre of saltpetre and indigo trade; p. 47,500.
**Chard**, *mun. bor.*, Somerset, Eng., lace and linen collar mftg., p. *4,053*.
**Charente**, *R.*, and also brandy producing dep. in W. France; cap. Angoulême; centre of distilling trade, Cognac; area, 2,305 sq. m., p. 316,279.
**Charente-Inférieure**, *dep.* on S.W. cst. France; cap. La Rochelle, area 2,792 sq. m., p. 418,310; wine and wheat.
**Charjui**, *t.* on R. Amu (Oxus) and *stn.* on Russ. Trans-Caspian Ry., Bokhara, great raw-cotton collecting depot.
**Charleroi**, *t.* on Sambre R., Belgium, in colliery dist., p. 28,864; also mftg. *t.* of Washington co., Penn., U.S.A., p. 11,200.
**Charles**, *c.* Iowa, U.S.A., on Cedar R.; also R. in Mass. (75 m.), enters sea at Boston; also two sub-district t.'s of Quebec. [p. 3,570.
**Charlesbourg**, *t.*, cap. of Quebec co., Canada;
**Charleston**, *c.* and *spt.*, S. Carolina, U.S.A., defended by Forts Sumter and Moultrie; important position in Civil War; p. 61,750, more than half negroes; also t. W. Virginia, U.S.A., in bituminous coal dist. on Kanawha R., p. 39,608; also t. in Coles co., Illinois, U.S.A.
**Charlestown**, *t.* Mass., U.S.A., nr. Bunker's Hill; burnt by Brit. 17 June, 1775, now part of

Boston; also vil. and stn. N. frontier Natal; also vil. S. coast Cornwall, Eng.; also t., Virginia, U.S.A.; also two vils. co.'s Fife and Banff, Scotl.

**Charleville**, mkt. *t.*, co. Cork, I.F.S., p. 2,020; also t. on R. Meuse, adjoining Mézières, N.E. France, mftg., p. 20,050. [Lawrence.

**Charlevoix**, co. Quebec, Canada, abutting on R. St.

**Charlotte**, *c.* in cotton and tobacco dist., Mecklenburg co., N. Carolina, U.S.A., p. 86,500; also c. Mich., U.S.A., p. 5,350.

**Charlottenburg**, *t.* on R. Spree, suburban to Berlin; Royal castle, and many flourishing industries.

**Charlottesville**, *c.* on R. Rivanna, Virginia, U.S.A.; p. 15,500.

**Charlottetown**, *spt.*, cap. of Prince Edward Isl., Canada, p. 11,203. [Melbourne; p. 2,465.

**Charlton**, *t.* in Victoria, co. Gladstone, 178 m. W. of

**Charlton Kings**, *urb. dist.*, nr. Cheltenham, Gloucestersh., Eng., p. *4,764*.

**Charo**, *t.* at foot of Sierra Otzumatlan, Mexico, p. 7,100.

**Charonne**, *t.* dep. Seine, France, adjoining Paris on E., p. 23,450. [p. 8,750.

**Charsadda**, *t.* in Peshawur dist., Punjab, India,

**Charters Towers**, *t.* N. Queensland, gold mines, p. 17,298.

**Chartres**, *c.* France, cap. dep. Eure-et-Loir, 50 m. S.W. of Paris; finest Gothic cathedral in France; p. 22,450. [Grenoble, France.

**Chartreuse, La Grande**, famous monastery nr.

**Chatalja**, ind. sanjak., Turkey in Europe, area 733 sq. m., p. 78,000. [impt. rly. centre, p. 7,020.

**Châteaubriant**, *t.* dep. Loire-Inférieure, France,

**Châteaudun**, *t.* dep. Eure-et-Loir, France, p. 7,015.

**Château-Gonthier**, *t.* dep. Mayenne, France, p. 7,470.

**Châteauquay**, *vil.*, *R.*, and *dist.*, Quebec, Canada.

**Châteauroux**, *t.* dep. Indre, France; woollen manuf.; p. 24,020.

**Château-Thierry**, *t.* in France, on R. Marne, p. 7,545.

**Chatelet**, mftg. *t.* Hainault, Belgium, on R. Sambre, p. 12,050.

**Chatellerault**, cutlery mftg. *t.* dep. Vienne, nr. Poitiers, France, p. 20,070.

**Chatham**, *mun. bor.*, *spt.* and naval arsenal on R. Medway, Kent, Eng., p. *42,996*; also mftg. t. Ontario, Canada, p. *14,529*; also fish-exporting spt., N.B., Canada.

**Chatham Islands**, Brit. group in S. Pacific, 536 m. E. of New Zealand; largest isl., Warikaori.

**Châtillon-sur-Seine**, *t.* dep. Côte-d'Or, nr. Dijon, France, p. 5,620.

**Chat Moss**, peat bog in Lancs., Eng., nr. Manchester.

**Chatre, La**, *t.* in dep. Indre, France, p. 5,460.

**Chatsworth**, *par.* Derbysh., Eng., on R. Derwent, seat of Duke of Devonshire.

**Chattanooga**, *c.* on Tennessee R., U.S.A.; iron and steel manuf.; seat of Grant Univ., p. 125,000.

**Chatteris**, *urb. dist.*, mkt. *t.* Cambs., Eng., p. *5,153*.

**Chaudière**, *R.*, *L.*, and *falls*, above Ottawa, Quebec, Canada. [giang, prov.

**Chaudoc**, *t.* in French Cochin China, cap. of Nan-

**Chaumont**, *t.* dep. Haute-Marne, France, formerly cap. of Bassigny, p. 14,070.

**Chauny**, *t.* on R. Oise, Aisne, France, p. 10,000.

**Chautauqua**, *L.*, and *co.*, N.Y. State, U.S.A.; favourite summer resort, residential.

**Chaux-de-Fonds, La**, *t.* Switz., canton Neuchâtel, centre of watch mftg.; p. 37,708.

**Cheadle**, *t.* Staffs., Eng., coal-pits, metal manuf., p. 37,000; also Mersey-side, *urb. dist.*, Chester, Eng., p. *18,469*. [mills, p. 4,850.

**Cheboygan**, *c.* Mich., U.S.A., on L. Huron, saw-

**Cheddar**, *vil.* Mendip Hills, Somerset, Eng., famous for cheese, p. 2,020.

**Cheduba**, *isl.* in Aracan, B. of Bengal, fertile and well-wooded; area 240 sq. m., p. 25,000.

**Chefoo, or Chifu**, treaty port on N. coast, Shantung prov., China, p. 54,500.

**Chegin**, *t.* in prov. Murcia, Spain, on R. Quipar, nr. the ruined Roman t. of Begastri, p. 11,650.

**Chekiang**, maritime prov. China, area 35,700 sq. m.; exports, silk, tea, cotton, etc.; p. 13,950,000; cap. Hangchow (*q.v.*). [at Maldon.

**Chelmer**, *R.* co. Essex, Eng., joins R. Blackwater

**Chelmsford**, *mun. bor.* co. *t.* of Essex, Eng., 30 m. N.E. London; *mftg.*; p. *26,537*.

**Chelsea**, S.W. *met. bor.* of London, Eng., p. *59,026*; also c. of Suffolk co., Mass., U.S.A.; p. 46,000; rubber mftg.

**Cheltenham**, *mun. bor.* and *spa*, and educational centre, Gloucestersh., 120 m. W. of London, Eng., p. *49,385*.

**Chelyabinsk**, dist. *t.* of U.S.S.R. on Mijas R. at beginning of W. Siberian lowlands; corn and cattle trade; p. 22,000.

**Chelyuskin Cape**, most N. point of Asia.

**Chemnitz**, *t.*, the "Manchester of Saxony," 40 m. S.W. of Dresden, p. 303,775.

**Chemulpo**, *spt.* on W. coast Corea, 25 m. S.W. of Seoul, the cap.

**Chenab**, *R.* of India, in the Punjab, trib. of Sutlej, rises in the Himalayas, length 650 m.

**Chénee**, *t.* in prov. Liège, Belgium, iron-works, p. 9,575.

**Cheng-Tu-Fu**, cap. of Sze-Chuan prov., China; p. 850,000.

**Chepe**, *t.* in dep. Panama, Colombia, p. 7,500.

**Chepping Wycombe**, *mun. bor.*, Bucks, Eng., p. *27,987*.

**Chepstow**, *urb. dist.*, mkt. *t.* on R. Wye, Mon., Eng.; fine ruined castle, p. *4,303*.

**Cher**, *R.* flowing from Auvergne mtns.; also central dep., France; area 2,819 sq. m., p. 304,800; agr. and grape-growing; cap. of dep. Bourges.

**Cherasco**, *t.* in prov. Cuneo, Italy, on R. Tanaro, silk and wine industries, p. 11,300.

**Cherbourg**, strongly fort. *p.* and *naval arsenal* on N. coast France, opposite to and 80 m. dist. from Portsmouth, p. 43,250.

**Cheribon**, *spt.* on N. coast Java, p. 54,000; chf. t. of Dutch residency of W. Java, area 262,000 sq. m.; p. 1,500,000; rice and tea and coffee cultivation.

**Cheriton**, *urb. dist.*, Kent, Eng., p. *8,089*.

**Cherkasi**, *t.* nr. Kiev, U.S.S.R., imp. industries, p. 31,000.

**Chernigov**, *t.* (on R. Desna, p. 28,500) and prov. in U.S.S.R., E. of R. Dnieper, area 20,000 sq. m.; p. 2,500,000.

**Cherokee**, *t.* in Iowa, U.S.A., p. 6,500.

**Cherse**, *isl.* and *t.* in prov. of Istria, Italy, on Adriatic coast; p. (of t.), 5,200, (of isl.) 11,500.

**Chertsey**, *urb. dist.*, on R. Thames, Surrey, Eng., p. *17,136*.

**Cherwell**, *R.* (30 m.) trib. of Thames, nr. Oxford, Eng.

**Chesapeake Bay**, *inlet* on Atlantic coast, U.S.A., extending 200 m. from mouth of R. Susquehanna to C. Charles.

**Chesham**, *urb. dist.*, Bucks., Eng.; industries, boots, brushes, etc.; p. of dist., *8,809*.

**Cheshire**, *co.* of Eng., borders on R. Mersey (area 1,027 sq. m., p. *1,087,544*), textile and other manufs.; cap. Chester (*q.v.*).

**Cheshunt**, *urb. dist.*, in mkt. gardening dist. with Bishops Coll., Herts., Eng., p. *14,651*.

**Chesil Bank**, a long *bar* on S. coast of Eng., extends from Portland to Bridport.

**Chesme**, or **Tchesme**, *t.* in Asia Minor, opposite Scio Isl., p. 16,500.

**Chester**, *co. bor.*, on R. Dee, Eng., 17 m. from Liverpool; cathedral, p. *41,438*; also c. Ill., U.S.A., p. 4,000; also c. Delaware, U.S.A., cotton manuf. and ship-bldg., p. 38,537.

**Chesterfield**, *mun. bor.*, mkt. *t.* in colliery dist., Derbysh., Eng., on R. Rother, p. *64,146*.

**Chesterfield Inlet**, arm of Hudson Bay, U.S.A., 250 m. by 25 m. [Eng., on R. Wear, p. *16,639*.

**Chester-le-Street**, *urb. dist.*, mftg. *t.* co. Durham,

**Chesterton**, *par.* of Cambridgeshire, Eng., suburb of Cambridge, p. 11,600.

**Cheviot Hills**, between Scotl. and co. Northumberland, Eng., highest pt. 2,676 ft.

**Chewton**, *t.* (mining) Victoria, 75 m. N. by W. from Melbourne, formerly known as Forest Creeks.

**Cheyenne**, state *cap.* of Wyoming, U.S.A., cattle ranching dist., p. 17,750; also name of R. in Dakota and Wyoming (500 m.), trib. of Missouri.

**Chiapas**, maritime *state* of Mexico, area 27,527 sq. *m.*; p. 457,000; produces coffee, tobacco, sugar and cocoa.

**Chiaromonte**, *t.* nr. Syracuse, prov. Potenza, Italy, p. 10,250. [of the Madonna, p. 12,300.

**Chiavari**, *t.* of Liguria on the Riviera, Italy; shrine

**Chiavenna**, *t.* of Lombardy, Italy, nr. L. of Como, famous for beer, wine, and pottery, p. 5,100.

**Chicago**, *c.* on L. Michigan, Ill., U.S.A.; second c. in America; immense trade by rail and Great Lakes, flourishing university; great fire in 1871, 500 people perished and 100,000 rendered homeless; p. 3,430,000; Chicago Heights is a suburb.

**Chichester,** *mun. bor., c.* in W. Sussex, Eng., fine cathedral; p. *13,911.*
**Chickahominy,** *R.* (75 m.), Virginia, U.S.A., trib. of James R. Several battles in Civil War nr. here.
**Chickamauga Creek,** branch of the Tennessee R. above Chattanooga; desperate battles in Civil War in 1863; site of a National Park.
**Chiclana,** mftg. *t.* nr. Cadiz, Spain, p. 13,350.
**Chicopee,** *t.* Mass., U.S.A., on R. Connecticut; iron-works; p. 44,750. [Mass, U.S.A.
**Chicopee Falls,** *t.* on Chicopee R., Hampden co.;
**Chicoutimi,** *R.* in Quebec, trib. of Saguenay R.; also t. on bank of latter, cap. of Chicoutimi co., p. 5,880.
**Chiem See,** large L. in Bavaria, nr. Munich, 12 m. by 8 m., 1,500 ft. above ocean level.
**Chieng-Mai,** *t.* in N. Siam, centre of teak forest dist.
**Chieri,** *t.* nr. Turin, in Piedmont, Italy, was a mediæval republic; fine Gothic ch., p. 13,350.
**Chiese,** *R.* in Tyrol, Italy (75 m.), trib. of R. Oglio.
**Chieti,** *prov.* S. Italy on Adriatic, area 1,142 sq. m., p. 381,580; c., cap. of prov., the anc. Teate Marrucinorum, p. 26,500.
**Chignecto Bay,** *inlet* of B. of Fundy, Canada.
**Chigwell,** residential *par.* in Essex, Eng., on borders of Epping Forest.
**Chihuahua,** *state* of Mexico, adjoining the U.S.A.; area 90,036 sq. m., p. 423,387; mining, stock-raising, and agr.; cap. c., Chihuahua, on Mexican Central Rly., electrically lighted, fine cathedral, p. 40,100.
**Chikishliar,** *spt.* on E. side of Caspian Sea, in U.S.S.R., nr. Persian frontier.
**Chilambaram,** *t.* in S. Arcot dist. of Madras, India, nr. Cuddalore, p. 21,000.
**Chilas,** fort. hill *vil.* on R. Indus, 50 m. below Bunji, commanding rd. from Gilgit to Punjab frontier.
**Chilcoh,** *R.* and *L.*, nr. Mt. Evans, Brit. Columbia.
**Chilcoot,** *R.* and *pass* in Alaska, leading into Yukon Valley.
**Chili,** or **Chile;** area 289,829 sq. m., p. (est.) 4,365,000. Republic on Pacific coast of S. America, independent of Spain since 1818. Sometimes styled "the United States of S. America." Great nitrate output, and general minl. wealth, also agr.; chf. port, Valparaiso, cap. Santiago (*q.v.*).
**Chillan,** picturesque *c.* in Nuble prov., Chili; fine squares and prosperous industries, p. 30,881.
**Chillianwalla,** *vil.* Punjab, N.W. India; battle, Sikh War, 1849.
**Chilicothe,** *cap.* of Ross co., Ohio, U.S.A., on Scioto R., mftg.; p. 18,600; also t. in Livingstone co., Missouri; also *t.* on L. Peoria, Ill.
**Chillingham,** *vil.* in Northumberland, nr. Alnwick, Eng. In C. park is a herd of British wild cattle.
**Chillon,** famous dungeoned castle on L. Geneva, Switz., nr. Vevey.
**Chiloango,** *R.* N. of the Congo, W. Africa.
**Chiloé,** *isl.* on Chilian coast, length 120 m., greatest width 40 m., p. 123,043; cap. Ancud, or San Carlos.
**Chiltern Hills,** chalk range, Oxon., Herts. and Beds., Eng.; highest pt. 904 ft., nr. Wendover.
**Chimaltenango,** *t.* Guatemala, in agr. and cattle-raising dist., p. 5,500.
**Chimborazo,** *mtn.* (alt. 21,420 ft.) in Andes or Ecuador, also *prov.* Ecuador, S. of Quito and Mt. Chimborazo; area 5,544 sq. m., p. 154,000; cap. Riobamba.
**China,** republic of E. Asia, consists of 18 provs., the dependencies of Manchuria, Fengtien, Kirin and Heilungkiang, the new dominion of Sinkiang, and trib. states of Mongolia and Tibet. Total area 5,445,980 sq. m.; total p. 436,094,953. All important ports on the coast and rivers now open to foreign trade. China has great industries in agr., tea and silk cult., and many manufs. Country partly mountainous, partly fertile plains with numerous navigable rivers. The cap. is Pekin, p. 924,334.
**China Sea,** part of W. Pacific between Corea and Philippines.
**Chinandega,** *cap.* of prov. same name in Nicaragua; cotton, sugar, and banana trade, p. 10,000.
**Chinchilla,** *t.* in Albacete prov., Cent. Spain; p. 6,000.
**Chindwara,** *dist.* in Narbudda div., Centl. Provs., India; area, 4,630 sq. m., p. 408,000; chf. t., Chindwara, p. 9,500.
**Chindwin,** *R.* Burma, trib. of Irawadi rising in the Patkoi Hills and navigable in the rainy season for considerable distances. Chindwin, Upper and Lower, are two Burmese provs., with fertile plains along the R., and extensive teak forests. Rice princ. crop.
**Chingalpat,** *t.* Madras, India, p. 10,500 in prov. of the same name, area, 2,842 sq. m., p. 1,350,000. Cotton weaving and salt manufacture.
**Chingford,** *urb. dist.*, bordering on Epping Forest, Essex, Eng., p. *22,051.*
**Ching-Hai,** *spt.* China, prov. Che-Kiang, nr. Ningpo.
**Ching-Tu,** *c.* of China, cap. of Sze-Chuan, prov. on R. Min-Kian.
**Chiniot,** *t.* nr. R. Chenab, Punjab, India, p. 15,250.
**Chin-Kiang,** *treaty port* Yang-tsze-Kiang, R., 60 m. above Nanking, China, p. 477,591.
**Chinon,** industl. *t.* on R. Vienne, dep. Indre-et-Loire. Cent. France; ruined castle, once a royal residency; p. 6,520.
**Chioggia,** *spt.* and cathedral *c.* on isl. in Gulf of Venice, N. Italy, p. 25,500.
**Chippenham,** *mun. bor.*, Wilts., Eng., on R. Avon; grain and cheese trade, cloth factories; p. *8,493.*
**Chippewa Falls,** *c.* Wisconsin, U.S.A., on Chippewa R.; timber yards, p. 9,600.
**Chipping Camden,** mkt. *t.* in Gloucestershire, Eng., p. 2,020.
**Chipping Norton,** *mun. bor.*, mkt. *t.* Oxon., Eng., nr. Banbury, p. *3,489.*
**Chipping Sodbury,** mkt. *t.* Gloucester, Eng., p. 1,220.
**Chirk,** *t.* on R. Cleriog, Denbigh, Wales, p. 4,600.
**Chislehurst,** *urb. dist.*, W. Kent, Eng., 9 m. S.E. of London; Napoleon III. died here in 1873; p. *9,876.* [suburban to London.
**Chiswick,** *urb. dist.*, Middx., Eng., on R. Thames,
**Chitral,** *R., state,* and *t.* in Kashmir, extreme N.W. India. The native t. of Chitral stands on the Kashgar R. nr. the main watershed of the Hindu Kush.
**Chittagong,** *spt.* on E. side of B. of Bengal, terminus of the Assam-Bengal Ry., large trade; p. 31,000.
**Chobham,** *vil.* nr. Woking, W. Surrey, Eng., p. 3,570.
**Choctawhatchee R.,** flows through Alabama and Florida (180 m.), U.S.A., to G. of Mexico.
**Choiseul,** one of the Solomon Isls., Pacific Ocean.
**Choisy-sur-Seine,** or **Choisy-le-Roi,** *t.* 6 m. S.E. of Paris; cloth and other factories, and river trade; p. 12,520.
**Cholet,** *t.* dep. Maine-et-Loire, France; cotton and linen factories, flannel weaving; p. 16,570.
**Cholula,** ancient city of Puebla, prov. Mexico; Aztec temple, pyramid of Cholula, and other remains; p. 10,250.
**Chonos Arch.,** Chilian Isls., about 120 in number, on W. coast of Patagonia.
**Chorley,** *mun. bor.*, cotton-spinning and iron-working *t.* N. Lancsh., Eng., on R. Chor., p. *30,795*; also sm. industl. t. Cheshire, nr. Macclesfield.
**Chorleywood,** *urb. dist.*, Herts., Eng., p. *3,296.*
**Chorum,** in Angora, vilayet of Turkey (the anc. Euchaita), attacked by the Huns, A.D. 508, p. 12,750.
**Chota Nagpore,** former prov. of Bengal, India, now included in Bihar and Orissa (*q.v.*).
**Chotin** or **Khotin,** *t.* in Bessarabia, Rumania, on R. Dniester, p. 21,500.
**Christchurch,** *mun. bor., spt.* S. Hants, Eng., p. *9,183*; also cap. (p. 118,000) Canterbury prov., South Island, New Zealand; manufacturing, in agr. dist.
**Christiania** (now **Oslo**), *cap.* and chf. *port* of Norway, on Fjord of same name, p. 258,241.
**Christiansand,** *spt.* of Norway, 160 m. S.W. of Oslo, p. 16,543.
**Christiansborg,** fort. *settlement* on Gold Coast, nr. Accra, Brit. W. Africa.
**Christianstad,** fortified *t.* Sweden, 10 m. from the Baltic, p. 12,740. [Danish W. I., p. 6,000.
**Christiansted,** or **Bassin,** *t.* St. Croix Isl., cap. of
**Christiansund,** *spt.* fishery t. on W. coast of Drontheim, Norway, p. 15,183.
**Christmas Island,** sml. Brit. *isl.*, guano-producing, in Pacific; also Brit. coral *isl.* in Indian Ocean, to S.W. of Java; also *t.* in Little Bras d'Or, Cape Breton Isl.
**Chrudim,** *t.* in Bohemia, Czecho-Slov., horse-mart and many manfs., p. 13,780.
**Chubut,** *terr.* of the Argentine Repub., area 93,427 sq. m., agr. p. 42,750.

**Chudleigh**, mkt. *t.* on Teign R., Devon, p. 2,020.
**Chudleigh Cape**, on N. coast Labrador, at extrem. of Hudson Strait. (Ganges.
**Chumbul** (650 m.), *R.* Cent. India, trib. of Jumna
**Chumulari**, *mtn.* in E. Himalayas, alt. 23,944 ft.
**Chung-King**, or **Chungkeng**, treaty *port* on Yangtsze R., prov. Sze-Chuan, China, princ. commercial centre of the S.W. portion of China, p. 1,011,597.
**Chupat R.**, running to Atlantic, in Patagonia.
**Chupra**, *t.* on R. Gogra, nr. its junction with Ganges, cap. of Saran dist., Berar, India, p. 55,000.
**Chuquibamba**, *mtns.* (alt. 21,000 ft.), and *t.* nr. Arequipa, Peru, p. 6,700.
**Chuquisaca**, *dep.* of Bolivia, area 36,132 sq. m., p. 333,226; cap. Sucre.
**Chur**, *cap.* of Grisons canton, Switz., in Upper Rhine Valley, nr. Lucerne, cathedral, p. 15,600.
**Church**, *urb. dist.*, suburban to Accrington, Lancashire, Eng., factories, p. *6,185.*
**Churchill**, or **English R.** (925 m.), Canada; enters Hudson Bay at Port Churchill; fine harbour.
**Church Stretton**, *urb. dist.*, Shropshire, Eng., p. *1,705.*
**Chusan Isl.** and Arch., off E. coast, China. Chusan, the largest *isl.* of the group (p. 200,000) was occupied by the British in 1840 and 1860; cap. Tinghai.
**Cicero**, *t.*, Ill., U.S.A., p. 69,000.
**Cienfuegos**, *spt.* on S. coast, Cuba; fine land-locked harbour, impt. trade; fight here between Americans and Spanish, 1898; p. 28,700.
**Cieza**, *t.* of Murcia, Spain, in fertile raisin and orange-growing dist., p. 12,850.
**Cilicia**, anc. *prov.* of S.E. Asia Minor, cap. Tarsus.
**Cinaloa**, or **Sinaloa**, *state* of Mexico, E. of California, area 27,557 sq. m., p. 330,000, cap. Culiacan.
**Cincinnati**, *c.* on Ohio R., Hamilton co., largest in Ohio, U.S.A., "the Queen City," pork-packing and many factories, p. 456,000.
**Cinque Ports**, five anc. Eng. *ports* on coast of Kent and Sussex; Sandwich, Dover, Hythe, Romney, and Hastings.
**Cintra**, *t.* Portugal, favourite summer resort, 18 m. from Lisbon; Royal residences, convention of C., 1808; p. 6,250.
**Circassia**, *div.* of W. Caucasia.
**Circleville**, *t.* on Scioto R., Ohio, U.S.A.; furniture and iron implement factories, p. 7,049.
**Cirencester**, *urb. dist.*, Gloucestersh., Eng., the Roman Corineum; wool trade, p. *7,200.*
**Cithæron**, or **Elatea**, *mtn.* on boundary of Bœotia and Attica, Greece, alt. 4,620 ft.
**Cittadella**, *t.* of Venetia, nr. Padua, Italy; mediæval walls and towers, p. 9,850.
**Cittanova**, *t.* of Calabria, prov. Reggio, Italy; built on ruins of Casalnuovo (destroyed by earthquake in 1793); olive oil industry, p. 11,760.
**Citta Vecchia**, *c.* in Central Malta, formerly the cap., p. 22,150.
**Ciudad Bolivar**, *spt.* on Orinoco R., Venezuela, cap. of Bolivar State (formerly called Angostura), great commercial centre, p. 20,250.
**Ciudad Real**, *prov.* of S. Central Spain (area 7,620 sq. m., p. 433, 056), grazing grounds, forest, and quicksilver mines; cap. Ciudad Real; cattle fairs, p. 15,750.
**Ciudad Rodrigo**, fort. *c.* in Salamanca prov., Spain, captured by French in 1707 and 1710, by the Eng. in 1706, and stormed again by Wellington in 1812. Fine cathedral, p. 8,160.
**Ciudadela**, on W. coast Minorca, Spain; cathedral, p. 9,300.
**Civita Vecchia**, *spt.* N. Italy, prov. Rome, the anc. Portus Trajani, destroyed by Saracens 9th cent., p. 15,820. (p. 8,260.
**Civitella del Tronto**, fort. *t.* Italy, nr. Teramo,
**Clackmannan**, smallest *co.* in Scotl., N. of the Forth and S. of Perth, p. *31,947*; co. *t.*, Clackmannan, on R. Black Devon, at its conflu. with the Forth, p. *2,535.* (Eng., residential p. *15,351.*
**Clacton-on-Sea**, *urb. dist.*, *wat. pl.* on Essex coast.
**Clairvaux**, *vil.* dep. Aube, France, famous Cistercian Abbey; also vil. nr. St. Paul's Bay, in Quebec.
**Clanwilliam**, *div.* of C. of Good Hope, watered by Oliphant's R., p. 5,705 (white); also t. in Minnedosa co., Manitoba, Canada.
**Clapham**, S.W. *dist.* of London, Eng.
**Clare**, a *co.* in prov. of Munster, I.F.S., area 1,294 sq. m., p. 112,000, co. *t.*, Ennis; also smi. *t.* 2 m. from Ennis; also isl. in Clew Bay. W. Ireland; also t. W. Suffolk, Eng.; also t. S. Australia, on Hutt R.
**Clarence**, *R.*, N.S.W. (240 m.), enters Shoal Bay, also large pastoral dist. in N.E. of the Colony.
**Clarendon**, sm. *t.* nr. Adelaide, S. Australia; also sm. t. Victoria, 83 m. from Melbourne (sometimes called Corduroy); also sm. t. in Eurongilly goldfields dist. of N.S.W.
**Clarke Mt.**, highest peak of Australian Alps, N.S.W., alt. 7,256 ft.
**Clarke's R.** (or **Flathead R.**), fork (700 m.) of the Columbia R., running from Rocky Mtns., through Idaho and Washington, U.S.A.
**Clarksville**, *t.* on Cumberland R., Tennessee, U.S.A., great tobacco mart., p. 9,350.
**Clausthal**, *t.* in Harz Mtns., Hanover; silver mines, p. 9,150. (iron centre; p. *8,493.*
**Clay Cross**, *urb. dist.*, Derbysh., Eng. coal and
**Clayton**, *urb. dist.*, W.R. Yorks, Eng., suburban to Bradford, p. 5,040; also sml. t. nr. Manchester.
**Clayton-le-Moors**, *urb. dist.*, cotton manufg. *t.* Lancsh., Eng., nr. Blackburn, p. *7,910.*
**Clayton West**, *urb. dist.*, in colliery dist., nr. Barnsley, W.R. Yorks, Eng., p. *1,846.*
**Clear, Cape** (the southernmost *pt.* of Ireland), on isl. off S.W. coast, with lighthouse.
**Cleator Moor**, *urb. dist.*, colliery *t.* Cumberland, Eng., on R. Eden; p. *6,582.*
**Cleckheaton**, mftg. *t.* nr. Bradford, Yorksh., Eng; woollens, blankets, etc.; p. 13,100.
**Clee Hills** (1,800 ft.), Shropshire, Eng.
**Cleethorpe with Thrunscoe**, *urb. dist.*, Lincs, Eng., p. *28,624.*
**Clerkenwell**, industrl. *dist.* of London immediately N. of the city.
**Clermont**, pastoral *dist.* (with bark forests) in Queensland, 570 m. N.E. of Brisbane.
**Clermont-Ferrand**, *t.* in dep. Puy-de-Dôme, France; first crusade preached here; fine Gothic cathedral; formerly cap. of Auvergne; rubber industry, p. 82,577.
**Clevedon**, *urb. dist.*, *wat. pl.* at mouth of R. Severn, Somerset, Eng.; p. *7,033.*
**Cleveland**, hilly ironstone and agr. *dist.* in N.R. Yorks, Eng., between R. Tees and Whitby; fine horses. Also *c.* and port. of entry, Ohio, U.S.A., on Lake Erie; great railway, steamboat, manuf., and educatl. centre, p. 910,000.
**Cleves**, *wat. pl.* in Rhine prov. of Pruss.; old palace, many manufs., p. 15,250.
**Clew Bay** (10 m. by 7 m.), on coast of Mayo, Ireland.
**Clewer**, *par.* of Berks co., Eng., part of bor. of Windsor, p. 6,040. [tories.
**Clichy**, N.W. *suburb* of Paris; oil and starch fac-
**Clifton**, fashionable *suburb* of Bristol, Eng., on R. Avon, hot mineral springs, p. 24,450; also port on Magara R., Ont., Canada; also name of numerous other places in Britain, the Colonies, and U.S.A.
**Clinton**, *cap.* (p. 25,900) of Clinton co., Iowa, U.S.A.; also t. on Nashua R., Worcester co., Mass., U.S.A.; also t. in Henry co., Missouri, U.S.A.; also several other places same name in the U.S.A. and the British colonies.
**Clitheroe**, *mun. bor.*, cotton mftg. *t.* on R. Dibble, Lancash., Eng., p. *12,008.*
**Clogher**, *t.* co. Tyrone, N. Ireland, cathedral.
**Clonakilty**, *spt.* nr. Bandon, co. Cork, I.F.S., p. 3,750.
**Cloncurry**, *t.* in Queensland, on Cloncurry R., in gold mining and mountainous dist. S. of the G. of Carpentaria, p. 3,150.
**Clones**, mkt. *t.* nr. Dundalk, co. Monaghan, I.F.S., p. 2,220.
**Clonfert**, *c.* co. Galway, I.F.S., formerly a Bishop's see, famous monastery with seven altars; p. (par.), 5,125.
**Clonmel**, *t.* on Suir R. in Munster prov., I.F.S.; agr. centre, frequent fairs, p. 10,300.
**Clontarf**, *wat. pl.* nr. Dublin, I.F.S., on the Bay, p. 5,020.
**Cloudy Bay**, inlet on N. coast of South Isl., New Zealand.
**Clovelly**, picturesque fish. *vil.* in Barnstaple Bay, N. Devon, nr. Ilfracombe, p. 650. [p. 1,230.
**Cloyne**, mkt. *t.* nr. Middleton, co. Cork, I.F.S.,
**Clunes**, gold-mining *t.*, Victoria, nr. Ballarat, p. 1,226.
**Cluny**, or **Clugny**, *t.* in Saône-et-Loire dep., nr. Macon, France; famous Benedictine abbey, p. 4,330.
**Clwyd**, *R.* in co. Denbigh, N. Wales (30 m.), flows into the Irish Sea at Rhyl, through romantic vale.

**Clyde, R.** (96 m.) and *firth*, forms four falls nr. Lanark, S.W. Scotland. On the Clyde stands Glasgow, the chief port and commercial centre of Scotland.

**Clydebank**, *t.* on the Clyde, 5 m. below Glasgow, Scotl. Shipbuilding and sewing machine factory, p. 46,515.

**Clydesdale**, *vall.* of R. Clyde, S.W. Scotl., agr., fine horses. Also *vil.* nr. Holytown Junction, N. Lanark; also *t.* in mining dist., Victoria, 88 m. from Melbourne.

**Coahuila**, *state*, Mexico, area 63,786 sq. m., p. 376,747; agr. and stock raising; cap. Saltillo (*q.v.*).

**Coalbrookdale**, *vil.* with coal and iron mines, on R. Severn, Shropsh., Eng., p. 2,420.

**Coalisland**, *vil.* nr. Stewartstown, in colliery dist., co. Tyrone, Irel.

**Coalville**, *urb. dist.*, Leicestersh., Eng., nr. Ashby-de-la-Zouch, p. *21,886*.

**Coanza**, *R.* in Lower Guinea, Portug. W. Africa (600 m.); enters Atlantic S. of São Paulo.

**Coatbridge**, colliery and iron mftg. *t.* Lanarksh., Scotl.; p. *43,056*.

**Coban**, *t.* Guatemala, Cent. America; coffee and Peruvian bark trade, p. 30,000.

**Coblenz**, or **Coblentz**, *c.* strongly fortified at junction of Moselle and Rhine, Germany; wine trade and piano factories, p. 56,676.

**Cobourg**, *port* on L. Ontario, Canada, cap. of Northumberland co.; car works, etc., p. *5,256*.

**Coburg**, *c.* and *duchy* (part of Saxe-Coburg-Gotha), Germany, old castle, flourishing industries, p. 23,413; also *t.* and convict prison at Merri Creek, nr. Melbourne, Victoria, p. 18,112.

**Cocanada**, *spt.* Godavari dist. Madras, India; rice-cleaning mills, flourishing trade, p. 49,250.

**Cochabamba**, *dep.* Bolivia, area 25,288 sq. m., p. 534,900; cap. t. of same name, p. 35,750 (also called Oropesa), fine cathedral.

**Cochin**, *spt.* on Malabar coast, Madras, p. 19,500; also native State S. India, feudatory to Madras, area 1,362 sq. m., p. 979,019; principal products, rice, cocoanuts, pepper, coffee, etc.

**Cochin China** (22,000 sq. m., p. 3,500,000), name formerly applied to the whole E. part of Indo-China, but now limited to French col. in the S.E. of the pen.; rice, silk, coffee, etc.; cap. Saigon.

**Cockenzie**, *spt.* in co. Haddington, Scotl., nr. Prestonpans on Firth of Forth, p. 2,420.

**Cockermouth**, *urb. dist.*, *t.* on R. Derwent, Cumberland, Eng., ironworks, p. *4,789*.

**Cockpen**, colliery *vil.* Midlothian, Scotl., p. *6,161*.

**Cocos Islands.** (*See* **Keeling.**)

**Coggeshall**, *t.* Essex, Eng., on R. Blackwater, p. 5,820.

**Coghills Creek**, *t.* in Talbot co., Victoria, 114 m. W.N.W. of Melbourne.

**Cognac**, *t.* dep. Charente, France, on R. Charente, centre for famous brandy dist., p. 19,420.

**Cohoes**, *c.* of Albany co., N.Y. State, U.S.A., on Hudson R.; hosiery manuf.; p. 23,250.

**Coimbatore**, *t.*, Madras, India, p. 47,007.

**Coimbra**, *c.* cap. of Beira prov., Portugal; wine-growing, earthenware manuf.; p. 20,581.

**Colac**, *t.* on L. C., in Victoria, nr. Melbourne; fertile dist., p. 12,108.

**Colchagua**, *prov.* Chili, S. America, area 3,851 sq. m., p. 285,757; stock-raising; cap. San Fernando.

**Colchester**, *mun. bor.*, *spt.* Essex, Eng., on R. Colne, oyster fisheries, p. *48,607*; also *t.* on L. Champlain, Vermont, U.S.A., p. 5,550.

**Cold Harbour**, *vil.* of Hanover co., Virginia, U.S.A.; battles between Grant and Lee, 1864. (*1,922*.

**Coldstream**, *t.* Berwicksh., Scotl., on R. Tweed, p.

**Coleberg**, fort. *spt.* in Prussia, prov. Pomerania, on R. Persante, p. 18,250.

**Coleford**, *urb. dist.*, Forest of Dean, Gloucester, Eng., p. *2,777*. [15, 1899, p. *425*.

**Colenso**, *vil.* on Tugela R., Natal, great battle, Dec.

**Coleraine**, *spt.* on Bann R., N. Ireland, p. 7,020.

**Colesberg**, *t.* in stock-raising dist., N. of C. Colony, nr. Orange R., p. *1,050*. [Birmingham, p. 2,770.

**Coleshill**, mkt. *t.* Warwicksh., Eng., 10 m. N.E.

**Colima**, *c.*, state and vol. on Pacific coast, Mexico; *c.* on Colima R., in fertile valley, p. 31,000; *state* area 2,273 sq. m., p. 80,500; agr. and stock-raising; vol. (80 m. N.E. of *c.*) alt. 12,685 ft.

**Colle di Val d'Elsa**, *t.* in prov. Siena, Tuscany, Italy; ironworks, p. 6,060.

**Collingwood**, *t.* Simcoe co., Ont., Canada, on L. Huron, dry dock, etc., p. *5,557*; also a populous *suburb* of Melbourne, Victoria, p. 34,248.

**Collumpton**, *t.* nr. Exeter Devon, Eng.; paper mills; p. 3,520.

**Colmar**, *t.* cap. Up. Alsace, France; textile industries, wine-growing; p. 37,500. [5,050.

**Colmenar**, *t.* nr. Malaga, Spain; sm. manuf., p.

**Colmonell**, pic. *vil.* in Ayrsh., Scotl., on R. Stinchar, p. *1,713*.

**Colnbrook**, *vil.* Bucks, Eng., nr. Wraysbury, p. 1,540.

**Colne**, *mun. bor.* mftg. *t.* E. Lancs, Eng., p. *23,790*; also name of R.'s in Essex, Herts, Yorks, and Gloucestersh.

**Cologna**, mftg. *t.* Italy, 19 m. from Verona, p. 8,150.

**Cologne**, *c.* and *spt.* strongly fort., on R. Rhine, cap. Rhen. Prussia, magnificent cathedral with spires 515 ft. in height, p. 633,904. Import trade and industries.

**Colombes**, *vil.* and residential *dist.* dep. Seine, France, nr. Paris, p. 10,120.

**Colombia** (440,846 sq. m., p. 7,950,000), *Republic* of S. America, great mineral wealth; cap. Bogota (*q.v.*).

**Colombo**, *cap.* and chief *port* of Ceylon; great trade in tea, p. 244,100.

**Colonia**, dep. on the R. L. Plata, Uruguay, area 2,193 sq. m., p. 107,000.

**Colonna**, Cape, most S. pt. of Attica, Greece.

**Colonsay**, *isl.* of the Inner Hebrides, Scotl., 8 m. long, ecclesiastical antiquities, p. *238*.

**Colorado**, *R.*, formed by union of Grand and Green Rs. (2,000 m. long, navigable for 600 m.) in W. of N. America, with wond. cañon, ent. G. of California; also *R.* (900 m.) in Texas, U.S.A., flows to G. of Mexico.

**Colorado**, (103,658 sq. m., p. 1,080,000), rich mining *state*, Rocky Mtn. region, U.S.A.; cap. Denver (*q.v.*).

**Colorado Springs**, *wat. pl.*, Col., U.S.A., on Fontaine qui Bouille R., 64 m. S. Denver; p. 33,500.

**Coltness**, *par.* in N. Lanark, Scotl., ironworks, p. 3,520.

**Columbia**, *cap.* of S. Carolina, U.S.A., burned 1865, p. 51,500; also mftg. *t.* Penns., U.S.A., p. 11,400; also *c.* in Missouri, seat of State University, p. 15,100; also *R.* (1,400 m.) on Pac. slope of N. America, sometimes called the Oregon, rising in the Rockies.

**Columbia, British.** (*See* **British Columbia.**)

**Columbia, District of** (60 sq. m.), on left bank of Potomac R., contains Washington, the federal cap. of U.S.A.

**Columbus**, state *cap.* of Ohio, U.S.A., mftg. and rly. centre, p. 206,000; also name of smaller *t.*'s in Ga., Ind., Miss., and Tex., U.S.A.

**Colwyn Bay and Colwyn**, *urb. dist. wat. pl.* on Denbigh coast, N. Wales, p. *20,855*.

**Comacchio**, *c.* 20 m. N. Ravenna, nr. the Adriatic, Italy, p. 9,770.

**Comayagua**, *cap.* Honduras Republic, C. America, formerly called Valladolid, p. 8,000.

**Combaconum**, *c.* in delta of Cauvery R., Tanjore dist., Madras, India, p. 60,000.

**Comines**, *t.* partly on French and partly on Belgian side of R. Lys; p. of French *t.* (in dep. Nord), 7,020; of Belgian t. (in E. Flanders), 4,770.

**Comiso**, *t.* in Syracuse prov., Sicily, fine medicinal spring, the fabled "Bath of Diana," porcelain manufacty.; p. 26,000. [Moulins, p. 12,040.

**Commentrey**, min. *t.*, Allier dep., France, nr.

**Como**, *c.* (p. 46,216), silk industry, at foot of the Alps, N. Italy; also beautiful L. (35 m. long), both in the prov. of Como, area 1,105 sq. m., p. 637,863.

**Comorin, Cape**, most S. pt. of India.

**Comoro Isls.**, French group between N. Madagascar and African cst.; total area 760 sq. m., p. 84,120.

**Compassberg**, *min.* in Cape Colony, Graaf Reinet dist., alt. 8,500 ft.

**Compiègne**, *t.* dep. Oise, on R. Oise, France; famous castle; sugar mills, hosiery manuf., etc., p. 17,120.

**Compstall**, *urb. dist.*, Cheshire, Eng., p. *865*.

**Compton**, name of numerous *pars.* in Britain; also a dist. on Coaticook R., Quebec, Canada.

**Concarneau**, *t.* dep. Finisterre, France, on *isl.* nr. Quimper; salted fish and preserve trade, p. 5,520.

**Concepcion**, *c.* (p. 70,120) and *prov.* (3,318 sq. m., p. 326,711) of Chili; also *t.* Bolivia, p. 2,400; also *t.* in Paraguay, p. 26,000; also *t.* in Hayti,

and a t. on Uruguay R., Entre Rios prov., Argentina, p. 15,750. [land, N.W. of St. John's.
**Conception Bay,** *inlet* on E. coast of Newfound-
**Conception, Cape,** on coast of California.
**Concord,** *t.* Mass., U.S.A., literary centre, p. 7,500; also t., p. 22 157, on Merrimac R., cap. of New Hampshire, U.S.A.; also t. on Rocky R., N. Carolina, U.S.A., p. 12,000.
**Concordia,** *c.* Kansas, U.S.A., on Republican R., p. 5,900; also t. in Italy, prov. Modena, p. 10,150; also t. on R. Uruguay, Argentina, p. 35,000.
**Condamine,** *R.* in E. Australia, trib. of Darling R.
**Condé,** *t.* dep. Nord, France, on R. Scheldt, nr. Valenciennes, p. 5,020; also t. nr. Caen, in Normandy; also spt. N.E. Bahia, Brazil.
**Condom,** *t.* in France, nr. Auch, dep. Gers, p. 9,020.
**Conegliano,** *t.* N.E. Italy, nr. Treviso, p. 9,570.
**Coney Island,** pop. *wat. pl.* on Long Isl., N.Y., U.S.A., 5 m. long, a mile wide; comprises Manhattan Beach, Brighton Beach, West Brighton, and West End.
**Congleton,** *mun. bor.*, E. Cheshire, Eng., manuf. silks, ribbons, etc., p. *12,885*.
**Congo,** greatest R. (estimated length 3,000 m.) in Africa, with its numerous tribs.); drains 1,500,000 sq. m., navigable from sea to Matioli, and above the Rapids and Falls; estuary, 7 to 10 m. wide.
**Congo, Portuguese.** (*See* Port. W. Africa.)
**Congo Free State.** (*See* Belgian Congo.)
**Congo, French.** (*See* French Eq. Africa.)
**Conisborough,** *urb. dist.*, W.R. Yorks, Eng., p. *18,179*.
**Coniston Old Man,** *mtn.* at head of L. Coniston, in the Eng. Lake Dist., alt. 2,575 ft.
**Coniston Water,** *L.* N. Lancashire, Eng., 6 m. S.W. of Ambleside, length 5¼ m.
**Conjevaram,** or **Kanchiverum,** *c.* Madras, the "Holy City" of S. India; p. 53,864.
**Con, Lough,** co. Mayo, I.F.S.
**Connah's Quay** *urb. dist.*, Flint, Wales, p. *5,982*.
**Connaught,** *prov.*, I.F.S. (6,863 sq. m., p. 648,000), embracing co's Galway, Mayo, Sligo, Leitrim, and Roscommon; was a distinct kingdom till the reign of Henry I. of England.
**Connecticut** (4,820 sq. m., p. 1,640,000), most S. of the six New Eng. States, U.S.A.; copper and brass mills, textile and other factories, cotton, silk, and agr. Hartford, on R. Connecticut, is the cap., New Haven the largest c.
**Connecticut,** *R.* (450 m.), flows S. between Vermont and New Hampsh. through Mass. and Conn. to Long Isl. Sound, U.S.A.
**Connemara,** mtns. *dist.* W. of I.F.S., in co. Galway, many lakes and bogs.
**Consett,** *urb. dist.*, on *R.* Derwent, co. Durham, Eng.; colliery and ironworks dist., p. *12,251*.
**Constance,** old *c.* Baden, Germany, on Rhine, where it leaves Lake C., p. 22,250.
**Constance, L.,** or "the Swabian Sea," between Switz. and Germ., 45 m. long, 9 m. broad, area 207 sq. m.; R. Rhine flows through.
**Constanta,** or **Kustendji,** *spt.* of Rumania, on the Black Sea, the anc. Tomi; fav. wat. pl.; p. 27,662.
**Constantina,** *t.* Andalusia, N. of Seville prov., mainly agr., p. 11,300.
**Constantine,** *c.* and *cap.* of E. Algeria, standing 2,130 ft. high on a rock; thriving trade and industries, p. 78,220; Philippeville is its port.
**Constantinople,** now **Istambul,** Turkey, chief seapt.; former cap. S. entrance of the Bosphorus. Turkish t. (Stamboul) and Christian subs. (Galata and Pera) sep. by the "Golden Horn." The anc. Byzantium. Magnif. mosque of St. Sophia; p. about 1,000,000.
**Constantinov,** *t.* in Ukraine, govt. Volhynia, nr. Zhitomir; p. 11,500. [13,350.
**Conversano,** industrl. *c.* S. Italy, prov. Bari; p.
**Conway,** or **Aberconway,** *mun. bor. spt.* Carnarvonshire, N. Wales; wat. pl. (p. *3,769*) at mouth of R. Conway, nr. Great Orme's Head.
**Cooch Behar,** native *state*, Bengal, India, nr. Darjeeling; area, 1,307 sq. m., p. 592,372; cap. Cooch Behar, on R. Torsha, p. 10,500; suffered severely from earthquake in 1897.
**Cook,** *mtn.* (12,350 ft.) highest point in S. Alps, nr. Canterbury, New Zealand. [12,150.
**Cookham,** *par.* nr. Maidenhead, Berks., Eng., p.
**Cook Inlet,** *G.* (200 m. long) on S. coast of Alaska
**Cook Isls.,** or **Hervey Arch.,** Brit. group (Raratonga, etc.) in S. Pacific, 700 m. S.E. of Samoa.
**Cook's Peak,** *mtn.* (8,330 ft.) in Grant co., New Mexico; nr. Deming.
**Cook Strait,** *chan.* between N. and S. islands, of N.Z.; 15 to 18 m. wide.
**Cookstown,** mkt. *t.* co. Tyrone, N. Ireland, p. 3,970.
**Cooktown,** *spt.* in N. Queensland, at mouth of Endeavour R., pearl fishery and mining dist., p. 3,250.
**Coolgardie,** gold-mining *t.*, W. Australia, p. 5,500.
**Coolin Mts.,** in Isl. of Skye, Scotl., highest peak, 3,183 ft.
**Coomassie (Kumasi),** *cap.* of Ashanti, Africa, 124 m. N.W. of Cape Coast Castle, now Brit. terr., p. 20,000.
**Coonoor,** *sanatorium* (6,000 ft. above sea-level) in Nilgiri Hills, S. India.
**Cooper's Creek,** or **Barcoo,** an inland *R.* of Queensland and S. Australia, in copper-mining dist.
**Coorg,** *prov.* S. India, subordinate to the Govr.-Genl. through the Resident of Mysore, lying on the Western Ghats; area 1,583 sq. m., forest and coffee plantations, p. 164,459.
**Coorong, The,** a lagoon and long tongue of land on coast of S. Australia.
**Coosa,** *R.* (350 m.) in Georgia and Alabama, U.S.A.
**Coos Bay,** on the coast of Oregon, U.S.A.
**Cootehill,** mkt. *t.* co. Cavan, I.F.S., Bellamont forest, p. 2,020.
**Copeland Isls.,** group off N.W. coast of co. Down, N. Ireland, at entrance to Belfast Lough.
**Copenhagen,** ch. *port* and *cap.* of Denmark on E. coast of Zeeland Is., strongly fortified; p. (without suburbs) 561,344.
**Copiapo,** *spt.* (p. 9,985) and *R.* in prov. Atacama, Chili, several times overwhelmed by earthquakes; also volcano in Andes range, alt. 17,000 ft.
**Coppermine,** *R.* in N.W. Terr., Canada (300 m.), flows N. into Arctic Ocean.
**Copper R.,** or **Atna R.,** in Alaska, flowing to Pacific W. of Mount St. Elias.
**Coquet,** *R.* (40 m.) and *isl.* Northumberland, Eng., nr. Warkworth.
**Coquimbo,** *spt.* (p. 15,100) and *prov.* of Chili on the Argentine border, copper-mining dist.; area of prov. 14,098 sq. m., p. 196,415.
**Coral Sea,** part of the Pacific Ocean, extending from the New Hebrides to Australia.
**Corato,** *c.* prov. Bari, S. Italy, olive and wine production, p. 43,500.
**Corazon,** *mtn.* in the Andes of Ecuador, alt. 15,871 ft.
**Corbeil,** industrl. *t.*, dep. Seine-et-Oise, France, on R. Seine, p. 7,520.
**Corbie,** *t.* nr. Amiens, dep. Somme, France, p. 5,030.
**Corbridge,** *t.* on the Tyne, nr. Hexham, p. 2,120.
**Cordillera,** Spanish name of *mtn.* chain, frequently applied to the Andes.
**Cordoba,** *c.* (p. 175,000) and agr. *prov.* (area, 66,912 sq. m., p. 1,001,750), Argentina; also t. State of Vera Cruz, Mexico, p. 6,500.
**Cordova,** *prov.* in Andalusia, Spain (5,299 sq. m., p. 539,125), agr., olives, vines, live-stock; also c. cap. of prov. on R. Guadalquivir; cathedral, formerly one of the most sacred mosques of the Mohammedans, leather and other factories, p. 66,492.
**Corea, Korea,** or **Chōsen,** *pen.* E. Asia, extending between Yellow Sea and Sea of Japan; formerly tributary to China, now part of the Japanese Empire, area 84,738 sq. m., p. 17,284,207.
**Corella,** *t.* Navarre, Spain; liquorice, oil mills, distilleries, p. 6,020. [and Dutch Guiana.
**Corentyn,** *R.* (400 m.) in America, separating Brit.
**Corfe Castle,** *t.* Dorsetsh., Eng., nr. Wareham, p. 1,890.
**Corfu,** the largest and most N. of Ionian Isls., Greece, area 274 sq. m., p. 123,371, mountainous, olives, wine; also Corfu, spt. t. the cap., p. 27,084.
**Corigliano,** industrl. *t.* prov. Cosenza, S. Italy, p. 14,750.
**Corinaldo,** *t.* in the Marches, nr. Ancona, Italy, p. 6,200.
**Coringa,** *port* at mouth of Godavari R., Madras, India, p. 6,300.
**Corinth,** *c.* Greece, in Isth. of Corinth, across which a ship canal has been cut, p. 4,700. Occupies a site 3 m. distant from the anc. classic city, destroyed by an earthquake in 1858.
**Corinth, Isthmus of,** divides the Saronic G. from the G. of Corinth, Greece. [the Republic, p. 2,500.
**Corinto,** *t.* in Nicaragua, on the Pacific, chf. port of

**Cork,** *co.*, I.F.S., largest and most S., area 2,890 sq. m.; p. 340,000, agr., fisheries; cap. Cork, c. on the R. Lee, p. 77,000. [lantic steamers.
**Cork Harbour,** *port of call* (Queenstown) for At-
**Corleone,** industrl. *t.* Palermo, Sicily, p. 18,750.
**Corning,** *t.* in tobacco-growing dist., N.Y. State; U.S.A., on R. Chemung, p. 15,750.
**Cornplanter,** *township* of Penn., U.S.A., contains Oil City, etc.; p. 11,200.
**Cornwall,** *co.* (area 1,357 sq. m., p. *317,951*) in S.W. Eng., rich in tin and other minerals, extreme pt. Land's End, co. t. Bodmin: also t. prov. Ont., Canada, on St. Lawrence R., p. *11,100*.
**Cornwallis Islands,** Arctic O., Brit. N. America, east of Bathurst.
**Coro,** *t.* Venezuela, cap. of Falcon state, nr. the B. of Coro, p. 11,100.
**Coromandel Coast,** E. coast of Madras Pres., India.
**Coronation Gulf,** arm of Arctic O. extreme point N. Canada, discovered by Franklin.
**Correggio,** *t.* of Emilia, Italy, cheese and hats, p. 15,750.
**Corrèze,** mountainous *dep.* S. Cent. France, area 2,272 sq. m., p. 281,959, agr., mts., etc., cap. Tulle.
**Corrib, Lough,** *L.* co. Galway, and Mayo, I.F.S., area 68 sq. m.; R. Corrib flows from it into Atlantic.
**Corrientes,** trading *port* (p. 47,500), at junc. of Parana and Paraguay R., cap. of prov. of C. Argentina, area (of prov.) 33,535 sq. m., farming; p. 421,500.
**Corsham,** mkt. *t.* Wilts, Eng., nr. Chippenham, p. 3,860.
**Corsica,** (3,368 sq. m., p. abt. 305,000). Fr. isl. in Mediterr., agr., fruit, and wine growing; cap. Ajaccio, birthpl. of Napoleon.
**Corstorphine,** vil. nr. Edinburgh, Scotl., p. 1,200.
**Cortona,** *t.* Tuscany, Cent. Italy, nr. Perugia; silk factories; p. 31,150.
**Corunna,** *spt.* on N.W. coast of Spain, and cap. of agr. and mining prov. (area 3,051 sq. m., p. 690,772) of same name, import. trade; p. 61,219; victory and death of Sir John Moore, 1809.
**Corvo,** *isl.* most N. of the Azores.
**Corwen,** mkt. *t.* on R. Dee, Merioneth, Wales, nr. Bala, p. 2,870.
**Cos,** *isl.*, sep. fr. Cape Krio, Asia Minor, by a narrow strait, p. 10,000.
**Cosenza,** *prov.* of Calabria, Italy, area 2,566 sq. m., p. 496,910; *t.* cap. of prov., p. 27,048.
**Cosne,** *t.* on R. Loire, Cent. France; pottery, etc., p. 9,150.
**Cosseir,** or **Kosseir,** *spt.* Egypt, on Red Sea.
**Costa Rica** (23,000 sq. m., p. 490,000), republic in South Cent. America; agr., coffee, and banana cult.; cap. San José.
**Côte d'Or,** *mtns.* (highest pt. 1,968 ft.) and dep. in E. France, traversed by R. Saône, area 3,391 sq. m., p. 321,088; cap. Dijon.
**Cotentin,** *pen.* in N. France, 50 m. long; Cherbourg, at its extremity, is only 80 m. from Portsmouth.
**Côtes-du-Nord,** agr. *dep.* Brittany, W. France, area 2,787 sq. m., p. 557,824; cap. St. Brieuc.
**Cöthen,** *t.* on R. Zittau, Anhalt, Germany, beet-root sugar industry, p. 23,416.
**Cotopaxi,** *mtn.* (alt. 19,613 ft.) in the Andes of Ecuador, nr. Quito; loftiest act. vol. in the world.
**Cotrone,** ftd. *t.* and *spt.* Catanzaro, S. Italy; good trade in wine, olive oil, etc.; p. 10,250.
**Cotswold Hills,** W. Engl., between Lr. Severn and Up. Thames, highest pt. 1,006 ft.; fine sheep pasturage. [and machinery, p. 41,150.
**Cottbus,** industrl. *t.* on R. Spree, Prussia, cloth
**Cottingham,** *urb. dist.*, E.R. Yorks, Eng., p. *6,182*.
**Coulsdon and Purley,** *urb. dist.*, Surrey, Eng., p. *37,666*.
**Council Bluffs,** *c.* on R. Missouri, Iowa, U.S.A., railway depot and manuf.; p. 42,500.
**Coupar Angus,** mkt. *t.* nr. Perth, co.'s Perth and Forfar., Scotl.; p. *2,435*.
**Courbevoie,** *t.* on the R. Seine, nr. Paris, residential suburb of the cap.
**Courcelles,** *t.* in Hainault prov., Belgium; colliery dist., linen factories; p. 16,200.
**Courland,** former Russian *prov.*, now part of the Republic of Latvia, area 10,435 sq. m. (*See* **Latvia.**)
**Courtral,** *t.* on R. Lys, West Flanders, Belgium; linen factories; p. 36,767. Battle of the Spurs, 1302.
**Coutances,** *t.* in Cotentin pen., N. France, near Cherbourg; p. 8,520.
**Coventry,** *co. bor.*, mftg. *t.* N. Warwicksh., Eng. Formerly famous for its ribbon manuf., now chief centre of cycle trade in Engl.; p. *167,046*.
**Covilhão,** *t.* in Beira prov., Portugal, nr. Guarda; cloth factories; p. 15,745.
**Covington,** industrl. *c.* on Ohio R., Kentucky, U.S.A.; opposite Cincinnati; p. 66,000.
**Cowbridge,** *mun. bor.*, Glam., S. Wales, nr. Cardiff; p. *1,018*. [Scotl.; p. *34,954*.
**Cowdenbeath,** mining *t.* near Dunfermline, co. Fife,
**Cowes,** W., *urb. dist.* (p. *10,179*), and E. (p. *4,595*), *wat. pl.* on N. coast I. of Wight, Eng., on both sides of estuary of Medina R., headquarters of Royal Yacht Club.
**Cowpen,** cst. min. *t.* nr. Morpeth, Northumberland, Eng., p. 18,200. [4,500.
**Cowra,** *t.* of N.S.W., 60 m. S.W. of Bathurst, p.
**Cracow,** *c.* of Poland, strong fortress, university, impt. manuf.; p. 176,463. [*3,608*.
**Cradock,** *t.* in Cape of G. Hope, wool trade; p.
**Craiova,** *t.* in Rumania and cap. of Little Wallachia, good trade in agr. prod.; p. 51,877.
**Cramlington,** *urb. dist.*, nr. Newcastle, Northumberland, Eng., p. *3,238*.
**Cramond,** *vil.* on Firth of Forth, Scotl., nr. Edinburgh; p. 3,220.
**Cranborne,** *t.* in N.E. Dorset, Eng., p. 2,820; also *t.* nr. Melbourne, Victoria, p. 5,682.
**Cranbrook,** mkt. *t.* in Weald of Kent, Eng., p. 4,360.
**Cranston,** industrl. *t.* in Providence co., Rhode Isl., U.S.A., p. 44,000.
**Crathie and Braemar,** *pars.* Aberdeensh., Scotl., adjoining Balmoral Castle and Abergeldie Castle estates, p. *1,245*.
**Crayford,** *urb. dist.*, Kent, Eng., p. *15,887*.
**Crécy,** *vil.* Somme dep., N. France, nr. Abbeville, p. 1,760; Edward III.'s victory, 1346.
**Crediton,** *urb. dist.*, mkt. *t.* nr. Exeter, Devon, Eng.; p. *3,490*.
**Crefeld,** busy mftg. *t.* Rhine Prov., Prussia; velvet and silks; p. 124,325.
**Creil,** *t.* on R. Oise, nr. Beauvais, France; machinery manuf.; p. 10,120.
**Cremona,** *c.* on R. Po, N. Italy, 51 m. from Milan; import. silk and iron industries; p. 42,704.
**Crete** (area 3,327 sq. m., p. 310,273), *isl.* in E. Medit.; since the Balkan War part of Greece; 60 m. from nearest pt. in Greece. Cap. Candia, exports fruit, oil, etc.
**Creuse,** *dep.* Cent. France, area 2,164 sq. m., p. 228,344; agr., etc.; cap. Gueret.
**Creusot, Le,** *t.* Saône-et-Loire dept., France; large ordnance works; p. 31,150.
**Crevillente,** *t.* 20 m. W. of Alicante, Spain, in wine, wheat, and fruit dist., p. 11,020.
**Crewe,** *mun. bor.*, Cheshire, Eng., p. *46,061*.
**Crewkerne,** *urb. dist.*, mkt. *t.* Somerset, Eng., nr. Taunton; p. *3,509*.
**Criccieth,** *urb. dist.*, *wat. pl.*, Carnarvonshr., N. Wales, p. *1,449*.
**Crickhowell,** mkt. *t.* on R. Usk, Brecon, S. Wales; p. 1,420.
**Cricklade,** mkt. *t.* on R. Thames, N. Wilts, Eng.; p. (including Wootton Bassett) 11,070.
**Crieff,** *t.* and summer resort, on R. Earn, Perth, Scotl., p. *6,058*.
**Crimean Republic** (area 15,060 sq. m.), *pen.* between Black S. and S. of Azof, campaign 1854–5 between Russia and the allied forces of Turkey, Britain, France, and Sardinia was chiefly fought out here (Alma, Balaclava, and Sebastopol); p. 761,600.
**Crimmitzchau,** *t.* nr. Zwickau, Saxony; woollen cloth factories, p. 25,496.
**Crinan Canal,** across pen. of Cantyre, S.W. Scotl., connecting Loch Gilp with the Atlantic.
**Cripple Creek,** mining *t.* of El Paso co., Colorado, U.S.A., p. 5,000.
**Croaghpatrick** (2,510 ft.), *mtns.*, co. Mayo, I.F.S.
**Croatia,** formerly part of Austria, now included in the newly formed state of the Serbs, Croats and Slovenes; area 17,405 sq. m., p. 2,715,237.
**Crocodile R.** (*See* Limpopo.)
**Cromarty,** *t.* firth of N.E. Scotland. (*See* **Ross and Cromarty.**)
**Cromer,** *urb. dist.*, *wat. pl.* on Norfolk coast, Eng.; p. *4,177*.
**Crompton,** *urb. dist.*, mftg. *t.* nr. Oldham, Lancs. Eng., p. *14,750*.
**Cronstadt,** *spt.* (strongly fort.) on an isl. in G. of Finland. Chief Baltic port and naval stn. U.S.S.R., p. 61,000.

**Crook**, *urb. dist.*, Durham, Eng., p. *11,690*.
**Crosby**, or **Great Crosby**, *urb. dist.*, *wat. pl.* nr. Liverpool, p. *18,283*.
**Crossen**, *t.* on the Oder, Prussia; brisk trade, p. 8,440.
**Cross Fell**, *mtn.* in Cumberland, Eng., on E. border of co., alt. 2,930 ft.
**Croston**, *urb. dist.* Lancs. Eng., p. *1,935*.
**Crowland**, or **Croyland**, mkt. *t.*, with anc. abbey, Lincs., Eng., p. 3,030.
**Crowle**, *urb. dist.*, in Lincolnshire, Eng., nr. confluence of R.'s Don and Trent, p. *2,833*.

**Crozet Isls.**, mountainous uninhabited group in S. Indian Ocean.
**Csaba**, or **Bekés-Csaba**, mkt. and industrl. *t.* in Hungary, 50 m. S.W. of Grosswardein, p. 39,200.
**Csongrad**, mkt. *t.* in agr. dist. at junct. of R.'s Theiss and Körös, Hungary, p. 24,000.
**Cuba** (area 44,215 sq. m., p. 3,600,000), W.-most and largest of W. Indian Isls., taken from Spain by the United States, but later relinquished to the people and constituted an independent republic. Has rich copper mines, and produces tobacco, coffee, and sugar. Cap. Havana (*q.v.*).
**Cubacao**, gold-mining *t.* in prov. Matto Grosso, Brazil, p. 6,100.
**Cubango**, *R.* S. Africa, enters L. Ngami.
**Cuchullin** (or Coolin) **Hills**, in I. of Skye, Scotl.; highest point, Scuir-na-Gillean, 3,183 ft.
**Cuckfield**, *urb. dist.*, mkt. *t.* Sussex, Eng., nr. Lewes, p. *2,114*.
**Cuddalore**, *spt.* on E. coast India, nr. Pondicherry, S. Arcot div. of Madras; good trade; p. 56,574.
**Cuddapah**, *t.* and *dist.* Madras, India, nr. the Pennar R.; cotton, cloth factories; p. 18,250.
**Cudworth**, *urb. dist.*, W.R. Yorks, Eng., p. *9,380*.
**Cuenca**, *c.* on Jucar R. (p. 12,000), and agr. and mining prov. of centl. Spain, area 6,639 sq. m., p. 284,973; also c. in Ecuador; important industries, p. 43,000.
**Cuernavaca**, *cap.* of Morelos State, Mexico; anc. Indian *t.* captured by Cortes, p. 5,900.
**Cuesmes**, coal-mining *t.* adjoining Mons, Belgium, p. 9,150. [the Medit., p. 22,000.
**Cuevas de Vera**, old mkt. *t.* in Almeria, Spain, nr.
**Cuilera**, *spt.* on Jucar R., Spain, in Valentia prov., p. 11,760.
**Culebra**, *valley* and *mtns.* in Northern New Mexico, nr. Colorado border; also spt. of Costa Rica, fine harbour.
**Culiacan**, *c.* Mexico, on R. of same name, 90 m. S.E. of Cinaloa, p. 10,850.
**Culloden Moor**, 6 m. E. of Inverness, Scotl. Defeat of Prince Charles Edward in 1746.
**Cullompton**, or Collumpton, mkt. *t.* Devon, Engl., nr. Exeter; paper mftg., p. 3,540.
**Culross**, sm. *pt.* on F. of Forth, Scotl., co. Fife. One of the Stirling Burghs, p. *4,088*.
**Cumana**, *spt. c.* and *G.* on N. coast Venezuela, in State of Sucre, p. of port, 20,500.
**Cumberland**, (1,515 sq. m., p. *262,897*), border co. N.W. England, includes "Lake District," co. t. Carlisle (*q.v.*).
**Cumberland**, industl. *t.* on Potomac R., Maryland, U.S.A., p. 38,500; also R., trib. of Ohio, flows 700 m. in Kentucky; also pen. of Arctic America.
**Cumbernauld**, *t.* in Dumbarton co., Scotl., nr. , p. *4,329*. [Buteshire, Scotl., p. *2,165*.
t and Little, two *isls.* in F. of Clyde,
as., enclosing Eng. Lakeland in Cumberland, Westmorland, and Lancashire.
, **Old, and New**, two t.'s in mining dist. of , Scotl., p. *3,653*.
narca, *dep.* of Colombia, Cent. America, contains the Fed. cap. Bogota; area 8,046 sq. m., p. 812,086. [falls into Atlantic.
**Cuneme** (or **Nourse**), *R.* (600 m.), Portug. W. Africa.
**Cuneo**, *prov.* of Piedmont, Italy; area 2,870 sq. m., p. 666,735; *t.* cap. of prov., p. 29,608.
**Cunha**, industrl. *t.* Sao Paulo, Brazil, p. 4,050.
**Cupar**, co. *t.* Fife, Scotl., on R. Eden, p. *7,110*.
**Curaçao**, *isl.* (Dutch) W. Indies, in the Caribbean Sea, off N. Coast of Venezuela; area 210 sq. m., 0,000. Orange-growing for liqueur; cap.

**Curico**, *prov.* of Chile, S. America, area 3,045 sq. m., p. 108,848; cap. Curico *c.*, 114 m. from Santiago, p. 16,100.
**Curragh**, *plain*, co. Kildare, I.F.S.; large military camp and racecourse.

**Curtea d'Argesti**, *t.* in Rumania, on S. slopes of the Carpathians; cathedral, p. 4,500. [p. 120,050.
**Curytiba**, commercl. *c.* in the Parana prov., Brazil.
**Curzola**, *isl.* and *t.* of Dalmatia, J.-Slavia, in the Adriatic; fishing, seafaring, agric.; p. (of isl.) 20,000; (of t.) 7,000. [4,250.
**Cusano**, industrl. *t.* in prov. Benevento, Italy, p.
**Custozza**, *vil.* of Verona, Italy; here Austrians defeated Sardinians, 1848, and Italians in 1866.
**Custrin**, or **Kuestrin**, *t.* nr. Frankfort, Prussia; machinery works; p. 16,770.
**Cutch** (7,616 sq. m., p. 484,526), *pen.* and native *state* on N.W. coast India; suffered much in the famine of 1899-1900; also from plague; famous for silver filigree work and embroidery; cap. Bhuj.
**Cuxhaven**, *outport* of Hamburg at the mouth of R. Elbe, Germany; fine harbour, p. 7,070.
**Cuyaba**, industrl. *c.* cap. of Matto Grosso prov., Brazil, on R. C., p. 20,500.
**Cuyahoga**, *R.* (85 m.) in Northern Ohio, U.S.A., flowing into L. Erie at Cleveland.
**Cuzco**, anc. *c.* in the Andes of Peru; once capital of the Incas; temple and fortress, besieged and sacked by Manco Inca in 1536; cathedral; p. 45,000; present cap. of Cuzco prov. (area 156,270 sq. m., p. 440,000).
**Cwmamman**, *urb. dist.*, Carmarthen, Wales, p. *5,214*.
**Cyclades**, group of about 220 *isls.* in the Grecian arch.; p. (total) 135,000; ch. t. Syra.
**Cyprus** (3,584 sq. m., p. 275,000), Brit. *isl.* in the Levant; greatest length, 140 m., greatest width, 60 m.; salt lakes, rock crystal, asbestos, copper, etc; cap. Nicosia; chf. port, Larnaca; centre of wine trade, Limasol.
**Cyrene**, anc. *c.* of Cyrenaica (in Italian Libia), 10 m. from the Mediterr., N. Africa; many antiquities.
**Czechoslovakia**, which came into existence at the end of the War, comprises the territories of Bohemia, Moravia, Silesia, Slovakia and Carpathian Ruthenia, all of which formerly belonged to the Austro-Hungarian Empire. Czechoslovakia is the revival of the old Kingdom of Bohemia, which from 1526 to 1918 was under the Hapsburg dynasty. During the War the Czechs and Slovaks joined the Allies. They supplied troops for the various Allied armies and also established their own force of legionaries. Area, 14,000,000 sq. kilo.; p. 13,600,000 (8,700,000 Czechs and Slovaks, 3,100,000 Germans, besides others). There is a National Assembly and a Senate, the elections to which are held on the basis of universal suffrage. Cap. Prague. The first president, T. G. Masaryk. [noted monastery; p. 81,832.
**Czestochowa**, industrl. *t.* on R. Warta, Poland;
**Czernowitz**, *t.* on R. Pruth; cap. of Bukovina prov., Rumania; university, Greek cathedral, thriving trade, p. 88,000.
**Czirknitzer** (or **Zirknitzer**) **See**, *L.* (with *isl.*) in Carniola, Jugo-Slavia, south of Laibach, 6 m. long; extraordinary variations in depth.

## D

**Dabas Isl.**, one of the Bishop's Isls., group of the Hebrides, Inverness, Scotl., 1 m. long, ½ m. wide.
**Dacca**, *div.* Bengal, India, area 15,000 sq. m., p. nearly 10,000,000; also cap. same name, on Buriganga R., an old channel of the Ganges, p. 117,304; impt. ind.; c. suffered severely in earthquake, 1897.
**Dachstein**, *mtn.*, one of the highest peaks of the Limestone Alps, Salzkammergut, Austria, alt. 9,830 ft.
**Dacre**, *vil.* Cumberland, Eng., on R. Dacre, nr. Penrith, p. 1,020.
**Dagenham**, U.D.C., in S. Essex, Eng., p. *89,385*.
**Daghestan**, U.S.S.R., in the Caucasus, one of the most mountainous dists. in the world; 13,730 sq. m., p. 798,181; cap. Derbend or Derbent.
**Dago**, *isl.*, Esthonia, at entrance G. of Finland, p. 15,000.
**Dagupan**, commercial *t.* in Pangasinan prov., Luzon, Philippine Isls., p. 16,700.
**Dahlac**, or **Dahlak**, group of *isls.* in Red Sea, nr. Massowah; Italian.
**Dahomey**, old *kingdom*, Upper Guinea, N.W. Africa, now a French colony, 42,460 sq. m.; natives pure negroes and fetish worshippers; p. 860,590, cap. Abomey. [**Maybole**, p. *1,726*.
**Dailly**, *par.* in co. Ayr, Scotl., on R. Girvan, nr.

**Dakar,** *fort.* nav. sta., Senegal, Fr. W. Africa, p. 25,466.

**Dakota, North** (70,605 sq. m., p. 646,872), a N. *state*, U.S.A., famous for wheat production, bordering on Canada; cap. Bismarck.

**Dakota, South** (77,615 sq. m., p. 636,547), *state* U.S.A., in Upper Missouri basin; agr., mtnous. in the W.; cap. Pierre. [Indian corn, p. 22,000.

**Dalaguete,** *t.* in Cebu, Philippine isls.; sugar.

**Dalbeattie,** *t.* Kirkcudbright, Scotl., nr. Dumfries; granite; p. *3,011*.

**Dalfsen,** *t.* nr. Zwolle in Overyssel, Holland, p. 5,570.

**Dalgetty,** mining *par.*, nr. Dunfermline, Fife, Scotl., p. *1,481*.

**Dalhousie,** health *resort* in Gurdaspur dist., Punjab, India, 7,687 ft. above sea-level. [dist., p. *7,854*.

**Dalkeith,** *t.* nr. Edinburgh, ironworks and colliery

**Dalkey,** *t.* nr. Dublin, Ireland, p. 3,020; also sml. t. and dist. in S. Australia, nr. Adelaide.

**Dallas,** *c.* cap. of Dallas co., Texas, U.S.A., in cotton and grain-growing region, p. 270,000.

**Dalmatia,** (5,090 sq. m., p. 621,503), *dist.* of the Serb., Croat and Slovene State on Adriatic coast, with many isls.; mainly a mountainous tract, producing wine and oil.

**Dalmellington,** *vil.* in co. Ayr, Scotl., p. *6,151*.

**Dalmeny,** *vil.*, Linlithgowshire, Scotl., p. *3,237*.

**Dalny** (or **Dairen**), *t.* built by Russia, nr. Port Arthur on the Liao-tung Pen., in Manchuria, p. 97,231.

**Dalry,** mining *t.*, Ayrsh., Scotl., on R. Garnock; p. *6,327*.

**Dalserf,** Clydeside, industrl. *dist.* in co. Lanark, Scotl.; p. *17,312*.

**Dalston,** N.E. *dist.* of London, Eng.

**Dalton-in-Furness,** *urb. dist.*, N. Lancs.; Eng., nr. Furness Abbey, ironworks and mining; p. *10,338*.

**Dalton-le-Dale,** industrl. *par.* nr. Sunderland, Durham, Eng., p. 14,570.

**Daman, Damaun** or **Damao,** Portug. *spt.* and *terr.* on G. of Cambay, W. Indies; salt industry; area of prov. 169 sq. m.; p. 32,700.

**Damanhur,** anc. *t.* Lr. Egypt, nr. Alexandria; cotton factories, great fairs; p. 47,867.

**Damar,** *t. of* Yemen, Arabia, nr. Sana, impt. trade; p. 25,000.

**Damaraland,** formerly part of Ger. S.W. Africa. Its only port, Walfisch Bay, is Brit. Cattle rearing.

**Damascus,** *cap.* of Syria, 70 m. E. of its port, Beyrout; p. 250,000. Taken in Allenby's advance, Oct. 1918.

**Dambul,** *t.* nr. Kandy, Ceylon, with noted Buddhist temples, p. 45,000.

**Damiel,** *t.* in prov. Ciudad Real, Spain, p. 12,200.

**Dampier Arch.,** group of sml. *isls.*, off N.W. coast of Australia.

**Dampier Strait,** *chan.* between N.W. of New Guinea and Waigiu Isl.; also strait in Bismarck Arch., between Rock Isl. and New Britain.

**Danakil,** or **Dankali Country,** coast land between Red Sea and Abyssinia, called also Afar country.

**Danao,** *t.* on Cebu coast Philippine Isls.; rice and sugar dist.; p. 16,500.

**Danbury,** *t.*, Connecticut, U.S.A., Fairfield co., hat and boot industries; p. 22,325.

**Danby,** *par.* nr. Guisborough, N.R. Yorks, Eng., agr., p. 1,600.

**Dantzig,** or **Danzig,** strongly fort. *spt.* on R. Vistula, near its mouth (G. of D.), formerly in W. Prussia. It is now, with its surrounding territory, constituted a free city under the protection of the League of Nations. Area 709 sq. m., p. 351,380.

**Danube, R.** (1,770 m.), second largest river in Europe, rises in Schwarz Wald and flows into Black Sea. Navig. for steamers from Ulm to the sea. Vienna, Budapest, Belgrade, and other large cities on its banks; Lower Danube under international control.

**Danvers,** rural mftg. *t.* Mass., U.S.A., 19 m. N. Boston, p. 13,100.

**Danville,** *c.* in colliery dist., Ill., U.S.A., p. 37,000; also several sm. tns. in U.S.A.

**Darbangah,** *c.* Patna div. of Behar, Bengal, India, (p. 62,628) on Little Baghmati R. Magnif. palace of Rajah.

**Dardanelles,** strait between Europe and Turkey in Asia (anc. Hellespont), 40 m. long, commanded by castles.

**Dar Elbaida,** grain port of Central Morocco, p. (estimated) 20,000.

**Darent R.,** in co. Kent (20 m.), Eng., flows to Thames at Erith.

**Dar-es-Salaam,** *cap.* and *spt.* of Tanganyika Territory, E. Africa (Brit.). [Eng., p. *5,260*.

**Darfield,** *urb. dist.*, nr. Barnsley, W.R. Yorks,

**Darfur,** *region* of the Egyptian Sudan, between Kardofan and Wadai, with ill-defined limits, inhabited by Arabs and negroes.

**Darjilling,** or **Darjeeling,** hill *stn.*, Bengal, India; tea and quinine producing; sanatorium for British troops; suffered from earthquake and landslips; p. 18,000.

**Darlaston,** *urb. dist.*, Staffordsh., Eng., coal and ironworks; p. *19,736*.

**Darling,** or **Calewatta,** *R.*, New South Wales (160 m.), joins Murray R. at Westworth; also D. mtns., granite range; great grazing country of West Australia parallel with coast, highest pk. 3,500 ft.

**Darlington,** *co. bor.*, colliery and mftg. *t.*, Durham, Eng., p. *72,093*; also suburb of Sydney, N.S.W.

**Darmstadt,** *t.*, Germany, cap. of former Grand Duchy of Hesse Darmstadt, on R. Darm., nr. Frankfort-on-Main; carpet and mchny. manuf.; p. 82,867.

**Dart,** *R.* (46 m.), Devonsh., Eng., enters English Channel at Dartmouth. [works; p. *23,928*.

**Dartford,** *urb. dist.*, mkt. t., Kent, Eng.; chemical

**Dartmoor,** high stony plateau, S.W. Devonsh., Eng.; 140,000 acres; convict prison.

**Dartmouth,** *mun. bor., pt.*, S. Devonsh., Eng., p. *6,707*; also industrl. t. Nova Scotia, Halifax co., p. *3,548*; also t. Mass., U.S.A., p. 9,000; also port on Richmond Bay, Prince Edward Isl.

**Darton,** *urb. dist.*, W.R. Yorksh., Eng., nr. Barnsley, p. *12,595*.

**Darwen,** *mun. bor.*, N.E. Lancashire, Eng., nr. Blackburn; cotton trade and blast furnaces; p. *36,010*.

**Darwin, Mount,** peak in King Charles' South Land, Tierra del Fuego, alt. 6,800 ft.

**Datchet,** *vil.* adjoining Windsor, on R. Thames, Eng.; p. 1,460.

**Datia,** *t.*, Cent. India, Bundelkhand Agency, nr. Gwalior; stonewalled, with palaces; p. 29,000.

**Dauphiné,** old *prov.*, S.E. France, now dep. Isère, Drôme, and Hautes-Alpes.

**Dauria,** *country* circling Nerchinsk, Transbaikalia, Asia.

**Davenport,** *c.* Iowa, U.S.A., at foot of Rock Isl. Rapids, on Mississippi; flour mills; p. 61,000.

**Daventry,** *mun. bor.*, Northamptonsh., Eng., bootmaking; p. *3,608*.

**Davis Strait,** *channel* between Greenland and Brit. N. America; connects Atlantic with Baffin Bay.

**Davos Platz,** Alpine *winter resort*, Grisons, Switz.; alt. 4,845 ft., p. 4,250.

**Dawdon,** or **Seaham Harbour,** mftg. *t.* Durham, Eng., nr. Sunderland, p. 10,150.

**Dawley,** *urb. dist.*, Shropshire, nr. Wellington, Eng., p. *7,363*; ironworks.

**Dawlish,** *mun. bor., wat. pl.* S.E. coast, Devonshire, Eng.; p. *4,578*.

**Dawson,** *R.*, Queensld., Australia, *trib.* of R. Fitzroy; also isl. in Magellan Strait, Tierra del Fuego.

**Dawson City,** on R. Yukon, Canada, nr. the Klondyke goldfields, p. 3,013.

**Dax,** *t.* S.W. France, on R. Adour; hot sulphur spring, horse mart; p. 10,650.

**Daylesford,** *t.* Victoria, Australia, 76 m. from Melbourne, p. 3,330.

**Dayton,** *t.* Ohio, U.S.A., on Great Miami R.; iron and steel, agr. implements, etc.; p. 200,000; also t. on the Ohio R., Kentucky, U.S.A., p. 9,200.

**De Aar,** *t.* and *ry. junction* in prov. of C. of Good Hope, 500 m. from Capetown, p. *2,143*.

**Dead Sea,** salt-water *L.* in Palestine, receives R. Jordan; surface 1,292 ft. below level of the Mediterranean; area 340 sq. m., length 47½ m., greatest width 9½ m.

**Deadwood,** mining *t.* Dakota, U.S.A., in Black Hills dist., p. 5,010.

**Deal,** *mun. bor.*, anc. *spt.* and *wat. pl.*, E. Kent, Eng.; opposite to the Goodwin Sands and nr. where Julius Cæsar is said to have first landed; p. *13,680*.

**Dean, Forest of,** Gloucestersh., Eng.; between Wye and Severn R.'s; coal and iron dist.; 22,000 acres.

**Debreczen,** *t.* in pastoral plain of Hungary, 114 m. E. of Budapest, p. 103,228.

**Decatur, mftg. t.** in colliery dist., Macon co., Illinois, U.S.A., p. 58,750.
**Decazeville, t.** in Aveyron dep., France, coal and iron works, p. 12,250.
**Deccan, The,** great upland of S. India, bounded by the Narbadda and Kistna R.'s.
**Dedeagatch, spt.** of Thrace, Balkan Peninsula, oak-timber trade; many antiquities; p. 4,500.
**Dee,** *R.* in N. Wales and Cheshire (90 m.); also R. in Aberdeen and Kincardine co.'s, Scotl. (87 m.); also R. in Kirkcudbrightsh., Scotl. (38 m.); also R. in I.F.S., co. Louth (20 m.), flowing to Dundalk B.
**Deer L.** (146 m. long), in Canada, drains into R. Mississippi.
**Deer, Old and New,** two *pars.* in Aberdeensh., Scotl.
**Deering,** *t.* nr. Portland, Maine, U.S.A., p. 4,900.
**Dees** or **Des,** *t.* on R. Szamos, Rumania; large distillery; p. 10,000.
**Dehra,** *t.* United Provs., India, hdqrs. of the Dehra Dun dist.; p. 27,000.
**Deir,** or **Deir-ez-Zor,** *t.* of Iraq, on R. Euphrates, cap. of Zor sanjak, p. 7,070.
**Delagoa Bay,** *harbour,* in Indian Ocean, S.E. Africa; Portuguese training stn. of Lorenzo Marques on N. side.
**Delaware** (1,965 sq. m., p. 244,000), Middle Atlantic State, U.S.A.; fruit and grain growing, manuf., etc.; cap. Dover; ch. port, Wilmington. Delaware R. flows (350 m.) from New York State along the Pennsylvania border, through New Jersey to Delaware Bay. Delaware is also the name of a county and its cap. in Ohio, U.S.A.
**Delemont,** *t.* in canton Bern, Switzerland, p. 3,220.
**Delft,** anc. *t.* and *port* on R. Schie, S. Holland, nr. Rotterdam, butter and cheese mart; earthenware mftg.; p. 39,539. [Rotterdam.
**Delftshaven,** *t.* on R. Maas, Holland, suburban to
**Delhi,** *cap.* of India, was constituted a province (area 557 sq. m.), Oct. 1, 1912, out of the Punjab division. Seat of government; cotton mftg. and other impt. industries, p. 487,000; ancient cap. of Mogul Empire.
**Dell,** or **Deal,** *R.* in co.'s Limerick and Cork, I.F.S., trib. (26 m.) of the Shannon.
**Dellys,** *spt.* in Algeria, p. (of dist.) 35,000.
**Delmenhorst,** *t.* in Germany, on R. Delme, nr. Bremen; cork-cutting, jute, etc.; p. 17,100.
**Delphi,** anc. *t.* in Phocis, Greece, on the Corinthian G. at ft. of Mt. Parnassus, the modern Kastri; site bought for excavation of antiquities by France in 1891.
**Demavend,** *mtn.* 21,000 ft.; highest peak in Elburz Mtns., N. Persia; volcanic.
**Dembea,** *L.* in Abyssinia; 60 m. by 25 m.; the source of the Blue Nile.
**Demerara,** *R.* (200 m.) in Brit. Guiana, falls into Atlantic at Georgetown.
**Demir-Hissar,** *t.* Macedonia, Greece, p. 8,070.
**Demirkapu,** "The Iron Gate," rocky defile, through which the Danube rushes, in the Transylvanian Alps.
**Demmin,** *t.* in Pomerania, Prussia, nr. Stralsund, p. 12,340. [p. 6,060.
**Demonte,** fort. *t.* on R. Stura, Italy, lead mines; **Demotica,** *t.* nr. Adrianople, Thrace, p. 10,150.
**Denain,** *t.* Nord. dep., N. France, nr. Douay; colliery dist.; p. 23,600.
**Denbigh,** *mun. bor.* in N. Wales, p. *7,249*; cap. of co. (area 662 sq. m., p. of co. *157,645*), agr., min. and quarrying.
**Denby,** with **Cumberworth,** *urb. dist.,* W.R. Yorks, 8 miles W. of Barnsley, Eng., p. *3,396*.
**Dendermonde,** or **Termonde,** *t.* on Dender R., E. Flanders, Belgium, nr. Ghent, p. 9,150.
**Denholme,** *urb. dist.,* in W.R. Yorks, Eng., nr. Bradford, p. *2,662*.
**Denia,** *spt.* Almeria, Spain, 45 m. N.E. of Alicante; exports raisins, grapes and onions, p. 12,750.
**Deniliquin,** *t.* on Edward R., N.S. Wales, p. 5,000.
**Denison,** *c.* on Red R., N. Texas, U.S.A., cotton depot, p. 13,500.
**Denizli,** *t.* in Aidin vilayet of Turkey; beautiful gardens, "the Damascus of Anatolia," p. 17,250.
**Denmark,** (area 17,144 sq. m., p. 3,289,195), *kingdom* in N.W. Europe, consisting of pen. of Jutland and Isls. in Baltic, chiefly agr.; cap. Copenhagen (*q.v.*).
**Denny and Dunipace,** *burgh* of co. Stirling, Scotl.; iron and chemical factories, p. *11,256*.
**Dent du Midi,** *mtn.* (10,778 ft.) in the Valais Alps.
**Denton,** *urb. dist.,* nr. Manchester, Lancs., Eng., felt hat making, p. *17,383*.
**D'Entrecasteaux Isls.,** Brit. group off S.E. New Guinea; D. Point, a cape at S.W. extremity of Australia.
**Denver,** "the Queen *c.* of the Plains," on the E. slope of Rocky Mtns., cap. of Colorado, U.S.A., on South Platte R., in Arapahoe co.; seat of University and many important industries, p. 290,000.
**Deoband,** *t.,* India, Meerut div., p. 24,000.
**Deodar,** sm. native *state,* Gujerat, Bombay, India; area 440 sq. m., p. 25,050.
**Deogarh,** *t.* in Santal Parganas dist. of Bengal, India; numerous temples, a place of pilgrimage, p. 8,250.
**Deori,** *t.* Nagpur, Cent. India, nr. Sagar, p. 7,750.
**Deptford,** *met. bor.,* on Thames in S.E. dist. of London, Eng., p. *106,880*.
**Dera Ghazi Khan,** *t.* W. side of Lr. Indus, in the Derajat div. of the Punjab, India, handsome mosques, p. 31,030.
**Dera Ismail Khan,** *t.* in Punjab, India, large bazaar for Afghan traders, p. 28,500.
**Derbent,** or **Derbend,** *cap.* and *port* of Daghestan, Transcaucasia, on W. side of Caspian Sea, p. 17,000.
**Derby,** *co. bor., cap.* of Derbysh., Eng., on R. Derwent, centre of L.M.S. system, p. *142,406*; Derbyshire co., hilly and rich in minerals, area 1,029 sq. m., p. *757,332*.
**Derby,** *t.* in New Haven co., Connecticut, U.S.A., on Housatonic R., p. 11,238.
**Dereham, East,** *urb. dist.,* nr. Norwich, co. Norfolk, Eng.; agr. centre, p. *5,641*.
**Derg, Lough,** in basin of R. Shannon, I.F.S., separating Galway and Clare from Tipperary; also sm. L. in co. Donegal, with cave on an isl., much visited by Roman Catholic pilgrims, and known as "St. Patrick's Purgatory."
**Derna,** *spt.* Barca, N. Africa, p. 6,200.
**Derwent,** R. in Derbysh. (60 m.); also in Yorks (57 m.); also in Cumberland (33 m.); also a tributary of the Tyne (30 m.); all in Eng. Also the largest R. in Tasmania, flowing (30 m.) to Storm Bay.
**Derwentwater,** *L.* in Cumberland, Eng., nr. Keswick, 3 m. long.
**Desaguadero,** *R.* in Bolivia, S. America (180 m.), outlet of L. Titicaca; also R. in Argentina, from the Andes (500 m.) to Urre Lanquen; also the name of the plateau in S. Peru and W. Bolivia between the Andes ranges, the highest tableland in the world except that of Tibet.
**Desborough,** *urb. dist.,* Northants, Eng., p. *4,407*.
**Desertas,** rocky *isls.* S.E. of Madeira.
**Désirade,** *isl.* Fr. W. Indies, nr. Guadeloupe, area 10 sq. m., p. 1,750.
**Des Moines,** *R.* in Iowa, U.S.A., trib. of Mississippi (550 m.) flowing from Minnesota; also *c.,* cap. of Polk co., the largest *c.* in Iowa, U.S.A., great rly. and mftg. centre, p. 144,000.
**Desna,** *R.* trib. of Dnieper R., U.S.S.R. (550 m.), flowing nr. Kiev.
**Despoto Dagh,** *mtn. range,* a branch of the Balkans, alt. 7,800 ft.
**Dessau,** *t.* cap. of Anhalt, on R. Mulde, N. Germany; impt. trade and industries, p. 57,658.
**Detmold,** *t.* cap. of Lippe, on R. Werra, N.W. Germany; linen mft., tanning, etc., p. 15,275.
**Detroit,** ch. *c.* and *port* of Michigan, U.S.A.; busy commercial and industl. centre, and great grain mart, p. 1,620,000.
**Detroit R.,** channel between L. St. Clair and L. Erie, U.S.A. (25 m.); separates the State of Michigan from Ontario, Canada.
**Dettingen,** *vil.* on R. Main, 15 m. above Frankfort, Bavaria; battle 1743, in which George II. of England defeated French under Noailles.
**Dettva,** industl. *t.,* Czecho-Slov., nr. Altoshl, p. 11,500.
**Deventer,** *c.* and old Hanse *t.* on R. Yssel, Holland; commercial centre, p. 32,013.
**Deveron,** *R.* of Aberdeen and Banff., Scotl. (61 m.); flows into Moray Firth.
**Devizes,** *mun. bor.,* mkt. *t.* N. Wilts., Eng., nr. Salisbury; engineering works, p. *6,058*.
**Devon,** *R.* trib. of Forth, Scotl. (34 m.), flows past Alloa.
**Devonport,** *spt.* (ftd.) on estuary of R. Tamar, adjoining Plymouth, Devon, Eng.; royal dockyards and naval sta., p. 81,750.

**Devonshire,** area 2,605 sq. m., p. *732,969* maritime *co.* S.W. Eng.; between English and Bristol Channels; famous for butter and cider; ch. t.'s Exeter and Plymouth (*q.v.*).

**Dewsbury,** *co. bor.*, mftg. *t.* W.R. Yorks., Eng., on R. Calder, 9 m. from Leeds, p. *54,303*.

**Dezful,** *t.* in Persia, on R. Dezful, nr. Schuster, p. 15,500.

**Dharampur,** native *state* in Gujarat div. of Bombay, India; area 794 sq. m., p. 130,000; also c. State cap., p. 5,050.

**Dharwar,** *t.* in Bombay, 70 m. E. of Goa, cap. (p. 35,000) of Carnatic dist.

**Dhawalaghiri,** *mtn.* in Himalayas, N. India, alt. 26,826 ft.

**Dholpur,** native *state* Cent. India, Rajputana Agency; area 1,156 sq. m., p. 229,734; suffered from drought and famine; cap. Dholpur, nr. Agra, p. 161,000.

**Dhulia,** *t.* Bombay, administrative hdqrs. of Khandish dist.; cotton industry; p. 21,000.

**Diamantina,** *t.* in Minas Geraes state, Brazil, centre of diamond dist.; p. 13,500.

**Diarbekir,** *t.* on R. Tigris, Turkey in Asia, the anc. Amida, old walls, gates and citadel, great mosque and palatial remains; p. 38,000; in stock-raising and fertile agr. dist.

**Dibrugarh,** *t.* in Lakhimpur dist. of Assam, India; coal and tea exported; p. 10,500.

**Didsbury,** *t.* nr. Stockport, Lancs., Eng.; p. 5,630.

**Diedenhofen,** fort. *t.* of France, in Alsace-Lorraine; wine, fruit, etc.; capitulated to Prussia in 1870; p. 11,600.

**Diego Garcia,** Brit. *isl.* and coaling sta. in Indian Ocean, the largest of the Chagos group.

**Diego Suarez,** French *colony* on N. coast of Madagascar; p. 5,050.

**Dieppe,** *spt.* and *wat. pl.* on coast of France, 35 m. N. of Rouen; lace, woollen and ceramic manuf.; p. 22,100.

**Digby,** port of entry, Nova Scotia; p. 2,100.

**Dignano,** *t.* in Istria, Italy; vineyard dist.; p. 10,220.

**Digne,** *t.* dep. Basses-Alpes, France, nr. Aix; cathedral, p. 7,070.

**Dihong R.,** the name given to the R. Brahmaputra in its middle course through Assam.

**Dijon,** strongly fort. frontier *t.* E. France, dep. Côte-d'Or, the Roman Castrum Divionense; cathedral, bathing, and casino; manuf., p. 78,578.

**Dillingen,** *t.* on R. Danube, Bavaria, nr. Augsburg, p. 6,100.

**Dilolo,** *L.* of S. Cent. Africa, source of R. Zambesi.

**Dimboola,** *t.* in corn-growing dist. of Victoria, 250 m. N.W. of Melbourne, p. 6,269.

**Dinan,** *t.* in dep. Côtes-du-Nord, France, nr. St. Brieux; mineral waters, p. 11,600.

**Dinant,** *t.* fortif. on R. Meuse, prov. Namur, Belgium; famous for brass and copperware, p. 7,610.

**Dinapur,** milit. *t.* on R. Ganges, Patna dist., Bengal, India, p. 46,000.

**Dinaric Alps,** mtn. *range* on E. side of the Atlantic between Dalmatia and Bosnia; highest pt., Mt. Dinara (6,007 ft.). [nr. Dolgelly, p. 1,220.

**Dinas-Mawddwy,** old mkt. *t.* Merioneth, N. Wales,

**Dindigul,** *t.* of Madras, India; cigar and tobacco factories, p. 26,000.

**Dindings, The,** Brit. *isls.* and *terr.* on W. coast of Malay pen. in the Straits Settlements.

**Dingle,** *spt.* and *b.* S.W. coast I.F.S., *co.* Kerry, p. 2,020.

**Dingwall,** co. *t.* of Ross and Cromarty, Scotl., one of the Wick Burghs, p. *2,763*.

**Diomede Isls.,** two sm. granite *isls.* a mile apart in Behring Strait, inhabited by Esquimaux; boundary line Russ. and U.S.A. possessions passes between them.

**Diosgyor,** mkt. *t.* of N. Hungary, nr. Miskolcz; iron and steel works, p. 14,000.

**Dirk Hartog,** *L.* off W. Australia, Shark Bay.

**Dirschau,** *t.* nr. Dantzig Free City, on R. Vistula; railway works, sugar factories, etc., p. 12,600.

**Disco,** Danish *isl.* off W. coast Greenland, in Baffin's Bay, contains harbour of Godhaven.

**Dismal Swamp,** *morass* in S. Virginia and N. Carolina, U.S.A.; contains Lake Drummond, and extends 30 to 40 m. S. from nr. Norfolk.

**Diss,** *urb. dist.*, mkt. *t.* Norfolk, Eng., on R. Waveney, p. *3,422*.

**Ditchling,** *par.* nr. Brighton, Sussex, Eng., p. 1,760.

**Dittons, The.** (*See* **Esher and the Dittons.**)

**Diu,** Portuguese *spt.* and *isl.* off coast of Kathiawar, Bombay, India; area 20 m., p. 13,600.

**Dixmude,** *t.* on R. Yer, W. Flanders, Belgium, p. 4,300.

**Dixon Entrance,** *chan.* between Queen Charlotte Isl. and Alaska, Brit. Columbia.

**Dizful,** *t.* in Khuzistan prov. on R. Dizful, trib. of Karun R., Persia; consid. trade, p. 31,000.

**Djockjokarta,** *cap.* Dutch Residency, Java, of same name, p. 60,000.

**Dnieper,** *R.* (length over 900 m.), S.E. Europe, rises in U.S.S.R., old Smolensk and flows into the Black Sea; connected by canals with Baltic, etc.

**Dniester,** *R.* (700 m.), of S.E. Europe, rises in Carpathians and flows into the Black Sea.

**Doab,** *dist.* between "two rivers," Jumna and Ganges, in United Provs., India.

**Döbeln,** *t.* Saxony, on R. Mulde, nr. Leipsic; manuf. and trade; p. 17,700.

**Dobrudja,** or **Dobrudscha,** Rumanian *dist.* S. of and including delta of Danube and Black Sea; area 6,102 sq. m. Traversed by anc. wall of Trajan.

**Dobsina,** *t.* Czecho-Slovakia; curious cave containing ice-field of two acres; p. 5,300.

**Doce,** *R.* (400 m.), of Brazil, flows to Atlantic.

**Dochart, Loch,** and *R.* of Perth, Scotl., draining through Glen D. to Loch Tay.

**Dodworth,** *urb. dist.*, nr. Barnsley, W. R. Yorks, Eng., p. *4,248*.

**Dogger Bank,** sandbank in N. Sea, between England and Denmark. Valuable fishing ground. Russian Baltic Fleet incident, 1904.

**Dogs, Isle of,** riverside *dist.* formed by bend in the Thames, off Greenwich, London, Eng.

**Dokkum,** *t.* in Friesland, Holland, nr. Leeuwarden, p. 4,500.

**Dôle,** *t.* dep. Jura, on R. Doubs, nr. Dijon, E. France; anc. cap. of Franche-Comté, ceded to France in 1678; p. 15,600.

**Dôle, La,** *mtn.* of the Jura range, Switz., nr. Geneva, alt. 5,509 ft.

**Dolgelly,** *urb. dist.*, ch. *t.* of Merionethsh., nr. Barmouth, N. Wales, p. *2,261*. [Hills, p. *1,485*.

**Dollar,** *t.* in Clackmannan, Scotl., at base of Ochil

**Dollar Law,** *mtn.* nr. Peebles, Scotl., alt. 2,680 ft.

**Dollart Bay,** inlet at mouth of R. Ems, Germany, on Dutch frontier.

**Dolnja-Tuzla,** *t.* on Julla R. in Bosnia, Jugo-Slavia; salt indust.; p. 11,000.

**Dolores,** *t.* in the Argentine, Buenos Ayres prov., p. 10,750; also R. in Utah, U.S.A. (250 m.), affl. of Rio Grande.

**Dominica,** Brit. Leeward *isl.*, West Indies, area 305 sq. m., p. 34,000. Exports, lime-juice, sugar, cacao, fruits, and spices; cap. Roseau.

**Dominican Republic.** (*See* **Santo Domingo.**)

**Dommel,** *R.* of Holland, trib. of the *R.* Maas at Crevecœur.

**Domo d'Ossola,** *t.* Piedmont, N. Italy, nr. the Simplon, p. 4,150.

**Domrémy,** *vil.* on R. Meuse, Vosges dep., E. France; birthplace of Joan of Arc.

**Don,** *R.*, in Aberdeensh., Scotl. (82 m.); also R. in W.R. Yorks., Eng. (70 m.), trib. of R. Ouse; also R. of France, dep. Maine-et-Loire (40 m.); also large R. of W. Russia (1325 m.), falls into Sea of Azof.

**Don, Republic,** former govt. of Russia.

**Donaghadee,** *spt.* co. Down, N. Ireland, nearest pt. to Scotland, p. 2,020.

**Don Benito,** *t.* prov. Badajoz, Spain; good trade in wheat, wine, fruit, etc.; p. 16,750.

**Doncaster,** *mun. bor.* and mftg. *t.* W.R. Yorks. Eng., on R. Don; rly. wks. and famous racecourse, p. *63,308*.

**Donchery,** anc. *t.* on R. Meuse, nr. Sedan, Ardennes dep., France; great battle between French and Bavarians here, 1870, followed by the capitulation of Napoleon III. at Sedan.

**Donegal,** *spt.* W. coast, I.F.S., and cap. of co. D., on D. Bay, p. 1,520. Area of co., 1,870 sq. m.; rugged coast, mountainous surface; agr. and stock-keeping; p. 166,000.

**Dongola, New** and **Old,** *t.'s* on banks of R. Nile, in Upper Nubia, p. 19,500. [p. 1,229.

**Donnington,** mkt. *t.* Shropshire, Eng., nr. Newport.

**Donnybrook,** S.E. *suburb* of Dublin, I.F.S., on R. Dodder, p. 16,000; formerly famous for its fair.

**Doobant,** *R.* of Canada, rising in Wholdiah L. and draining Doobant L. into Hudson B.

**Doobooka,** industrl. *t.* on R. Volga, Russia, nr. Saratov, p. 14,100.

**Doon,** *R.* Ayrsh., Scotl., flows from Loch Doon (26 m.) to Firth of Clyde.

**Doonbeg,** *R.* co. Clare, I.F.S., falls into the Atlantic at D. Bay.

**Dorama,** *t.* in Arabia, nr. Dereyeh, p. 7,950.

**Dora Ripaira,** *R.* Italy, trib. of R. Po, flowing (60 m.) from the Cottian Alps past Turin.

**Dorchester,** *mun. bor.*, co. *t.* of Dorsetsh., Eng., on R. Frome, p. *10,030*; a vil. 9 m. S.E. of Oxford; also pt. of entry, New Brunswick, on Petitcodiac river.

**Dordogne,** *dep.* S.W. France (area 3,550 sq. m., p. 396,742), cap. Perigueux; also R. (290 m.) which joins Garonne to form the Gironde.

**Dordrecht,** or **Dordt,** *t.* (p. 53,989) on Maas R., nr. Rotterdam, Holland; timber trade; also Dutch t. in C. Colony, battle Dec. 30th, 1899, p. *1,368*.

**Dores,** *par.* on Loch Ness, Inverness, Scotl., p. *572*.

**Dorking,** *urb. dist.* and mkt. *t.* Surrey, Eng., p. *10,109*.

**Dornoch,** co. *t.* and *wat. pl.* of Sutherland, Scotl., on D. Firth; one of the Wick Burghs, p. *2,086*.

**Dorp,** *mftg. t.* Rhen. Prussia, on R. Wipper, nr. Cologne, p. 14,000.

**Dorpat** (or **Tartu**), *t.* in Esthonia, on R. Embach; university and observatory; formerly one of the Hanse towns; p. 60,000.

**Dorset** (988 sq. m., p. *239,347*), *co.* on S. coast Eng.; mainly agr.; co. t. Dorchester (q.v.).

**Dortmund,** busy commercl. yet anc. *t.* of Westphalia, Germany, in colliery dist., nr. Dusseldorf, p. 295,026.

**Douai,** or **Douay** (fort.), *t.* nr. Lille, N.E. France; glass, bell-founding, arsenal, etc., p. 36,750.

**Douarnenez,** *spt.* prov. Finistere, N.W. France, on D. Bay; p. 11,970.

**Doubs,** *dep.* E. France, traversed by the Jura range and the R. Doubs, area 2,052 sq. m., chiefly agr.; p. 285,022; watchmkg. industry; cap. Besançon.

**Douglas,** *cap.* of Isl of Man, 75 m. W. of Liverpool, Eng.; a favourite wat. pl.; p. (with subs.) 22,500.

**Dour** (400 m.) *R.* Spain and Portugal, enters Atlantic below Oporto.

**Douze,** *R.* (55 m.) in France, joins Midou at Mont di Marsan.

**Dove,** *R.* of Derbysh. and Staffs. Eng., trib. of Trent; flows (45 m.) through a beautiful dale

**Dover,** *mun. bor.*, old Cinque port on English coast, Kent co.; nearest pt. of passage to France, the Strait of D. being only 21 m. wide. Strongly fortified. Splendid national harbour constructed, cost £4,000,000; p. *41,095*. Also name of t. on Cocheco R., New Hampshire, U.S.A.; p. 13,600; as well as of smaller industrl. t.'s in New Jersey, and Delaware, U.S.A.

**Dovercourt,** *wat. pl.* nr. Harwich, Essex, Eng.; p. 3,875.

**Dowlais,** colly. *dist.* Merthyr Tydvil, S. Wales; p. 17,850.

**Down,** maritime *co.* in North Ireland; area 957 sq. m.; p. 305,000; industries, agr. and fishy., except in neighbourhood of Belfast, where are factories; cap. Downpatrick.

**Downham Market,** *urb. dist.*, on R. Ouse, Norfolk, Eng.; p. *2,463*.

**Downpatrick,** co. *t.* of Down, N. Ireland, on R. Quoile; p. 3,920.

**Downs,** natural harbour of refuge for shipping between Kent coast and Goodwin Sands in the English Channel.

**Downs, North and South,** two chiefly pastoral broad chalk ridges in S.E. Eng.; N. Downs ending at Dover and S. Downs at Beachy Head; fine grazing ground for sheep.

**Downton,** *t.* and *par.*, with agr. college, nr. Salisbury, S. Wilts, Eng., on R. Avon; p. 1,120.

**Draava,** or **Drave** (380 m.), *R.* trib. of Danube, flows from the Tyrol across Carnithia and Styria, joining the D. at the town of Eszek.

**Drachenfels,** *min. pk.* on the Rhine, the steepest of the Siebengebirge range, nr. Königswinter, alt. 1,065 ft.; ascended by a light railway; famous cave of legendary dragon.

**Draguignan,** *cap.* of Var dep., S.E. France, nr. Toulon, p. 10,010.

**Drakensburg,** or **Kathlamba Mtns.,** between Natal and Orange R. Col., S. Africa, highest peaks (each over 10,000 ft. alt.) Catkin and Mont aux Sources; railway crosses range by Van Reenas Pass.

**Drammen,** *spt.* Norway, on the Drammens Fly, nr. Oslo; exports timber, wood-pulp, paper, etc.; p. 26,174. [Ireland, p. 1,160.

**Draperstown,** *dist.* with ry. stn. in co. Londonderry.

**Drenthe,** an E. prov. of Holland, on Prussian frontier; area, 1,028 sq. m., p. 208,718; cap. Assen.

**Dresden,** *cap.* of Saxony, on R. Elbe; military headquarters, and 5th city in size of Germany. Numerous mfts., and fine art collections, p. 529,326.

**Dreux,** *t.* dep. Eure-et-Loir, France, nr. Chartres, hardware and heavy iron *mftg.*, flourishing trade, p. 10,150.

**Drewenz,** *R.* in Prussia, rising S.E. of Osterode, passes through L. of Drewenz (7 m. long), and after a course of 148 m. S.W. enters R. Vistula, nr. Thorn L. D. is connected by the Elbing Canal with the Baltic.

**Driffield, Great,** *urb. dist.*, on the Wolds of E. Yorks, Eng., 13 m. from Beverley, oil-cake works, p. *5,916*.

**Drighlington,** *urb. dist.*, W.R. Yorks, Eng., 5 m. S.E. Bradford, p. *4,064*.

**Drin,** *R.* of Albania, flowing (110 m.) to the Adriatic, nr. Alessio.

**Drina,** *R.* trib. of the Save, separating Serbia from Bosnia, flows 300 m. from its Montenegrin source to about 63 m. W. of Belgrade.

**Drogheda,** *spt.* co. Louth, I.F.S.; considerable trade in agr. prod., salmon, etc.; stormed by Cromwell in 1649, p. 12,450.

**Drohobicz,** *t.* in Galicia, Ukraine; salt, naphtha, and oil prod., trade in corn and cattle, p. 20,500.

**Droitwich,** *mun. bor.*, Worcestersh., Eng.; brine baths, salt works, etc., p. *4,553*.

**Drôme,** *dep.* S.E. France; traversed by Alps, and watered by R.'s Rhône, Drôme, and Isère; area 2,533 sq. m., p. 263,509; agr., forestry, silkworm growth, textile industry, cap. Valence.

**Dromore,** mkt. *t.* on R. Lagan, co. Down, N. Ireland, p. 2,520.

**Dronfield,** *urb. dist.*, mining *t.*, Derbysh., Eng., between Chesterfield and Sheffield, p. *4,530*.

**Dronne,** *R.* France (90 m.) trib. of R. Dordogne.

**Drontheim.** (*See* Trondhjem.) [5,560.

**Drossen,** *t.* nr. Frankfort-on-the-Oder, Prussia, p.

**Droylsden,** *urb. dist.*, Lancash., Eng.; cotton-spinning suburb of Prestwich, Manchester, p. *13,277*.

**Dublin,** metropolitan *c.* and *co.* of I.F.S., p. (of co.) 476,909; (of c.) 399,000, on R. Liffey at its entrance to Dublin Bay; cathedral, university, castle; spirit and chemical produce, stout, glass, etc.; also t. same name in Texas, U.S.A.

**Dubois,** *bor.* of Clearfield co. Pa., U.S.A., in coal mining dist., p. 11,400.

**Dubossary,** *t.* on R. Dniester, govt. Kherson, Ukraine; p. 10,250.

**Dubuque,** *c.* Iowa, U.S.A., cap. of Dubuque co., on Mississippi R.; clothing and carriage factories, p. 41,750. [Eng.

**Duddeston,** N.E. industrl. dist. of Birmingham,

**Duddingston,** *t.* suburban to Edinburgh, Scotl., p. 11,270. [Eng., flows (20 m.) to Irish Sea.

**Duddon,** *R.* in co.'s Cumberland and Lancash.,

**Dudley,** *co. bor.*, min. and *mftg. t.* Worcestersh., Eng., 8 m. N.W. Birmingham, p. *59,579*; also t. Mass., U.S.A., p. 4,300.

**Dudweiler,** *t.* nr. Saarbrücken, Prussia, in iron-works and colliery dist., p. 18,150.

**Duffield,** *t.* on R. Derwent, Derbyshire, Eng., p. 2,760.

**Duisberg,** *t.* Rhenish Prussia, in Ruhr coalfield, nr. Dusseldorf; extensive iron and other industries, p. 244,302.

**Dukinfield,** *mun. bor.*, Lancash., Eng., p. *19,309*.

**Dulcigno,** anc. *c.* in Montenegrin terr., Jugo-Slavia, formerly belonging to Turkish Albania; p. 5,050.

**Dulken,** *t.* in Prussia, nr. Crefeld, Rhine prov.; textile and ironworks, p. 10,700.

**Duluth,** *port* at W. end of L. Superior, Minn., U.S.A.; great trade in grain, timber, and iron ore, p. 101,500.

**Dulwich,** *suburb* of S. London, Eng.; residentl. and educatl. [Isls., p. 26,500.

**Dumangas,** *t.* in Panay, one of the Philippine

**Dumbartonsh.,** a western *co.* of Scotl.; area 267 sq. m., agr., stock-raising, ship bldg., chemicals, dyeing, paper-making, mining, quarrying, etc.; p. *147,751*; co. t. Dumbarton, *spt.* on R. Leven, nr. its confluence with the Clyde; p. *16,976*.

**Dumbrowitsa,** *R.* in Rumania, joins the Arjis, both tribs. to the Danube.

**Dum Dum,** *t.* and *cantonment* Bengal, India, 4½ m. from Calcutta; p. about 5,000.

**Dumfriesshire,** maritime *co.* S. Scotland, on Solway Firth; area, 1,068 sq. m., p. *81,060*. Northern pts. mtns., much of the remainder pastoral; lead ore, coal, sandstone; co. t. Dumfries (burgh) on R. Nith; p. *19,359*.

**Dumraon,** *t.* in Shahabad div., Bengal, India; p. 18,000.

**Düna, or Southern Dwina,** *R.* of U.S.S.R., rises in old govt. of Tver, and falls into S. at Riga (600 m.); navigable most of its course.

**Dünaburg, or Dvinsk,** *t.* (ftd.) on R. Düna, now in Latvia, p. 81,000.

**Dunbar,** *spt.* co. Haddington, Scotl., Scots defeated here by Edward I. in 1296, and by Cromwell in 1650; p. *5,062*.

**Dunblane,** mkt. *t.* on Allan Water, Perthsh., Scotl., 5 m. from Stirling; anc. cathedral, p. *4,421*.

**Duncansbay Head,** promontory of Caithness, the N.E. extremity of Scotl.

**Dundalk,** *spt.* and *cap.* co. Louth, I.F.S.; impt. ry. centre; p. 13,200.

**Dundas,** *c.* Wentworth co., Ontario, Canada, at head of Burlington Bay, p. 3,750.

**Dundas Strait,** separating Melville Isl. from Coburg pen. in N. Australia.

**Dundee,** *spt.* and mftg. *t.* Forfarsh., Scotl., on F. of Tay, 50 m. N. Edinburgh; p. *175,933*; also coal mining t. in N. of Natal; p. *1,657*; also p. of entry, Huntingdon co., Quebec, Canada.

**Dundrum Bay,** *inlet* on W. coast of co. Down, N. Ireland, 9 m. wide; also sm. spt. on B.

**Dunedin,** *cap.* of Otago and chief *t.* in S. Island, N. Zeal. ; p. 85,000. Fine bldgs., institutions, and good trade.

**Dunfermline,** *t.* Fife, Scotl., one of the Stirling Burghs, table linen and cover factories; tomb of Robert Bruce discovered here in 1818; p. *40,918*.

**Dungannon,** *t.* co. Tyrone, N. Ireland, the anc. seat of the O'Neills ; p. 3,610.

**Dungarvan,** *spt.* co. Waterford, I.F.S.; p. 4,760.

**Dungeness,** *hd.* on S. coast of Kent, Eng., 10 m. S.E. of Rye.

**Dunkirk, or Dunkerque,** most N. *p.* of France. Strong fort, good harbour and trade; p. 41,250; also p. on L. Erie, N.Y., U.S.A., good trade inland, p. 17,500.

**Dunloe, Gap of,** romantic *mtn. pass* nr. L. of Killarney, co. Kerry, I.F.S..

**Dunmore,** min. *t.* nr. Scranton, Pa., U.S.A., p. 23,750.

**Dunmow, Great and Little,** Essex, Eng., on R. Chelmer; (p. combined) 3,140.

**Dunnet Head,** *prom.* of Caithness, most N. pt. of Scotl.

**Dunnottar,** *par.* on Kincardine coast, nr. Stonehaven, Scotl.; ruined castle, p. *1,987*.

**Dunoon,** *wat. pl.* on Argyle side of F. of Clyde, nearly op. Greenock, p. *12,361*.

**Duns,** *burgh* of Berwicksh., Scotl., p. *2,677*.

**Dunsinane** (alt. 1,012 ft.), *hill* of the Sidlaws, nr. Perth, Scotl. [bonnet trade, p. *8,972*.

**Dunstable,** *mun. bor.*, Beds., Eng., straw hat and

**Dunvegan,** *vil.* with castle, on Dunvegan Bay, Isle of Skye, Scotl.; also stat. on Peace R., Athabasca, Canada.

**Duppel,** *t.* in Schleswig-Holstein, entrenched and fortified and the scene of much fighting between Danes and Germans before the fortification of Kiel.

**Duquesne,** *bor.* of Allegheny co., Penn., U.S.A., on the Monongahela R.; iron mftg., p. 21,500.

**Durance,** (217 m.), *R.* S.E. France, trib. of Rhône, the anc. Druentia, a mtn. torrent rising at the Gondran Pass in the Hautes-Alpes dep., and rushing down to irrigate vast tracts of land in Vaucluse and the Bouches du Rhône.

**Durango,** *state* of Mexico, area 42,272 sq. m.; rich as to mining, agr. and stock raising, p. 509,585; cap. Durango, c., has a fine cathedral, p. 41,000.

**Durazzo,** *p.* on Albanian coast of the Adriatic; olive oil and corn, p. 5,100.

**Durban,** *spt.* of Natal and chf. com. *t.* in S.E. Africa, p. (whites) *61,328*.

**Düren,** mftg. *t.* on R. Ruhr, Rhen. Prussia, p. 29,000.

**Durham,** *mun. bor.*, cathedral *c.* on R. Wear, cap. of co. Durham, N.E. Eng.; university and mftg., p. *16,223*. Area of D. co., 1,011 sq. m., many collieries and other industries, besides agr. and stock-keeping, p. *1,485,979*. Also Durham t., cap. of Durham co., N. Carolina, U.S.A., tobacco factories, etc., p. 55,000.

**Dursley,** mkt. *t.* in co. Gloucestersh., Eng., p. 2,480.

**Dusseldorf,** *t.* on R. Rhine, Prussia, one of the handsomest and most flourishing c.'s in Germany; iron foundries, machy., and other factories; p. 407,338; art and educatl. centre.

**Dutch East Indies.** (*See* **Malay Archipelago.**)

**Dutch Guiana.** (*See* **Surinam.**)

**Dux,** *t.* in the lignite coalfield of Bohemia, Czecho-Slovakia, p. 12,250.

**Dwina,** *R.* (N.) flows to White S. at Archangel, and is formed by the junc. of the Suchona and Vitchegda R.'s in the old Vologda govt. of U.S.S.R. It flows for 1,000 m. (*See* **Dina.**)

**Dysart,** *spt.* Fife, on F. of Forth, Scotl. (one of the Kirkcaldy Burghs), p. 4,200.

**Dzungaria, or Jungaria,** broad trench leading to the Mongolian plateau from the lowlands round L. Balkask; formerly an indept. state, now belonging partly to Russian Turkestan, and partly to the Chinese.

## E

**Eaglehawk,** *t.* Victoria, Australia, nr. Bendigo c. and gold mines; p. 4,719. [*1,671*.

**Eaglesham,** *vil.* co. Renfrew, Scot., nr. Glasgow; p.

**Ealing,** *mun. bor.*, Middx. Eng., suburban to W. London, p. *117,688*.

**Earby,** *urb. dist.*, W.R. Yorks, Eng., p. *5,522*.

**Earlestown,** mftg. *t.* S. Lancs., Eng., nr. Warrington; p. 8,100.

**Earn,** *R.* Perthsh., Scotl. (46 m.) issues from Loch Earn (6¼ m.) long and falls into the R. Tay.

**Earnslaw,** mountns. *dist.* of Otago, S. isl., N.Z.; highest peak, 9,165 ft.

**Earsdon,** *urb. dist.*, Northumberland, Eng., p. *13,086*.

**Easdale,** *isl.* off W. Argyllsh., Scotl., nr. Oban, slate quarries.

**Easingwold,** *t.* in agr. dist., N.R. Yorksh., Eng., nr. Thirsk, p. 2,120.

**East Africa.** (*See* **Brit. E. Africa:** also **Portuguese E. Afr.**)

**East Anglia,** anc. name of the dist. comprising Norfolk and Suffolk, Eng.

**East Barnet.** (*See* **Barnet.**)

**Eastbourne,** *co. bor., wat. pl.* E. coast of Sussex, Eng.; 19 m. E. of Brighton. p. *57,435*.

**East Bridgewater,** *t.* nr. Boston, Mass., U.S.A., p. 3,600.

**East Cape,** extreme N.E. pt. of Asia; also eastern extremity of New Guinea.

**East Cowes,** Isle of Wight. (*See* **Cowes.**)

**East Dereham,** *t.* Norfolk, Eng., p. *5,641*.

**Easter Isl.** (or Waihu Isl.), in Pacific, W. of Chili.

**East Farnham,** *t.* in Brome co., Quebec, Canada, p. 2,750.

**East Grinstead,** *urb. dist.*, mkt. *t.* E. Sussex, Eng., p. *7,901*.

**East Haddam,** *t.* in Connecticut, U.S.A.

**East Ham,** *co. bor.*, Essex, Eng., suburban to E. London, p. *142,460*.

**Eastham,** *vil.* Cheshire, Eng., nr. entrance to Manchester Ship Canal, p. 2,020.

**East Las Vegas,** *t.* in New Mexico, U.S.A.

**Eastleigh (and Bishopstoke),** *t.* and *urb. dist.* on the L. & S.W. Rway.; 5 m. N.E. of Southampton, p. *18,333*.

**East Liverpool,** pottery mftg. *t.* Ohio, U.S.A., on Ohio R., p. 21,411.

**East London,** *spt.* C. of Good Hope, on S.E. coast, p. (whites) *20,397*.

**East and West Molesey,** *urb. dist.* on Thames, of Surrey, Eng., p. *8,460*.

**Easton,** *t.* on Delaware R., Pa., U.S.A., great ry. centre; p. 34,500; also t.'s Maryland, and Mass., U.S.A.

**East Orange,** *t.* (residential suburban to New York) in New Jersey, U.S.A., p. 70,000.

**East Portland,** *c.* Oregon, U.S.A., in Willamette R., p. 15,000.

**East Providence,** *t.* Rhode Isl., U.S.A., on Seekonk R., p. 21,793. [berg (*q.v.*).

**East Prussia,** *prov.* of Prussia, Germ.; cap. Königs-

**East Retford,** *mun. bor.*, mftg. *t.* in co. Notts, Eng., p. *14,228*.

**East River,** *channel* between New York and Brooklyn, U.S.A.

**East St. Louis,** *c.* Ill., U.S.A., on Mississippi, opposite St. Louis, extensive dockyards, p. 75,000.
**East Stonehouse,** *t.* Devonsh., Eng., adjoining Plymouth and Devonport. [p. 1,760.
**East Vale,** *t.* Staffordsh., Eng., nr. Stoke-on-Trent.
**Eastwood,** *urb. dist.*, Nottingham, Eng., p. *5,360.*
**Eau Claire,** *t.* Wis., U.S.A., at head of Chippewa R., sawmills and timber-yards, p. 27,000.
**Eaux Bonnes, Les,** *wat. pl.* in French Pyrenees, nr. Pau.
**Eaux Chaudes,** *wat. pl.* French Pyrenees.
**Ebal, Mt.,** in Palestine, opposite Gerizim (modern "Jebel Eslamiyah"), alt. 2,986 ft.
**Ebbsfleet,** *vil.* nr. Ramsgate, E. coast Kent, Eng., landing pl. of Hengist and Horsa and of St. Augustine.
**Ebbw Vale,** *urb. dist.*, Monmouthsh., Eng., iron and coal, p. *31,695.* [Prussia, p. 23,000.
**Eberswalde,** industrl. *t.* Brandenburg, nr. Berlin,
**Eboli,** or **Evoli,** *t.* Italy, in Salerno, 44 m. S.E. Naples, p. 11,750.
**Ebro,** *R.*, N.E. Spain (440 m.), flows to Mediterranean from Cantabrian Mtns.
**Ebwy,** *R.* of Monmouth (24 m.), Eng., trib. of R. Usk.
**Ecclefechan,** *vil.* Dumfries, Scotl., birthplace of Thomas Carlyle.
**Eccles,** *mun. bor.*, on Manchester Ship Canal, Lancs, Eng.; silk-throwing, fustian, ginghams, etc., p. *44,415.*
**Eccleshall Bierlow,** *t.* W.R. Yorks, Eng., suburban to Sheffield.
**Ecclesfield,** *t.* W.R. Yorks, Eng., 5 m. N. of Sheffield; cutlery, etc., p. 37,150.
**Eccleshall,** mkt. *t.* in N.W. Staffs, Eng., p. 5,520.
**Eccleshill,** *t.* on R. Aire, W.R. Yorks, Eng., suburb to Bradford, p. 8,600.
**Eccleston,** industrl. *t.* nr. Prescot, Lancs. Eng., p. 3,440.
**Echmiedzin,** *t.* in govt. Erivan, Transcaucasia.
**Echternach,** *t.* Luxembourg, Netherlands, famous abbey, with annual Whitsuntide dancing-procession, p. 4,500.
**Echuca,** *t.* on R. Murray, in vineyard dist., Victoria, Australia, p. 3,745.
**Echunga,** *t.* in S. Australia, in agr. and gold-digging dist. nr. Adelaide.
**Ecija,** anc. c. on R. Jenil, Seville, Spain, the Roman Astigi, p. 26,100.
**Eck, Loch,** sm. *L.* (6 m. long), co. Argyllsh., Scotl.
**Ecuador** (area 219,000 sq. m., p. 3,207,500), Republic, S. America, between Colombia and Peru; cocoa the princ. product; cap. Quito.
**Edam,** *t.* Holland, 12 m. N. Amsterdam, on Zuyder Zee; noted for cheese; p. 6,500.
**Eday,** *isl.* of the Orkneys, Scotl., includ d in Stronsay par. (7 m. long, 2 m. wide), the Ocelli of Ptolemy, p. *469.*
**Eddystone,** famous rock with lighthouse in Eng. chan. off Plymouth.
**Ede,** industrl. *t.* nr. Arnhem, prov. Gelderland, Holland; p. 13,010.
**Eden,** *R.* Cumb. and Westmorld., Eng. (65 m.), flows into Solway F.; also R. of Fife, Scotl., flowing (29 m.) to St. Andrews Bay; also R. of Scotl. (affl. of the Tweed, 23 m.) nr. Kelso.
**Edenburg,** *t.* Orange Free State, S. Africa, on main line 47 m. S. of Bloemfontein, p. *1,104.*
**Edenhope,** *t.* in Victoria, nr. the South Australian border; p. 3,000.
**Edessa.** (*See* Urfah.)
**Edfu** or **Edfoo,** *t.* on the Nile, Upper Egypt, ruined temples; p. 2,500.
**Edgbaston,** S.W. *dist.* of Birmingham, Eng.
**Edgehill,** *ridge* 15 m. S. Warwick, Eng. First battle in Civil War, 1642.
**Edgewater,** *t.* on Staten Isl., New York, U.S.A.; p. 15,500.
**Edgeworthstown,** *t.* co. Longford, I.F.S.; p. 1,080.
**Edgware,** *par.* of Middlesex co., Eng., suburban to London.
**Edinburg,** *t.* in Indiana, U.S.A., p. 4,020; also smlr. t.'s in nine others of the U.S.A.
**Edinburgh,** cap. of Scotland, on S. side of F. of Forth (2 m. dist.). Has famous University, castle and pal. (Holyrood), also import. industries, and is the literary, as Glasgow is the commercial, centre of Scotland. E. c. is also the capital of co. E. (or *Midlothian*), area 362 sq. m., p. *438,998.*
**Editharburg,** *wat. pl.* in S. Australia, G. of St. Vincent.
**Edmonton,** *urb. dist.*, Middlesex, Eng., p. *77,652*; also t. on Saskatchewan R., Alberta, Canada, p. 58,621.
**Edrom,** *par.* E. Berwick, Scotl., nr. Duns., p. *1,015.*
**Edwardesburg,** or **Port Elgin,** *t.* in Grenville co., Ontario, Canada, p. 3,200.
**Edwardesabad** (or **Dhulipnagar**), milit. sta. Kuram Val., Punjab, N.W. India, p. 10,500.
**Edwardsville,** *t.* in Madison co., Ill., U.S.A.; p. 6,300; also *t.* Lucerne co., Pa., U.S.A., p. 8,750.
**Eecloo,** *t.* in Belgium, nr. Ghent, E. Flanders, p. 12,900.
**Egba,** nat. *state* in Brit. Nigeria, W. Africa, cap. Abbeokuta.
**Eger,** *t.* in Bohemia, nr. Prague, on R. Eger; cloth, hat, and shoe factories; p. 25,800.
**Egga,** *port* on R. Niger, Africa, in Yoruba country, p. 10,000.
**Egham,** *urb. dist.*, on R. Thames, Eng., nr. Staines; contains the field of Runnymede, where King John signed Magna Charta, also the artificl. L., Virginia Water, p. *15,915.*
**Egin,** *t.* on R. Euphrates in Armenia, p. 10,200; many Armenians massacred, 1895.
**Egorievsk,** *t.* in old Ryazan govt., U.S.S.R., import. corn fairs, p. 21,100.
**Egremont,** *urb. dist.*, mkt. *t.* on R. Eden, Cumb., Eng., p. *6,015*; also sub. of Birkenhead, Cheshire, p. 3,550.
**Egypt,** ind. sovereign state, area (excluding the Sudan) about 350,000 sq. m., p. 12,750,000; E. proper stretches from the Medit. to Wady Halfa; cap. Cairo, chief port Alexandria; cap. of Sudan, Khartum, port Suakin (*q.v.*).
**Ehen,** sml. *R.* (12 m.), Cumberland, Eng., flows into Irish S.
**Ehrenbreitstein,** *t.* and *fort* on Rhine, opposite Coblenz, the "Gibraltar of the Rhine," p. 6,120.
**Ehrenfeld,** *t.* Rhen. Prussia, *mftg.* sub. of Cologne, p. 29,200. [embroidery, p. 7,760.
**Eibenstock,** *t.* Saxony, 15 m. S. Zwickau; tambour
**Eider,** *R.* between Schleswig and Holstein, Germany (90 m.) now connected with Emperor William Canal.
**Eidsvold,** *t.* nr. Oslo, Norway, p. 7,860.
**Eiger,** *mtn.*, one of the highest peaks of the Bernese Oberland, Switz., alt. 13,042 ft.
**Eigg,** *isl.* of the Hebrides, Scotl., included in co. Inverness; basaltic rocks on coast.
**Eildon Hills,** three peaks nr. Melrose, Roxburgh, Scotl., highest pt. 1,385 ft.
**Eilenburg,** *mftg. t.* on R. Mulde, Prussian Saxony; anc. castle, p. 17,100.
**Einbeck,** *t.* in Hanover, Germany; antiqn. museum, p. 8,075.
**Einsiedeln,** *t.* cant. Schwyz, Switz.; old monastery, pilgrim resort, p. 9,160.
**Eisenach,** *t.* Saxe-Weimar, Cent. Germany, on R. Nesse, at foot of the Thuringian forest, p. 39,229.
**Eisenerz,** min. *t.* in Erzberg mtns., Styria, Austria, p. 6,750.
**Eisleben,** *t.* Prussian Saxony, 39 m. from Leipsic; birthpl. of Luther, centre of copper and silver min. regn., p. 25,210.
**Ekaterinburg,** *t.* on R. Iset in the E. Urals, Russia, govt. mining centre, many import. industries, p. 61,000.
**Ekaterinodar,** busy Cossack *t.* on Kuban R., S. Russia; great grain trade, p. 68,750.
**Ekaterinoslav,** *prov.* of govt. of Ukraine; area 24,478 sq. m., p. (abt.) 2,500,000; rich in minls., soil fertile black earth; cap. Ekaterinoslav, on R. Dnieper, p. 126,250.
**Ekowe,** *cap.* of Zululand, S. Africa.
**Elabuga,** *t.* of Russia on Kama R., 279 m. S.E. of Vyatka; good corn trade, anc. burial ground, many reliques of Stone Age, p. 10,200.
**Elands Laagte,** *vil.* and *sta.* N. Natal, nr. Ladysmith; Brit. vict., Oct. 21, 1899.
**El Araish,** *spt.* fortified, Morocco, on the Atlantic coast, p. 5,100.
**Elba,** *isl.* off Tuscan coast, Italy, prov. Leghorn; iron ore, wine, salt, convict prisons, p. 27,850; chf. t. Porto Ferrajo. Napoleon dwelt on the isl., 1814–1815.
**Elbe** (725 m.), chief *R.* of Germany, the Roman "Albis," rises in Bohemia and flows into North Sea 65 m. below Hamburg. Navig. to Melnik in Bohemia (over 500 m.). [157,218.
**Elberfeld,** import. *mftg. t.* Rhine prov., Prussia, p.
**Elbeuf,** *t.* on R. Seine, France, 14 m. W. of Rouen; woollen manuf.; p. 20,120.

**Elbing**, *t.*, W. Prussia, on R. Elbing, nr. the Frisches Haff; shipbldg., p. 67,127.
**Elbruz, Mt.**, highest pt. in the Caucasus, alt. 18,526 ft.
**Elburz**, *mtn.* ra. in N. Persia, bordering on Caspian Sea; highest peak, Demavend, 21,000 ft.
**Elche**, *t.* nr. Alicante, Spain, on R. Vinalpo; oil, soap, and other manuf., p. 30,000.
**Elephanta**, *isl.* in Bombay Harbour, with wonderful cave sculptures.
**Elephantine**, *isl.* in the Nile, Upper Egypt, opposite Assouan.
**Eleuthera**, Brit. *isl.* Bahamas, W.I., p. 6,048.
**El Fasher**, *cap.* of Darfur, E. Sudan, p. 12,500.
**Elgin**, or **Moraysh.**, *co.*, N.E. Scotl., area 482 sq. m.; p. 41,561; distilling, woollen manuf., agr.; co. t. Elgin on R. Lossie, p. *10,192*. Also Elgin, *c.* in Kane co. Illinois, U.S.A., watch-making, p. 36,750.
**Elgon Mt.** (or **Masawa**), extinct *volcano* in Brit. E. Africa, a vast mass, 40 m. in diam., alt. 14,100 ft., cave dwellings on slopes.
**El Hasa**, situated on Persian Gulf, cap. Hothuf.
**Elizabetgrad**, *t.* (fort.) on R. Ingul in Kherson, govt., Russia, flour mills, corn trade, p. 64,500.
**Elizabeth City**, mftg. *t.* New Jersey, U.S.A., p. 116,000; also t. on Pasquotank R., N. Carolina, U.S.A., timber industry, p. 10,100.
**Elizabetpol**, *t.* Transcaucasia, Russia, cap. of govt. same name; gardening, silkworm-rearing; p. 23,000.
**El Khargeh**, the great oasis in the Libyan desert, Egypt.
**El Khatif**, fortified *t.* of El Hasa, p. 21,000.
**El Khulil**, or **Hebron**, anc. *t.* S. Palestine, p. 18,500.
**Elk Mtns.**, lofty *ra.* in W. Colorado, U.S.A., highest pt. Castle Peak, alt. 14,115 ft.
**Elkhart**, mftg. *c.* of Elkhart co., Indiana, U.S.A., p. 33,750.
**Elland**, *urb. dist.*, on Calder R., W.R. Yorks, Eng., nr. Halifax, cotton mills, p. *10,327*.
**Ellesmere**, *urb. dist.*, mkt. *t.* Shropshire, Eng., nr. Whitchurch, p. *1,872*.
**Ellesmere Land**, *reg.* in Arctic America.
**Ellesmere Port and Whitby**, *urb. dist.*, Cheshire, Eng., p. *13,898*.
**Ellice Isls.**, Brit. group in S. Pacific, N. of Fiji.
**Ellon**, *vil.* Aberdeen co., Scotl., on R. Yohan, p. (par.) *3,446*.
**Ellora**, *vil.* Nizam's Dom., S. India, with wonderful rock temples.
**Ellore**, *t.* Madras, India; cotton-manuf., p. 33,500.
**Elmina**, *t.* fort., Brit. Gold Coast Colony, W. Africa, p. 15,200.
**Elmira**, mftg. *t.* N.Y. State, U.S.A., p. 47,500.
**Elmshorn**, *t.* in Schleswig-Holstein, Prussia, tanneries, etc., p. 16,000.
**El Obeid**, *cap.* Kordofan, E. Sudan, p. 30,000 to 41,000. Mahdist victory over Hicks Pasha's Egyptian army, 1883.
**Elopura.** (*See* Sandakan.)
**El Paso**, two frontier *t.*'s on Rio Grande; one in Texas, p. 105,000; the other in Mexico, p. 8,250.
**Elsass**, Ger. name of Alsace, *prov.* taken from France in 1871, and restored in 1918.
**Elsinore**, *spt.* Denmark, at narrowest pt. of the Sound, 28 m. from Copenhagen, shipbldg. trade, p. 15,120.
**Elster** (White), *R.* Germany, flows 110 m. N. from Bohemia to Saale, also (Black) *R.* rises in Saxony and joins the Elbe.
**Elstow**, *vil.* Bedfordsh., Eng., birthpl. of Bunyan.
**Elstree**, *vil.* residential and scholastic dist., Herts, Eng.
**Elswick**, *t.* Northumberland, Eng., nr. Newcastle; Armstrong's shipbuilding and ordnance works.
**Eltham**, *vil.* and residential dist., Kent, Eng., p. 7,200; also t. Victoria, 14 m. E.N.E. Melbourne, on R. Yarra, p. 4,071.
**Elton**, mftg. *t.* Lancs, Eng., in Bury bor.; p. 12,850; also salt L., govt Samara, Russia.
**Elvas**, *c.* (fort.) on R. Guidiana, E. frontier of Portugal, p. 13,500.
**Elwood**, *t.* (industrl.) of Madeira co., Indiana, U.S.A., on Duck Creek, p. 10,500.
**Ely, Isle of**, *adm. co.*, Eng., p. *77,705*.
**Ely**, *urb. dist.*, cathedral *c.* on R. Ouse, Cambs, Eng.; in fruit growing dist., p. *8,382*.
**Elyria**, industrl. *t.* in Loraine co., Ohio, U.S.A., p. 26,000.
**Embrun**, *c.* (fort.) on R. Durance, dep. Hautes-Alpes, France, p. 4,020.
**Emden**, *spt.* on Dollart Bay, Hanover; agr. produce, live-stock, etc.; p. 17,750.
**Emerald Hill**, *suburb* of Melbourne, Victoria.
**Emerson**, *t.* prov. of Manitoba, Canada, 65 m. S. of Winnipeg.
**Emilia**, *dep.* Cent. Italy, area 8,042 sq. m., p. 2,681,201; straw-plaiting, agr., etc.
**Emley**, *urb. dist.*, W.R. Yorks, Eng., 7 m. S.E. Huddersfield, p. *1,635*.
**Emmaville**, mining *t.* 403 m. from Sydney, N.S.W.
**Emmen**, *t.*, Netherlands, in Drenthe, 30 m. S.E. of Groningen, p. 40,749.
**Emmerich**, walled *t.* Rhenish Prussia; nr. Düsseldorf; tobacco factories, shipbldg.; p. 10,750.
**Empedrado**, *t.* Argentine Republic, prov. Corrientes, S. America; p. 10,000.
**Emperor William's Land**, former German possession on N. side of New Guinea.
**Ems**, *wat. pl.* Hesse-Nassau, Prussia, on R. Lahn; residentl., p. 7,070; also R. (205 m.) N. Germany, flowing to North Sea.
**Emsworth**, *spt.* Hants, Eng., nr. Havant, p. 2,030.
**Emu Park**, *wat. pl.* nr. Rockhampton, Queensland.
**Enara**, *L.* in Russian Lapland, area 685 sq. m., outlet into Arctic Oc.
**Encounter Bay**, S. Australia, receives Murray R.
**Enderby Land**, extensive *territory* in the Antarctic Ocean.
**Endrick**, *R.* in Stirling co., Scotl., flows (29 m.) to [Loch Lomond.
**Enfield**, *urb. dist.* Middlesex, Eng., 10 m. N. London, Govt. small arms factory, p. *67,869*.
**Engadine**, Alpine *valley* in Grisons, Switz., watered by R. Inn; favourite health resort.
**Engano**, *C.* S. extremity of Luzon, Philippine Isls.
**England**, area 50,823 sq. m., p. *37,354,917*, S. and most populous portion of Great Britain, the largest European isl. Nearest point to the Continent (Dover) 21 m. from N.E. coast of France; greatest length, Berwick to the Lizard, 420 m.; greatest breadth, Lowestoft Ness to Land's End, 360 m. Chief ports, London (the metropolis of the Empire), Liverpool, Bristol, Southampton, Hull, Newcastle-on-Tyne, Sunderland, Yarmouth, Plymouth, and Falmouth, all of which see.
**English Channel**, narrow *sea* separating England from France, extends from Strait of Dover to Land's End in Cornwall; length 300 m., greatest width 155 m.
**Enkhuizen**, Dutch *spt.* on W. side of Zuyder Zee, Holland, p. 6,100. [Whitehaven.
**Ennerdale Water**, *L.* in co. Cumberland, Eng., nr.
**Ennersdale**, *sta.* on Natal main line, between Estcourt and Colenso, South Africa.
**Ennis**, *t.* co. Clare, I.F.S., on R. Fergus, p. 6,500.
**Enniscorthy**, *t.* co. Wexford, I.F.S., on R. Slaney, p. 5,760.
**Enniskillen**, *co. t.* of Fermanagh, N. Ireland, p. 5,430.
**Enns**, *R.* (112 m.), Austria, trib. of Danube.
**Enos**, *spt.* at mouth of Maritza R., Thrace, p. 7,070.
**Enschede**, *t.* in prov. Overyssel, Holland, on Prussian frontier; cotton spinning, p. 41,254.
**Entre Douro et Minho**, fruit-growing prov. of N. Portugal.
**Entre Rios**, stock-raising *prov.* between the rivers Parana and Uruguay, Argentina, area 29,241 sq. m., p. 569,000.
**Entry**, *isl.* New Zealand, on E. side of Cook's Strait.
**Eperjes**, *t.* Czecho-Slov., on R. Tarcza; linen manuf., p. 13,370. [R. Marne, p. 20,150.
**Epernay**, *t.* Champagne dist., E. France, on
**Ephesus**, ruined *c.* of Asia Minor, 35 m. from Smyrna.
**Epinal**, *cap.* of Vosges dep., E. France, many manuf.; p. 27,960.
**Epirus**, anc. *dist.* S. Albania and N.W. Greece.
**Epping**, *urb. dist.*, and *forest*, Essex, Eng., p. *4,956*.
**Epsom**, *urb. dist.*, mkt. *t.* Surrey, Eng., famous racecourse, p. *27,089*.
**Epworth**, *t.* Lincs., Eng., nr. Gainsborough; birthpl. of John Wesley, p. 2,200.
**Erebus, Mt.**, active *volcano*, Victoria Ld., Antarctic, alt. 12,367 ft.
**Erfurt**, *c.*, assoc. with Luther, nr. Weimar, Saxony; two citadels, mkt. gardening and seed growing dist.; p. 129,640.
**Ericht**, *loch* in the Grampians, Scotl., 14½ m. long.
**Erie**, *L.*, the most southerly of the Great Lakes of N. America, 9,500 sq. m., in area; also pt. on L. Erie and cap. of Erie co., Pennsylvania, U.S.A.; gt. trade centre; p. 118,000.

**Eriskay,** one of the Hebrides *isls.*, Scotl., south of Uist.
**Erith,** *urb. dist.*, on Lower Thames, Kent, Eng.; p. (urban dist.) *32,780.*
**Eritrea,** Italian *colony* on Red Sea coast; area 45,800 sq. m.; p. 405,680.
**Erivan,** Armenian republic, Transcaucasia, area 15,240 sq. m., p. 1,214,391; p. *t.* 90,000.
**Erlangen,** *t.* Bavaria on R. Regnitz, nr. Nuremberg, University; p. 23,521.
**Eriau,** *c.* in Hungary, 89 m. N.E. of Pesth, cathedral, red wine; p. 23,750.
**Erne,** *R.* (72 m.) and L., N. Ireland; Donegal Bay their outlet. [p. 16,000.
**Erode,** *t.* in the Coimbatore dist. of Madras, India;
**Erromanga,** *isl.* in New Hebrides; p. 2,000.
**Erzerum,** *t.* Armenia, in vilayet of same name; forests and mineral springs, in dist.; large garrison; massacre of Armenians, 1895, earthquake, 1901; p. 40,000.
**Erzgebirge,** *mtn.* range between Saxony and Bohemia, highest peak, 4,122 ft.
**Erzingan,** *t.* in the western Euphrates vall., military centre; the anc. Arsinga; p. 23,500.
**Esbjerg,** *t.* on Jutland coast, Denmark, gt. trade; p. 15,750. [trade; p. 14,600.
**Escanaba,** *t.* Delta co., Michigan, U.S.A.; timber
**Eschwerge,** *t.* on R. Werra, prov. Hesse-Nassau, Prussia, p. 11,250.
**Eschweiler,** *t.* Rhenish Prussia, nr. Aix-la-Chapelle, foundries, etc., p. 21,020.
**Esdraelon,** *plain* in N. Palestine, between Carmel and Gilboa Mtns.
**Esh,** *t.* 5 m. from Durham, Eng., p. 6,550.
**Esher and the Dittons,** *urb. dist.*, on R. Mole, Surrey, Eng., p. *17,075.* [far., Scotl.
**Esk,** names of sm. R.'s in Dumfr., Edin., and For-
**Eske,** *R.*, Eng., flows into North Sea at Whitby.
**Eskilstuna,** *t.* in Sweden, on R. Eskilstuna, 55 m. from Stockholm; cutlery, p. 30,253.
**Eski Shehr,** *t.* in Asia Minor, on Pursak Su R.; meerschaum mines, p. 21,000.
**Eski-Zagra,** *t.*, Bulgaria, on the S. slope of the Balkans, p. 18,000.
**Esla,** *R.*, Spain, 152 m., affit. of the Doura.
**Esmeralda,** *t.* in prov. and on R. of the same name, Ecuador, S. America, p. 5,200.
**Esneh,** *t.* on R. Nile, Upper Egypt, p. 10,250.
**Esperance,** *t.* and summer resort in Western Australia, interesting caves. [jelly, p. 2,250.
**Esperanza,** old *t.* Santa Clara prov., Cuba; guava
**Espiritu Santo,** maritime *prov.* of Brazil, cap. Victoria.
**Esquimalt,** Brit. naval *stn.* on S.E. coast of Vancouver Isl., Brit. Columbia, p. 1,500.
**Essek,** or **Esjek,** industrl. *t.* of Slavonia on R. Drave, p. 20,070.
**Essen,** *t.* Rhenish Prussia; Krupp's ordnance and engineering works, p. 439,257.
**Essendon,** *t.* in Victoria, nr. Melbourne; meat-preserving, p. 32,260.
**Essequibo,** *R.*, Brit. Guiana (620 m.), flows into Atlantic; also country of B.G., formerly a separate colony.
**Essex** (area 1,542 *sq.* m., p. *1,755,240*), co. in Eng., on N. side of Thames; co. t. Chelmsford; also sm. *t.*'s in Vermont and Connecticut, U.S.A.
**Esslingen,** fort. *t.* Wurtemberg, Germany, on R. Neckar; cotton manuf., p. 37,814.
**Essones,** *t.* nr. Corbeil, dep. Seine-et-Oise, France; paper factories, p. 10,050. [p. *1,259.*
**Estcourt,** *t.* Natal, S. Africa, 150 m. from Durban,
**Estella,** *t.* prov. Navarre, Spain, on R. Ega; formerly a Carlist stronghold, p. 7,140.
**Esthonia,** independent State (area 23,160 sq. m., p. 1,750,000) extending along a shore of the G. of Finland, cap. Reval.
**Eston,** *urb. dist.*, nr. Stockton-on-Tees, Yorks, Eng., blast furnaces, p. *31,142.*
**Estrella, Serra da,** *mtn.* range in Beira, Portugal, highest pt. 7,524 ft.
**Estremadura,** former coast *prov.* of Portugal, on the Atlantic Ocean.
**Esztergom,** industrl. *t.* in Hungary, cap. co. same name, p. (with subs.). 19,000.
**Etables,** *t.* dep. Côtes-du-Nord, France, on English Channel, p. 4,440.
**Etampes,** commerci. *t.*, dep. Seine-et-Oise, France, p. 9,020. [p. 4,510.
**Etaples,** *t.* in Pas-de-Calais, France, nr. Boulogne.
**Ethiopia,** former name of African countries S. of Egypt. [Atlantic.
**Etive,** *R.* (20 m.) and *loch.* Argyllsh., Scotl., arm of
**Etna,** *act. volcano* N.E. coast of Sicily, alt. 10,784 ft.; also *t.* Pennsylvania, U.S.A., on R. Alleghany, p. 7,600.
**Eton,** *urb. dist.*, Bucks, Eng., on R. Thames; famous public school, opp. Windsor, p. *2,005.*
**Etowah,** *R.* in Georgia, U.S.A., trib. of R. Coosa.
**Etruria,** *t.* with large Wedgwood potteries, and ironworks, near Burslem, Staffs, Eng.; also anc. Italian country (now Tuscany, and part of Umbria).
**Ettrick,** *forest* and *R.* (32 m.) in Selkirksh., Scotl.
**Eu,** *t.* N. France, nr. Dieppe, famous château, p. 5,000.
**Eubœa,** or **Negropont,** Greek *isl.* in Ægean S., 115 m. long, p. 127,876.
**Eupatoria,** *spt.* on W. coast of Crimea, Russia; soap, leather, locks, etc., p. 17,000.
**Eupen** and **Malmédy,** *prov.* of Belgium; area 371 sq. m., p. 64,520.
**Euphrates** (1,780 m.), largest *R.* in S.W. Asia, rising in Armenian Uplands and joined by the Tigris and the Persian G., as the Shatt-el-Arab.
**Eure,** *dep.* (mainly agr.), Normandy, France; area 2,331 sq. m., p. (decreasing) 303,159; cap. Evreux, on R. Eure (117 m. long), at its confluence with Seine.
**Eure-et-Loir,** *dep.* Northern France, area 2,291 sq. m., p. 251,255; cap. Chartres.
**Eureka,** *co.* and mining *t.* Nevada, p. 4,900; also c. Humboldt co., Cal., U.S.A., p. 15,760.
**Eureka Springs,** *wat. pl.* Carroll co., Arkansas, U.S.A., p. 5,000. [Victoria, p. 8,908.
**Euroa,** *t.* in pastoral dist., 93 m. from Melbourne,
**Europe,** *continent*, forming N.W. portion of the Old World,; area nearly 4,000,000 sq. m., p. (about) 400,000,000. Separated from Asia by the Ural Mtns. and R., and bounded on the N. by the Arctic O., W. by the Atlantic, and S. by the Mediterranean. Principal co.'s, the insular kingdom of Great Britain and Ireland, France, Germany, Russia, Italy, Spain, Portugal, Austria, Hungary, Switzerland, Sweden, Norway, Denmark, Holland, Belgium, Greece, Jugo-Slavia, Czecho-Slovakia, Poland, Ukraine, Esthonia, Latvia, Lithuania, etc. (all of which see separately). Chief mtns., Alps, Apennines, Pyrenees, Carpathians, and Balkans, with the Ural and Caucasus ranges on the confines. Principal R.'s, the Volga, Don, Dnieper, Dniester, Danube, Bug, Po, Tiber, Arno, Rhône, Ebro, Guadalquivir, Guadiana, Tagus, Douro, Garonne, Loire, Seine, Rhine, Weser, Elbe, Oder, Vistula, Dwina, and Mezen. (*See* separate entries.)
**Evanston,** *t.* Ill., U.S.A., on L. Michigan; university, p. 66,000. [R., p. 104,000.
**Evansville,** mftg. *t.* of Indiana, U.S.A., on Ohio
**Everest Mt.** (29,002 ft.), highest mtn. in the Himalayas and in the world.
**Everett,** mftg. *t.* nr. Boston, Mass., U.S.A., p. 49,250; also *t.* on Puget Sound, Washington, U.S.A., p. 30,750. [Florida, U.S.A.
**Everglades,** extensive uninhabited marsh in S.
**Everton,** a division of Liverpool, Eng.
**Evesham,** *mun. bor.* and mkt. *t.* in Worcestershire, p. *8,799.*
**Evora,** *cap.* of Alemtejo, prov. Portugal; famous for its mules and cork woods, p. 17,901.
**Evreux,** *cap.* of Eure dep., France; ticking and other textile manuf.; fine town hall, p. 19,780.
**Ewe,** *loch*, Ross-sh., Scotl., inlet of The Minch, with sml. isl. same name. [Eng.
**Ewell,** *vil.* and residential *dist.* in Epsom, Surrey,
**Excelsior Springs,** *t.* in Missouri, U.S.A., p. 4,600.
**Exe,** *R.* Somerset and Devon (55 m.), rising on Exmoor.
**Exeter,** *co. bor.*, anc. *c.* on R. Exe, co. *t.* of Devonsh. Eng., fine cathedral (12th cent.), p. *66,039*; also vil., Huron co., Canada.
**Exminster,** *t.* nr. Exeter, Eng., p. 2,460.
**Exmoor,** extensive moorland and forest tract, borders of co.'s Somerset and Devon, Eng.; highest point Dunkery Beacon, 1,707 *ft.*
**Exmouth,** *urb. dist.*, *wat. pl.* Devon, Eng., at mouth of R. Exe, p. *14,584.*
**Exploits,** *R.* Newfoundland, flows 150 m. to Exploits Bay. [p. 3,730.
**Exumas,** group of sml. *isls.* in Bahamas, W. Indies,
**Eyam,** *t.* in Bakewell, Derbysh., Eng., p. 1,100.
**Eye,** *mun. bor.*, mkt. *t.* Suffolk, Eng., p. *1,733*
**Eyemouth,** *spt.* Berwick, Eng., p. *2,321.*
**Eylau,** *t.* E. Prussia, nr. Königsberg, p. 4,700; famous battle, 1807, between Napoleon's troops and those of Russia and Prussia.

**Eyre, L.** (salt), N part of S. Australia, area 4,000 sq. m., length 95 m.
**Eyria,** *pen.* in S. Australia, N.W. of Spencer G.

## F

**Faaborg,** *spt.* on Funen Isl., Denmark, p. 3,950.
**Fabriano,** mftg. *c.* prov. Ancona, Central Italy; fine cathedral, p. 22,860.
**Fabrizia,** *t.* nr. Monteleone, Italy, p. 5,550.
**Fachan, or Fatshan,** large industrl. *t.* nr. Canton, S. China, p. 400,000.
**Facone,** sacred *L.* in isl. Honshiu, Japan, 57 m. from Tokio, 9½ m. long.
**Faenza,** *prov.* Ravenna, Cent. Italy; faïence indust., p. 18,880.
**Fahlun,** or **Falun,** *t.* in Kopparberg, Sweden; famous copper mine, p. 9,250.
**Fai-Fo,** *t.* in Annam, Indo-Chinese penin., p. 14,950.
**Failsworth,** *urb. dist.*, cotton mftg. *t.* Lancs., Eng.; suburban to Manchester, p. *15,724*.
**Fairfield,** *t.* in Derbysh., Eng., p. 4,130; also two tns. in Conn. and Iowa, U.S.A.
**Fair Isl.,** midway between Shetland and Orkney, Scotl.; flagship of Spanish Armada wrecked here, 1588. [battle in Civil War, 1862.
**Fairoaks,** *stn.* nr. Richmond, Virginia, U.S.A.; great
**Fairweather,** *mtn.* Alaska, N. America, alt. 14,872 ft. [10,500.
**Faizpur,** *t.* in Khandesh div., Bombay, India, p.
**Fajardo,** sml. *spt.* of Porto Rico, prov. Humacao, p. 4,000. [3,020.
**Fakenham,** *t.* Norfolk, Eng., on R. Wensum, p.
**Fal,** *R.* Cornwall, Eng., flows (23 m.) into English Channel at Falmouth Harbour.
**Falaise,** *t.* dep. Calvados, France; castle, birthpl. of William the Conqueror, p. 9,020.
**Falcon,** *state,* Venezuela, along the coast of the Caribbean Sea; area 36,222 sq. m., p. 123,255; cap. Coro.
**Falemeh,** *R.* in Senegambia, Africa (200 m.), trib. of R. Senegal.
**Falkirk,** *t.* in co. Stirlingsh., Scotl.; foundries; battles 1298 and 1746; p. *45,443*.
Falkland, *t.* Fife, Scotl.; F. Palace, an anc. royal residence, now seat of Lord Bute, p. *2,181*.
**Falkland Isls.,** Brit. Crown colony S. Atlantic, area 6,500 sq. m., p. 2,350; cap. Stanley on Port William; wool and cattle rearing industry.
**Fall River,** *c.* of Bristol co., Mass., U.S.A.; cotton mills, 115,000.
**Falmouth,** *mun. bor., spt.* on S. coast of Cornwall, Eng., p. *13,492*.
**False Bay,** *inlet* on E. side of *C. of* Good Hope pen., leading into Simon's Bay, the prin. stn. of Brit. S. Africa squadron.
**False Point,** *C.* on delta of Mahanadi R., Cuttack dist., Bengal, India.
**Falster,** *isl.* (30 m.), in the Baltic, Denmark, p. 36,000; cap. Nukjobing.
**Falun.** (*See* Fahlun.)
**Famagusta,** *spt.* on E. coast of Cyprus, no harbour, 2½ m. S. of the ruins of anc. Salamis, p. (with Varoshia) 6,127.
**Fannich,** *loch* in Ross co., Scotl. (6½ m. long), drains to Cromarty F. [1888.
**Fanning,** Brit. *isl.* in N. Pacific Oc.; annexed in
**Fano,** *t.* on Adriatic cst. Italy; silk industries; p. 11,750. [area 20 sq. m.; p. 4,000.
**Fanoe,** *isl.* of Denmark, off W. coast of Jutland;
**Fareham,** *urb. dist., wat. pl.* nr. Portsmouth, Hants, Eng., p. *11,575*.
**Farewell, Cape,** *pt.* on Isl. at ext. S. of. Greenland.
**Fargo,** *t.* on Red R., N. Dakota, U.S.A.; in rich wheat region; p. 29,250.
**Faribault,** *cap.* of Rice co., Minnesota, on Cannon R., flour factories.
**Faringdon,** *t.* Berks, Eng. (properly Great F.); anc. t. hall; p. 2,920. [Conn., U.S.A.
**Farmington,** 3 small tns. in N.H., Maine, and
**Farnborough,** *urb. dist.*, E. Hants, Eng., Basingstoke div., nr. Aldershot; p. *16,359*, nearly half military.
**Farne Isls.,** group off Northumberland cst., Eng., opp. Bamborough; sometimes called the Fern Isls, or Staples. [Eng., p. *18,294*.
**Farnham,** *urb. dist.*, mkt. *t.* on R. Wey, Surrey.
**Farnley Tyas,** W.R. Yorks, Eng., p. 485.
**Farnworth,** *urb. dist.*, mftg. *t.* on R. Irwell, nr. Bolton, Lancs, Eng.; p. *23,711*.
**Faro,** *spt.*, cap. of Algarve prov., Portugal, p. 12,630.
**Faro,** an *isl.* in Baltic S., N. of Gothland, belonging to Sweden, p. 1,150.
**Faroe Isls.** (540 sq. m., p. 13,000), 200 m. N.W. of the Shetlands, Scotl.; cap. Thorshavn (Strömö Isl.); Danish possession; area 540 sq. m., p. 21,364.
**Fars,** or **Farsistan,** a S.W. *prov.* of Persia, on the Pn. Gulf, cap. Shiraz; p. 1,750,000.
**Farsley,** *urb. dist.*, W.R. Yorks, Eng., nr. Bradford, p. *6,153*.
**Fartash,** or **Saif,** *spt.* on W. coast. of Arabia, p. 11,600.
**Farukhabad,** *c.* United Provs., India, p. 59,647.
**Fasano,** industri. *t.* E. Italy, nr. Monopoli, prov. Bari; p. 19,000.
**Fashoda, Anglo-Egyptian** *stn.* on White Nile, 450 m. S. of Khartum. Evac. by the French after Khalifa's defeat at Omdurman by Kitchener, p. 300,000.
**Fastnet,** *lighthouse* in Atlantic, 4½ m. S.W. Cape Clear, on rocks nr. the Irish coast.
**Fatehgarh,** milit. *stn.* United Provs., India, cap. of Farukhabad dist., p. 13,000.
**Fatehpur,** *t.* United Provs., India, p. 22,500.
**Fatwa,** *t.* on Ganges, in India, nr. Patna, p. 12,000.
**Faucilles, Les Monts,** a range of *hills* connecting Vosges and Langres plateau, E. France, highest pt. abt. 1,600 ft. [16,750.
**Favara,** *t.* Sicily, nr. Girgenti; sulphur mines; p.
**Faversham,** *mun. bor.*, old mkt. *t.* Kent, Eng.; 10 m. W. Canterbury, p. *10,091*. [cap. Herta.
**Fayal,** *isl.* Azores, orange growing, p. 26,200;
**Fayoum,** *prov.* of Middle Egypt, on White Nile; cap. Medina-el-Fayoum.
**Fazeley,** *t.* in Stafford co., Eng., suburb of Tamworth, p. 2,020.
**Fazoki, or Fazogi,** *dist.* on both banks of Blue Nile, E. Sudan; cap. Adassé. [non.
**Feale, or Cashen R.,** I.F.S. (30 m.), *trib.* of R. Shan-
**Fear, Cape,** southernmost *pt.* of N. Carolina at mouth of Cape Fear R.
**Feather R.,** Cal., U.S.A., *trib.* of R. Sacramento, flowing 250 m. from the Sierra Nevada.
**Featherstone,** *urb. dist.*, W.R. Yorks, Eng., nr. Barnsley, p. *14,952*; also *t.* in New Zealand, nr. Wellington.
**Fécamp,** *spt.* dep. Seine-Inférieure, France; fisheries, and trade; p. 15,150.
**Fehmern, or Femern,** Pruss. *isl.* in Baltic, area 7½ sq. m.; cap. Burg.
**Felaniche,** *t.* on E. coast Majorca, Spain, p. 12,260; ruined Moorish castle, wine trade. [4,675 *ft.*
**Feldberg,** *mtn.* peak in Black Forest, Baden, alt.
**Félegyhaza,** free *t.* Hungary, in vineyard dist., 66 m. S.E. Budapest, p. 33,000.
**Felixstowe,** *urb. dist., wat. pl.* E. Suffolk, Eng., 12 m. S.E. Ipswich, p. *12,037*.
**Felling,** *urb. dist.*, Durham, Eng.; a Tyneside mftg. and colliery dist., p. *27,041*.
**Fellingsboro,** *t.* in ironworks dist. of Sweden, Orebro prov. p. 10,250. [13,400.
**Feltre,** industri. *t.* in prov. Belluno, Italy, p.
**Fenny Stratford,** mkt. *t.* Bucks, Eng., p. 5,200.
**Fens, The,** a low-lying level *dist.* round the Wash, including parts of six eastern Eng. counties.
**Fenton,** *t.* Staffs, Eng., nr. Stoke-on-Trent; earthenware works, p. 25,750.
**Fenwick,** *vil.* of co. Ayr., Scotl., nr. Kilmarnock, p. *1,209*.
**Ferentino,** *t.* nr. Frosinone, prov. Rome, Cent. Italy, the anc. Ferentinum; cathedral, old walls, Etruscan theatre; p. 11,230.
**Ferghana,** or **Fergana,** *prov.* Turkestan, Central Asia, area 58,000 sq. m.; fertile valley, surrounded by high mtns.; cap. Khokan (*q.v.*).
**Fergus,** *R.* co. Clare (25 m.), trib. of Shannon, I.F.S., also vil. on Grand R., Ontario.
**Fermanagh,** *co.* (inland) N. Ireland, area 714 sq. m., p. 61,900; R. Erne and great lakes; co. t. Enniskillen (*q.v.*).
**Fermo,** *c.* Cent. Italy, in the Marches, prov. Ascoli; anc. Fermun, Roman wall; p. 18,000.
**Fermoy,** *t.* co. Cork, I.F.S., on R. Blackwater, p. 6,500.
**Fern Isls.** (*See* Farne.)
**Fernandina,** *t.* Florida, U.S.A., on Amelia Isl., Nassau co.; cotton industry, p. 3,000.
**Fernando de Noronha,** *isl.* off E. coast Brazil, penal station, p. 2,000.
**Fernando Po,** mountainous Spanish *isl.* off Cameroon coast of W. Africa, area 700 sq. m., p. (about) 20,000; cap. Santa Isabel, p. 1,500, mainly negroes.

**Ferozabad**, *t.* India, E. of Agra, p. 17,000.
**Ferozepore**, or **Firozpur**, *dist.* of Punjab, India, area 4,302 sq. m., p. nearly 1,000,000; cap. c. of F., nr. the R. Sutlej, p. 55,000.
**Ferozeshah**, *t.* in Punjab, India, nr. Ferozepore; Brit. victory over Sikhs, 1845.
**Ferrara**, fortified *c.* in delta of R. Po, Italy; clothing manuf., p. 102,550; cap. of prov. of same name, area 1,019 sq. m., p. 326,447.
**Ferro**, most S.W. *isl.* in Canaries, area 106 sq. m., p. 6,020; cap. Valverde.
**Ferrol**, *spt.* and *naval arsenal* on N.W. coast of Spain, nr. Corunna, p. 36,500.
**Ferté-Macé, La**, industrl. *t.* in dep. Orne, France, nr. Domfront, p. 10,150.
**Festiniog**, *urb. dist.*, Merioneth, N. Wales, nr. large slate quarries, p. *9,072*. [by 2¼ wide.
**Fetlar**, one of the Shetland *isls.*, Scotl., 6½ m. long
**Fez**, a Mahom. "holy city," an impt. commercial centre and one of the three capitals of Morocco, situate 150 m. S. of Tangier, p. 62,693.
**Fezzan**, region in N. Africa (area 156,000 sq. m., p. 50,000), S. of Tripoli; cap. Murzuk.
**Fichtelgebirge**, *mtn. ra.* in Upper Franconia, N.E. Bavaria, highest peak the Schneeberg, alt. 3,454 ft.
**Fife**, *pen.* and *co.* E. Scotland, between the F. of Tay and Forth, area 492 sq. m., p. *276,261*; co. t. Cupar, (*q.v.*).
**Fife Ness**, ext. E. pt. Fife.
**Figuéras**, fort *t.* nr. French frontier of Spain, prov. Gerona; p. 12,150.
**Figuéira, or Figuéira Da Foz**, *wat. pl.* at mouth of R. Mondego, Portugal; corn, wine, etc.; p. 6,050.
**Fiji** (8,045 sq. m., p. 162,604) *archip.* of 250 (mainly coral) isls. on S. Pacific; 1,250 m. N. of Auckland, 1,880 m. N.E. Sydney; Brit. Crown Colony; cap. Suva, on Viti Levu isl.; fine harbr.; former cap. Levuka, sugar, bananas, etc.
**Filey**, *urb. dist.*, *wat. pl.* on Filey Bay, E. coast Yorksh., Eng., p. *3,730*.
**Finale**, or **Finale Nell Emilia**, *t.* in N. Italy, nr. Modena and the R. Po; p. 14,700.
**Finchley**, *urb. dist.*, Middlesex, Eng., p. *58,961*.
**Findhorn**, *vil.* on coast of Elgin, Scotl.; also vil. on riv. F., which flows 62 m. into Moray Firth.
**Findlay**, mftg. *t.* on Blanchard R., Hancock co., Ohio, U.S.A.; p. 19,500. [Scotl.
**Findon**, or **Finnan**, fishg. *vil.* on coast Kincardine,
**Finedon**, *urb. dist.*, Northants, Eng., p. *4,100*.
**Fingal's Cave**, on Staffa Isl., W. Scotl., one of the Inner Hebrides; basaltic columns.
**Finistère**, *dep.* in N.W. France, area 2,730 sq. m., p. 762,540; cap. Quimper; Cape Finistère at most W. point.
**Finisterre**, *c.* extr. N.W. pt. of Spain on the coast of Galicia.
**Finland**, Republic, former Grand Duchy of the Russian Empire, N. of the G. of Finland, and bordering on Norway and Sweden, area 149,586 sq. m., p. 3,335,237.
**Finland**, *G.* of, the E. arm of Baltic Sea, extending about 250 m. between Finland on the N. and Leningrad and Esthonia on the S.
**Finmark**, *prov.* N. Norway, inhabited by the Laps; cap. Hammerfest, N.-most *t.* in Europe, area 18,540 sq. m., p. 43,996.
**Finsbury**, *met. bor.* of London, Eng., N. of the c. proper; p. *69,888*.
**Finster-Aahorn**, *mtn.* in Switz. (14,020 ft.), highest pk. Bernese Alps.
**Finsterwalde**, *t.* on the Schakebach R., Prussia; iron foundries; p. 11,750.
**Firminy**, mftg. *t.* Loire dep., France, nr. St. Etienne, p. 16,380. [*2,963*.
**Fishguard**, *urb. dist.*, N. Pembrokesh., Wales, p.
**Fishkill**, *t.* in Dutchess co., New York, U.S.A., on the R. Hudson. [Mass, U.S.A., p. 41,750.
**Fitchburg**, textile and iron mftg. *c.* on Nashua R.,
**Fitzroy**, *R.* of Queensland, falls into Keppel Bay; also suburb of Melbourne, Victoria, p. 34,938.
**Fiume**, *ind. state*, created by the Treaty of Rapallo, 1920, formerly in Austria-Hungary; area 8 sq. m., p. 49,806.
**Fivizzano**, *t.* of Tuscany, prov. Massa and Carrara, on the W. slope of the Apennines; mineral springs; p. 14,750. [500 ft., lighthouse.
**Flamborough Head**, *C.* on Yorksh. coast, Eng., alt.
**Flanders**, *dist.* of Belgium, divided into two provs. of E. (1,158 sq. m.) and W. (1,249 sq. m.) Flanders; p. (E.) 1,122,620, (W.) 887,406; cap. Bruges and Ghent (both of which see).
**Flannan Isls.**, or **Seven Hunters**, group of *islets* (uninhabited) 20 m. W. of Lewis, W. Scotl.
**Flattery Cape**, on Pacific coast, U.S.A. (State of Washington.) [starch factories; p. 11,550.
**Flèche, La**, *t.* in dep. Sarthe, France, nr. Le Mans;
**Fleet**, *loch* and *R.*, Sutherland, Scotl.; also Fleet, Water of, Kirkcudbrightsh., Scotl.; also *urb. dist.*, co. Hants, Eng., p. *4,528*; also par. nr. Weymouth, co. Dorset, Eng.
**Fleetwood**, *urb. dist.*, *wat. pl.* Lancs, Eng., at mouth of Wyre, p. *22,993*.
**Flensburg**, *spt.* of Prussia, on Baltic coast; large coal and other trade; p. 60,941.
**Flers**, *t.* dep. Orne, nr. Alençon, France; brick and tile works, p. 14,460.
**Fleurus**, *t.* Belgium, prov. Hainaut, nr. Charleroi and Namur, p. 6,850.
**Flinders**, *R.* Queensland, flowing to G. of Carpentaria.
**Flinders Range**, *mtns.* S. Australia, N. of Spencer G., alt. 3,100 ft.
**Flint**, *t.* (p. *7,635*), *co.* N. Wales (p. *112,849*); also t. on Flint R., Mich., U.S.A., timber trade, p. 163,000; also *R.* Georgia, U.S.A. (400 m.), trib. of R. Chatahoochee.
**Flockton**, *urb. dist.*, nr. Barnsley, Yorks, Eng., p. *1,471*.
**Flodden**, *vil.* Northumberland, Eng., on R. Till; famous battle 1513, James IV. of Scotland defeated by the Earl of Surrey.
**Florence**, *c.* on R. Arne, Tuscany, 200 m. N.W. Rome; beautiful environs, cathedral, university; birthpl. of Dante and of Michael Angelo; p. 242,147; also several sm. tns. in U.S.A.
**Flores**, *isl.* Malay Arch., p. 300,000; also westernmost of Azores group, p. 10,250, also sml. isl. off Vancouver, 15 m. long; also *t.* in Guatemala on lsl. in L. Peten, p. 6,000; also the sea between the Celebes and Flores, part of the S. Pacific; also a dep. of Uruguay; area 1,744 sq. m., p. 30,000.
**Florianopolis**, *spt.* of Brazil, in agr. centre, formerly called Desterro, p. 40,969.
**Florida**, *state* in S.E. of U.S.A., between Atlantic and G. of Mexico, area 54,861 sq. m., p. 1,365,000; cap. Tallahassee.
**Florida Channel**, between Florida and Bahama Isls.; course of "Gulf Stream" from Mexico.
**Floridsdorf**, or **Florisdorf**, chf. *t.* in govt. dist. of same name in Lower Austria, nr. Vienna, p. 38,000; liqueur manuf.
**Flume, The**, picturesque *gorge* in the Francona Mtns., New Hampsh., U.S.A.
**Flushing**, *spt. wat. pl.*; and commercl. centre on Walcheren Isl., Holland, p. 23,025; also sml. pt. Falmouth Harb., Cornwall, Eng.; also wat. pl. on Flushing Bay, New York, U.S.A.
**Fly**, large and unexplored *R.* in New Guinea, southern pt. emptying in G. of Papua.
**Fochabers**, *vil.* nr. mouth of Spey, Elgin, Scotl., p. 1,220.
**Focsani**, or **Foktchany**, *t.* on the R. Milkov, Putna dist., Rumania, fortified and industrl., p. 25,287.
**Foggia**, busy industrl. *t.* (p. 79,213) and prov. (p. 484,560) S. Italy, in Apulia, area 2,683 sq. m.
**Fogo**, *par.* nr. Duns, Berwick, Scotl., p. *369*; also name of a volcanic isl. of Cape Verde grp., Atlantic Ocean; also sml. pt. on Fogo Isl., Newfoundland. [N. Sea, p. 5,100.
**Fohr**, *isl.* on W. coast of Schleswig, Prussia, in
**Fo-Kien**, prov. in S.E. China on Pacific (46,320 sq. m., p. 8,560,000); cap. and ch. port Foochow. Produces much tea, camphor, etc.
**Foligno**, or **Fuligno**, *t.* in Perugia, Italy; remarkable grotto; numerous factories; p. 12,250.
**Folkestone**, *mun. bor. wat. pl.* and steam-packet stn., Kent, 70 m. from London, and 29 m. from Boulogne, p. *35,890*.
**Fond du Lac**, mftg. *t.* on Winnebago Lake, Wisconsin, U.S.A., p. 26,750.
**Fonsagrada**, industrl. *t.* in the E. of the mtns. prov. Lugo, Spain, on R. Navia, p. 17,300.
**Fonseca, G. of**, *inlet* on Pacific cst. of C. America, bordering on San Salvador.
**Fontainebleau**, *t.* on R. Seine, 35 m. S.E. of Paris. Magnif. forest (area 42,500 acres) and palace, resid. of Pres. in summer; p. (including military) 14,450.
**Fontarabia**, *spt.* at mouth of R. Bidassoa, on French frontier of Spain, p. 2,770.
**Fontenay-le-Comte**, industrl. *t.* in Vendee, W. France, on R. Vendee, p. 10,120.

**Fontenay-Sous-Bois,** *t.* in dep. Seine, France, suburban to Paris, p. 10,750.
**Fontenoy,** *t.* nr. Tournai, Belgium. Battle, 1745, Saxe defeated the Allies. [3,320.
**Fontevrault,** *t.* in France, dep. Maine-et-Loire, p.
**Foochow,** or **Fuchau,** treaty *port,* cap. of Fokien prov., China, great tea-exporting centre; p. 1,491,143.
**Footscray,** *t.* Victoria, Australia, p. 33,772.
**Forbach,** *t.* nr. Saarbruck, Lorraine, France, p. 8,520.
**Forchheim,** fort. *t.* in Bavaria on the Ludwigs Canal, p. 5,650. [p. 3,200.
**Fordingbridge,** mkt. *t.* on R. Avon, S. Hants., Eng.,
**Foreland, N.** and **S.,** two *headlands* on E. coast of Kent, Eng.; lighthouses.
**Forfar,** co. *t.,* jute manuf. of Forfarsh., E. Scotl., p. *11,062*; area of co. (excluding foreshore) 878 sq. m., p. 270,950. [works; p. 48,943.
**Forli,** anc. *c.* in Emilia, Italy; silk factories, iron-
**Formby,** *urb. dist.,* Lancs., Eng., p. *7,957.*
**Formentera,** one of the Balearic Isls., S. of Ivica, 13 m. long.
**Formia,** *t.* in prov. Caserta, Italy, on G. of Gaeta; the anc. Formiæ, p. 8,150.
**Formosa** (13,944 sq. m., p. 3,654,398), *isl.* off cst. of China, ceded to Japan in 1897; cap. Taiwan.
Formosa contains some alluvial plains, but is mainly mountainous and afforested, and under Japanese influences something is being done to develop the resources of the island. Formosa is also the name of a territory in the Argentine Republic, bordering on Bolivia and Paraguay, area 41,402 sq. m., p. 26,750.
**Forres,** *t.* Elgin, Scotl., one of the Burghs of the Inverness group, cattle trade, p. *4,698.*
**Forst,** industrl. *t.* Prussia, on an isl. of R. Neisse, cloth and buckskin factories, p. 40,100.
**Fortaleza,** *spt.* prov. Ceara, Brazil, p. 70,000.
**Fort Augustus,** *vil.* nr. Glenmore, on Loch Ness, Scotl.; Fort now an Abbey.
**Fort Churchill,** trading *stn.,* Hudson Bay.
**Fort de France,** formerly Fort Royal, cap. of Martinique, Fr. W. Indies, p. 26,399.
**Fort Dodge,** *t.* on Des Moines R., Iowa, U.S.A., in rich agr. country, p. 22,000. Taken by Grant in the Civil War of 1862.
**Fort Fisher,** at entr. to Cape Fear R., N. Carolina, U.S.A. Great battle, 1865.
**Fort Garry,** old name of Winnipeg, Manitoba.
**Fort George,** N.E. Inverness-shire, Scotl., on Moray Firth.
**Fort Madison,** *cap.* of Lee co., Iowa, U.S.A.; meat packing, p. 13,900.
**Fort Monroe,** Virginia, at the mouth of the James R., the largest military work in the U.S.A.
**Fort Salisbury,** Mashonaland, Africa railway centre.
**Fort Scott,** *cap.* Bourbon co., Kansas, U.S.A., on the Marmaton R.; p. 10,700; good trade.
**Fort Smith,** *c.* of Sebastian co., Arkansas, U.S.A., on Arkansas R.; railway centre; p. 31,435.
**Fort Sumter,** mil. *post.* in Charlestown Harbour, S. Carolina, U.S.A.; captured by Confederates, 1861.
**Fort Wayne,** *cap.* Allen co., Indiana, U.S.A.; railway carriage bldg. and machine shops; p. 118,600.
**Fort William,** *par.* Inverness-shire, Scotl., at base of Ben Nevis, p. *2,527*; also *t.* of Thunder Bay dist., Ontario, Canada; large grain export; p. 26,075.
**Forth Worth,** *c.* Tarrant co., Texas, U.S.A.; a great ry. and commcl. centre on Trinity R., p. 168,000.
**Fort Yukon,** Alaska, trading *stn.* on R. Yukon, just on the Arctic Circle. [ley range.
**Fortescue,** *R.,* W. Australia, rising in the Hamers-
**Forth,** *R.* (65 m.) and Firth, Scotl; extending from Alloa E. for 50 m. The R. rises on Ben Lomond, and empties into the estuary or Firth at Alloa. The Forth Bridge, over 8,000 *ft.* long, crosses the Firth at Queensferry.
**Forth and Clyde Canal,** Scotl.
**Forth, Carse of,** the *dist.* on the bank of the Forth from Bo'ness to Gartmor. [of Newfoundland.
**Fortune Bay,** an *inlet* of the Atlantic, on the S. cst.
**Fossano,** *t.* prov. Cuneo, nr. Turin, N. Italy, p. 8,250; Austrians here defeated the French, 1799.
**Fossombrone,** *t.* Italy, in the Marches, 10 m. from Urbino, p. 8,160.
**Fotheringay,** *vil.* on R. Nen, Northampton, Eng.; Mary Queen of Scots beheaded in F. Castle, 1587.
**Fougères,** *t.* in dep. Ille-et-Vilaine, W. France, one of the strongest places in Brittany; ruined feudal castle; p. 21,360; shoe manuf.
**Fougerolles,** *t.* in France, prov. Haute-Saône, p. 6,015.
**Foula Isl.,** one of the smaller Shetlands, Scotl., westward of main group. [Eng.
**Foulness Island,** at mouth of R. Crouch, S. Essex,
**Foulwind Cape,** S. *isl.* of New Zealand.
**Fountains Abbey,** fine *ruin,* Cistercian, W.R. Yorks, Eng., nr. Ripon.
**Fourchambault,** *vil.* in France, on the Loire, nr. Nevers; ironworks; p. 6,520.
**Fourmies,** *t.* in France, dep. Nord., nr. Valenciennes; wool-combing, and glass works; p. 14,560.
**Foveaux Strait,** New Zealand, separates South Island from Stewart Island.
**Fowey,** *mun. bor.,* sml. *pt.* in Cornwall, Eng., nr. mth. of R. Fowey, p. *2,382.*
**Fox Channel,** to N. of Hudson Bay, between Baffin Land and Melville Pen.
**Fox Isls.,** one of the Aleutian groups.
**Foxton,** sml. *t.* in New Zealand (north isl.) on Manawatu R.
**Foyers,** *falls,* Inverness, Scotl., east of Loch Ness, on R. Foyers, nr. Fort Augustus.
**Foyle, Lough,** *inlet* of the Atlantic, the estuary of R. Foyle, between Donegal and Londonderry co.'s, N. Ireland.
**Framingham,** industrl. *t.,* nr. Boston, Mass., U.S.A.; p. 22,750. [wich, p. 2,750.
**Framlingham,** mkt. *t.* in E. Suffolk, Eng., nr. Ips-
**Francavilla,** industrl. *t.* prov. Lecce, W. Italy, nr. Brindisi, p. 20,370.
**France,** powerful Republic (former monarchy and Empire), W. Europe, bounded N. by Belgium and English Channel, W. by the Bay of Biscay, S. by the Pyrenees and the Mediterranean, E. by Italy, Switzerland, and Germany. Greatest length about 600 m., greatest breadth 540 m. Area 212,660 sq. m., or 3¼ times size of Eng. and Wales. F. is divided into 87 deps.; ch. t.'s are Paris (the cap., next to London the largest c. in Europe), Bordeaux, Marseilles, Toulon, Brest, and Havre, all of which see. The colonies and dependencies of France, in Asia, America, and Africa, have an area of about 5,120,000 sq. m., and a pop. (est.) of 53,500,000. P. of the Republic *41,834,923*, one-third of whom live in towns.
**Francistown,** gold-min. *t.* in Rhodesia, 125 m. S. of Bulawayo, S. Africa.
**Franconia,** N. part of Bavaria, divided into Upper, Middle and Lower.
**Frankenthal,** mftg. *t.* Bavaria, nr. Mannheim; nurseries, p. 16,000.
**Frankenwald,** *mtns.* region on borders of N. Bavaria, nr. the Thuringian Forest.
**Frankfort,** *cap.* of Kentucky, U.S.A., on the Kentucky R., p. 11,800; also *c.* in Clinton co., Indiana, U.S.A., p. 12,250; also smlr. t.'s in New York, Kansas, Maine, and Michigan.
**Frankfort-on-the-Main,** *c.,* on R. Main, a trib. of the Rhine. A "Free City" until 1866, when it was annexed to Prussia, prov. Hesse-Nassau; restored cathedral, thriving trade, p. 433,003.
**Frankfort-on-the-Oder,** *t.* in Brandenburg, Prussia, 50 m. from Berlin, a great railway centre, p. 65,055. The three famous annual commercial fairs of this old Hanseatic t. have declined.
**Franklin,** the name of several sm. t.'s in U.S.A.
**Frazensbad,** or **Kaiser Frazensbad,** *wat. pl.,* nr. Eger, N.W. Bohemia; saline springs, p. 2,450.
**Franz Josef Fjord,** *inlet* on E. coast, Greenland.
**Franz Josef Land,** *archip.* in Arctic Ocean, N. of Nova Zembla; disc. by Austrian exped. in 1873; extending W. to a dist. as yet undetermined.
**Frascati,** *t.* Italy, 12 m. S.E. of Rome, famous villas and archæological remains, p. 7,070.
**Fraser,** *R.* Brit. Columbia, flowing S.W. to G. of Georgia (405 m.) with famous salmon fisheries.
**Fraserburg,** *t.* agr. centre of C. of Good Hope, supply stn. for the stock raisers between Calvinia and Carnarvon, p. 8,059.
**Fraserburgh,** coast *t.* N.E. Aberdeensh., Scotl., one of the chf. stns. of herring fishery, p. *10,203.*
**Fraserville,** *wat. pl.* in Temiscouata co., Quebec, Canada, on St. Lawrence R., p. 6,000.
**Fratta Maggiore,** *t.* 6 m. from Naples, Italy, p. 12,250.
**Frauenfeld,** *t.* Switz., cap. of canton Thurgau; castle, cotton factory; p. 6,560.

**Fray Bentos**, *t.* on Uruguay R., Uruguay, 50 m. from its mouth, p. 7,500.
**Fredensborg**, *vil.* in Zealand, Denmark, with palace built in 1720, in commem. of the peace with Sweden.
**Fredericia**, *spt.* on E. coast Jutland, Denmark, at entr. to Little Belt; brewing, shipbldg., p. 12,300.
**Frederick**, industrl. *c.* of Maryland, U.S.A., cap. of F. co., p. 14,750.
**Fredericksburg**, *t.* on Rappahannock R., Virginia, U.S.A., scene of severe Federal rebuff, Civil War, p. 6,900; also t. C. of Good Hope, on Golana R.
**Frederickshaab**, sml. *spt.* on W. coast of Greenland.
**Fredericton**, *cap.* of New Brunswick, Canada, on R. St. John, p. 8,000.
**Frederiksborg**, or **Hillerød**, *vil.* in Denmark, 21 m. N.W. of Copenhagen, with royal palace, built by Christian IV., 1602.
**Frederikshald** (now called Halden), *spt.* Norway, p. 11,218. Charles XII. of Sweden killed here 1718.
**Frederikshavn**, *spt.* and fishing centre on N. coast of Jutland, p. 6,000.
**Frederikstadt**, *t.* (ftd.) at m. of R. Glommen, Norway, nr. the famous wat. pl., Hankö; p. 15,579; also t. on the Düna, in Courland, Latvia, p. 6,500.
**Frederiksværk**, *spt.* Denmark (fort.), on Ise Fjord, 30 m. from Copenhagen, p. 5,770.
**Fredonia**, *t.* in New York State, U.S.A., p. 15,750.
**Freehold**, *t.* in Monmouth co., New Jersey, U.S.A., p. 7,000.
**Freeport**, *mftg. t.* Ill., U.S.A., on the Pecatonica R., p. 22,300. [Africa, p. 34,500.
**Freetown**, or **St. George**, *cap.* of Sierra Leone, W.
**Fregenal de la Sierra**, *t.* in Spain, nr. Badajos, p. 8,150.
**Freiburg**, busy *t.* in Baden, Black Forest, Germany, with many fine bldgs. and fountains, p. 87,946; also t. in the Dresden circle of Saxony, libry., and public institns., p. 32,981; also canton of Switzerl., area 644 sq. m., much forest and unproductive land, p. 143,055; also the cap. of canton, between Bern and Lausanne, fine viaduct and bridges, p. 20,640.
**Freiburg unterm Furstenstein**, *t.* in prov. Silesia, Prussia, nr. Breslau and the famous castle of Furstenstein, p. 10,250.
**Freienwalde**, *t.* prov. Brandenburg, Prussia; medic. springs, summer resort; p. 8,670.
**Freising**, *t.* in Upper Bavaria, Germany, on R. Isar, old monastery, royal model farm; p. 10,750.
**Fréjus**, coast *t.* dep. Var, France, the anc. Forum Julii; here Napoleon embarked for Elba, 1814, p. 3,520.
**Fréjus, Cul de**, the Alpine pass under which the Mont Cenis tunnel runs.
**Fremantle**, *spt.* at mouth of Swan R., W. Australia, 12 m. S.W., from Perth, p. 25,526.
**Fremont**, *t.* on Plate R., Nebraska, U.S.A., cap. of Dodge co., p. 11,500; also *c.* on Sandusky R., Ohio, U.S.A., in petrol. region, p. 13,500.
**Fremont's Peak**, highest peak of Wind River range, in Wyoming terr., U.S.A., alt. 13,570 ft.
**French Broad**, *R.* (250 m.) in E. Tennessee and N. Carolina, U.S.A.; pic. scenery.
**French Equatorial Africa** (area 982,049, sq. m., p. 9,370,000), includes the Gabun Colony cap. Libreville), Middle Congo (cap. Brazzaville), Ubangi-Shari Colony (cap. Bangui) and the Chad Colony, together with part of the Cameroons.
**French Guiana**, adjoins Dutch Guiana on the east and has an area of abt. 32,000 sq. m., p. 47,000; cap. Cayenne (*q.v.*).
**French R.**, Ont., Canada, the outlet of L. Nipissing into Georgian B. (L. Huron).
**Frensham**, *par.* nr. Farnham, W. Surrey, Eng., p. 2,520.
**Frere**, *station* on Natal main line between Estcourt and Colenso, S. Africa.
**Freshwater**, *vil.* and *wat. pl.* W. end of Isle of Wight, Eng., p. 3,030.
**Fresnillo**, *t.* Zacatecas State, Mexico, p. 25,000.
**Fresno**, *c.* fruit dist. California, U.S.A., p. 52,525.
**Friedberg**, *t.* in Upper Hesse, on R. Usa, nr. Frankfort-on-the-Main, p. 5,750.
**Friedek**, *t.* on R. Ostrawitza, Silesia; textile industry, Archduke's château, p. 10,450.
**Friedland**, *t.* on R. Wittich, N. Bohemia, with castle, p. 5,440; also t. E. Prussia (battle, Napoleon defeated the Allies 1807); also *c.* in N.E. Mecklenburg-Strelitz, nr. Stettin, p. 5,780.
**Friedrichroda**, a Thuringian forest *resort* 9 m. from Gotha, Germany, p. 4,560.
**Friedrichshafen**, sml. *t.* on the L. of Constance, Würtemberg, p. 4,780.
**Friendly Isls.** (Tonga), 400 miles S.E. Fiji; area 385 sq. m., p. 27,000.
**Friern Barnet**, *urb. dist.*, Middlesex, Eng., p. *23,081.*
**Friesland**, *prov.* N. Holland; area, 1,243 sq. m., p. 382,891; cap. Leeuwarden.
**Frigidus**, sml. *R.* trib. of the R. Isonzo, Italy, the modern Wipbach, called "Frigidus" for its coldness.
**Frimley**, *urb. dist.*, Surrey, Eng., p. *16,472.*
**Frinton-on-Sea**, *urb. dist.* and *wat. pl.*, Essex, Eng., p. *2,196.*
**Frische Haff**, shallow freshwater *lagoon* on Baltic cst. of Prussia, 53 m. long, 4 to 11 m. broad, and 332 sq. m. in area.
**Frisian Isls.**, *chain* stretching from Zuyder Zee E. and N. to Jutland, along the coasts of Holland, Hanover, Oldenburg, Schleswig, and Holstein.
**Frobisher Bay**, *inlet* in S. Baffin Land, Arctic America, extending 200 m. between Cumberland Sound and Hudson Strait.
**Frodsham**, mkt. *t.* Cheshire, Eng., 10 m. N.E. Chester, p. 2,520.
**Frome**, *urb. dist.*, mkt. *t.* Somerset co., Eng., nr. Bath, p. *10,738.*
**Frosinone**, industrl. *t.* on R. Cosa, Italy, 32 m. N.N.W. Gaeta, p. 10,750.
**Fucino**, *L.* (now drained), prov. Aquila, Central Italy, formerly 37 m. round.
**Fuente-Alamo**, industrl. *t.* 18 m. from Murcia, Spain, p. 8,170.
**Fuente-Cantos**, industrl. *t.* nr. Badajos, Spain, p. 7,360.
**Fuente-Ovejuna**, *t.* in lead-mining dist. of Cordoba prov., Spain, p. 10,350.
**Fuenterrabia**, anc. Spanish *t.* on French frontier, nr. Bay of Biscay, p. 6,560.
**Fuentes de Onoro**, *vil.* Salamanca, Spain,; battle 1811; Wellington victorious over Massena.
**Fuerteventura**, *isl* of the Canary group; area 663 sq. m., p. 11,660.
**Fuji-Yama** (alt. 12,370 ft.), extinct *vol.* Japan, 60 m. S.W. of Tokio, pilgrim resort.
**Fu-Kien**, Chinese *prov.* (*See* **Fo-Kien.**)
**Fukui**, *t.* in prov. Echizen, Honshiu, Japan; suffered severely from earthquake in 1891–1892; flourishing industries, p. 59,932.
**Fukuoka**, *t.* in isl. of Kiushiu, Japan; silk-weaving; p. 98,583.
**Fulda**, *t.* (industrl.) nr. Cassel, Hesse-Nassau, Prussia, cathedral; p. 17,500.
**Fulham**, S.W. *met. bor.* of London, Eng., on R. Thames; p. *150,940.*
**Fulton**, *cap.* of Calloway co., Missouri, U.S.A.; p. 6,125.
**Fulwood**, *urb. dist.* in Lancs, Eng., nr. Preston; p. *7,387*; also a t. of N.Y., U.S.A., p. 13,043.
**Funchal**, *cap.* of Madeira; wine; p. 24,687.
**Fundy, Bay of**, *inlet* between Nova Scotia and New Brunswick.
**Funen**, second largest *isl.*, Denmark, in the Baltic S., area 1,320 sq. m., p. 252,000; cap. Odense.
**Fünfkirchen**, *c.* Hungary, 10 m. W. of Maria Theresiopel; fine Romanesque cathedral; p. 42,500.
**Furneaux**, *isl.* group in Bass Strait, belonging to Tasmania.
**Furnes**, industrl. *t.* in Belgium, nr. Bruges; tanneries and linen factories; p. 6,160.
**Furness**, *dist.* N.W. Lancs. Eng., between Morecambe Bay and the Irish Sea.
**Fürstenwalde**, industrl. *t.* on R. Spree, Prussia, prov. Brandenburg, p. 15,260.
**Furth**, *t.* nr. Nuremberg, in middle Franconia, Germany; brewing, chromo-lithography, p. 68,162.
**Fury and Hecla Strait**, between Fox Chan. and G. of Bothnia, Arctic America.
**Fusan**, open *port* S.E. cst. Corea; dominated by Japanese traders.
**Fusignano**, *vil.* in Emilia, Italy, on R. Senio; p. 5,250.
**Futa Jalon**, upland *dist.* in Senegambia, Fr. W. Africa; cap. Timbo.
**Futtak**, *t.* nr. Peterwardein, on R. Danube, Hungary, p. 6,070.
**Fyne**, *loch* on Argyle cst. W. Scotl. an arm (40 m.) of F. of Clyde.
**Fyvie**, *par.* on R. Ythan, Aberdeen co., Scotl., p. *3,180.*

# G

**Gablonz**, *t.* N. Bohemia, Czecho-Slovakia, on R. Neisse, chief seat of imitation pearl and jewellery industry, p. 24,750.

**Gaboon**, or **Gabun**, *colony* included in French Eq. Africa; products, ivory, ebony, palm oil, etc.

**Gadag**, or **Garag**, *t.* Bombay, Brit. India; cotton and silk weaving; p. 24,500.

**Gadara**, the mod. Umm Keis, a *c.* of the Syrian Decapolis, fortified, extensive ruins, hot sulphur springs.

**Gadsden**, industrl. *t.* on the Coosa R., Alabama, U.S.A., p. 24,040.

**Gadshill**, *vil.* Kent, Eng., between Gravesend and Rochester; immortalised by Shakespeare; here also Dickens died in 1870.

**Gaeta**, *spt.* fort. prov. Caserta, nr. Naples, the anc. Portus Caieta; cathedral, p. 18,120.

**Gagetown**, *t.* on R. St. John, New Brunswick, Canada, p. 2,150.

**Gaillac**, *t.* dep. Tarn, France; noted for wines; p. 9,120.

**Gaillon**, *vil.* dep. Eure, nr. Rouen, France; royal château; p. 4,250.

**Gainesville**, *t.* nr. the Red R., in Cooke co., Texas, U.S.A., p. 8,950. [Tees, p. 7,570.

**Gainford**, industrl. *t.* in co. Durham, Eng., on R.

**Gainsborough**, *urb. dist.*, mkt. and mftg. *t.* on R. Trent, Lincs, Eng., p. *18,684*. [broad.

**Gairdner, Lake**, S. Australia, 130 m. long, 23 m.

**Gairloch**, *par.* and *inlet* Ross and Cromarty, Scotl., p. of par., *2,380*.

**Gairn**, *R.*, of Scotl., co. Aberdeen (20 m.), affit. of R. Dee, nr. Ballater.

**Gala**, *R.* (20 m.), *trib.* of R. Tweed, rises in Midlothian, Scotl.

**Galapagos**, grp. of volcanic *isles* in Pacific O., 600 m. W. Ecuador, and belonging to that State, p. 400; peculiar fauna and flora.

**Galashiels**, *t.* Selkirkh., Scotl., on R. Gala; tweeds and woollen mftg.; p. *13,478*.

**Galata**, populous *suburb* of Constantinople, seat of foreign trade.

**Galatia**, anc. *div.* of Asia Minor. [15,270.

**Galatina**, *t.* in Apulia, prov. Lecce, S. Italy, p.

**Galatone**, *t.* in Italy, 9 m. from Gallipoli, p. 6,570.

**Galatz**, large *port* and *t.* in Rumania, on R. Danube; grain trade, Govt. docks; p. 73,512.

**Gala Water.** (*See* Gala R.)

**Galena**, *c.* on Fevre River, Ill., U.S.A., formerly lead mftg. centre, p. 5,000; also c. of Cherokee co., Kansas, zinc mining, p. 4,750.

**Galesburg**, *c.* in agr. regn. of Knox co., Ill., U.S.A., p. 29,250.

**Galicia**, old *prov.* N.W. Spain, now forming provs. of Corunna, Lugo, Orense, and Pontevedra; also former Austrian prov. now absorbed in Poland and Ukraine.

**Galilee, N.**, *div.* of Palestine, in Roman period, S. of G., on Lake of Gennesaret (otherwise Sea of Tiberias), the mod. Bahr Tabariyeh, 13 m. long, greatest width 6¼ m., traversed by R. Jordan.

**Gallaland**, *dist.* E. Africa, S. of Shoa, partly Brit. and partly Ital.; native p. (about) 3,000,000; related to the Somalis and Masai.

**Galle, or Point de Galle**, *spt.* on S.W. coast of Ceylon, extensive trade, p. 39,000.

**Gallinas**, *R.* and *dist.* of the Grain coast, British W. Africa; formerly a slave-trade centre.

**Gallipoli**, *spt.* in prov. Lecce, S. Italy, p. 11,300; also spt. in S.E. Europe on the Dardanelles, in sanjak of same name, vines and sericulture, the anc. Callipolis, p. 30,000.

**Gallipolis**, *c.* of Gallia co., Ohio, U.S.A., p. 7,250.

**Galloway**, *dist.* in S.W. Scotl., including the co.'s of Wigtown and Kirkcudbright; Mull of Galloway, extreme S.W. pt. of Scotland.

**Galofaro** (the anc. Charybdis), *whirlpool* in Strait of Messina, on the Italian coast, opp. the rock of Scylla. [marnock, p. *6,345*.

**Galston**, *t.* co. Ayr, Scotl., on R. Irvine, nr. Kilmarnock, p. *13,571*.

**Galt**, mftg. *t.* prov. of Ontario, Canada, on Grand R., p.

**Galtee Mtns.**, *range* in I.F.S., between Tipperary and Limerick, alt. 3,000 ft.

**Galveston**, *spt.* Texas, U.S.A., on G. Isl., Gulf of Mexico; great cotton port; p. 53,750.

**Galway**, *co.* (area 2,452 sq. m., p. 181,750), on Galway Bay, Connaught, I.F.S.; seat of Queen's College; fishery; cap. of same name, p. 13,320.

**Gambia**, *R.* (1,400 m.), and **Brit. Protectorate** (area 4,130 sq. m., p. 240,000), W. Africa; cap. Bathurst (*q.v.*).

**Gambia Isls.**, French grp. in the Pacific O.

**Gamtoos**, *R.* on the Gt. Karoo plateau, Cape Col., S. Africa. [Lawrence, p. 4,000.

**Gananoque**, *t.* prov. Ontario, Canada, on the St.

**Gandak**, or **Salagrami**, *R.* of Nepaul and Brit. India (400 m.), trib. of Ganges, which it joins nr. Patna.

**Gandia**, *t.* nr. the Mediterranean in Valencia, Spain, p. 10,300. [in Brit. Northern Nigeria.

**Gando**, *t.* and African native State, now included

**Gandya**, industrl. *t.* in govt. Tiflis, Georgia, p. 12,250.

**Ganges** (1,500 m.), the gt. sacred *R.* of India, rises in an ice-cave in Himalayas and flows through the plain of N. India, into B. of Bengal, which it enters by several delta mouths, on one of which stands Calcutta. Navigable from Hardwar, for large ships from Allahabad. Also the name of a t. in dep. Hérault, France, near Montpellier; p. 5,020.

**Gangi**, *t.* in Palermo, Sicily, the anc. Engulum; many antiquities, p. 12,330.

**Gangpur**, *trib.* state in India, Bengal frontier; area 2,484 sq. m., p. 110,000.

**Ganjam**, *dist.* Madras Pres., India; area 6,037 sq. m., p. over 2,000,000; prin. product rice; cap. Berhampur; also G., t. in G. Dist. on B. of Bengal, p. 6,000.

**Gap**, industrl. (silk and other textiles) *c.* Hautes Alpes dep., S.E. France, on R. Luye, the anc. Vapincum; p. 10,520.

**Gapan**, *t.* in prov. Nueva, Ecija, Luzon, Philippine Isls., tobacco-growing dist., p. 21,200.

**Gard**, Medit. *dep.* France, area 2,270, sq. m., p. 396,169, cap. Nîmes.

**Garda**, *L.* on Alpine border of Italy, area 143 sq. m.; greatest depth, 1,135 ft.

**Gardiner**, *c.* of Kennebec co., Maine, U.S.A.; timber and rice industries, p. 5,610.

**Gardner**, *t.* in Worcester co., Mass., U.S.A.; chair manuf.; p. 19,500.

**Gareloch** and **Garelochhead**, *inlet* and *vil.* Dumbarton, S.W. Scotl., Firth of Clyde.

**Garfield**, *t.* N.J., U.S.A., p. 30,750.

**Garforth**, *urb. dist.*, W.R. Yorks, Eng., p. *3,774*.

**Garhwal**, Himalayan *dist.* N.W. India, contains sources of Ganges. [centre, p. 4,800.

**Garnett**, industrl. *t.* in Kansas, U.S.A., impt. ry.

**Garonne** (350 m.), *R.* S.W. France, rises at foot of Mt. Maladetta (Pyrenees), and 20 m. below Bordeaux enters the Gironde.

**Garonne, Haute**, *dep.* of S. France, area 2,458 sq. m., p. 424,582. [India.

**Garrow, or Garo Hills**, hill *dist.* in N.W. Assam,

**Garrucha**, *spt.* prov. Almeria, Spain; old castle, barracks, p. 5,060.

**Garry**, *R.* in Scotl., Inverness co., flowing into Caledonian Canal; also R. in Scotl., co. Perth, flowing through Glengarry to R. Tummel.

**Garston**, *spt.* on R. Mersey, 5½ m. S. of Liverpool, Eng., p. 17,820.

**Gartokh**, trading *t.* in Western Tibet, p. 14,000.

**Gasconade**, *R.* (200 m.) in Missouri, U.S.A.

**Gascony**, anc. *dist.* and Duchy of S.W. France; comprises the pres. deps. of Landes, Gers, and Hautes-Pyrénées, with parts of Haute-Garonne, Lot-et-Garonne, and Tarn-et-Garonne.

**Gaspé**, *pen.* Quebec, on S. side of St. Lawrence.

**Gastein**, *valley* in Salzburg, Austria, famous for mineral springs; kurhaus, etc.

**Gastonia**, *t.* N.C., U.S.A., p. 17,500.

**Gatchina**, *t.* 40 m. S. of Leningrad, p. 12,230.

**Gateshead**, *co. bor.*, mftg. and mining *t.* on R. Tyne, opposite Newcastle, co. Durham, Eng., p. *122,379*.

**Gatineau**, *R.* of Canada, trib. (400 m.) Ottawa R., which it joins nr. Ottawa c.

**Gauritz**, *R.*, S. Africa, flowing into sea near Aliwal South. [p. 3,750.

**Gawler**, *t.* in mining dist. nr. Adelaide, S. Australia,

**Gaya**, *t.* Bengal, Patna div. (p. 67,759), cap. of Gaya dist., area 4,712 m. sq., p. over 2,000,000. Suffered severely from plague in 1901.

**Gaza** (modern **Ghazzeh**), anc. Philistine city of Syria, nr. the Mediterranean, p. 15,000.

**Gazaland**, *dist.* partly in Portuguese E. Africa and partly in S. Rhodesia.

**Geba**, *R.* and *port* of Portuguese Guinea, W. Africa.

**Gebal**, anc. Phœnician *c.* on a hill N. of Beirut, nr. the Mediterranean, formerly called Byblus (Arabic, "Jebel"); many archæological reliques.

**Gebweiler,** *t.* S. Alsace, France, nr. Kolmar; cotton manuf.; p. 13,750.

**Geelong,** *spt.* on Corio B. (Port Phillp) Victoria; fine harbour, flourishing trade; p. (including Geelong West), 24,456.

**Geelvink Bay,** *inlet* on N.W. coast of New Guinea.

**Geelvink Channel,** between West Australian mainland and Abrolhos Isls.

**Geestemunde,** *t.* on Weser, Hanover, Prussia, centre of North Sea fishery, p. 22,500.

**Gefle,** *spt.* at mouth of Gefle R., in mining co. of Kopparberg, Sweden, p. 37,746.

**Gefleborg,** maritime *prov.* Sweden, on G. of Bothnia, cap. Gefle.

**Geislingen,** mftg. *t.* nr. Stuttgart, Würtemberg; ruined castle, p. 13,521.

**Gelderland,** *prov.* E. Holland, between Zuyder Zee and Westphalia, area 1,939 sq. m., p. 727,636; cap. Arnhem.

**Gelligaer,** *urb. dist.*, Glam., Wales, p. *41,042*.

**Gellivara,** mining and mftg. *t.* N. Sweden, in Norbotten, p. 13,300.

**Gelsenkirchen,** *t.* Westphalia, Prussia, nr. Dortmund; collieries, ironworks, p. 168,557.

**Gemmi,** mtn. *pass* across Swiss Alps, Valais to Bern, alt. 7,600 ft.

**Gemona,** industrl. *t.* Italy, nr. Udine, p. 8,120.

**Genesee,** *R.* Pennsylvania, U.S.A., flows 200 m. into L. Ontario, nr. Rochester.

**Geneva,** *cant.* and *c.* (p. 135,050) in S.W. Switzerland; the Rhône flows through the c., which is situated at W. end of L. of Geneva (area 108 sq. m.). Wealthy city, flourishing watch-making industry. Area of cant. 107 sq. m., p. 171,000. Also name of several sm. t.'s in U.S.A.

**Gennaro,** *mtn.* of the Apennines, nr. Tivoli, Italy, alt. 4,289 ft.

**Gennesareth.** (*See* Galilee, Sea of.)

**Genoa,** maritime *prov.* of N. Italy (area 1,582 sq. m.); p. 1,119,877; also comml. c. and spt. situated on Gulf of Genoa, p. 300,139; fine palaces, flourishing velvet and silk factories.

**Genzaro,** *t.* nr. Potenza, Italy; p. (with environs) 9,450.

**Geographe Bay,** on S.W. coast of Australia, 35 m. wide.

**Georgetown,** *cap.* of Brit. Guiana, S. America, on Demerara R., p. 61,000; also *t.* on Potomac R., nr. Washington, U.S.A., p. 15,500; also various other sml. t.'s in United States and the Brit. Colonies.

**Georgia,** *state* (area 58,725 sq. m., p. 3,200,000), on Atlantic coast, U.S.A., large percentage of pop. is coloured; produce cotton, tobacco, maize, etc.; chief t.'s Atlanta (cap.) and Savannah; also mounts. region of the Caucasus, W. Asia, formerly in the Russian govt. dist. of Tiflis, now a republic.

**Georgia, Gulf of,** *inlet* (250 m. long), between Vancouver Isl. and mainland of Brit. Columbia.

**Georgian Bay,** N.E. side of L. Huron, Canada, length abt. 120 m.

**Georgievsk,** dist. *t.* of North Caucasia, prov. Terek; p. 12,500.

**Gera,** mftg. *t.* Cent. Germany, on the White Elster; cap. of Reuss-Schleitz; weaving, printing, etc.; p. 73,660.

**Geraldton,** *spt.* W. Australia, Champion B.; p. 4,176.

**Gerasa,** *c.* of Decapolis, Syria (the modern Jerash), supposed to be the Ramoth Gilead of the Bible, now occupied by Circassia.

**Gerizim,** Mtn., Palestine.

**German South West Africa,** *terr.* (322,400 sq. m., p. 240,000) N. of the Orange R., comprising Damaraland and Namaqualand; cap. Gt. Windhoek, now under mandate of Union of S. Afr.

**Germany,** cent. Europe, Fed. Rep., area 250,471 sq. m., p. about 60,000,000; formerly composed of 4 kingdoms, 6 grand duchies, 7 principalities, 3 Free Towns, besides the terr. of Alsace-Lorraine; main R.'s Rhine, Danube, Elbe, Weser, and Vistula.

**Germersheim,** *t.* (fort.) Bavaria, on R. Rhine, nr. Speyer; p. 7,150.

**Germiston,** *t.* on the Rand, Transvaal, nr. Johannesburg, p. *48,550*, (white) *19,580*.

**Gerona,** *t.* (p. 17,750), and maritime prov. in Catalonia, Spain (area 2,264 sq. m., p. 332,074).

**Gers,** wine-producing *dep.* S.W. France, area 2,429 sq. m., p. 194,406; cap. Auch; also name of small R., which rises in the Pyrenees, and flows (75 m.) to the Garonne.

**Geschenen,** *vil.* Switz. at end of St. Gothard Tunnel.

**Gettysburg,** *t.* Penn., U.S.A., great Federal victory, 1863, p. 5,700.

**Geysers,** hot-water *springs*, Iceland, chiefly in vicinity of Mt. Hecla, also in "Terrace" region of Auckland, New Zealand, and in the Yellowstone National Park of the U.S.A., and elsewhere.

**Geyser Springs,** summer *resort*, California, U.S.A., Sonoma co., 90 m. N.W. of San Francisco.

**Ghats,** or **Ghauts,** Eastern and Western, two mtn. *ranges* supporting the triangular upland of Southern India; alt. of chf. summits, 4,700 to 7,000 *ft.*

**Ghazipur,** *t.* on the bank of the Ganges (p. 40,000), Benares div. United Provs., India.

**Ghazni,** fort. mtn. *t.* Afghanistan, 78 m. S.W. of Cabul; great trade centre, cap. of the Empire of Mahmud, *circa* A.D. 1000; p. 10,500.

**Gheel,** *t.* nr. Antwerp, Belgium, with famous anc. asylum for the insane, p. 14,750.

**Ghent,** large commercl. and cathedral *c.*, cap. of E. Flanders, Belgium, on R. Scheldt; extensive cotton and other manuf.; splendid town hall; p. 165,910.

**Ghernigap,** *t.* in co. Grant, Victoria, 55 m. from Melbourne, p. 4,500.

**Ghilan,** or **Gilan,** *prov.* N. Persia, on S.W. shore of Caspian Sea, area 4,673 sq. m., p. (abt.) 150,000; cap. Recht.

**Ghiutendil,** or **Kostendil,** industrl. *t.* on R. Struma, Bulgaria, p. 12,300.

**Ghizeh,** *t.* 3 m. S.W. Cairo, Egypt, on the Nile, cap. of prov. same name; nr. to the pyramids of Khafra, Khufu, and Men-ka-ra; also the Sphinx; contains Museum of Egyptian antiq.; p. 18,714.

**Giant's Causeway,** famous basaltic *columns*, on prom. of N. coast of Ireland, co. Antrim. This tourist resort is now connected by elec. tram with Portrush.

**Giarre,** industrl. *t.* of Catania, Sicily, in the vicinity of Mt. Etna, p. 28,500.

**Gibraltar,** *fortress* and *t.* (civilian p. 19,120) sit. on rock (1,467 ft.) extreme S. of Spain; captd. by British in 1704; Strait of G. connects Atlantic and Mediterrn., its narrowest breadth is 9 m.

**Giessen,** mftg., arsl., and Univ. *t.* Hesse-Darmstadt, Germany, on R. Lahn, p. 33,409.

**Gifu,** or **Imaizumi,** industrl. *c.* of Centl. Japan; suffered severely from earthquakes, 1891-92, p. 57,909

**Gigha,** *isl.* off W. cst. Argyllsh., Scotl., 6 m. long, 2 m. wide, p. *243*.

**Gijon,** thriving *spt.* in prov. Oviedo, Spain, on Bay of Biscay; fine harbour, p. 53,248.

**Gila,** *R.* (650 m.) New Mexico and Arizona, U.S.A., trib. of Rio Colorado.

**Gilbert and Ellice Islands Colony,** group of islands (Brit.) in Micronesia, Pacific Ocean.

**Gildersome,** *urb. dist.*, nr. Leeds, W.R. Yorks, Eng., p. *3,041*. [1,410.

**Gilford,** *t.* co. Down, N. Ireland, on R. Bann, p.

**Gilghit,** or **Gilgit,** extreme N.W. prov. of India, under the rule of Kashmir; also R. of the Punjab rising in Chitral, affit. of the Indus, flowing along the Gilghit valley into Kashmir state.

**Gillingham,** *mun. bor.*, Kent, Eng., suburban to Chatham, p. *60,983*; also mkt. t. Dorsetsh., Eng., nr. Shaftesbury, p. 6,530.

**Gilly,** *t.* nr. Charlerol, Hainault prov., Belgium, in coll. dist., p. 24,500.

**Gilolo,** or **Jilolo,** *isl.* of the Moluccas, Malay Arch., under Dutch suprem.; area 6,500 sq. m., on the Equator. [hd. of Crinan Canal.

**Gilp, Loch,** Argyll., Scotl., inlet of Loch Fyne, at

**Gilsland,** *vil.* and *wat. pl.* E. Cumberland, Eng., nr. Brampton medcl. springs.

**Gioja,** or **Gioja del Colle,** *c.* prov. Bari, S. Italy; manuf., p. 19,700.

**Giovinazzo,** *spt.* S. Italy, on the Adriatic, nr. Bari, thriving trade, p. 11,350.

**Gippsland,** rich minrl. *dist.* S.E. Victoria, Australia, 250 m. long W. to E., and 80 m. wide.

**Girdleness,** *promont.* at mth. of R. Dee, Kincardine cst., Scotl., end of the Grampian Hills.

**Girgeh,** or **Jirgeh,** *t.* on R. Nile, Up. Egypt, in prov. same name; suffered from encroachment of the stream, p. 18,000.

**Girgenti,** *spt.* Sicily, cap. of Italian prov. same name; the Roman Agrigentum, once a Saracenic possessn.; many Doric temples remain, thriving modern trade, p. 27,100.

**Gironde,** *est.* in S.W. France formed by junc. of R.'s Garonne and Dordogne; also dep. of French Repub. on Atlantic; area 4,141 sq. m., p. 819,404; productive vineyard and agr. dist. [women.
**Girton,** *par.* nr. Cambridge, Eng.; Univ. college for
**Girvan,** *spt.* and fishy. *t.* co. Ayr, Scotl., p. *6,056.*
**Gisborne,** *port* on Poverty B., E. cst. of New Zealand (N. isl.), p. 15,000, also t. in co. Bourke, Victoria, p. 2,377.
**Gisburn,** *t.* on R. Ribble, nr. Clitheroe, W.R. Yorks, Eng.; p. 2,730.
**Gitschin,** *t.* of Bohemia, Czecho-Slovakia, garrison, corn trade, p. 10,250.
**Giugliano,** mftg. *t.* nr. Naples, Italy, p. 14,250.
**Giurgevo,** Rumanian *port* on R. Danube; good trade; p. 21,200. [manuf.; p. 12,470.
**Givors,** *t.* in France, on R. Rhône, nr. Lyons;
**Glace Bay,** *t.* Nova Sc., Can., p. *20,704.*
**Glacier House,** *stn.* on C.P. Ry., nr. Donald, Canada.
**Gladbach,** two mftg. *t.'s* in Rhine Prov. of Prussia, one W. (München-Gladbach), cotton, paper, etc., p. 64,031; the other (Bergisch-Gladbach), E. of the R., nr. Cologne, p. 12,370.
**Gladstone,** *spt.* off Queensland, fine harbour, p. 4,700; also t. nr. Adelaide, S. Australia; also county in Victoria.
**Glamis,** *par.* with anc. castle (associated with Shakespeare's "Macbeth"), nr. Forfar, Scotl.; p. *985.*
**Glamorgan,** *co.* in S. Wales, with immense coal and iron deposits; area 855 sq. m., p. *1,225,713*; co. t. Cardiff (*q.v.*).
**Glarus,** *cant.* Switz., E. of Schwyz; area 267 *sq. m.*, p. 33,834; also *c.*, cap. of cant., on R. Linth, nr. Wesen, p. 6,120.
**Glasgow,** *c.* Lanarksh., Scotl., on R. Clyde, second largest city in Gt. Britain; many thriving manufs.; university and famous cathedral; p. *1,088,417*; also small t.'s in Michigan and Kentucky, U.S.A.
**Glastonbury,** *mun. bor.*, nr. Wells, Somerset, Eng.; noted old abbey with legend of thorn planted by Joseph of Arimathea, also adjacent to Avalon, burial isl. of King Arthur, p. *4,515.*
**Glatz,** *t.* (ftd.) Prussian Silesia, on R. Niesse; many manufactures; p. 15,850.
**Glauchau,** *t.* Saxony, on R. Mulde, p. 22,971.
**Glebe,** a suburb of Sydney, N.S.W.
**Gleiwitz,** *t.* Prussia, on R. Klodnitz; many manufactures; p. 69,028.
**Glemsford,** *urb. dist.*, W. Suffolk, Eng., p. *1,262.*
**Glen,** *R.* of co., Lincolnsh., Eng. (36 m.), trib. of R. Welland.
**Glen, The,** beautiful *valley* and *tourist resort* in White Mountain dist. of New Hampshire, U.S.A.
**Glencoe,** *t.* Natal, South Africa, nr. Dundee, Brit. vict. Oct. 26th, 1899, p. *1,203*; also valley in N. Argyllsh., Scotl., scene of famous massacre, 1692.
**Glendale,** *t.* Cal., U.S.A., p. 62,750.
**Glenelg,** *R.* 200 m. in S.W. Victoria, Australia; also R. of N.W. Australia (70 m.) flowing to Doubtful Bay; also t. and wat. pl. on Holdfast Bay, nr. Adelaide, S. Australia, p. 4,500.
**Glen Innes,** hill *t.* of N.S.W., 406 m. N.N.W. of Sydney, alt. 3,518 ft.; p. 5,150.
**Glen More,** Scottish *valley* traversed by Caledonian Canal, from Fort William to Inverness.
**Glen's Falls,** *t.* on Hudson R., N.Y., U.S.A.; limekilns and many manufs.; p. 18,750.
**Glogau,** *t.* fort. on R. Oder, Silesia, Prussia; former cap. of extinct principality; p. 26,700.
**Glommen,** *R.*, longest in Norway (350 m.), flows into Skager Rack at Friedrikstad.
**Glossop,** *mun. bor.*, cotton manuf. *t.* Derbyshire, Eng.; p. *19,510.*
**Gloucester,** *co. bor.*, anc. *cathedral c.* on R. Severn, (p. *52,937*), cap. of Gloucester co., W. of Engld.; area 1,243 sq. m., p. *785,656*; also port and city of Essex co., Mass., U.S.A. on C. Ann, fishy. and quarrying industries, p. 24,250; also c. on Delaware R., New Jersey, U.S.A., opp. Philadelphia, p. 13,900.
**Gloversville,** *c.* in Fulton co., New York, U.S.A., seat of American glove industry, p. 23,200.
**Gluchow,** or **Glukoff,** industrl. *t.* in Tchernigov, Ukraine, on R. Jesmen, p. 19,000.
**Glynocrwg,** *urb. dist.*, Glam., Wales, p. *10,208.*
**Glückstadt,** *port* on R. Elbe, Schleswig-Holstein, nr Hamburg, p. 7,010.
**Gmünd,** *t.* Wurtemberg, Germany, on R. Enz, nr. Stuttgart; jewellery and silver work, woodcarving, etc.; p. 20,294.
**Gnesen,** mftg. *t.* Posen, Prussia; cathedral, linenweaving, p. 24,100.
**Goa,** Portuguese *terr.* on W. coast, India, area about 1469 sq. m., p. 515,772; cap. Nova Goa, p. 9,000.
**Goajira,** *pen.* on G. of Maracaibe, N. coast S. America, crossed by bndy. of Venezuela and Colombia.
**Goalanda,** *spt.* at junc. of Ganges and Brahmaputra, Faridpur dist., Bengal, India; great trade centre; p. 9,000.
**Goalpara,** *t.* on Brahmaputra R., Assam, India, p. 5,750.
**Goatfell,** *mtn.*, alt. 2,855 ft., on coast of Arran, W. Scotl.
**Gobi,** old name of the steppes and stony or sandy desert in Central Asia, divided into two princ. divs.; Shamo in Central Mongolia, and the basins of the Tarim, E. Turkestan; length about 1,500 m. (E. to W.), breadth 500 to 700 m.
**Goch,** *t.* in Prussia, Rhine prov., nr. Cleves, brush manuf.; p. 9,750.
**Godalming,** *mun. bor.*, Surrey, Eng., 4 m. S.W. of Guildford, p. *10,400.*
**Godavari,** *R.* (900 m.), S. India; drains the Deccan and forms large delta; also dist. of the Madras Pres., area 7,857 sq. m., p. 2,350,000; produce, rice, tobacco, sugar, cotton. Admin. hdqrs., Cocanada, old cap. Rajahmundry.
**Goderich,** *port.* on L. Huron, Ontario, Canada, p. 5,750.
**Godesberg,** *t.* nr. Bonn, in Rhine prov. of Prussia; famous hydro., chalybeate springs; p. 9,170.
**Goding,** *t.* on R. March, South Moravia, Czecho-Slovakia, p. 11,750.
**Godmanchester,** *mun. bor.*, Hunts, Eng., p. *1,991.*
**Godstone,** *par.* in Surrey, Eng., nr. Reigate, p. 3,100.
**Godwin-Austen Mt.** (alt. 28,250 ft.), *mtn.*, Himalaya, next to Mt. Everest, highest in the world.
**Gogmagog Hills,** *spur* of chalk range, nr. Cambridge, Eng.
**Gogo,** *spt.* in Ahmedabad dist., India, on G. of Cambay, p. 10,150.
**Gogra** (600 m.), sacred *R.*, trib. of Ganges, India.
**Gojam,** *dist.* Abyssinia, S. of L. Tasna, Amhara.
**Gokcha,** large *L.* in Erivan, Transcaucasia; triangular in shape (greatest length, N.W. to S.E. 45 m., greatest width, 27 m.), alt. 6,340 ft., never freezes, surrounded by high barren mtns.
**Golborne,** *urb. dist.*, Lancs, Eng., p. *7,322.*
**Golcar,** *urb. dist.*, in Colne valley, W.R. Yorks, Eng.; fancy woollen manuf.; p. *9,812.*
**Golconda,** *fort* and ruined *c.* nr. Hyderabad, S. India, famous for its diamonds in former days and for the mausoleums of the anc. kings.
**Gold Coast,** B. W. African *col.* on G. of Guinea; area of col. and dep. abt. 80,000 sq. m., p. 2,029,751, cap. Accra.
**Golden,** *c.* nr. Denver, Colorado, U.S.A., p. 3,347.
**Golden Gate,** entrance to B. of San Francisco, U.S.A.
**Golden Horn,** *pen.* on the Bosphorus, forming the harbour of Constantinople.
**Goldingen,** *t.* Courland, Latvia, on Windau R.; woollen mills, etc.; p. 12,750.
**Goldsboro,** *c.* N. Carol., U.S.A., on Neuse R., p. 15,250.
**Golfo Dulce,** *inlet* of the Pacific, S.E. of Costa Rica, Central America.
**Golinow,** *t.* on R. Ihna, Pomerania, Prussia, nr. Stettin, p. 9,070.
**Gombrun.** (*See* **Bander Abbas.**)
**Gomel,** dis. *t.* on R. Sozh, formerly Polish, annexed to Russia, 1772; p. 38,500, half Jews; grain and timber trade.
**Gomera,** *isl.* of the Canaries, 13 m. S.W. Teneriffe, 23 m. long, 9 m. wide; cap. San Sebastian.
**Gometray Isl.,** one of the Hebrides, included in co. Argyll, Scotl.; fishg. stn. and harbr.
**Gonaives, Les,** *spt.* on W. coast of Hayti, p. 8,000.
**Gonda,** *dist.* United Provs., India; area 2,880 sq. m., p. 15,000; cap. Gonda, p. 18,000.
**Gondal,** native *state* of the Gujarat div. of Bombay, area, 1,024 sq. m., p. 170,000; cap. Gondal, nr. Rajkot, p. 15,750.
**Gondar,** *t.* cap. of Amhara dist. (formerly cap. of kingdom), Abyssinia, p. 3,000.
**Gondokoro, the Ismailia of Baker,** formerly station on White Nile, 200 m. N. of the Albert Nyanza; now in ruins.
**Gonzaga,** *sm. t.* Mantua, N. Italy, p. 17,820.

**Goodenough Bay,** *inlet* N. coast of New Guinea, E. Indies; Goodenough Isl. just above the bay.
**Goodwin Sands,** dangerous sandbanks off E. coast of Kent, Eng., shielding the Downs roadstead.
**Goodwood,** racecourse and ducal seat, Sussex, Eng., nr. Chichester.
**Goole,** *urb. dist.*, W.R. Yorks, Eng., at confluence of Don and Ouse R.'s, p. *20,238*.
**Goolwa,** *port* at mouth of R. Murray, S. Australia, p. 3,250. [p. 31,000.
**Gooma,** walled *t.* of E. Turkestan, nr. Khoten,
**Goomish-Khaneh,** *t.* 100 m. W. of Erzerum, Armenia, p. 10,250.
**Gooty,** *t.* (ftd.), Madras Pres., India, p. 6,100.
**Goppingen,** manuf. *t.* Würtemberg, Germany, between Ulm and Stuttgart, p. 23,000.
**Gorakhpur,** *t.* of United Provs., India, on the Rapti, p. 56,892.
**Gorcum,** or **Gorkum,** *t.* in Holland, nr. Rotterdam, on the Merewede Canal; gold and silver working, p. 12,300. [W. Melbourne, p. (of dist.) 3,150.
**Gordon,** *t.* in mining and agr. dist., Victoria, 95 m.
**Gordon Bennett Mt.,** in Ruwenzori range, Cent. Africa, nr. L. Albert Nyanza, discovered by Stanley, alt. 16,000 ft. [W. Africa; p. 1,500.
**Goree, sm.** French *isl.* and *station* nr. Cape Verde,
**Gorey,** mkt. *t.* co. Wexford, I.F.S.; p. 3,020.
**Gorgonzola,** *t.* N. Italy, 12 m. from Milan, famous for its cheese; p. 5,150.
**Gorham,** *t.* (mftg.) in Maine, U.S.A.; p. 4,000.
**Gori,** dist. *t.* in Georgia, Transcaucasia, nr. the Goristsikhe fortress of the Byzantine Emperors; p. 12,820.
**Gorizia and Gradisca,** former Austrian terr., now Italian; area 1,138 sq. m., p. 260,749.
**Gorleston,** *wat. pl.* Suffolk, Eng., nr. Great Yarmouth.
**Gorlitz,** busy commil. and mftg. *t.* Prussian Silesia, on R. Weisse; lib. educ. instns.; p. 80,332.
**Gosford,** *t.* N.S. Wales, 50 m. N. Sydney; p. 1,250.
**Gosforth,** *urb. dist.*, colly. *t.* subn. to Newcastle-on-Tyne, Eng.; p. *18,042*.
**Goshen,** *c.* Indiana, U.S.A., on Elkhart R., p. 10,500.
**Goslar,** old commil. *c.* Hanover, Prussia, at foot of Harz Mtns.; copper and lead mining dist., p. 17,750.
**Gosport and Alverstoke,** *urb. dist., spt.* and Naval dep., Hants., Eng., W. side of Portsmouth Harbour, p. *37,928*.
**Gota,** *R.* of Sweden, flows (47 m.) from L. Wener to the Cattegat; also canal (125 m. long), connecting L. Wener with the Baltic.
**Gotha,** *c.* Cent. Germany, cap. of former Duchy of Saxe-Coburg-Gotha, p. 41,465.
**Gothenburg,** *govt.* Sweden, on coast of the Cattegat, also cap. of Govt. same name, at mouth of Gota R., second city in the kingdom for commerce and industry; p. 202,366.
**Gothland,** *prov.* of S. Sweden, including 12 govts., area, 35,788 sq. m., p. 2,750,000.
**Gothland Isl.,** fertile Swed. isl.; area, 1,220 sq. m. and govt. in the Baltic, p. 55,804; part of foregoing prov.; cap. Visby.
**Goto Isls.,** group belonging to Japan, W. of Hizen prov. All are highly cultivated.
**Gottingen,** *t.* Hanover, Germany, on the Leine; famous university; p. 32,200.
**Gouda** (or **Ter-Gouw**), *t.* S. Holland, on R. Yesel, 11 m. from Rotterdam. Famous for its cheese, p. 26,267.
**Goulbourn,** mftg. *t.* (boots, etc.), N.S.W., in agr. dist. 134 m. S.W. of Sydney, p. 11,000; also name of R. in Victoria, flowing (230 m.) to the Murray R. nr. Echuca.
**Gourock,** *wat. pl.* on F. of Clyde, nr. Greenock, Scotl., p. 5,520.
**Govan,** busy shipbuilding *dist.* on the Clyde, included in Glasgow, Scotl., p. *364,780*.
**Governor's Isl.,** *fort* in Boston Harbour; also fort. islet in harbour of New York, U.S.A.
**Gower,** *pen.* W. Glamorganshi., Wales.
**Gowrie, Carse of,** lies along the N. bank of R. Tay, Dundee to Kinnoul, Perthsh., Scotl.
**Goyanna,** commercial *t.* Brazil, 40 m. N. Pernambuco, on R. Goyanna, p. 15,500.
**Goyas,** *prov.* in Cent. Brazil, area 288,462 sq. m.; p. 528,879; cap. Goyas, on R. Vermelho, p. 3,500.
**Gozo, or Gozzo, Brit.** *isl.* Malta group in Medit., the anc. Gaulos, area 26 sq. m., p. 19,000.
**Graaf Reinet,** *t.* in agr. dist. on Sunday R., Cape Colony, S. Africa, p. *9,008* (whites *4,447*).
**Grabow,** industrl. *t.* in Pomerania, Prussia, on R. Oder, p. 17,500.
**Graciosa,** *isl.* of the Azores group, N.W. of Tercaira (20 m. long), p. 8,020.
**Gradisca.** (*See* **Gorizia.**)
**Grafton,** *t.* on both B. of Clarence R., N.S.W., 342 m. N. of Sydney, p. 5,350; also industrl. *t.* on Tygart Valley R., W. Virginia, U.S.A., p. 7,675.
**Graham Isl.,** the largest of the Queen Charlotte group in the Pacific, W. of Brit. Columbia; also disappearing vol. islet in the Mediterranean.
**Graham's Land,** in Antarctic Ocean, discv. 1832.
**Grahamstown,** *t.* C. of Good Hope, S. Africa, p. 14,000, (whites) *7,592*; also name of mining *t.* N. Zealand (N. Isl.), p. (dist.) 6,400.
**Graian Alps,** *mtn.* range between Savoy and Piedmont, highest pt. Gran Paradiso, alt. 13,320 ft.
**Grain, Coast of Africa.** (*See* **Liberia.**)
**Grammont,** or **Geertsbergen,** *t.* E. Flanders, Belgium, nr. Ghent, on R. Dender; manf., p. 12,160.
**Grampians,** or **Cent. Highlands,** highest *mtns.* of Scotl.; Ben Nevis (alt. 4,406 ft.); also mtn. range in Victoria, Australia Mt. William (alt. 3,825 ft.).
**Gran,** industrl. *t.* Hungary, on Danube, at junction with Gran R.; p. 10,240.
**Granada,** anc. *c.* at foot of Sierra Nevada, S. Spain, p. 77,477. Formerly cap. of the Moorish Kingdom of G., now a fertile maritime prov., area 4,928 sq. m., p. 545,217; also *c.* of Nicaragua, Cent. America, gold wire-drawing industry, p. 17,500.
**Gran Bassam,** *t.* Ivory Coast, W. Africa.
**Grand Calumet,** *isl.* Canada, on the Ottawa R., above Portage du Fort.
**Grand Canary,** *isl.* Canaries, cap. Las Palmas (*q.v.*).
**Grand Chartreuse, La,** *monastery*, 15 m. N. of Grenoble, France; famous for its liqueur.
**Grand Combin,** *mtn.* of the Alps, north of Aosta, Italy, alt. 10,141 *ft.* [wheat region, p. 17,400.
**Grand Forks,** *t.* N. Dakota, U.S.A., on Red R., in
**Grand Haven,** *t.* on Lake Mich., U.S.A., cap. of Ottawa co., p. 8,400.
**Grand Island,** *t.* in Hall co., Nebraska, U.S.A., cattle and grain trade, p. 18,500.
**Grand Junction,** *t.* in Mesa co., Colorado, U.S.A., p. 10,400.
**Grand Lake,** New Brunswick (25 m. long), draining into R. St. John.
**Grand Manan,** *isl.* of Charlotte co., New Brunswick (22 m. long), at entrance to B. of Fundy.
**Grand Rapids,** *c.* Mich., U.S.A., on Grand R.; many mfts. and thriving trade; p. 171,500.
**Grand R.,** Mich., U.S.A. (250 m.), enters L. Mich. at Grand Haven, navigable to Grand Rapids; also R. of Western Colorado and Eastern Utah, U.S.A. (350 m.), trib. of the Colorado R.
**Grange,** *urb. dist.*, Lancs, Eng., p. *2,648*.
**Grangemouth,** *spt.* of Stirlingsh., Scotl., on F. of Forth, p. *20,682*.
**Granite City,** Ill., U.S.A., p. 14,757.
**Granley,** *t.* on Yamaska R., Quebec, Canada, p. 3,000.
**Grantham,** *mun. bor.*, Lincolnsh., Eng., on R. Witham; iron mftg.; p. *19,709*.
**Grant Land,** region in Arctic Ocean, north of Grinnell Land.
**Granville,** *spt.* (ftd.) and *wat. pl.*, dep. Manche, France, at mouth of the Bosq. p. 12,020.
**Grao de Valencia,** *spt.*, of Spain, at mouth of the Guadalaviar, p. 4,570.
**Graslitz,** *t.* Bohemia, Czecho-Slovakia, nr. Eger; musical inst. mftg.; p. 12,260.
**Grasmere,** *urb. dist.* and picturesque *vil.* Westmorland, Eng.; at head of Grasmere Lake; Wordsworth lived here, p. *988*.
**Grasse,** *t.* and *health resort*, dep. Alpes-Maritimes, S.E. France; rose and orange flowers production; p. 14,480.
**Gratz,** *c.* cap. of Styria, Austria, on the Mur; bicycle and machy. mftg., good trade; p. 157,644.
**Graudenz,** *t.* in W. Prussia, on the R. Vistula; carriage and carpet factories; p., including military, 35,000.
**Gravelines,** *spt.* (ftd.) dep. Nord, N.E., France; fishery centre; p. 6,520.
**Gravelotte,** *vil.* 7 m. W. of Metz, Germany; great French defeat, 1870.
**Gravesend,** *mun. bor., spt.*, Kent, Eng., at mouth of Thames, p. *35,490*.
**Gravina,** industrl. *c.* Italy, Apulia, S.W. Bari, p. 16,120.

**Gray,** *t.* dep. Haute-Saône, France, on R. Saône, p. 6,060. [14,341 ft.
**Gray's Peak,** Rocky Mtns., Colorado, U.S.A.; alt.
**Grays Thurrock,** *urb. dist.*, Essex, Eng., on the Thames, nr. Tilbury Fort; cement manuf.; p. *18,172*. [Yorks, Eng., p. *3,599*.
**Greasbrough,** *urb. dist.*, nr. Rotherham, W.R.
**Greaseley,** *par.* nr. Nottingham, Eng., p. 9,020.
**Great Australian Bight,** coast line (850 m.) S. Australia.
**Great Barrier Reef,** off N.E. coast of Australia, 250 m. long. [resort, p. 5,900.
**Great Barrington,** *t.* in Berks co., Mass., summer
**Great Bear Lake,** on the Arctic Circle, in N.W. Terr., Canada, over 150 m. long, area 14,000 sq. m., outlet through Great Bear R. to Mackenzie R. [etc.).
**Great Britain.** (*See* Eng., Scotl., Wales, Britain,
**Great Driffield.** (*See* Driffield.)
**Great Falls,** *t.* in Cascade co., Montana, U.S.A.; on Missouri R.; lead and copper smelting; p. 29,290.
**Great Fish R.,** C. of Good Hope, S. Africa, rising in Sneuwbergen Mtns., and flowing to Indian O.; also *R. in extreme* N. of Brit. N. America, running from the Great Slave L. to the Arctic Ocean.
**Great Grimsby.** (*See* Grimsby.) [*12,787*.
**Great Harwood,** mftg. *t.* in Lancashire, Eng., p.
**Great Kanawha R.** (450 m.), trib. of R. Ohio, U.S.A.
**Great Malvern.** (*See* Malvern.) [7,530.
**Great Marlow,** Thames-side *t.* in Bucks, Eng., p.
**Great Ormes Hd.,** promontory nr. Llandudno, N. Wales.
**Great St. Bernard.** (*See* Bernard.) [foundland.
**Great St. Lawrence,** *pt.* on Placentia Bay, New-
**Great Salt Lake,** N. Utah, in the Gt. Basin plateau of N. America, 90 m. long, area 2,360 sq. m.; receives Bear, Jordan, and Beaver R.'s, no outlet.
**Great Sandy Isl.,** on coast of Queensland.
**Great Slave Lake,** in N.W.T., Canada, length 300 m., greatest breadth 50 m., outlet the Mackenzie R.
**Great Slave R.,** running betwn. Lake Athabasca, Brit. N. America, and the Great Slave Lake.
**Great Yarmouth,** *co. bor.*, Norfolk, Eng.; noted herring fishery; p. *56,769*.
**Greece,** a *kingdom* on the S. part of Balkan Pen., bounded on N. by Jugo-Slavia, on W. and S. by the Mediterranean, and on the E. by the Ægean Sea, and including islands in the Mediterranean, Ægean, and Ionian Seas. Before the Great War comprised 43,500 sq. m., p. 5,000,000; as a result of her war with Turkey her E. boundary was defined to some extent in 1929; cap. Athens (*q.v.*)
**Greeley,** *t.* nr. Denver, Colorado, U.S.A., p. 12,300.
**Green Bay City,** Wisconsin, U.S.A.; trade in timber, flour, etc.; p. 38,000.
**Greenfield,** *t.* Franklin co., Mass., U.S.A., p. 15,525,
**Greenford,** *urb. dist.*, Middlesex, Eng.; p. 1,463.
**Greenhithe,** Thames-side *vil.* nr. Dartford, Kent, Eng.
**Greenland,** extensive Danish Arctic *isl.* N.E. of N. America; inhabited mainly by Eskimos; icy region of which little is known. Estimated area 850,000 sq. m., ice-free area 46,740 sq. m., p. (about) 13,500.
**Green Mtns.** Vermont section of Appalachian or. Alleghany system; highest pk. Mt. Mansfield, alt. 4,430 ft.
**Greenock,** imp. *port* on F. of Clyde, Renfrew, Scotl., shipbuilding and sugar-refining, p. *77,928*.
**Greenough,** *t.* 251 m. N. of Perth, W. Australia, p. 2,800.
**Green R.,** trib. (750 m.) Grand *R.*, Utah, U.S.A.; also R., trib. (350 m.) Ohio R., Kentucky, U.S.A. also *vil.* Victoria, co., New Brunswick, on R. St. John, p. 1,200.
**Greensborough,** mftg. *t.*, Guildford co., N. Carolina, U.S.A., p. 56,000.
**Greensburg,** *t.* cap. of Westmorland co., Penn., U.S.A.; iron and glass factories, p. 16,600.
**Greenville,** *t.* S. Carolina, U.S.A., cap. of Greenville co., in the cotton belt, p. 29,750; also *t.* in Washington co., Mississippi, U.S.A., good cotton trade, p. 15,000; also t. in Hunt co., Texas, U.S.A., cotton, shipping, p. 12,400.
**Greenwich,** *met. bor.*, on Thames, Kent, 5 m. S.E. London, Eng. Famous for its Hospital and Observatory; p. *100,879*; also t. of Connecticut, U.S.A., summer resort, p. 6,000.
**Greetland,** *urb. dist.*, nr. Halifax W.R. Yorks, Eng., p. *4,298*.
**Greifswald,** univ. *t.* Pomerania, Prussia, p. 23,750.
**Greiz,** *t.* cap. of Reuss-Greiz, Germany, on the White Elster R.; woollen manuf.; old castles, modn. pal., p. 23,100.
**Grenada,** Brit. *isl.* in W. Indies, area 133 sq. m., p. 75,660, cap. St. George; seat of govt. of the Windward Isls.
**Grenadines,** Brit. group of smll. *isls.* between Grenada and St. Vincent; like Grenada, in the Windward Isls. jurisdiction.
**Grenfell,** *t.* 215 m. W.S.W. of Sydney, N.S.W., mining and agr. dist.; p. 9,570.
**Grenoble,** *fort. c.* on R. Isère, S.E. France, 60 m. from Lyons; glove, button and machy. mftg.; p. 77,409.
**Gretna Green,** *vil.* at head of Solway Firth, on border of Scotl., Eng.; noted for clandestine marriages; also t. Louisiana, U.S.A., on the Mississippi R., opp. New Orleans; p. 9,750.
**Greymouth,** *spt.* on Grey R. W. cst. of New Zealand (South I.); p. 4,200.
**Greytown,** *t.* New Zealand, nr. Dunedin, p. 2,100; also t. Natal, in Umvoti Valley, p. *1,401*; also t. Cent. America, at mouth of San Juan R., Nicaragua, p. 750.
**Griffin,** *c.* Georgia, U.S.A., Spalding co.; cotton factories and trade; p. 10,500.
**Grigoripol,** fort. *t.* in Kherson, on R. Dniester, Ukraine, p. 9,220.
**Grimmen,** *t.* on R. Trebel, nr. Stralsund, Prussia; p. 4,260.
**Grimsby,** Gt., *co. bor., spt.* Lincolnsh., Eng., on S. bank of R. Humber; centre of fishery industry; p. *92,463*.
**Grindelwald,** *vil.* in cant. Bern, Switz.; picturesque scenery, great tourist resort; res. p. 3,560.
**Grinnel Land,** in Arctic America, lies W. of Robeson and Kennedy Channels.
**Grinstead, E.,** mkt. *t.* in Sussex, Eng., p. *7,901*.
**Griqualand East.,** div. of C. of Good Hope, S. Africa, S. of Natal; G. West, lies W. of the Orange Free State.
**Gris Nez,** *C.* N.E. France, nearest pt. on French coast to Dover.
**Grisons,** largest *canton* in Switz., area 2,774 sq. m., one half only productive, many glaciers, contains the mtn. air health resorts of Davos-Platz (alt. 5,115 ft.), St. Moritz (alt. 6,089 ft.), and Arosa (alt. 6,108 ft.); p. 110,500.
**Grivegnee,** *t.* (ironworks) nr. Liège, Belgium, p. 12,270.
**Grodek,** *t.* nr. Lemberg, Galicia, Ukraine, flax trade; p. 13,100.
**Grodno,** *t.* (p. 61,600) and *prov.* of Poland, N.W. Russia, area 15,000 sq. m., p. (nearly) 2,000,000; agr., stock raising, wool, and tobacco factories.
**Groningen,** commercl. and university *t.* (p. 89,895) and agr. prov., N.E. Holland; area 881 sq. m., p. 363,589. [Australia, 40 sq. m.
**Groote Eylandt,** *isl.* in Gulf of Carpentaria,
**Grossenhain,** industrl. *t.* Saxony, on R. Roder; 20 m. N.W. Dresden, p. 13,750. [R. Oder.
**Grosses Haff,** *bay* on coast of Prussia, at mth. of
**Grosseto,** fort. *t.* (p. 7,850) and *prov.* Cent. Italy, area 1,735 sq m., p. 155,774.
**Gross-Meseritsch,** *t.* on the R. Oslawa, N.E. Moravia; linen indust., p. 5,600.
**Grosswardein,** *c.* (ftd.) Rumania, cap. of co. Bihar, on Koros R.; Roman and Greek cathedrals, one of the most anc. Hungarian towns; p. 50,000.
**Groton,** industrl. *t.* on R. Thames, New London co., Connecticut, p. 4,100; also name of several small t.'s in U.S.A.
**Grottaglie,** *t.* in prov. Lecce, Apulia, Italy, nr. Brindisi; white glaze pottery, p. 10,250.
**Groznyi,** *t.* (fort.) N. Caucasia, on R. Terek; naphtha works, p. 17,360.
**Grubeschow,** *t.* in Poland, nr. Lublin, p. 8,560.
**Grumo,** industrl. *t.* nr. Bari, in S. Italy, p. 10,300; also smaller Italian t. nr. Naples, p. 5,160.
**Grunberg,** *t.* Prussian Silesia, nr. Glogau; straw hat, tobacco, leather manuf.; p. 23,200.
**Gruyère,** *dist.* in canton Freiberg, Switz., noted for its cheese; p. 1,400.
**Guadalajara,** mftg. *t.* (p. 12,370) and prov. (area 4,676 sq. m., p. 214,288) Spain; agr. and salt mines; also c. in Mexico, cap. of Jalisco State; cotton and wool manuf., cathedral; p. 160,000.
**Guadalaviar,** *R.* (130 m.) E. Spain, flows into Mediterr. nr. Valencia.

**Guadalcanar,** *isl.* of the Solomon group in the Pacific Ocean.

**Guadalquivir,** ch. *R.* (375 m.) Spain, flows through Andalusia to Atlantic.

**Guadalupe,** *t.* in Caceras prov., Spain, p. 3,120.

**Guadeloupe,** *isl.* (French) W. Indies, in Leeward grp.; area 722 sq.m., p. 212,430; sugar produce; ch. port. Pointe-à-Pitre.

**Guadiana,** *R.* (380 m.) Span. and Portug. frontier, flows into B. of Cadiz.

**Guam,** largest *isl.* of the Ladrones grp. in the N. Pacific, area 210 sq. m.; naval station of the U.S.A.; native p. 13,275; ch. t. Agana.

**Guanabacóa,** industrl. *t.* nr. Havana, Cuba, p. 25,260.

**Guanajuato,** *state* Central Mexico, area 10,950 sq. m., p. 1,085,680; very fertile, productive and prosperous. Chief t. Guanajuato, 250 m. from Mexico city, p. 83,000, many fine bldgs.

**Guanare,** industrl. *t.* in Venezuela, nr. Trujillo; cap. of Portuguesa State; p. 12,000.

**Guapore,** *R.* of Brazil, S. America (900 m.), joins the Mamoré.

**Guarda,** wine-growing *dist.* of Portugal, between R.'s Tagus and Douro; area 2,216 sq. m., p. 271,816.

**Guardafui,** *C.* E.-most point of Africa.

**Guatemala** (area 48,290 sq. m., p. over 2,450,000), Republican *state* in Cent. America, adjoins Mexico, Honduras, San Salvador, and the Pacific. Coffee and sugar produce; cap. Guatemala city, with 125,000 inhabitants, was destroyed by an earthquake in 1917.

**Guayama,** *t.* of Porto Rico, in prov. of same name, 10 m. from the S. coast; p. 5,560.

**Guayaquil,** ch. *port* of Ecuador, S. America, on R. Guayas, 30 m. above its ent. into the B. of Guayaquil. Devastated by fire in 1896 and 1899; p. 98,000.

**Guaymas,** Mexican *port* on G. of California, p. 17,000.

**Guayra, La,** or **La Guaira,** *t.* in Venezuela, prov. Caracas; impt. tr.; p. 16,000.

**Gubbio,** *t.* in Perugia, Umbria, Italy, nr. Ancona; lustre ware; p. 5,620.

**Guben,** *t.* (walled) Brandenburg, Germany, on R. Neisse; impt. trade, p. 28,740.

**Guden-Aa,** *R.* in Jutland, Denmark, flows (80 m.) to the Cattegat.

**Guelderland,** *prov.* Holland. (*See* Gelderland.)

**Guelph,** *mftg. t.* in Ont., Canada; agr. college and fine bldgs.; p. *21,068*.

**Guernsey** (28 sq. m., p. *42,606*), next to Jersey, largest of Channel Isls. between cst. of France and Eng. Only t., St. Peter Port.

**Guerrero,** a Pacific *state*, Mexico, area 25,279 sq. m.; p. 620,416; agr. and mineral; cap. Chilpancingo; ch. port Acapulco.

**Guiana,** *country* in N.E. part of S. America; pol. divided into Brit., French, and Dutch G. (*q.v.*).

**Guienne,** old French *prov.* separated by R. Garonne from Gascony.

**Guildford,** *mun. bor.*, co. *t.* of Surrey, Eng., 30 m. S.W., London, p. *30,753*.

**Guildford,** *bor.* New Haven co., Long Island Sound, Connecticut, U.S.A., p. 3,200.

**Guimaraes,** *t.* Portugal, Braya dist., surrounded by vineyards; cutlery and embroidery, fruit-preserving; p. 9,450.

**Guinea,** general name for W. African coastlands round the greatest bend of Gulf of G. (*See* Liberia, etc.)

**Guinegate,** *vil.* in dep. Pas-de-Calais, nr. St. Omer.

**Guines,** *t.* in France, 7 m. S. of Calais; an Eng. possess, 14th to 16th cent.; p. 4,730; also t. in Havana prov., Cuba, in sugar dist.; p. 9,000.

**Guingamp,** *t.* on R. Trieux, nr. St. Brieuc, Brittany, France; ch. of Notre Dame, pilgrim resort; p. 10,020.

**Guipuzcoa,** one of Span. Basque provs.; area 723 sq. m., p. 253,132. Mftg., minerals, agr.; cap. San Sebastian.

**Guisborough,** *urb. dist.*, in Cleveland iron dist., Yorks, Eng., p. *6,306*.

**Guise,** *t.* Aisne dep., France, on R. Oise; gave name to Dukes of Guise; p. 8,300. [p. *5,607*.

**Guiseley,** *urb. dist.*, nr. Otley, W.R. Yorks, Eng.,

**Gujarat or Guzerat,** maritime *prov.* in Bombay, India; area 70,038 sq m.; p. (nearly) 10,000,000. Includes Kathiawar penin., Brit. dists. of Ahmadabad, Panch Mahals, Kaira, Surat and Broach, besides the territories of Baroda, Cutch and Cambay, all of which see.

**Gujranwala,** *c.* cap. of dist. same name, Punjab, India, p. 27,220.

**Gujrat,** *t.* Punjab, India, Rawalpindi div., S. of Kashmir, nr. the Chenab R.; inlaid work and various manuf., p. 18,500.

**Gulf Stream,** current of the Atlantic, issuing from Gulf of Mexico by Florida Strait.

**Gumal Pass,** from Afghanistan to the Punjab, India, over Sulaiman mtns.

**Gumbinnen,** industrl. *t.* in prov. of E. Prussia, Germany, on R. Pissa; p. 14,750.

**Gumti,** *R.* (500 m.) trib. of Ganges, India, runs past Lucknow.

**Gumtur,** or **Guntoor,** *t.* Madras Pres., India, nr. [Masulipatam; p. 26,000.

**Gumurdjina,** *t.* on R. Karaga, Adrianople, Thrace; wine, silk, and wheat, p. 20,500.

**Gunthwaite and Ingbirchworth,** *urb. dist.*, W.R. Yorks, Eng., p. *338*.

**Gurgaon,** *t.* (p. 20,000) and *dist.*, Delhi div., Punjab, India, area 1,948 sq. m., p. 750,000.

**Güstrow,** industrl. *t.* Mecklenburg-Schwerin, N. Germany, p. 18,843.

**Gütersloh,** *t.* in Westphalia, Prussia, nr. Bielefeld; silk and cotton industry; famous for its pumpernickel (rye-bread), p. 7,750.

**Guthrie,** *cap.* of Oklahoma, U.S.A., p. 9,300.

**Guzerat.** (*See* Gujarat.)

**Gwalior,** native *state*, Cent. India, S.W. of N.W. Provs.; area 25,107 sq. m., p. 3,175,822; cap. same name, p. 76,849, situate 76 m. S. of Agra.

**Gweedore Bay,** *inlet* of the coast of co. Donegal, I.F.S.

**Gympie,** *t.* Queensland, on Mary R.; gold, silver, copper, and antimony mines, and collieries; p. 12,419. [Hungary, p. 10,250.

**Gyoma,** industrl. *t.* on the Koros R., co. Bekes,

**Gyongyös,** *t.* Cent. Hungary, 44 m. N.E. Pesth, flourishing trade, p. 17,360.

**Gyula,** commercial *t.* Hungary, on the White Koros, cap. of Bekes co., p. 19,500.

## H

**Haaksbergen,** *t.* in Overyssel, Holland, nr. Deventer, p. 5,050.

**Haarlem,** *c.* N. Holland, 14 m. from Amsterdam, centre of Dutch bulb industry, p. 76,858.

**Haase,** *R.* of Hanover, Germany trib. of R. Ems.

**Habab,** *dist.* on W. coast of Red S. in N.E. Abyssinia. [of Hacha R., p. 74,000.

**Hacha,** *spt.* Magdalena State, Colombia, at mouth

**Hache, Lac La,** *L.* in Brit. Columbia, Lillooet dist., draining to Frazer R.

**Hackensack,** *t.* in Bergen co., New Jersey, U.S.A., p. 25,750; also vil. nr. Wappinger's Falls, and the R. Hudson, Dutchess co., New York, U.S.A.

**Hackland,** *par.* on Mainland Isl., one of the Orkney group, N.E. Scotl. [p. *215,330*.

**Hackney,** *met. bor.* of N. London, Eng.; commercl.,

**Hacos Ness,** *promontory*, Shapinshay, one of the Orkneys, Scotl.

**Haddenham,** *par.* nr. Thame, co. Bucks, Eng., p. 1,500; also par. nr. Ely, co. Cambridge, Eng., p. 3,330.

**Haddington,** *t.* cap. co. same name on R. Tyne, Scotl.; woollen manuf., p. *5,682*; area of H. co. (otherwise E. Lothian), 267 sq. m., p. *47,369*.

**Haddon,** *t.* Grenville co., Victoria, p. (of dist.) 5,400.

**Hadersleben,** industrl. *t.* on fiord in N. Schleswig, Prussia, p. 9,470. [Eng., p. *2,952*.

**Hadleigh,** *urb. dist.*, mkt. *t.* on R. Bret, Suffolk,

**Hadramaut,** maritime *prov.* of Arabia, part of anc. Arabia Felix, p. 450,000.

**Hagen,** *t.* on R. Volme, Westphalia, Prussia; iron and cotton indust., p. 92,862.

**Hagerstown,** *c.* of Washington co., Maryland, U.S.A.; college for women, p. 31,000.

**Hagonoy,** *t.* in agr. dist., Luzon, Philippine Isls., p. 20,000.

**Hague, The,** cap. *c.* of S. Holland, and seat of the Dutch Govt.; palaces, art galleries, etc., p. 353,286. [15,010.

**Haguenau,** *t.* (fort.) of Alsace, nr. Strasburg, p.

**Haidarabad,** or **Hyderabad,** native *state* of South India, sometimes styled the Deccan, and sometimes the Nizam's Dominions; area 82,698 sq. m., p. over 12,500,000; chief c. H. on R. Musi, p. (with Secunderabad), 404,225.

**Hai-Dzuong,** *t.* (fort.) of Annam, Fr. Indo-China, p. 30,000.

**Haifa,** *t.* on B. of Acre, at foot of Mt. Carmel, Palestine, Syria, p. *50,689*.

**Hailsham**, mkt. *t.* in Sussex, Eng., p. 4,020.
**Hainan**, *isl.* off S. coast of China, area 13,974 sq. m., p. 2,500,000, chief t. Kiungschow; large trade with Hong Kong.
**Hainault**, or **Hainaut**, *prov.* (industrl. and agr.) Belgium, adjoining N.E. border of France, area 1,437 sq. m., p. 1,231,720.
**Haine**, *R.* in Belgium, and dep. Nord., French trib. (40 m.) of R. Scheldt.
**Haiphong**, or **Hai-Fong**, *t.* in Tongking, French Indo-China; thriving tr., p. 17,800.
**Haiti**, *isl.* West Indies, area 28,523 sq. m.; also H. (the "Black Republic"), part of Isl., area 11,072 sq. m.
**Hajipur**, *t.* in Bengal, India, on R. Gondak, p. 22,500.
**Hakodate**, *spt.* of Yezo Isl., Japan; flourishing tr., p. 133,698. [manuf., p. 12,750.
**Hal**, *t.* in Brabant prov., Belgium; beetroot sugar
**Halberstadt**, *t.* in Saxony, nr. Halle; agr. and sugar factories, ry. works; p. 46,120.
**Hale**, *urb. dist.*, Cheshire, Eng., p. *10,669*.
**Halesowen**, industrl. *t.* nr. Birmingham, Worcestersh., Eng., p. *31,058*.
**Halesworth**, *urb. dist.*, *t.* on R. Blyth, Suffolk, Eng., p. *2,024*.
**Halfaya**, *t.* in the Anglo-Egyptian Sudan, nr. Khartum, 7 m. above the confluence of the Blue and White Nile, formerly the res. of the Sheikh of the Jalin Arabs.
**Halidon Hill**, nr. Berwick, Northumberland, Eng.; here in 1333 Edward III. defeated Scots under the Regent Douglas.
**Halifax**, *co. bor.*, in W.R. Yorks, Eng., on the R. Hebble, carpet and woollen manuf., p. *98,122*; also spt., cap. of Nova Scotia, great trade, p. *58,939*.
**Halliwell**, cotton mftg. *t.* nr. Bolton, Lancs., Eng., p. 32,010.
**Hallamshire**, S. dist. of W.R. Yorks, Eng., including busy mftg. centres of Sheffield and Ecclesfield.
**Halle**, *t.* on R. Saale, Saxony, Prussia; university and many public instns.; sugar, starch, and other factories, p. 182,326.
**Hall Isls.**, Frobisher Bay, Canada; also sml. group of Germ. islets of the Caroline system in Oceania. [on R. Lys, p. 16,170.
**Halluin**, frontier industrl. *t.* in France, dep. Nord,
**Halmahera**, *isl.* of the Dutch East Indies; area 6,648 sq. m.; mountainous, grows sago and rice, p. 32,000.
**Halmstad**, *spt.* on Cattegat, Sweden; cloth jute, and paper factories, p. 18,400.
**Halstead**, *urb. dist.*, on R. Colne, Essex, Eng., p. *5,878*. [p. 4,150.
**Haltwistle**, *t.* in Northumberl., Eng., on R. Tyne.
**Ham**, *t.* on R. Somme, nr. Amiens, France; old castle. Napoleon III. escaped from prison here in 1846, p. 3,425.
**Ham**, *urb. dist.*, Surrey, Eng., p. *2,206*.
**Hamadan**, *c.* of Irak Ajemi, Persia, the anc. Ecbatana, p. 31,000.
**Hamah**, *c.* on R. Orontes, in Upper Syria; the anc. Hamath, cap. of a kingdom in times of King David and King Solomon.
**Hambach**, *t.* in Neustadt circle, Bavaria, p. 2,550.
**Hamburg**, Republic (area 160 sq. m.) on the Elbe; gt. transit port, p. 1,014,664; also name of t.'s in N. Carolina, Iowa, Penn., and New York, U.S.A.
**Hamelin**, or **Hamelyn**, old industrl. *t.* on R. Weser, in Hanover; legend of "The Pied Piper"; p. 19,960.
**Hamilton**, *burgh* of the Falkirk grp., Lanark co., Scotl.; cotton and lace factories, p. *41,224*; also c. of Ontario, Can., at W. end of L. O., many manuf., p. *154,914*; also c. in Butler co., Ohio, U.S.A., on the Gt. Maine R., thriving ind. and tr., p. 53,500; also t. in Western Victoria, p. 5,098; also t., New Zealand, p. 13,798; also cap. of the Bermudas (on largest isl.), p. 2,627.
**Hamirpur**, *dist.* in Allahabad div. on N.W. Prov., India; area 2,289 sq. m., p. 450,000; cap. H., at confluence of R.'s Jumna and Betwa, p. 9,250.
**Hamm**, *t.* on R. Lippe, nr. Dortmund, Westphalia, Pruss.; iron industries, etc., p. 33,000.
**Hammamet**, *spt.* on G. of H., 42 m. S.E. of Tunis, p. 7,250.
**Hamme**, *t.* nr. Termonde, E. Flanders, Belgium; rope, linen, and lace factories, p. 14,620.
**Hammerfest**, spt. *co.* Finmarken, Norway; the most northerly t. of Europe, p. 2,220.
**Hammersmith**, Thames-side, *met. bor.* of London, Eng.; industrl. and residtl., p. *135,521*.
**Hammond**, *c.* of Lake co., Indiana, U.S.A.; ironworks, pork packing, p. 67,500.
**Hamoaze**, the *est.* of the R. Tamar, Plymouth, Eng.
**Hampshire**, S. *co.* of Eng., bounded by Dorset, Wilts, Berks, Surrey, Sussex, and the English Channel, and embracing the Isle of Wight; area 1,622 sq. m., p. *1,014,115*.
**Hampstead**, hilly *met. bor.* of London, Eng.; mainly residentl.; p. *83,914*.
**Hampton**, *urb. dist.*, Thames-side *t.* W. of London, Eng.; Hampton Court Pal. in the par., p. *13,053*; Hampton Wick is an urb. dist. a mile E. of H. Court, p. *2,957*.
**Hamtramck**, *t.* Mich., U.S.A., p. 57,000.
**Hanau**, *t.* in Hesse-Nassau prov., Pruss.; technical art acad., impt. industries; p. 31,250.
**Handforth**, *urb. dist.*, Cheshire, Eng., p. *1,031*.
**Handsworth**, *urb. dist.*, W.R. Yorks, Eng., p. 15,889.
**Hangchow**, *c.* Chekiang prov., China, hd. of H. Bay; treaty port, extensive trade, centre of silk-weaving ind.; p. 729,948.
**Hankow**, treaty *port*, 700 m. from mth. of Yangtse R., China; great tea mart, also large trade in opium, raw silk, cotton, etc.; p. 289,804.
**Hanley**, industrl. *t.* (now included in co. bor. of Stoke-on-Trent), Staffs, Eng.
**Hannibal**, *c.* on the Mississippi R., Missouri, U.S.A., timber and wagon bldg.; p. 23,000.
**Hanoi**, *c.* cap. of Tongking, French Indo-China, the anc. "Ke-Sho" or "great market," on the Red R.; transformed from an old Annamese fort, to a modn. commercl. centre; p. 90,303.
**Hanover**, *prov.* of Prussia (formly. an indepnt. kingdom); area 14,869 sq. m., p. 3,017,366; gt. mineral wealth; cap. H., industrl., commercl. and garrison t. on R. Leine, p. 310,431; also t. in Grafton co., New Hampsh., U.S.A., on the Connecticut R., seat of Dartmouth Coll., p. 2,150; also t. York co., Penn., U.S.A., p. 12,000.
**Hanse Towns**, free *cities* of Germany. (*See* Hanseatic League in "Gen. Inform." sectn., *Pears' Cyclopaedia*.)
**Hanthawaddy**, *dist.* Pegu div., Lower Burma, detached from Rangoon; area 3,023 sq. m., p. nearly 500,000; rice-growing.
**Hanwell**, *urb. dist.*, Middlesex co., Eng., on R. Brent, 10 m. W. of London, insane asylum; p. 20,485.
**Han-yang**, industrl. *c.* of China, opp. Hankow, on R. Yangste; p. (abt.) 100,000.
**Haparanda**, *t.* Sweden on R. Tornea, nr. G. of Bothnia; meteorolog. stn.; p. 1,690.
**Harbour Grace**, *t.* and *port* on Conception B., Newfoundland, p. 4,300.
**Harburg**, *spt.* nr. Hamburg, Hanover, Pruss.; linseed-crushing, india-rubber industry, etc.; p. 65,933.
**Hardanger Fiord**, W. coast Norway (length 75 m.), noted for its grandeur.
**Harderwyk**, *spt.* Holland, on the Zuyder Zee, p. 7,750.
**Hardwar**, *t.* in Saharanpur dist., United Provs., India, on R. Ganges; great annual fair and pilgrimage; p. (of municipality) 31,000.
**Harfleur**, *t.* and *spt.* nr. Havre, France; iron-foundries, oil-refining; p. 2,520.
**Hari-Rud**, or **Heri-Rud**, *R.* of N. Afghanistan and Persia (650 m.); the anc. "Arius."
**Harlech**, *t.* nr. Barmouth, co. Merioneth, Wales; famous castle, p. 720. [of Long Island Sound.
**Harlem**, *R.* New York, U.S.A. (7 m. long), outlet
**Harlingen**, trading *t.* in Friesland prov., Holland; margarine manuf.; p. 11,750.
**Harlow**, *vil.* Essex, Eng., p. 1,720.
**Harney's Peak**, *mtn.* of the Black Hills range, S. Dakota, U.S.A., alt. 7,215 ft.
**Harpenden**, *urb. dist.* Herts, Eng.; Lawes' agr. experiments were here conducted; p. *3,349*.
**Harper's Ferry**, *vil.* Jefferson co., West Virginia, U.S.A., at junc. of Potomac and Shenandoah R.'s, seized by John Brown, 1859; Genl. Miles surrendered to the Confederates in 1862, p. 1,500.
**Harringay**, *res. sub.* of London, Middlesex, Eng.
**Harrington**, *urb. dist.*, *t.* nr. Whitehaven, Cumberland, Eng., p. *4,125*.
**Harris**, *par.* of Lewis Isl. in the Outer Hebrides, Scotl., including sev. small islets; famous for manuf. of tweed cloth, p. *4,467*.

**Harrisburg**, *c.* of Dauphin co., cap. of Pennsylvania, U.S.A.; iron and steel factories, p. 80,750.

**Harrison, or East Newark**, industrl. *t.* on the Passaic R., New Jersey, U.S.A., p. 15,500.

**Harrogate**, *mun. bor., wat. pl.*, W.R. Yorks, Eng.; numerous chalybeate springs, p. *39,785*.

**Harrow-on-the-Hill**, *urb. dist.*, N.W. of London, Eng., famous Public school, p. *26,378*.

**Harryhar**, or **Harihar**, *t.* on R. Tunghabhadra, Mysore, S. India, p. 4,750.

**Hart Fells**, *mtn.* between Peebles and Dumfriesshire, Scotl., alt. 2,651 ft.

**Hartford**, *cap.* of Hartford co., and Connecticut State, U.S.A.; large commercl. centre, and seat of Trinity College, p. 164,250; also Hartford City, cap. of Blackford co., Indiana, U.S.A., p. 6,000; also vil. on Rough Creek, Kentucky, U.S.A., p. 3,500; also vil. on White R., Vermont, U.S.A., p. 3,650; also par. nr. Northwich, Cheshire, Eng., p. 2,820.

**Hartland Point**, on Barnstaple B., N. Devon, Eng.

**Hartlepools**, *mun. bor., spt.* on the Durham coast, Eng., sometimes called E. Hartlepool; with adjoining tnshp. of W. Hartlepool officially considered one port. Good trade, flourishing iron, shipbldg. and other industries; p. *20,545*.

**Hart's Island**, Long Island Sound, New York, U.S.A.

**Harvard**, *vil.* Worcester co., Mass., U.S.A., seat of largest and oldest University in America.

**Harvey**, *c.* of Cook co., Illinois, U.S.A., close to Chicago, p. 9,216. [on R. Stour, p. *12,700*.

**Harwich**, *mun. bor., spt.* and *wat. pl.*, Essex, Eng.,

**Harz Mtns.**, range in Hanover and Brunswick, highest pk. the Brocken (*q.v.*). [sort.

**Harzburg**, sm. *t.* in Brunswick, summer mtn. re-

**Haslemere**, *urb. dist.*, in Surrey, Eng., on hills of Hindhead and Blackdown, p. *4,340*.

**Haslingden**, *mun. bor.*, nr. Accrington, Lancash., Eng.; cotton and engineering wks., p. *16,637*.

**Haspe**, *t.* in Westphalia, Pruss.; iron and chemical wks., p. 17,820.

**Hassan Kaleh**, *t.* in Asia Minor, p. 8,080.

**Hasselt**, *t.* in prov. Limbourg, Belgium; gin distilleries, p. 16,700.

**Hastings**, *co. bor., spt.* and *wat. pl.* of Sussex, Eng., one of the Cinque Ports, p. *65,199*; also t., cap. of Adams co., Nebraska, U.S.A., p. 16,000; also t.'s in Michigan and Minnesota.

**Hatfield**, or **Bishop's Hatfield**, *t.* in Herts, Eng.; Hatfield House here, seat of the Marquis of Salisbury, p. 8,620.

**Hatteras**, *C.* North Carolina, U.S.A.; stormy region.

**Hattiesburg**, *t.* Miss., U.S.A., p. 13,270.

**Hatvan**, mkt. *t.* of Hungary; sugar works, p. 10,200.

**Haubourdin**, *t.* nr. Lille, dep. Nord, France; starch factories, p. 9,430. [centre; p. 16,563.

**Haugesund**, *spt. t.* of Stavanger, Norway; fishery

**Hauraki**, *G.* E. coast N. isl., New Zealand.

**Haut Rhin**, *dep.* France, in Upper Alsace, formerly ceded in gt. part to Germany; area 1,354 sq. m., p. 468,943; cap. Belfort.

**Haute-Garonne**, *dep.* France, 2,457 sq. m., p. 423,582; cap. Toulouse.

**Haute-Loire**, *dep.* France, area 1,930 sq. m., p. 268,910; cap. Le Puy.

**Haute-Marne**, *dep.* France, area 2,420 sq. m., p. 198,865; cap. Chaumont.

**Haute Saône**, *dep.* France, area 2,074 sq. m., p. 228,348; cap. Vesoul.

**Haute-Savoie**, *dep.* France, area 1,774 sq. m., p. 235,668; cap. Annecy.

**Haute-Vienne**, *dep.* France, area 2,119 sq. m., p. 350,235; cap. Limoges.

**Hautes-Alpes**, *dep.* France, area 2,178 sq. m., p. 89,275; cap. Gap.

**Hautes-Pyrénées.** (*See* Pyrénées.)

**Havana**, *cap.* of Cuba, and largest c. in W. Indies, spt. on N. cst. of isl., extens. expts., p. 595,000; also vil. of Mason co., Illinois, p. 3,400; also vil. on Catharine Creek, New York, p. 2,897.

**Havant**, *urb. dist.* in S. Hants, nr. Portsmouth, Eng., p. *4,264*.

**Havel**, *R.* Prussia, flowing (221 m.) to R. Elbe.

**Haverfordwest**, *mun. bor.*, mkt. *t.* Pembrokesh., Wales, p. *6,113*.

**Haverhill**, *urb. dist., t.* in Suffolk, Eng., p. *3,837*; also t. in Essex co., Mass., U.S.A., boot factories, p. 48,000.

**Haverstraw**, *t.* on H. Bay, New York, U.S.A., brickmaking, p. 5,650.

**Havre, Le**, *spt.* of France on Eng. Chan. at mouth of R. Seine; immense trade and thriving indust.; fine boulevards, p. 163,374.

**Havre de Grace**, *t.* Maryland, Hartford co., U.S.A., on R. Susquehanna, p. 4,500.

**Hawaii**, territory of the U.S., consisting of the Hawaiian Arch., or Sandwich Isls.; area 6,449 sq. m., p. 225,912; cap. Honolulu. Hawaii, largest of the group; area, 4,015 sq. m., p. 25,000; mtnous., highest pk. Mauna Kea, alt. 13,953 ft.

**Hawarden**, *t.* in Flintshire, N. Wales; castle; p. 7,020.

**Hawash**, *R.* Abyssinia, flows (500 m.) E. of Shoa frontier.

**Hawes Water**, *L.* Westmorland, Eng. (2½ m. long).

**Hawick**, *t.* in Roxburghshire, Scotl.; woollen manuf., p. *18,214*.

**Hawkes Bay**, *dist.* New Zealand, on E. coast (N. isl.), p. 60,925; cap. Napier.

**Hawkesbury**, *R.* (330 m.) N.S.W., flows to sea 14 m. N. of Port Jackson; also t. in Ontario, Can., on Ottawa R. [Cranbrook, p. 2,480.

**Hawkhurst**, *par.* in Sussex and Kent, Eng., nr.

**Haworth**, *urb. dist., t.* W.R. Yorks, Eng., nr. Keighley; here the Brontes lived and wrote; p. *5,912*.

**Hay**, *urb. dist.* on R. Wye, Brecknocksh., Wales, p. *1,509*; also t. in Griqualand West, S. Africa; also t. on Murrumbidgee R., N.S.W., p. 4,000.

**Hayange**, *t.* in Lorraine, nr. Diebenhofen; ironworks, p. 7,010.

**Hayden Mt.**, or **Grand Teeton**, *pk.* of the Rockies, Wyoming, U.S.A., alt., 13,600 ft.

**Haydock**, *urb. dist., t.* Lancs., colliery dist., nr. Warrington, p. *10,352*.

**Haydon Bridge**, *t.* Northumberland, Eng., p. 20,307.

**Hayes Peninsula**, N.W. Greenland.

**Hayes and Harlington**, *urb. dists.* Middlesex, Eng., 10 m. W. of London; residentl., p. *23,646*.

**Hayle**, *urb. dist.*, Cornwall, Eng., p. *915*; ironworks. [1,530.

**Hayling Island**, *wat. pl.* Hampshire, Eng., p. (res.)

**Haystack**, summit of the Adirondacks, Vermont, U.S.A., alt. 4,919 ft.

**Hayti.** (*See* Haiti.)

**Hayward's Heath**, *urb. dist.*, mkt. *t.* Sussex, Eng., *5,382*. [13,410; busy ry. centre.

**Hazebrouck**, *t.* France, dep. Nord, nr. Lille, p.

**Hazelgrove and Bramhall**, *urb. dist.*, Cheshire, Eng., p. *13,300*.

**Hazleton**, *bor.* in Luzerne co., Penn., U.S.A., in anthracite coal region, p. 37,000.

**Headingley**, *sub.* Leeds, Yorks, Eng., mainly residtl.

**Heage**, *urb. dist.*, Derby, Eng., p. *4,054*.

**Healdsburg**, *c.* California, U.S.A., on Russian R., p. 4,000. [Good Hope.

**Healdtown**, *mtns. stn.* nr. Fort Beaufort, C. of

**Heanor**, *urb. dist., t.* Derbyshire, Eng., in colliery dist., p. *22,386*. [Kerguelen Isl.

**Heard's Isl.**, in S. Indian Oc., 280 m. S.E. of

**Heathfield**, *vil.* Sussex, Eng., p. 2,620.

**Heathtown**, *dist.* nr. Wolverhampton, Staffs, Eng., p. 13,087. [Mersey, p. 11,300.

**Heaton Norris**, industrl. *t.* Lancs. Eng., on R.

**Hebburn**, *urb. dist., t.* Durham, Eng., on R. Tyne; shipbldg., engineering and colliery ind., p. *24,125*.

**Hebden Bridge**, *urb. dist.*, nr. Halifax, W. Riding, Yorks, Eng.; cotton factories, dye-works, p. *6,312*.

**Hebrides**, or Western Isls. of Scotl.; p. 84,120; grouped as Outer and Inner Hebrides; ch. t. Stornaway, in Lewis.

**Hebron**, anc. *t.* in Palestine, 16 m. S.W. of Jerusalem, p. 16,000; also vil. and tshp. Nebraska, Thayler co., U.S.A., p. 3,500; also t. in New York State, U.S.A., p. 2,700.

**Heckmondwike**, *urb. dist., t.* W. Riding, Yorks, Eng.; woollen manuf., p. *8,991*.

**Hecla**, *volcano*, S.W. Iceland, alt. 5,110 ft.

**Heddon**, *mun. bor.*, E.R. Yorks, Eng., p. *1,509*.

**Hedemarken**, *dist.* of Norway, prov. Hamar, p. 135,000.

**Heidelberg**, famous university *c.* on R. Neckar, nr. Mannheim, Baden, p. 60,881; also t. in S. Transvaal, S. Africa, p. *1,943*.

**Heidenheim**, *t.* in Würtemberg, nr. Ulm; cotton, tobacco, and woollen factories; p. 18,412.

**Heilbronn**, *mtg. t.* Würtemberg, 26 m. N. Stuttgart, p. 44,105.

**Heiligenstadt**, *t.* on R. Leine, Saxony, nr. Cassel, cap. of old principality of Eichsfeld, p. 6,900.
**Helder**, *t.* on cst. of Holland, 50 m. distant from Amsterdam, with which it is connected by the Helder Canal; arsenal and garrison; p. 28,818.
**Heldersberg Hills**, New York, U.S.A., a spur of the Catskills, W. of Albany.
**Helena**, *t.* in Arkansas, Phillips co., U.S.A., on the Mississippi R., shipping centre for cotton, p. 8,316; also t. in Montana, Lewis and Clarke co.'s, in mining dist. at base of the Rockies, p. 11,500.
**Helensburgh**, residentl. *dist.* nr. Glasgow, Scotl., Dumbartonsh., on Firth of Clyde, p. *8,893*.
**Helicon**, *mtn.* Greece, between Gulf of Corinth and L. Copais, alt. 5,736 ft.
**Heligoland**, German fort. *isl.* North Sea, off mouth of Elbe, formerly British. The forts are now dismantled.
**Heliopolis**, anc. name of Baalbec, Syria.
**Hellespont.** (*See* Dardanelles.)
**Hell Gate River**, Montana, U.S.A., trib. of Bitter Root R.
**Hellin**, *t.* Spain, Albacete prov., sulphur mines, p. 16,950. [Bois-le-Duc canal, p. 16,950.
**Helmond**, mftg. *t.* of N. Brabant, Holland, on the
**Helmstedt**, *t.* in colliery dist., Brunswick, nr. Magdeburg, Germany, p. 15,750.
**Helmund**, *R.*, Afghanistan (650 m.), falls into L. Hamun.
**Helsingborg**, *spt.* Sweden, on the Sound, oppos. Elsinore, Denmark; p. 47,074.
**Helsingfors**, *c.*, cap. of Finland, fine harbr. p. 188,922.
**Helston**, *mun. bor.*, *t.* on R. Hel, nr. Falmouth, Cornwall, Eng.; p. *2,544*.
**Helvellyn**, *mtn.* Cumberland, Eng., 9 m. S.E. Keswick; alt. 3,111 ft.
**Hemel Hempstead**, *mun. bor.*, *t.* Herts, Eng., p. *15,122*. [co.; p. 13,250.
**Hempstead**, *t.* New York, U.S.A., in Queen's
**Hems**, or **Hums**, *t.* on R. Orontes, Syria, the anc. Emesa; p. 70,000.
**Hemsworth**, *urb. dist.* W.R. Yorks, Eng., nr. Doncaster, p. *13,001*.
**Henderson**, *c.* Kentucky, Henderson co., tobacco and cotton, p. 11,500; also vil. N. Carolina, Vance co., p. 6,450; also vil. Texas, Rusk co.; all in U.S.A.
**Hendon**, *urb. dist.* Middlesex, Eng., suburban to London, site of Brent reservoir; p. *115,682*.
**Henley-on-Thames**, *mun. bor.*, Oxfordsh., Eng., p. *6,618*. [p. 8,250.
**Hennebout**, *t.* on R. Blavet in Morbihan, France.
**Henry**, *C.* Virginia, U.S.A., at S. ent. to Chesapeake B.
**Henzada**, *t.* in Burma, on Irawadi R., p. 20,000; ch. t. of Henzada prov. (formly. Pegu), area 2,885 sq. m., p. 500,000.
**Heppenheim**, old *t.* Hesse-Darmstadt, on R. Bergstrasse, p. 7,500.
**Herat**, cap. *c.* of prov. same name, Afghanistan on Hari Rud; strongly fortified, and has been called "the key of India"; p. 20,000.
**Hérault**, *dep.* S. France, area 2,402 sq. m., p. about 488,215; cap. Montpellier.
**Herculaneum**, buried *c.* Italy, 7 m. E.S.E. Naples; unearthed in 1709.
**Hereford**, *mun. bor.*, co. *t.* of Herefordsh., Eng., on R. Wye; cathedral; p. *24,159*; also co. on borders of Wales, area 840 sq. m., fruit-growing and agr.; p. *111,755*.
**Herford**, *t.* on the Werra R., Westphalia, Prussia; textile industries, p. 27,950.
**Herisau**, *t.* Switzerland, cant. Appenzell; muslin manuf.; p. 14,500.
**Herkimer**, *t.* Herkimer co., New York, U.S.A.; dairy centre; p. 10,440.
**Herm**, sm. *isl.* in Engl. Channel, 4 m. N.W. Sark, and N.E. of Guernsey.
**Hermannstadt**, *t.* on R. Zibin, Transylvania, Rumania, p. 20,720. [Anti-Libanus.
**Hermon**, *mtn.*, Palestine (9,385 ft.), in chain of
**Hermosillo**, *t.* Mexico, on Sonora R., impt. tr., p. 27,500. [arsenal, large tr., p. 17,657.
**Hermupolis**, *spt.* and *cap.* of Syra Isl., Greece;
**Herne**, *t.* nr. Dortmund, Westphalia; collieries, gunpowder mills.
**Herne Bay**, *urb. dist.*, *wat. pl.* on coast of Kent, 62 m. from London, Eng., p. *11,244*.
**Herndesand**, or **Westernorrland**, *dist.* Sweden, on Gulf of Bothnia, area 9,760 sq. m.; cap. H., p. 8,010.
**Herrin**, *t.* Ill., U.S.A., p. 9,500.
**Herstal**, *t.* near Liège, Belgium, renowned repeating rifle factories, p. 18,750.
**Hertford**, *mun. bor.*, *t.* on R. Lea, Eng., p. *11,376*; cap. of H. co., area 635 sq. m., a S. Midland shire, p. *401,159*.
**Hervey Archipelago.** (*See* Cook Islands.)
**Hersegovina**, *prov.* J.-Slavia (*q.v.*).
**Hesket**, *t.* Victoria, co. Bourke, 57 m. N.W. Melbourne, p. 4,500.
**Hessen**, or **Hesse**, formerly Hesse-Darmstadt, *state* and *grand duchy*, Germany, area 2,966 sq. m., p. 1,290,988.
**Hessen-Cassel**, or **Hesse-Cassel**, once a German electorate, now included in Prussia.
**Hessen-Homburg**, former sm. *state* of Germany, now part of Wiesbaden, govt. dist. Hessen-Nassau.
**Hessen-Nassau**, or **Hesse-Nassau**, *prov.* Prussia, area 6,062 sq. m., between R.'s Rhine and Werrau, p. 2,221,021; cap. Cassel (*q.v.*).
**Hessle**, *urb. dist.*, E.R. Yorks, Eng., p. *6,430*.
**Heston and Isleworth**, *urb. dist.* Middlesex co., Eng., suburban (S.W.) to London, p. *75,446*.
**Hetton**, *urb. dist.*, Durham, Eng., p. *17,672*.
**Hexham**, *urb dist.*, mkt. *t.* Northumberland, Eng., p. *8,898*.
**Heysham**, *urb. dist.*, *spt.* Lancs, Eng., steamers for Belfast, on Morecambe B.; p. 5,024.
**Heytesbury**, *par.* Wilts, Eng., on R. Wiley, nr. Warminster, formerly a parly. bor., p. 2,700.
**Heywood**, *mun. bor.*, mftg. *t.* Lancs. Eng., 3 m. E. Bury, p. *25,967*. [Tennessee R.
**Hiawassee**, *R.*, Tennessee, U.S.A., trib. of the
**Hibbing**, *t.* Minn., U.S.A., p. 15,750.
**Hickory**, *t.* North Carolina, U.S.A., p. 7,500.
**Hidalgo**, *state*, Mexico, area 8,637 sq. m.; mining and agr., p. 655,187; cap. Pachuca.
**Hierapolis**, or **Pambuk**, ruined anc. Phrygian *c.*, nr. Laodicea.
**Higham Ferrers**, *mun. bor.*, mkt. *t.* in Northamptonshire, Eng., p. *2,928*.
**High Bridge**, New York, on Harlem R., U.S.A.; also *urb. dist.* in Somerset, Eng., p. *2,534*.
**Higher Betington**, *urb. dist.*, Cheshire, Eng., p. 1,764.
**Highgate**, resid. *dist.* in Middlesex (and London), Eng., on hill N. of S. Pancras bor.
**Highland Falls**, *vil.* New York, Orange co., U.S.A., on Hudson R., p. 2,750.
**Highland Park**, *t.*, Mich., U.S.A., p. 53,500.
**Highlands of Scotland**, mountainous *dists.* N. of the Grampians.
**High Wycombe**, industrl. *bor.*, Bucks, 15 m. N.W. of Windsor, p. 21,952; chair manufactories.—Also styled Chipping Wycombe.
**Hikone**, *t.* Kioto, Japan, p. 20,711.
**Hildburghausen**, *t.* on R. Werra, Saxe-Meiningen, Germany, p. 13,120.
**Hilden**, *t.* Rhine prov. Prussia, nr. Dusseldorf; silk, velvet; p. 13,120.
**Hildesheim**, old industrl. *t.* at foot of Hartz Mtns., Hanover, fine 14th cent. town hall, p. 53,499.
**Hilleh**, or **Hillah**, in Iraq, nr. the anc. Babylon.
**Hillsborough**, *t.* in Hill co., Texas, U.S.A., in cotton region, p. 7,900; also t.'s in Ohio and Missouri, U.S.A., and port on Petitcodiac R., New Brunswick.
**Hillsdale**, *c.* (cap. of H. co.) in Michigan, U.S.A., p. 5,900.
**Hilversum**, *t.* nr. Utrecht, N. Holland; floor-cloth factories, p. 38,852.
**Himalayas**, vast chn. (1,500 m. long) of *mtns.* along N. border of India; highest pk. Mt. Everest (*q.v.*). [Queensland.
**Hinchinbrook**, **Isl.**, off E. cst. Rockingham B.,
**Hinckley**, *urb. dist.*, mkt. *t.* on border of Leicestersh. and Warwicksh., Eng., p. *16,030*.
**Hinderwell**, *urb. dist.*, N.R. Yorks, Eng., p. *2,147*.
**Hindhead**, a hilly common and health resort in Surrey, nr. Haslemere, p. 4,040. [p. *21,629*.
**Hindley**, *urb. dist.*, mftg. *t.* nr. Wigan, Lancs., Eng.,
**Hindu Kush**, or **Indian Caucasus**, *mtn. range* continuing W. of Himalayas; highest pt. 20,000 ft.
**Hindustan**, part of N. India between the Himalayas and the Vindhya ranges.
**Hingham**, *t.* on Massachusetts B., Plymouth co., Mass, U.S.A., p. 6,750; also t. in S. Norfolk Eng., nr. Wymondham, p. 1,630.
**Hiogo**, or **Hyogo**, *t.* in Settsu prov., Japan, on Bay of Osaka; silk and cotton industry.
**Hipperholme**, *urb. dist.* nr. Halifax, W.R. Yorks, Eng., p. *5,383*.

**Hirado,** *isl.* off W. cst. prov. Hizen, Japan; famous for blue and white porcelain.
**Hirosaki,** *t.* Honshiu, Japan; picturesque houses, green lacquer ware, great commercial centre, p. 45,000.
**Hiroshima,** *spt. c.* of Central Honshiu, Japan, close to the "Island of Light," with its famous temples, p. 162,391.
**Hirschberg,** mftg. *t.* in Silesia, Pruss., nr. Gorlitz, p. 19,110. [ket work, p. 7,850.
**Hirson,** *t.* in dep. Aisne, France, on R. Oise, bas-
**Hissar,** *dist.* Delhi div., Punjab, India; area 5,163 sq. m., p. 783,000; cap. H., on the Western Jumna Canal, p. 18,000.
**Hitchin,** mkt. *t.* Hertfordsh., Eng.; lavender and peppermint cult., p. *14,382.* [p. 4,630.
**Hitteren Isl.,** off cst. of Norway, nr. Trondjhem.
**Hjelmar Lake,** Sweden, area 185 sq. m., S.W. of L. Malar. [ban.
**Hlaing** (*Rangoon*), *R.* Burma, flows to G. of Marta-
**Hoang Hai,** Chinese name of Yellow Sea.
**Hoang Ho** (Yellow R.) China, falls into G. of Pe-chi-li; length 2,610 m.
**Hobart,** *t.* cap. of Tasmania, on R. Derwent; great fruit exports, p. (with suburbs) 52,163.
**Hoboken,** *c.* Hudson co., New Jersey, U.S.A.; large ocean commerce, p. 58,250; also t. in prov. Antwerp, Belgium, shipbldg., p. 10,250.
**Hochst,** *t.* on R. Main, Hesse-Nassau, Pruss.; dye-works, tobacco factories; p. 15,870.
**Hochstetter,** *mtn.*, New Zealand, alt. 11,200 ft.
**Hoddesdon,** *urb. dist.* Herts, Eng., nr. Ware, p. *6,811.*
**Hodeida,** *spt.* on Red S., Arabia, p. 20,000.
**Hof,** *t.* on R. Saale, nr. Bayreuth, Bavaria; woollen manuf.; p. 39,690.
**Hoffman,** *mtn.* pk. of the Sierra Nevada, California; alt. 8,018 ft.; also mtns. in Nova Zembla. [sian G., p. 25,000.
**Hofhuf,** *t.* in Arabia, cap. of El-Hasa, on the Per-
**Hohenems,** or **Hohenembs,** mkt. *pl.* of Dornbirn, Vorarlberg, Austria; cotton spinning; p. 5,820.
**Hohenheim,** *vil.* nr. Stuttgart, Wurtemberg, agr. college. [industr.; p. 9,760.
**Hohenlimburg,** *t.* nr. Dortmund, Westphalia; metal
**Hohenlinden,** *vil.* nr. Munich, Bavaria; gt. battle 1800; p. 1,100.
**Hohenlohe,** anc. Franconian *principality*; musical inst. manuf.; p. 9,720.
**Hohenzollern,** Kingdom of Prussia, on R. Danube, area 441 sq. m., p. 70,751; agr.; cap. Sigmaringen. [Empire.
**Hokkaido,** Japanese name for N. *div.* of Mikado's
**Holbeach,** *urb. dist.*, mkt. *t.* in Fen district of S. Lincolnsh., Eng., p. *6,111,*
**Holbeck,** *par.* (industrl.) of Leeds, W.R. Yorks, Eng., p. 40,020. [p. *38,816.*
**Holborn,** *met. bor.* of London, immedy. N. of c.,
**Holcombe,** industrl. *par.* nr. Bury, Lancs., Eng., p. 5,760.
**Holderness,** *div.* of E.R. Yorks, Eng., between R. Humber and N. Sea, agr. and pastoral.
**Holkham,** *vil.* in Norfolk, Eng., p. 1,250.
**Holland,** the *kingdom* of the Netherlands, N. Europe, including the provs. of N. and S. H.; area 12,588 sq. m., p. 6,841,120; agr., manuf., fisheries; cap. and seat of govt., The Hague; commercial cap. Amsterdam (*q.v.*); also t. Mich., U.S.A., p. 14,500.
**Holland, Parts of,** the Fen co. of Lincolnsh., Eng., adjoining the Wash. [Eng., p. 1,160.
**Hollingbourn,** *par.* in mid-Kent, nr. Maidstone,
**Hollingworth,** *urb. dist.*, *t.* nr. Stalybridge, in E. Cheshire, Eng., p. *2,299.* [p. 8,420.
**Hollinwood,** indust. *par.* nr. Oldham, Lancs., Eng.,
**Hollister,** *t.* San Benito co., California, U.S.A., p. 3,750.
**Holloway,** N. *dist.* of Islington bor., London, Eng.
**Holly Springs,** *t.* Marshall co., Mississippi, U.S.A., educatl. centre, p. 2,646.
**Holme,** *urb. dist.*, E.R. Yorks, Eng., p. *368.*
**Holme Cultrum** (or **Abbey Holme**) *urb. dist.* in Cumberland, Eng., nr. Wigton, p. *4,735.*
**Holmfirth,** *urb. dist.* nr. Huddersfield, W.R. Yorks, Eng., p. *10,407.*
**Holstein,** former Danish duchy, now *prov.* of Pruss.
**Holston R.,** head of Tennessee R., runs 300 m. through Virginia and Tennessee, U.S.A.
**Holsworthy,** *urb. dist.* Devon, Eng., p. *1,403.*
**Holt,** *bor.* Denbighsh., Wales, on R. Dee, p. 1,150; also mkt. t. nr. Aylsham, N. Norfolk, Eng., p. 1,560. [p. 3,417.
**Holton,** *c.* Kansas, nr. the Indian Reservation,
**Holyhead,** *urb. dist.*, *spt.* and naval *stn.* Anglesey, Wales, on Holyhead Isl. (7¼ m. long, width ½ m. to 4 m.), p. *10,707.*
**Holy Isl.,** Scotl., in F. of Clyde, nr. Isl. of Arran; also isl. (called sometimes Lindisfarne) off coast of Northumberland, Eng.
**Holyoke,** *c.* Hampden, co., Mass., U.S.A.; impt. manuf. centre on Connecticut R.; p. 56,000.
**Holyrood Palace,** anc. royal *pal.*, Edinburgh, Scotl. [p. 2,660.
**Holytown,** sml. *t.* nr. Glasgow, Lanarksh., Scotl.,
**Holywell,** *urb. dist.* mkt. *t.* Flintsh., N. Wales, p. *3,423.*
**Holywood,** *spt.* on Belfast Lough, co. Down, N. Ireland, p. 3,320; also par. Dumfriessh., Scotl., p. *968.*
**Holzminden,** *t.* on R. Weser, Brunswick; school of engineering; p. 8,760.
**Homberg,** *t.* nr. Dusseldorf, Prussia, on R. Rhine, p. 4,770; also t. nr. Cassel, Pruss., p. 3,720.
**Homestead,** *bor.* Allegheny co., Penn., U.S.A.; site of the great Carnegie ironworks, p. 30,000.
**Ho-Nan,** fertile inland *prov.* China, traversed by Yellow R.; area 67,940 sq. m., p. 22,375,000; cap. Kai-feng.
**Honduras,** *Repub.* Central Amer.; area 44,275 sq. m., p. 700,000; cap. Tegucigalpa.
**Honduras, British.** (*See* **Brit. Honduras.**)
**Honey Lake,** Lassen co., California, U.S.A., nr. Pyramid L.; no outlet. [9,870.
**Honfleur,** *spt.* of Caen, France, fine harbour; p.
**Hong Kong,** Brit. *isl.* off S.E. coast China; area of whole colony, 390 sq. m., p. 648,150, mostly Chinese; veg. growing, sugar-refining; cap. Victoria.
**Honiton,** *mun. bor.*, mkt. *t.* nr. Exeter, Devon, Eng.; lace industry, p. *3,008.* [Eng.; p. *4,611.*
**Honley,** *urb. dist.*, nr. Huddersfield, W.R. Yorks,
**Honolulu,** *cap.* of the Hawaii Isls.; good harbr.; p. 83,327.
**Honshiu** or **Nippon,** largest *isl.* Japan; area 87,426 sq. m., p. (est.) 28,000,000.
**Hood, Mt.,** highest *peak* Cascade range, Oregon, U.S.A.; alt. 11,225 ft.
**Hoogeveen,** *t.* in fen prov. of Drenthe, Holland; peat cutting; p. 12,350.
**Hooghli,** or **Hughli,** *R.*, Western Branch of R. Ganges, falls into B. of Bengal; Calcutta on its banks; also name of dist. of Bengal, India.
**Hook of Holland,** Dutch *port*, in direct com. with Harwich, Eng.
**Hooker Mt.,** one of the Rockies, Brit. Columbia, alt. 15,700 ft.
**Hoole,** *urb. dist.*, mftg. *t.* in Cheshire, Eng., p. *5,889.* [Africa, p. 4,627.
**Hoopstad,** *t.* on R. Vet, Orange Free State, S.
**Hoorn,** old fishing *t.* on inlet of Zuyder Zee, N. Holland; Tasman, discoverer of Tasmania, and Koen, founder of Batavia, born here; p. 11,740.
**Hoosack Mtns.,** part of Green Mountain range, Mass., U.S.A. [lovely lake dist., 8½ m. long.
**Hopatcong L.,** Morris co., New Jersey, U.S.A.;
**Hopedale,** Moravian Miss. *stn.* Labrador.
**Hope Point,** *cape* on the Arctic cst. of Alaska.
**Hopetown,** *t.* on Orange R., C. of Good Hope, p. *840*; also t. Brit. Guiana, p. 2,050.
**Hopkinsville,** *c.* cap. Christian co., Kentucky, U.S.A.; college, also insane asylum; p. 10,750.
**Hor,** *mtn.* in Arabia Petrea, between Dead S. and G. of Akaba, alt. 4,360 ft. [field; p. *7,791.*
**Horbury,** *urb. dist.*, W.R. Yorks, Eng., nr. Wake-
**Horde,** mftg. *t.* Westphalia, nr. Dortmund; p. 17,870.
**Horeb, Mt.,** Arabia. (*See* **Sinai.**)
**Horitz,** commune in Kruman *div.*, Bohemian Forest, noted for periodical pfce. of Passion plays, res. p. 1,240; also textile and sugar refg. t. in Königrätz govt. of Bohemia; p. 8,120.
**Horley,** *vil.* Surrey, Eng., on R. Mole; p. 3,250.
**Horn, Cape,** S.-most *pt.* of S. America.
**Horncastle,** *urb. dist.*, mkt. *t.* Lincolnsh., Eng.; impt. cattle fairs; p. *3,496.*
**Hornchurch,** *t.* nr. Romford, Essex, Eng., p. *28,417.*
**Hornellsville,** *c.* Steuben co., New York, U.S.A.; *ry.* car works; p. 15,025. [Eng.; p. *4,450.*
**Hornsea,** *urb. dist.*, *wat. pl.* on cst. of E.R. Yorks,
**Hornsey,** *mun. bor.*, residentl. *dist.* of N. London, Eng.; p. *95,524.*
**Horodenka,** *t.* on the trib. of R. Dniester, E. Galicia; corn tr., candle factories, etc.; p. 12,250.
**Horsens, Danish** *spt.* on coast of Jutland, p. 27,588.

**Horsforth,** *urb. dist.*, mftg. *t.* in W.R. Yorks, nr. Leeds, Eng., p. *11,770*. [p. *13,579*.
**Horsham,** *urb. dist.*, *t.* on R. Arun, Sussex, Eng.,
**Horta,** *cap.* of Fayal Isl., Azores, p. 8,300.
**Horten,** *spt.* Norway, nr. Oslo, p. 10,413.
**Horwich,** *urb. dist.*, *t.* nr. Manchester, Eng.; bleaching and cotton-spg., p. *15,680*.
**Hoshangabad,** *t.* Cent. Provs. India, on Nerbudda R., p. 14,500.
**Hoshiarpur,** *t.*, Punjab, India, lacquer works, inlaid goods manuf., p. 21,000.
**Hot Springs,** *c.* cap. Garland co., Arkansas, U.S.A., health resort; p. 20,245; also vil., Custer co., S. Dakota, U.S.A., p. 3,000.
**Houghton-le-Spring,** *urb. dist.*, *t.* in colly. dist., co. Durham, Eng., p. *10,492*.
**Hounslow,** *t.* in Middlesex, Eng., subn. to W. London, p. 17,000.
**Housatonic R.,** Connecticut and Mass., U.S.A. (150 m. long), empties into Long Isl. Sound.
**Houston,** *t.* on Buffalo Bayou, Harris co., Texas, U.S.A.; large cotton trade, p. 307,000.
**Hove,** *mun. bor.*, Sussex, Eng., p. *54,994*. [2,910.
**Howden,** mkt. *t.* E.R. Yorks, nr. Hull, Eng., p.
**Howrah,** *c.* on R. Hooghli, Bengal, India, p. 152,000; hdqrs. of jute manuf.
**Howth,** *par.* nr. Dublin, Ireland, fishg., p. 1,110; Hill of Howth, alt. 563 ft.
**Hoxter,** *t.* on R. Weser, Westphalia, Prus., mint, famous Benedictine abbey (Corvei), p. 7,900.
**Hoxton,** *dist.* of London. [Stromness.
**Hoy,** *isl.* and *hdld.* of the Orkneys, Scotl., nr.
**Hoylake,** and **West Kirby,** *urb. dist.*, *t.* nr. Birkenhead, Cheshire, Eng., p. *16,628*.
**Hoyland Nether,** *urb. dist.* W.R. Yorks, Eng., nr. Barnsley, p. *15,215*.
**Hoyland Swaine,** *urb. dist.*, W.R. Yorks, Eng., p. *793*. [m., p. 225,000; cap. H., p. 5,700.
**Huancavelica,** *dep.* of Centl. Peru, area 9,251 sq.
**Huanuco,** *dep.* Centl. Peru, area 14,024 sq. m., p. 145,309; cap. H., p. 7,000.
**Hubli,** *t.* in Bombay, India, cotton and silk wvg. tr., p. 61,440.
**Hucknall Torkard,** *urb. dist.*, industrl. *t.* nr. Nottingham, Eng., p. *17,338*.
**Huddersfield,** *co. bor.*, mftg. *t.* W.R. Yorks, Eng., woollen and cott. textiles, p. *113,467*.
**Hudiksvall,** *spt.* Sweden, on inlet of G. of Bothnia, p. 4,560.
**Hudson,** *t.* Middlesex co., Mass., U.S.A., p. 8,500; also t. cap. Columbia co., New York, U.S.A., p. 12,400; also t. St. Croix co., Wisconsin, U.S.A., p. 3,450.
**Hudson,** *R.*, New York, U.S.A., flows (350 m.) from the Adirondack Mtns. to New York Harbour.
**Hudson's Bay,** inland *sea*, Canada, area 540,000 sq. m.; communicating by Hudson's Strait (400 m. long) with Davis Strait.
**Hué,** *cap.* of Annam, nr. mth. of Hué R., Cochin-China, royal pal., glass factories, impt. tr., p. 60,611. [Indian capital, p. 9,500.
**Huehuetenango,** *c.* Guatemala, remns. of anc.
**Huelva,** maritime *prov.* S.W. Spain, area 3,913 sq. m., mining, vine and olive growing, stock-raising, fisheries, brandy distillery, etc., p. 346,724; cap. H., spt. on Atlantic, p. 30,443.
**Huercal-Overa,** *t.* S.E. Spain, Almeria prov., in mining dist., p. 17,700.
**Huesca,** frontier *prov.* N.E. Spain, area 5,848 sq. m.; great wine and timber tr. with France, p. 244,863; cap. H., t. on R. Isuela, p. 11,750.
**Hughenden,** *vil.* in Bucks, Eng., nr. Wycombe, p. 1,850; H. manor, seat of Earl of Beaconsfield.
**Hugh Town,** *cap.* St. Mary's Isl., Scilly Isles.
**Hull,** or **Kingston-upon Hull,** *co. bor.*, spt. *c.*, E.R. Yorks, Eng., at influx of R. Hull, in est. of the Humber; impt. manuf., and gt. shipping tr.; p. *313,366*; also *c.* of Quebec, Canada, on R. opp. Ottawa; sawmills, paper factories; p. *29,270*.
**Humber,** *estv.* of R.'s Ouse and Trent (38 m. long), separating co.'s Yorks and Lincoln, Eng.; fine waterway; 1 to 7 m. wide.
**Humboldt Bay,** inlet of cst. of California, U.S.A.
**Humboldt Lake,** Nevada, receives Humboldt R. (350 m. long). [Humboldt L.
**Humboldt Mtns.,** range in E. Nevada, U.S.A., nr.
**Hu-Nan,** inland *prov.* of China, area 83,380 sq. m., p. 20,580,000; cap. Chang-Sha.
**Hungary,** *republic* of Cent. Europe, formerly part of Austria-Hungarian Empire; area 35,654 sq. m., p. 7,840,830; cap. Buda-Pesth, on R. Danube (*q.v.*).
**Hungerford,** mkt. *t.* Berks, Eng., on Wilts border and R. Kennet, p. 9,030.
**Hunmanby,** *t.* in N.R. Yorks, Eng. nr. Scarborough; p. 3,630. [Norfolk, Eng., p. 2,560.
**Hunstanton,** *wat. pl.* on E. shore of the Wash,
**Hunsworth,** *urb. dist.* nr. Bradford, W.R. Yorks, Eng., p. *1,318*.
**Huntingdon,** inland *co.* W. of Cambridgeshire, Eng.; area 359 sq. m.; mkt. gardg., fruit-growing, agr.; p. *56,204*. Also co. t. and *mun. bor.* same name, on R. Ouse, nurseries, p. *4,108*; also t. in Penn., U.S.A., car works, p. 7,600.
**Huntington,** *t.* on Little R., Huntington co., Indiana, U.S.A., ry. and wood works, p. 13,250; also t. on Ohio R., Cabell co., W. Virginia, U.S.A., machine works, p. 50,177.
**Huntly,** mkt. *t.* at confluence of R.'s Bogie and Deveron, Aberdeensh., Scotl., p. *4,579*.
**Huntsville,** *t.* in Madison co., Alabama, U.S.A.; cotton-mills, p. 8,018.
**Hu-Pe,** *prov.* China, N. of the Yangtse-Kiang, area 71,410 sq. m., p. 21,260,000; cap. Wu-chang.
**Hurdwur.** (*See* Hardwar.)
**Hurley,** *vil.* Wisconsin, U.S.A., p. 3,300; also par. E. Berks, Eng., on R. Thames; p. 1,400.
**Hurlford** and **Crookedholm,** mining *t.* of Ayr, Scotl., p. 5,320.
**Huron,** *L.* (area 23,610 sq. m.) between Canada and U.S.A., one of the 5 gt. L.'s of the St. Lawrence basin; 280 m. long; also vil. in S. Dakota, U.S.A., p. 11,250.
**Hurrur,** or **Harar,** walled *t.*, p. 50,000 in State same name, Galla country, E. Africa; p. (of dist.) 2,000,000.
**Hurst,** *urb. dist.*, mftg. *t.* in Lancs., Eng., pt. of bor. of Ashton-under-Lyne, p. 8,073.
**Hurstmonceaux,** *vil.* nr. Hastings, Sussex, Eng., castle; p. 1,640.
**Hurstpierpoint,** *vil.* nr. Brighton, p. 3,120.
**Husch,** mftg. *t.* in Moldavia; p. 13,500; cathedral.
**Husiatyn,** *t.* in Galicia, Ukraine, nr. Czortkow, p. 5,750. [mart, p. 8,650.
**Husum,** *spt.* Schleswig-Holstein, Pruss.; cattle
**Hutchinson,** *c.* Kansas, U.S.A., p. 27,250.
**Huthwaite,** *urb. dist.*, Notts., Eng., p. *5,092*.
**Hutt,** *t.* in Wellington dist., New Zealand, p. 3,500.
**Huy,** *t.* (fort.) nr. Liège, Belgium, in vine-growing dist., p. 15,500. [Liverpool, p. *5,198*.
**Huyton,** with **Roby,** *urb. dist.* Lancash., Eng., nr.
**Hwang Ho R.** (the Yellow R.). (*See* **Hoang Ho.**)
**Hyde,** *mun. bor.*, industrl. mkt. *t.* nr. Cheshire, Eng., on R. Tame; p. *32,066*.
**Hyde Park,** *t.'s* in Norfolk co., Mass., and Dutchess co., N.Y., U.S.A.; also subn. dist. Chicago, Illionois, U.S.A.
**Hyderabad.** (*See* **Haiderabad.**) [m., p. 17,900.
**Hydria,** or **Idra,** *isl.* Greece, off Morea; area 26 sq.
**Hyères,** winter health *resort* nr. Toulon, dep. Var, France, in fruit and flower-growing dist., p. 18,490. Hyères Isls. in the Mediterranean off H.
**Hythe,** *mun. bor.* Kent cst., Eng., nr. Folkestone; Royal school of musketry, p. *3,397*.

## I

**Ibadan,** *t.* in Yoruba country, nr. Lagos, W. Africa, p. 131,000. [Amer., p. 35,000.
**Ibagué,** or **Ibaqué,** *t.* dep. Tolima, Colombia, S.
**Ibarra,** *t.* in Ecuador, nr. Quito, p. 4,500; terrible earthquake, 1868.
**Iberia,** the name given to Spain by the Greeks, and *t's.* N. of Spain and Portugal.
**Ica,** cst. *dep.* Peru; area 6,295 sq. m., p. 94,000; cap. Ica, p. 21,000.
**Iceland,** *isl.* in N. Atlantic O., 130 m. E. Greenland; in union with Denmark; area 39,709 sq. m., barren and mtnous., with volcanoes; highest pk., Oreafa Jokull, alt. 6,409 ft., p. 94,690; cap. Reykjavik. [S.W. Africa.
**Ichaboe Isl.,** British poss. off cst. Namaqualand
**Ichang,** treaty *port.* in Hupeh prov., China, on R. Yangtse; large tr., p. 448,509.
**Ida,** *mtn. range,* Asia Minor, highest pk. Gargaron (mod. Kas Dagh), alt. 5,749 ft.; also t. in Igara, Nigeria.
**Idaho,** a N.W. *state* of U.S.A., Rocky Mtns., and rich mineral region, area 83,354 sq. m., p. 600,000; cap. Boisé; also Idaho c. in Boisé co., p. 9,500; and Idaho Springs, t. in Clear Creek co., Colorado, U.S.A., p. 3,500.
**Idle,** mftg. *t.* nr. Bradford, W.R. Yorks, Eng., p. 7,570; also R. Notts., Eng., trib. to R. Trent.

**Idria,** *t.* in Carniola, Jugo-Slavia; quicksilver mining, p. 5,890.
**Iesi,** or **Jesi,** walled *t.* nr. Ancona, Italy, p. 20,850.
**Iglau,** *t.* in Moravia, Czecho-Slov., cigar factories, textiles, p. 25,250.
**Iglesias,** *t.* in Sardinia, Italy, Cagliara prov.; cathedral, p. 8,520.
**Igio,** *t.* Zips, Czecho-Slovakia, p. 7,970.
**Ik,** *R.* old prov. Orenburg, U.S.S.R., trib. (200 m.) of R. Kama. [long.
**Ike-Aral-Nor,** *L.* Mongolia, Khalhas Terr., 40 m.
**Iki,** *isl.* off N.W. cst. of Kiushiu, Japan, area 51 sq. m., p. 37,000.
**Ilchester,** *par.* on R. Yeo, Somerset, Eng., p. 1,030.
**Iletsk,** formly. Fort Iletskaya, Zaschita, *t.* in prov. Orenburg, Russ.; rock-salt, brine-baths, p. 13,010.
**Ilford,** *urb. dist.* on R. Roding, Essex, Eng., bordering on Hainault Forest; paper mills, photo-plate works, p. *131,046*; Ilford (Little) on oppo. side of R. Roding.
**Ilfracombe,** *urb. dist.*, coast *wat. pl.* nr. Barnstaple, N. Devon, Eng., p. *9,174*.
**Ilhava,** *t.* Aveiro dist., Portugal; fishery, vine culture, p. 13,000. [Balkash.
**Ili R.,** U.S.S.R., Asiatic, flowing (850 m.) to L.
**Ilion,** *vil.* on R. Mohawk, Herkimer co., New York, U.S.A., sewing machine mftg.; p. 9,750.
**Ilkeston,** *mun. bor.*, mkt. *t.* Derbysh., Eng. manuf., p. *32,809*.
**Ilkley,** *urb. dist.*, health *resort* on R. Wharfe, W.R. Yorks., Eng., p. *9,721*.
**Ill,** *R.* Alsace, France, flows (100 m.) to the Rhine, N. of Strasburg.
**Illawarra,** fertile *dist.* N.S.W., S. of Sydney.
**Ille-et-Vilaine,** *dep.* N.W. France, on Eng. Chan.; area 2,699 sq. m., agr., p. 558,574; cap. Rennes.
**Iller,** *R.*, Bavaria, rising in the Tyrol, trib. (103 m.) of R. Danube.
**Illinois,** *state* S. of Wisconsin, U.S.A., named after its prin. R., a large trib. (360 m.) of R. Mississippi; area of state 56,043 sq. m.; p. 7,323,000; cap. Springfield; most pop. c. Chicago (*q.v.*).
**Illyria,** former *mtns. div.* of Austria, now Carinthia, Carniola, and the Kustenland.
**Ilmen,** *L.* govt. Novgorod, Russ., area 355 sq. m.
**Ilmenau,** summer *resort* in Thuringian Forest, Saxe-Weimar, Germy.; toy manuf.; p. 12,470.
**Ilminster,** *urb. dist.*, mkt. *t.* on R. Isle, Somerset, Eng., p. *2,232*.
**Iloilo,** *cap.* of prov. of same name, Panay, Philippine Isls.; cocoa-nut oil; p. 48,000.
**Ilsley,** *t.* nr. Newbury, Berks., Eng., p. 1,240.
**Imaharu,** *t.* in Japan, nr. Matsuyama, p. 22,000.
**Imbros,** *isl.* in the Ægean Sea; fertile fruit-growing dist.; p. 93,000.
**Inca,** *t.* nr. Palmas, isl. of Majorca, Spain, p. 7,470.
**Ince-in-Makerfield,** *urb. dist.*, mftg. *t.* adjoining Wigan, Lancs., Eng., p. *21,763*.
**Inchcape.** (*See* Bell Rock.)
**Inchgarvie,** *islt.* in F. of Forth, Scotl., where Forth Bridge crosses.
**Inchkeith,** fort. *isl.* F. of Forth, co. Fife, Scotl., nr. Leith. [Bothnia.
**Indals-Elf,** *R.* of Sweden, flows (60 m.) to G. of
**Independence,** *t.* on prairie, S. of Missouri lt., Jackson co., Missouri, U.S.A., p. 15,000; also t. Buchanan co., Iowa, U.S.A., p. 7,000; also t. in Montgomery co., Kansas, U.S.A., p. 12,850.
**India,** the great Asiatic *country*, forming an Imperial appanage to the British Crown, with an area of over 1,700,000 sq. m., and a p. numbering *350,352,673*.
**India, French,** possessions or establishments of the French Republic on the Coromandel coast, Pondicherry, Karikal, Yanovan in Orissa, Mahe on the Malabar coast, and Chandernagor in Bengal; total area 196 sq. m., p. 268,500. Seat of Colonial govt., Pondicherry.
**Indiana,** *state* between Kentucky and Michigan, Illinois and Ohio, U.S.A., area 36,045 sq. m., p. 2,930,300; industries, agr., mlnl., and mftg.; cap. Indianapolis on White R., p. 370,000; meat-packing.
**Indian Archipelago.** (*See* **Malay Archipelago.**)
**Indian Lake,** connected with Hudson R., New York, U.S.A.
**Indian Ocean,** extends from S. of Asia and E. of Africa to the C. of Good Hope and C. Leeuwin in Australia, separated from the Pacific by the Malay Arch. and Australia.
**Indian River,** *channel*, co.'s Valusia and Bravard, Florida, U.S.A.
**Indian Territory,** since 1907 part of the State of Oklahoma. The Indian reservations have an area of 5 sq. m. and a p. of 119,255.
**Indore,** nat. *state*, Central India Agency, area 9,469 sq. m., p. 1,148,100; cap. c. Indore, on R. Katki, p. 92,993.
**Indre,** *dep.* Central France, area 2,666 sq. m., p. 260,535; agr. and industrl.; cap. Chateauroux.
**Indre-et-Loire,** *dep.* Central France, to the N.W. of Indre, area 2,377 sq. m., p. 327,743; agr., vines, silk factories,; cap. Tours.
**Indus,** *R.* N.W. India, rises in Tibet, and flows (1,800 m.) through Kashmir, the Punjab, and Sindh to the Arabian Sea.
**Ineboli,** *t.* nr. Kastamuni, on the N. coast of Black S., Asia Minor; open port, good trade in mohair and wool; p. 10,000.
**Ingatestone,** sm. *t.* in Chelmsford Hundred, Essex, Eng., p. 1,150.
**Ingersoll,** *t.* in Oxford co., Ontario, Canada, on R. Thames; manuf., p. *5,235*. [2,378 ft.
**Ingleborough,** *mtn.* near Settle, Yorks, Eng., alt.
**Inglewood,** post *t.'s* in S. Australia, nr. Adelaide, co. Clive, Queensland, and nr. New Plymouth, New Zealand; also mining t. in Victoria, p. 1,780.
**Inglia,** mftg. *t.* nr. Bologna, Italy, p. 14,750.
**Ingolstadt,** fort. Bavarian c. on R. Danube nr. Munich; ammunition factories, p. 26,013.
**Ingrow** and **Hainworth,** mftg. dist. W.R. Yorks, nr. Keighley, p. 9,850.
**Inhambe,** or **Inhambane,** Portuguese *t.* in East Africa, 200 m. N.E. of Delagoa Bay, p. 7,500.
**Inkerman,** ruined *t.* nr. Sebastopol, in the Crimea, Russ.; battle, 1854.
**Inn,** *R.* traversing Switzerland, the Tyrol, and Bavaria, trib. (320 m.) of R. Danube, the anc. Œnus.
**Innerleithen,** *t.* and *health resort* on the Leithen Water, Peeblesh., Scotland, p. *3,747*.
**Innerwick,** *t.* on coast E. Haddingtonsh., Scotl., nr. Dunbar, p. *684*.
**Inniskeen,** *vil.* co. Monaghan, I.F.S., p. 1,880.
**Innsbruck,** or **Innspruck,** cap. of the Tyrol, Austria; university and military stronghold, p. 55,650.
**Inowrazla,** or **Inowrazlaw,** *t.* on Posen prov., Pruss.; rock, salt, and iron pyrites; tr. in agr. prod., p. 29,000.
**Insterburg,** *t.* in Pruss., nr. Königsberg; iron foundries, p. 29,780. [p. 3,250.
**Interlaken,** *vil.* on R. Aar, cant. Bern, Switzerl.,
**Inverallochy,** fishing *vil.* nr. Fraserburgh, Aberdeenshire., Scotl., p. 1,050.
**Inverbervie,** *burgh*, co. Kincardine, Scotl., p. *1,032*.
**Invercargill,** *t.* in Southland co., New Zealand (S. Isl.); fine bldgs., p. 22,000.
**Inverell,** *t.* N.S.W., 383 m. N. of Sydney, p. 5,750.
**Invergordon,** *spt.* on Cromarty Firth, Scotl., p. *1,417*.
**Inverkeithing,** *vil.* nr. Turrif, Banffsh., Scotl., p. *640*, also burgh on Firth of Forth nr. Dunfermline, p. *4,968*.
**Inverness,** *burgh* and co. *t.* (p. *26,585*; tweed and cloth industry) of Inverness-shire, Scotl.; area (of shire) 4,351 sq. m., p. *82,082*; fisheries and agr.
**Inverurie,** *burgh* on R. Don, Aberdeensh., Scotl., one of the Elgin group, p. *4,415*.
**Investigator Strait,** N. of Kangaroo Isl., S. Australia.
**Iona,** *isl.* off cst. of Mull, Argyllsh., anc. burial pl. of Scottish kings; also isl., pleasure rest., on Hudson R., New York, U.S.A.
**Ionia,** *c.* of Ionia co., Michigan, U.S.A., on Grand R., in farming regn., p. 6,500.
**Ionian Isls.,** *grp.* in Mediterranean, belonging to Greece, total area 905 sq. m., p. 260,000; 7 islands in all: Corfu, Cephalonia, Zante, Santa Maura, Ithaca, Paxo and Cerigo; formerly under Brit. protection.
**Ionian Sea,** that part of the Mediterr, between Greece on E. and Italy (and Sicily) on the W.
**Iowa,** *state* between the R.'s Mississippi and Missouri, U.S.A.; area 5,586 sq. m., p. 3,225,000; cap. Des Moines, in centre of coal region. Iowa *c.* (university, p. 15,750) stands on the Iowa R. (375 m. long, trib. of the Mississippi) in Johnson co. Iowa Falls is the name of a town in Hardin co., I., also on the Iowa R.
**Ipek,** *t.* in Kossovo vilayet, Montenegro, the anc. seat of the Serbian patriarch, p. 10,150.
**Ipoh,** mining centre, Perak, Malay Pen., tin and marble.

**Ipswich,** *co. bor.*, mkt. *t.* and mftg., Suffolk, Eng., on R. Orwell, p. *87,557*; also name of mftg. t. nr. Brisbane, Queensland; and of vil. in Essex co., Mass., U.S.A., p. 5,500.

**Iqualada,** *t.* in prov. Barcelona, Spain; cotton, ribbons, chocolate, p. 10,600.

**Iquique,** or **Puerto de Iquique,** *t.* in Chili, cap. of dep. and prov. same name; iodine and nitrate of soda trade; p. 37,421.

**Irak,** or **Irak Ajemi,** *prov.* of Centrl. Persia; grain growing and carpet weaving; area 138,224 sq. m.; the anc. Media; p. 1,000,000; cap. Sultanabad.

**Irak Arabi,** *dist.*, Iraq, the anc. Chaldea, watered by R.'s Tigris and Euphrates.

**Iran,** gt. Asiatic *plateau*, embracing Persia, Baluchistan, and Afghanistan.

**Irapuato,** industrl. *t.* in Central Mexico, p. 32,000.

**Irawadi,** *R.*, princ. R. of Burma, flows south (900 m.) to B. of Bengal.

**Irbit,** *t.* in govt Perm, Siberia, Russ.; ironworks and thriving tr.; p. 23,500.

**Ireland,** *isl.* lying W. of Great Britain. The whole of Ireland—with the exception of the 6 northern counties of Down, Antrim, Londonderry, Armagh, Tyrone and Fermanagh, which maintain a separate existence under the Crown as N. Ireland—is now embodied in the Irish Free State, with all the powers of a self-governing Dominion. Area 32,393 sq. m., p. (est.) 4,400,000; cap. Dublin (*q.v.*). Divided into provs. of Leinster, Munster, Ulster, and Connaught. Industries agr. (many sml. holdings), fisheries, mining, manuf.

**Iriga,** *t.* in Luzon, Philippine Isls.; in dist. producing rice, sugar, tobacco, etc.; p. 17,300.

**Irish Sea,** that part of the Atlantic Ocean lying between Eng. and Wales and Ireland and S. of Scotl.

**Irkutsk,** great commercial *c.* Siberia, on the Angara R., styled "the Paris of Siberia," cap. of prov. same name; p. 71,000.

**Irlam,** *urb. dist.*, Lancs, Eng., p. *12,898*.

**Iron Mountain,** mftg. *t.* in Dickinson co., Michigan, U.S.A., on the Menominee R., p. 12,000.

**Ironton,** *cap.* of Lawrence co., Ohio, U.S.A.; blast furnaces; p. 10,570.

**Ironwood,** *c.* Gogebic co., Michigan, U.S.A.; iron-mining; p. 14,000. [1,240.

**Iroquois,** *vil.* in Dundas co., Montreal, Canada, p.

**Irthlingborough,** *urb. dist.*, Northants, Eng., p. *4,715*.

**Irtish R.,** Siberia (1,900 m.), trib. of R. Obi.

**Irun,** *t.* on N.E. frontier, Spain, nr. San Sebastian; tanning and brandy distillery; p. 10,100.

**Irvine,** *burgh* (of the Ayr group), Scotl., nr. mth. of R. Irvine; shipbldg., p. *3,318*.

**Irvington,** *t.*, N.J., U.S.A., p. 60,000.

**Irwell R.,** flows (30 m.) past Manchester to the Mersey. [to the Danube.

**Isar R.,** of Bavaria, flows (165 m.) from the Tyrol

**Ischia,** *isl.* in G. of Naples, Italy, area 26 sq. m., p. 28,000; fam. minl. baths; Ischia t. has 7,250 inhab.

**Ischl,** *wat. pl.* in Gmünden dist., Upper Austria, nr. the Schatberg mtn.; salt works; res. p. 10,250 (200,000 visitors annually). [isl., Denmark.

**Ise,** *fiord* (20 m. by 10 m.), N. side of Zealand

**Iseghem,** mftg. *t.* nr. Bruges, Belgium, p. 10,110.

**Isère,** *dep.* in S.E. France, watered by R.'s Isère and Rhône; area 3,178 sq. m., p. 525,522; cap. Grenoble.

**Iserlohn,** t. in Westphalia, Pruss.; metal industries, pins, needles, etc.; p. 20,010. [10,250.

**Isernia,** mftg. *t.* in prov. Campobasso, Italy, p.

**Isfahan,** or **Ispahan,** *prov.* Persia (anc. Aspadana), cap. Isfahan c., former cap. of Persia, on Zendarud R., p. 80,000, exclusive of Armenian col. of Gulfa on opp. bank of R., with 4,000 inhab.

**Ishim,** *t.* on R. same name (1,000 m. long) in U.S.S.R., old govt. Tobolsk; famous fair, one of the most impt. for agr. prod. in Siberia; p. 8,550.

**Ishinomaki,** *t.* in Japan, on Ishinomaki B., p. 22,000. [gan, U.S.A., p. 9,200.

**Ishpeming,** *c.* in the Marquette iron dist. of Michi-

**Isis,** *R.*, principal trib. of R. Thames, Eng., so named until its confluence with Thames at Dorchester.

**Isjum,** industrl. *t.* in Russia, p. 23,500. [Syria.

**Iskanderun,** or **Alexandretta,** *spt.* nr. Antioch,

**Isla,** *R.*, of Perth and Forfar co.'s Scot., trib. (40 m.) of R. Tay; also R. of Banffsh., Scotl., trib. (18 m.) of R. Deveron.

**Islay,** *isl.* of Argyll co., Scotl., 13 m. W. Kintyre, one of the Inner Hebrides, area 235 sq. m., p. 7,620.

**Isle Jesus** (area 85 sq. m.), in Jesus and Prairie R.'s, Quebec, Canada. [gan, U.S.A.

**Isle Royal** (40 m. long), in Lake Superior, Michi-

**Isle Verte,** *isl.* in R. St. Lawrence, Quebec, Canada; also t. on same; cap. of Temicouata co.

**Isleworth.** (See **Heston and Isleworth**).

**Islington,** *met. bor.*, London, Eng., N. of City, p. *321,712*; industrl. and residentl.

**Islip,** summer *resort*, New York, U.S.A., p. 7,300; also pars. in Oxford and Northants, Eng.

**Ismail,** *t.* on R. Danube, Bessarabia; fortfd., p. 86,000.

**Ismailia,** *t.* on L. Timsah (Suez Canal centrl. stn.), Lower Egypt, p. (with Port Said) 9,1090.

**Ismid,** *t.* in Asia Minor, the anc. Nicæa, where the Nicene Creed was promulgated.

**Isola Grossa,** *isl.* in Adriatic, off Dalmatian coast (27 m. by 3 m.), p. 13,250.

**Ispahan.** (*See* **Isfahan.**)

**Issoudun,** *t.* in the Théols dep. Indre, France; old keep, often besieged; p. 15,120.

**Issy,** *vil.* on R. Seine, subn. to Paris, France, p. 12,500.

**Issyk-Kul,** *L.* in Russn. Centrl. Asia; alt. 4,476 ft., area 2,466 sq. m., drained by R. Chiu.

**Istria,** Italy, formerly *crown land* of the Cisleithan part of Austria-Hungary; area 2,035 sq. m., p. 404,309; includes several Isls. in the Adriatic.

**Italy,** *kingdom* of S. Europe, an extensive pen., Continental portn. and numerous Isls. (largest Sardinia and Sicily). Total area 118,000 sq. m., p. *42,158,817*; cap. Rome (*q.v.*). Exports, silk, velvet, olive oil, sulphur, fruit, wines, anchovies, etc.

**Itasca,** *L.* a source of Mississippi R., Minnesota, U.S.A., alt., 1,575 ft. [ton Water.

**Itchen R.,** Hants, Eng., flows (25 m.) to Southamp-

**Ithaca,** or **Thiaka,** one of the Ionian Isls., Greece, area 37 sq. m., p. 13,500; chf. t. Vatkí; also t. on Cayuga L., New York, U.S.A., p. 21,000.

**Itzehoe,** *t.* on R. Stor, Holstein, Pruss., oldest t. in the prov.; good trade; p. 14,000.

**Ivanovo-Voznesensk,** cotton manuf. *t.* of U.S.S.R., old govt. Vladimir, p. 56,000.

**Ivica, Iviza,** or **Ibisa,** one of the Balearic Isls. in the Mediterranean, Spain, p. 24,000; cap. Ivica or La Ciudad (fort.), p. 7,500.

**Ivinghoe,** mkt. *t.* Bucks, Eng., p. 1,380.

**Ivory Coast,** French W. Africa, *colony* between Liberia and the Gold Coast; area 121,976 sq. m., p. 1,407,030.

**Ivrea,** *t.* on the Dora Baltea, Italy, nr. Turin, p. 6,020. [30,120.

**Ivry-sur-Seine,** *vil.* on R. Seine, subn. to Paris, p.

**Ivybridge,** *urb. dist.*, in Devon, Eng., on R. Erme, nr. Plymouth, p. *1,609*.

**Ixelles,** *t.* in prov. Brabant, Belgium, subn. to Brussels, p. 60,100. [12,250.

**Ixmiquilpan,** *t.* in Hidalgo State, Mexico, p. (dist.)

**Ixtlahuaca,** industrl. *t.* of Mexico, 60 m. N.W. of the cap., p. 14,500.

**Ixtlan,** *t.* in Oajaca State, Mexico; commercial and industrial; p. 27,750.

**Izieux,** *t.* nr. St. Étienne, dep. Loire, France, p. 6,250. [p. 19,750.

**Izium,** fort. *t.* on R. Donetz, old Kharkov, U.S.S.R.,

**Izmail.** (*See* **Ismail.**) [p. 12,850.

**Izucar,** *t.* nr. Popocatepetl, Puebla State, Mexico.

## J

**Jabalpur,** or **Jubbulpore,** *t.* in Centl. Provs., India, p. 108,973. [m.), trib. of R. Maranon.

**Jabary,** *R.* on Brazilian and Peruvian frontier (450

**Jabok,** *R.* Syria, affluent of R. Jordan (45 m.).

**Jackson,** cotton tr. *t.* Hinds co., Mississippi, U.S.A., p. 51,000; also c. on Grand R., Jackson co., Michigan, U.S.A., wagon-mkg., p. 55,500; also iron-wkg. t. in Jackson co., Ohio, U.S.A., p. 5,590; also university t. in Madison co., Tennessee, U.S.A., p. 22,500.

**Jacksonville,** *t.* in Duval co., Florida, U.S.A., on St. John's R.; large timber, cotton, and cigar output, p. 133,500 (more than half colrd.); also t. in Morgan co., Illinois, U.S.A., collegiate, p. 18,000.

**Jacobabad,** *t.* in Upper Sind. dist., Bombay, India; mil. and admin. hdqrs., p. 13,500.

**Jacobina,** *t.* on Itapicura R., Bahia, Brazil, p. 10,900. [Africa, p. (dist.) 3,904.

**Jacobsdaal,** t. on Rist R. Orange Free State, S.

**Jacobstadt**, *t.* on R. Düna, Courland, Latvia, p. 4,950. [of St. Lawrence.
**Jacques-Cartier R.**, Quebec, Canada (50 m.), trib.
**Jade**, or **Jahde**, *estuary* of N. sea, Oldenberg, Germany; fine harbr. and entrance to Pruss. naval pt. of Wilhelmshaven.
**Jaen**, *prov.* S. Spain, area 5,203 sq. m.; mines agr.; p. 568,652; cap. J., c. nr. Granada, p. 30,135.
**Jaffa**, or **Jappa** (the anc. Joppa), *t.* nr. Jerusalem, Palestine; orange-growing dist., p. *51,876.*
**Jaffna**, or **Jaffnapatam**, *t.* on W. cst. of J. isl., N. Ceylon, p. 42,400.
**Jagadhri**, *t.* Punjab, India, nr. R. Jumna, p. 12,750.
**Jagerdorf**, or **Karnow**, *t.* in govt. dist. same name Silesia, Czecho-Slovakia, textiles, p. 15,820.
**Jagganath.** (*See* Juggernaut.)
**Jagispur**, *t.* Shahabad dist., Bengal, India, p. 13,760.
**Jaipur**, or **Jeypore**, native *state* Rajputana, India; area 15,579 sq. m., p. 2,329,087; cap. J., a great commercl. centre, p. 120,196; also t. same name in Vizagapatam dist., Madras Pres., India, p. 5,000.
**Jalalabad**, *t.* S. Cabul R., Afghanistan, p. 7,500; also two t.'s in United Provs., India, one in the Shahjahanpur dist., p. 8,500; and one in Muzaffarnagar dist., p. 7,770.
**Jalapur**, *t.* in Gujarat dist., Punjab, India, p. 13,200.
**Jalaun**, *t.*, United Provs., India, p. 10,250.
**Jalesar**, *t.* United Provs., India, nr. Muttra, p. 16,500; good tr.
**Jalisco**, *state* of Mexico; well timbd., agr., mining; area 33,492 sq. m., p. 1,220,160; cap. Guadalajara.
**Jallandhar**, *t.* Punjab, India, p. 53,000.
**Jalon**, *R.*, in Spain (180 m.), trib. of R. Ebro.
**Jalpaiguri**, *t.*, Bengal, p. 9,000.
**Jamaica**, princ. *isl.* of Brit. W. Indies, divided into three counties, Middlesex, Surrey and Cornwall; area 4,207 sq. m., p. 975,000. Exports sugar, rum, spices, coffee. Cap. Kingston (*q.v.*). Also name of t. on Long Island, N. York, U.S.A.; p. 12,300.
**James Bay**, S. part of Hudson Bay (length abt. 250 m.).
**James R.** (or **Powhattan**), Virginia, U.S.A., flows (450 m.) from Blue Ridge to Chesapeake B.
**James Fork**, *R.* affltt. of White R. (60 m.), Missouri, U.S.A.
**Jamestown**, *t.* nr. Balloch, Dumbartonsh., Scotl., p. 2,260; also *cap.* of isl. of St. Helena; also t. in S. Australia, p. 1,250; also dist. in James City co. Virginia, U.S.A., nr. mth. of J.R., where first Eng. perm. settlement was founded in 1607; also c., in Chautauqua co., New York, U.S.A., summer resort and mftg.; p. 45,500.
**Jammu**, or **Jummoo**, *cap.* of nat. State of J. in Kashmir, N. India, on R. Tavi, p. 35,000. Burnt down 1898, but since rebuilt. Jammu State (apart from Kashmir) has a p. of 1,500,000.
**Janesville**, *t.* in agr. regn., Rock co., Wisconsin, U.S.A.; p. 22,000.
**Jangipur**, *t.* on Bhagirathi R., Murshidabad dist., Bengal, India, p. 10,780.
**Janina**, or **Yanina**, cap. *vilayet* same name, on L. Janina, Greece, famous for embroidery wk., p. 18,878. [fabrics, p. 29,000.
**Januay**, *t.* in Panay, Philippine Isls., fine woven
**Jan Jira**, native *st.* Konkan div., Bombay, India, among the W. Ghats, area 324 sq. m., p. 87,000, ch. t. (fortfd.) Janjira.
**Jan-Mayen**, *isl.* betwn. Spitzbergen and Iceland, in the Arctic Oc.
**Jaora**, nat. *st.* Malwa Agency, India, area 581 sq. m.; p. 122,000, cap. J. t., p. 23,000.
**Japan**, insular *emp.* of E. Asia, S. of Corea, China and As. Russia; consists of Honshiu, Kiu-siu, Shikoku, and numerous smlr. isls. together with Chôsen (Korea), Taiwan (Formosa), Hokoto (Pescadores) and Karafuto (the Japanese part of Sakhalin Is.), total area 260,738 sq. m. Produces, rice, silk, cotton, tobacco, tea, hemp; much mineral wealth, many thriving industries, great commercl. and political enterprise, mountainous (volcanic), total p. *83,454,489*, cap. Tokio (*q.v.*).
**Japan, Sea of**, portion of Pacific Oc. running between Corea, As. Russia, and Japan.
**Japura**, *R.* rising in the Andes of Colombia, S. America, and flowing (1,300 m.) through Ecuador and Brazil to R. Amazon.
**Jardine**, *R.* of N. Queensland, flowing (23 m.) to G. of Carpentaria.
**Jarlsberg**, *dist.* Norway, S.W. Oslo, area (with Laurvik) 911 sq. m., p. 88,246.
**Jaroslav**, or **Jaroslaw**, mftg. *t.* in Galicia, Poland, on R. San; garrison; p. 24,100.
**Jarrow**, *mun. bor.* on R. Tyne, co. Durham, Eng.; shipbldg. Venerable Bede born here; p. *32,018.*
**Jassy**, *t.* in Rumania, former cap. Moldavia, in vineyd. dist., active tr. and manuf., p. 76,180.
**Jasz Bereny**, manuf. *t.* nr. Pesth., Hungary, p. 24,000. [p. 12,620.
**Jativa**, *t.* prov. Valencia, Spain, fruit, agr. prod.,
**Jauer**, *t.* on the Roaring Niesse, Silesia prov., Pruss, famous for sausages, p. 14,100.
**Jauja**, *t.* in Junin dep., Central Peru, p. 15,000.
**Jaunpur**, *t.*, United Provs., India, on the Gumti, p. 43,000.
**Java**, *isl.* (Dutch poss.) of the Malay Arch.; area 50,300 sq. m., p. 30,100,000; mtns. (many volcanic); prod. rice, sugar, cotton, spices, coffee; cap. Batavia (*q.v.*).
**Javana**, *t.* on N. cst. Java, p. 11,120.
**Java Sea**, part of the Pacific Oc. between N. cst. Java, Borneo and Sumatra.
**Jawalpur**, *t.* on R. Ganges, United Provs., India, p. 15,750. [Cracow, p. 10,020.
**Jaworzno**, *mkt. pl.* in mining dist. of Galicia, nr.
**Jaxartes**, or **Syr Daria**, *R.* of Asiatic Russ., flowing 1,450 m. from Thian Shan mtns. to Sea of Aral.
**Jaxt**, or **Jagst R.** of Würtemberg (80 m.), trib. of R. Neckar. [Penn., U.S.A., p. 15,500.
**Jeanette**, *bor.* in nat. gas regn., Westmorland co.,
**Jebel-Akdar**, *mtn.* S.W. of Muscat, Arabia, alt. 6,017 ft.
**Jebel-Hauran**, high table-land of Syria (alt. 6,000 ft.), nr. S. of Galilee. [alt. 6,760 ft.
**Jebel Serbal**, *mtn.* nr. Horeb, Sinai penin., Syria,
**Jebrail**, *t.* in Transcaucasia, gt. tr. with Persia, p. 11,750. [woollen mills, p. *4,110.*
**Jedburgh**, co. *t.* of Roxburgh, Scotl., on R. Jed,
**Jeddore**, fishery *t.* on cst. Nova Scotia, nr. Halifax, p. 2,400.
**Jedo**, or **Yeddo**, old name of Tokio, the Japanese cap.
**Jefferson**, *c.* of Jefferson co., Wisconsin, U.S.A. p. 4,550; also t. on big Cypress Bayou, Texas, U.S.A., p. 4,000.
**Jefferson City**, on the Missouri *R.*, Cole co., Missouri, U.S.A., good tr. p. 22,250.
**Jeffersonville**, mftg. *t.* in Clark co., Indiana, U.S.A., on R. Ohio, at the hd. of the falls, p. 12,200.
**Jehlam**, *dist.* in Rawalpindi div. of the Punjab, India; area 3,910 sq. m., p. 600,000; cap. J., c. (p. 22,000) on J. R., most W. of the five R.'s of the Punjab, flowing (450 m.) from Kashmir to join the Chenab. [Palestine.
**Jehoshaphat**, famous *valley* nr. Mt. of Olives,
**Jeisk**, *t.* in N. Caucasia, Russ., in Jeisk B., Sea of Azov; exports corn, linseed, etc., p. 21,900.
**Jekyl Isl.**, off cst. Georgia, U.S.A., nr. Brunswick; separated from the mainland by Jekyl Sound.
**Jemappes**, industrl. *t.* on the R. Haine, prov. Hainault, Belgium, p. 12,750.
**Jena**, *t.* on R. Saale, Thuringia, Germany; famous university, p. 48,504.
**Jennah**, *t.* on R. Niger, Sudan, Africa, 285 m. S.W. Timbuctoo, p. abt. 10,000.
**Jeremie**, *spt.* of S.W. Haiti, good tr., p. 10,770.
**Jerez de la Frontera**, or **Xeres**, *t.* nr. Cadiz, Andalusia, Spain, noted for sherry, p. 62,628.
**Jerez de los Caballeros**, *t.* nr. Badajos, Spain, p. 9,000.
**Jericho**, now **Richa**, *vil.* in Jordan Valley, Palestine, Roman and Byzantine remains.
**Jermyn**, *bor.*, Penn., U.S.A., nr. Bald Mtn., Lackawanna, p. 3,525. [ney, p. (dist.) 1,470.
**Jerry's Plains**, post *t.* in N.S.W., 144 m. N. Sydney.
**Jersey**, largest of Channel Isls. belonging to Britain, 13 m. W. of French cst., area 45 sq. m., p. *50,455.* Prod. potatoes, fruit, cattle, etc.; cap. St. Heliers.
**Jersey City**, spt. *t.* cap. Hudson co., New Jersey, U.S.A., opp. New York on Hudson R., p. 318,500. Impt. commerce and manuf.
**Jerusalem**, *c.* of Palestine, 33 m. S.E. of Jaffa, 2,660 ft. above sea-level, among mtns. between Dead S. and Mediterr. The "Holy City" or "City of Peace" of the Jews; anciently called "Jebus," many times besieged and captured, p. *90,526.* [p. 8,000.
**Jesmond**, N. *suburb* of Newcastle-on-Tyne, Eng.,

**Jesus Isl.** (*See* **Isle Jesus.**)

**Jhang,** *dist.* Mooltan div., Punjab, area 5,702 sq. m., p. 400,000. Cap. J., c., p. (with Maghiana) 22,115.

**Jhansi,** *div.* of Gwalior, India; area 4,984 sq. m., p. 1,110,000; also dist. same name, area 1,567 sq. m., p. 340,000; cap. Jhansi.

**Jiddah, or Djiddah,** spt. *t.* of the Kingdom of Hejaz, nr. Mecca, p. 20,000.

**Jimena de la Frontera,** *t.* nr. Cadiz, Spain, p. 8,750.

**Jind,** nat. *st.* of the Punjab, India, E. of R. Sutlej, p. 255,000, area 1,232 sq. m.; cap. J., t., p. 7,500.

**Jizakh,** *t.* in Russ. Cent. Asia, prov. Samarkand, good tr., p. 17,000. [centre, p. 7,770.

**Joachimsthal,** *t.* nr. Carlsbad, Bohemia, mining

**Jodhpur,** nat. *st.* Rajputana, India, N. of Cutch, area 34,963 sq. m., p. 1,841,642. Cap. J., c. with many fine bldgs., p. 73,480.

**Jogjogarta,** Dutch *restd.* in Java; area 1,200 sq. m., cap. J. c., connected with Batavia by train; citadel, with palace; p. 61,000.

**Johanna,** *isl.* of the Comoro grp. in Mozambique Channel (26 m. by 18 m.), p. 12,870.

**Johannesburg,** *t.* in the Transvaal, S. Africa, nr. Witwatersrand goldfids.; p. *199,495.*

**John o' Groat's House,** *place* nr. the most N.E. extremity of Gt. Britain, in co. Caithness, Scotl.

**Johnshaven,** fishing *vil.* co. Kincardine, Scotl., nr. Montrose, p. 1,130.

**Johnson C.,** in Washington co., Tennessee, U.S.A., p. 26,500; also name of several t.'s in various parts of the U.S.A. [p. 6,000.

**Johnston,** *t.* in co. Providence, Rhode Isl., U.S.A.,

**Johnstone,** mftg. *t.* Renfrewsh., Scotl., on Black Cart R., nr. Paisley, p. 12,070.

**Johnstown,** glove mftg. *t.* Fulton co., New York, U.S.A., p. 10,750; also bor. on Conemaugh R., Cambria co., Penn., U.S.A., immense steel wks. p. 66,750.

**Johore, or Johor,** indpt. Malayan, *state* at S. end of peninsula; area 7,500 sq. m., p. 282,244, two-thirds Chinese; cap. Johor Bharu, opp. Singapore, p. 20,000.

**Jojo,** *t.* on S. est. of Cuba, nr. Santiago, p. 14,500.

**Joliet,** *t.* in Will co., Illinois, U.S.A., ry. and mftg. centre, p. 43,250. [Quebec, Canada, p. 4,000.

**Joliette, or Industry Vil,** *t.* on R. L'Assomption,

**Jonkoping,** match mftg. *t.* on L. Wetter, Sweden, p. 29,284. [France, p. 3,730.

**Jonzac,** *t.* on R. Seugne, Charente-Inférieure,

**Joplin City,** in lead mining regn. of Jasper co., Missouri, U.S.A., p. 33,700.

**Joppa.** (*See* **Jaffa.**)

**Jordan R.,** famous in Bible histy. and one of the most remarkable streams in the world. Flowing S. from Anti-Lebanon (120 m.) along a sinuous course, mostly below sea-level to the Dead Sea. its rapidity and variant depth render it unnavigable, and no *t.* of any importance has ever been built on its banks.

**Jorullo,** *volcano* in Michoacan st., Mexico; alt. 4,265 ft.

**Joubert,** *vil.* Transvaal, S. Africa, p. 1,770.

**Joux, L.,** nr. the Jouru canton, Vaud, Switzerland (length 5 m.), drained by R. Orde.

**Joyce's Country,** mtns. *dist.* co. Galway, I.F.S.

**Juan de Fuca Strait,** betwn. Vancouver Isl. and Washington Terr., U.S.A.

**Juan Fernandez,** rocky *isl.* belonging to Chili, in S. Pacific O.; area 38 sq. m. Famous as solitary res. Alex. Selkirk (Robinson Crusoe), 1704–9.

**Juba, or Roques R.,** E. Africa, flows to Indian O., nr. the Equator. [near nr. Valencia.

**Jucar R.,** of E. Spain, flowing 250 m. to Mediterra-

**Juchipula,** *t.* in Mexico, nr. Guadalajara, p. 8,100.

**Judea,** S. div. of Palestine in the Roman Period, W. of the Jordan and Dead S. and S. of Samaria.

**Judenberg,** *t.* on R. Mur, Styria, Austria, p. 4,400.

**Juggernaut, or Jaganath** (also called **Puri**), *spt.* of Orissa, Bengal, India, famous for its temple and festival of the heathen god Vishnu and his monster car; p. 90,000.

**Jugo-Slavia,** new *state* comprising former territories of Serbia, Montenegro, Croatia, Dalmatia, Bosnia, Herzegovina and Slavonia, p. *13,930,918.* (*See* Serbia, Croatia and Slavonia.)

**Jujuy,** *prov.* of Argentina; area 14,802, p. 90,000; cap. J., p. 10,000.

**Julian Alps,** the easternmost *range* in Venetia, Carinthia, Carniola, and Gorz-Gradiska; highest pk. Terglou, 9,394 ft. [C. Farewell, p. 2,620.

**Julianshaab,** *stn.* in Greenland, 110 m. N.W. of

**Jullundur.** (*See* **Jalandhar.**)

**Jumetz,** industrl. and mining *t.* in Belgium nr. Charleroi, p. 24,750

**Jumilla,** mftg. *t.* in Spain, nr. Marcia, p. 14,682.

**Jumna R.** (860 m.), chf. *trib.* of R. Ganges, rises in the Himalayas and flows past Delhi and Agra to Allahabad.

**Junagarh,** native *state* Gujarat div., Bombay, India; area 3,283 sq. m., p. 465,221; cap. J., p. 36,000.

**Junction City,** on Kansas R., Davis Co., Kansas, p. 7,400. [settlement in Alaska, p. 3,126.

**Juneau City** (formerly **Harrisburg**), cap. and mining

**Jung Buntzlau,** mftg. *t.* on R. Iser, Bohemia, p. 14,500.

**Jungfrau,** *mtn.* of the Bernese Alps, Switz., alt. 13,761 ft.

**Juniata R.,** Pennsylvania, U.S.A., flows (180 m.) to the Susquehanna at Petersburg; picturesque scenery; t., p. 7,660.

**Junin,** interior *dep.* Peru, traversed by the Andes; area 23,347 sq. m., p. 400,000; also *t.* of Argentina, p. 39,750.

**Jura,** *mtn. chn.* Switzerland and France (180 m. by 30 m.), highest pk., Mt. Molleson, alt. 6,588 ft.; also dep. E. France, named from the mtns., area 1,951 sq. m., p. 229,062. Many vineyards. Cap. Lons-le-Saulnier; also isl. off W. coast Argyll, Scotl., area 146 sq. m. Sound of J. separates the isls. of J. and Islay; p. *332.*

**Jurjura,** *mtn. chn.* in Algeria, N. Africa.

**Jurua.** (*See* **Amazon.**) [p. 7,500.

**Jutecalpa,** *t.* in Olancho dep., Honduras Repub.,

**Juterbock (or Juterbogk),** industrl. *t.* nr. Potsdam, Pruss.; Swedish victory, 1654; p. 7,750.

**Jutland,** *penin.* of Denmark, washed by N. Sea, Skager Rack, and Cattegat; area 11,443 sq. m.; flat, low-lying and infertile; but now being reclaimed and irrigated, p. 1,498,480.

**Jyhoon,** *R.*, Asia Minor, rising in Mt. Tauras, and flowing to G. of Iskanderun.

## K

**Kaagoe, or Kaako,** *isl.* of Norway, in Arctic O., N. of Lyngen Fiord.

**Kabansk,** *t.* in Transbaikalia, E. Siberia; thriving Russn. tr. centre; p. 8,000.

**Kabinda,** *t.* in Portuguese W. Africa, on coast of Kabinda dist., N. of Congo estuary.

**Kabul,** *cap.* of K. prov. and of Afghanistan, on Kabul R., S. of the Hindu Kush, 6,900 ft. above sea; estim. p. 150,000.

**Kabul R.** (270 m.), flowing through Afghanistan to the Indus in the Punjab, E. of Peshawar.

**Kadi,** *t.* in Baroda State, India; industrl. and commercl. p. 17,760.

**Kadiak Isl.,** the largest *isl.* (90 m. long) of Western Alaska in the N. Pacific; fur trading and extensive salmon fishg. and canning. Chf. settlement St. Paul, on Chiniak B.; p. 1,820 (one-third Eskimos).

**Kadina,** *t.* nr. Wallaroo, S. Australia, p. 2,000.

**Kaffa,** fort. Russian *t.* in the Crimea, p. 12,200; also E. African State (sometimes called Gomaraland) S. of Abyssinia, cap. Bonga.

**Kaffraria,** extensive *dist.* of Cape of Good Hope, S. Africa, comprising Griqualand East, Tembuland, Transkei, and Pondoland.

**Kafiristan,** *tract* of country between Chitral and Afghan terr., S. of the Hindu Kush, peopled by (abt. 620,000) Kaffirs, mainly of the Siah Posh (or black-robed) tribe.

**Kagoshima,** *spt.* at S. end of Kiu-Siu isl., Japan; ft. tr.; p. 92,306.

**Kaiapoi,** coast *t.* nr. Christchurch, New Zealand, p. 1,910

**Kai-fong,***c.* on Hoang-Ho, Ho-nan, China, one of the most anc. cities in the empire; p. about 95,000.

**Kaikorua,** *t.* on coast of New Zealand (S. isl.), 100 m. N.E. of Christchurch, p. (dist.) 1,800.

**Kairwan,** holy *c.* of the Mohammedans, 80 m. S.S.E. of Tunis, N. Africa; founded *circa* A.D. 670 ; magnificent mosque; p. (est.),25,000.

**Kaiserlautern,** mftg. *t.* nr. Mannheim, Bavaria; gt. industrl. activity; p. 55,707.

**Kaiser Wilhelm Canal,** connecting Kiel with the mth. of R. Elbe, opened 1895.

**Kaiser Wilhelm Isls.,** sm. group in the Antarctic, belonging to Graham Land.

**Kaiser Wilhelm's Land,** former German *protect.*, New Guinea (now Brit.), area 72,000 sq. m., p. 120,000.

**Kalach,** Cossack *t.* on R. Don, S.E. Russia; gt. tr. res.; p. (much increased by visitors in summer) 9,750.

**Kalafat,** *t.* on R. Danube, opp. Widin, Rumania, p. 5,010.

**Kalahari Desert,** gt. infertile tract (alt. 3,700 ft.) of S. Centl. Africa, between the Orange R. and the Zambesi; area 200,000 sq. m.; inhabited chiefly by Bushmen and mainly comprised in Bechuanaland Protectorate.

**Kalahasti,** *t.* in N. Arcot dist., Madras Pres., India, p. 10,650.

**Kalamata,** *t.* in the Morea, Greece, nr. Sparta; silk industry, olive oil export; p. 20,592.

**Kalamazoo,** cap. K. co., on K. R. (200 m. long), Michigan, U.S.A.; manuf., college; p. 55,220.

**Kalamito Bay,** Black Sea, W. cst. Crimea.

**Kalat,** *cap.* Baluchistan; fortifd.; alt. 6,780 ft.; p. 9,000.

**Kalbe,** *t.* on R. Saale, Prussn. Saxony, p. 9,750.

**Kale Water,** *R.* co. Roxburgh, Scotl. (20 m.) trib. of R. Teviot.

**Kalgan,** fort. *t.* in Pechili, China, nr. the Great Wall; large tr. in tea; p. 72,000.

**Kalgoorlie,** *t.* nr. Coolgardie, in gold-field dist. W. Australia; p. 7,898.

**Kalisz,** govt. Poland, adjng. Prussia; agr., cattle breedg.; ch. *t.* K., in the valley of the Prosna; linen factories; p. 44,753.

**Kalk,** *t.* in the Rhine prov., Prussia, adjng. Cologne; iron and chem. wks.; p. 24,010.

**Kalmar,** fort. *c.* on the Baltic cst. of K. dist., Sweden, opp. Oland Isl., p. 17,087. [*Loheia.*

**Kalmaran Isl.** (Brit.) in Red S., Arabia, nr.

**Kalmyk, or Kalmuck Steppe,** reservatn. of Kalmucks in W. Caucasia; area 38,440 sq. m., p. over 126,256; fishing and cattle-rearing.

**Kalna,** *t.* on Bhagirathi, R. Bardwan dist., Bengal, India, p. 11,500.

**Kalpi, or Calper,** mftg. and tr. *t.* in Jalaun dist., United Provs., India, on R. Jumna, p. 15,000.

**Kaluszi,** *t.* on R. Lomnicza, Galicia, large salt wks.; p. 8,740. [gd. tr.; p. 14,100.

**Kalyan,** *spt.* Thana dist., Bombay Pres., India; **Kama,** R. U.S.S.R. (1,400 m.), trib. of R. Volga, which it joins S. of Kazan.

**Kamalonbo,** *R.* of Centl. Africa, trib. of the Congo; also native t. on banks of same, p. 6,200.

**Kaman,** *t.* in Bhartpur State, Rajputana, India, nr. Muttre; p. 14,750.

**Kamchatka.** (*See* Kamschatka.)

**Kamenskaya,** *t.* on N. Donets R., U.S.S.R., in colliery dist.; p. 26,000.

**Kamenz,** *t.* on Black Elster R., nr. Dresden, Saxony, cloth manuf., p. 8,600.

**Kamerun.** (*See* Cameroons.)

**Kamieniec,** or **Kamenets Podolsk,** *t.* in Podolia, Ukraine, nr. Rumanian frontier; thriving indust.; p. 39,100.

**Kamishin,** mftg. *t.* on R. Volga, Saratov govt., Russ., p. 18,050. [p. (dist.) 3,020.

**Kamloops,** tr. *port* Brit. Columbia, on Penny's R.,

**Kamouraska,** *t.* cap. K. co., Quebec, Canada, on R. St. Lawrence, p. 2,150. [prov., p. 19,750.

**Kampen,** mftg. *t.* on R. Yssel, Holland, Overyssel

**Kamrup,** *dist.* in Brahmaputra vall. div., Assam, Brit. India; area 3,600 sq. m., p. 598,000; cap. Gauhati.

**Kamschatka,** *penin.* on N.E. Asia, pt. of U.S.S.R., old govt. Primorsk.; area 465,637 sq. m.; mtns. with volcanoes (Kluchevskaia, alt. 16,512 ft.); much mineral wealth, fisheries on coast, climate cold, wet and foggy; cap. Petropavlovsk on E. cst., good roadstead; p. 6,500.

**Kamthi,** or **Kampti,** *t.* in Nagpur dist., Centl. Provs., India, on R. Kanhan, nr. Nagpur c., hdqrs. of mil. dist. and busy tr. cent.. p. 45,760.

**Kamyshin,** *t.* on R. Volga, old Saratov govt., U.S.S.R.; shipping tr., p. 19,750.

**Kanara, or Canara,** N. and S., *dists.* of India, N. K. is in Bombay (Konkan div.), area 3,910 sq. m.; p. 456,000; dist. hdqrs. Karwar; S. K. is attached to Madras, and has its hdqrs. at Mangalore, area 3,902 sq. m., p. 1,200,120.

**Kanauj,** anc. *c.* nr. R. Ganges, Farukhabad dist., India; shrine of Rajah Jaipal, and mag. mosque, p. 17,750.

**Kanazava,** *t.*, prov. Kaga, Honshiu, Japan; thriving ind., and gt. tr., p. 158,637.

**Kandahar,** *prov.* S. Afghanistan, mtns., p. over 1½ mill.; cap. K. c. (largest in A. and former seat of gov.), alt. 3,400 ft., 370 m. from Herat on N.W., p. 31,500.

**Kandy,** *t.* nr. centre of Ceylon, very beautiful, historical and prosperous; many fine temples and tombs of K. kings, formerly the cap., p. 32,000.

**Kane,** *bor.*, McKean co., Penn., U.S.A., nat. gas regn., p. 6,200. [p. 8,400.

**Kaneff, or Kanieff,** *t.* on R. Dnieper, Kiev, Ukraine,

**Kanem,** *dist.* of Sudan, bordng. on L. Chad.

**Kangaroo Isl.,** off cst. of S. Australia, area 1,970 sq. m., p. 4,600.

**Kangra,** *t.* Punjab, India; cap. K. (or Nagarkot), p. 6,000.

**Kanisa,** industrl. t. on R. Theiss, co. Bac, Hungary, p. 15,010; also Nagy (or Great) Kanisa, mkt. t. in the Trans-Danubn. co. of Zala, Hungary, p. 21,750.

**Kankakee R.,** Indiana and Illinois, U.S.A., trib. (230 m.) of Des Plaines R.; also t. on same in Illinois, p. 21,000.

**Kano,** *t.* of Sokoto, Sudan; cloth dyeing; p. 30,000.

**Kansas,** *state* W. of Missouri R., U.S.A., area 81,774 sq. m., called the "Sunflower State"; cattle-raising and fattening, p. 1,852,000; cap. Topeka.

**Kansas City,** Jackson co., Missouri, U.S.A.; great live-stock mart, p. 406,000; adjoins Kansas City, Wyandotte co., Kansas, meat-packing centre, p. 124,000. [R., p. 8,750.

**Kansk,** U.S.S.R. *t.* Yeniseisk, E. Siberia, on the Kan.

**Kan-Su,** most N.W. *prov.* China, area 125,450 sq. m., p. 3,810,000; cap. Lanchow.

**Kanturk,** mkt. *t.* in co. Cork, I.F.S., p. 1,860.

**Kanum,** *c.* of Little Tibet, on the Upper Sutlej R.; p. (est.) 80,000.

**Kapadwanj,** fort. *t.* Kaira dist., Bombay Pres., India; p. 15,500.

**Kaposwar,** industrl. *t.* in wheat-growing dist., Light co., nr. Adelaide, S. Australia, p. 3,600.

**Kapurthala,** nat. *state* in the Punjab, India, area 630 sq. m., p. 284,070; cap. K., p. 19,000.

**Karachev,** old *t.* in govt. Orel, Russ.; hemp factories and oil works, p. 17,000.

**Karachi,** or **Kurrachee,** *spt. c.* Sindh prov., Bombay, India, on the Indus delta; thriving trade, p. 215,781; cap. K. dist.

**Karakorum Mtns.,** separating E. Turkestan from Kashmir, highest pk. Dapsang (28,278 ft.); also name of two anc. cities in Mongolia.

**Kara Sea,** E. of Nova Zembla in Arctic Ocean.

**Karauli,** or **Kerowee,** nat. *state* Rajputana agency, India, area 1,242 sq. m., p. 133,730; cap. K., t., p. 24,500. [Thebes, ruined temples.

**Karnak,** *vil.*, Up. Egypt, on Nile, the site of anc.

**Karolinenthal,** *t.* suburban to Prague, Bohemia, manuf., p. 24,000. [Cape Colony, S. Africa.,

**Karoos,** extensive *plains* between mtn. ranges,

**Kars,** fort. *c.* Georgia, Transcaucasia, taken from the Turks, p. 21,000.

**Kasanlik,** *t.* nr. Adrianople, Thrace, captured at the surrender of the Shipka Pass in 1878 from the Turks; famous for attar of roses; p. 21,250.

**Kaschau,** or **Kositze,** *c.* Czecho-Slovakia; commercial centre, Gothic cathedral; p. 29,000.

**Kashan,** *prov.* Persia, between Isfahan and **Kum**; cap. c. in the plains, exporting silk and rose-water, p. 30,000.

**Kashgar,** commercial *c.* of Chinese Turkestan, p. 80,000; also R. flowing 500 m. in E. Turkestan to the Yarkand.

**Kashmir,** Indian nat. *state.* (*See* **Cashmere.**)

**Kasia,** famous *vil.* nr. Garakhpur, India; Buddhistic remains. [16,760.

**Kasimov,** *t.* in old govt. Kazan, U.S.S.R., p.

**Kassala,** *t.* nr. Atbara R., Sudan, p. 7,500.

**Kastamuni,** or **Costombone,** *t.* on Karu-Su, Asia Minor; cap. of Turkish vilayet same name; great commercial centre, p. 40,750.

**Katahdin,** *mtn.* nr. Augusta, Maine, U.S.A., alt. 5,385 ft. [Kamalombo and Luapala R.'s.

**Katanga,** mining *dist.* in S. Centrl. Africa, betwn.

**Kathiawar,** or **Kattywar,** *penin.* within the Gujarat div. of Bombay, India; suffered in famine of 1899–1900. [Col.

**Kathlamba,** or **Quathlamba,** *mtn.* range in Cape

**Katoomba,** *t.* in Blue Mountains nr. Sydney, N.S.W.; tourist resort; p. 11,000.

**Katrine, Loch,** S.W. Perthsh., Scotl., on R. Teith, 8 m. long; principal source of Glasgow water supply; beautiful scenery.

**Kattowitz,** *t.* in Prussia, prov. Silesia; ironwks. and colly. dist.; p. 36,200.

**Kaukauna,** industrl. *t.* nr. L. Winnebago, Wisconsin, U.S.A., p. 6,650. [p. 5,750.

**Kaunal,** one of the Sandwich Isls., area 543 sq. m.,

**Kavala**, or **Cavalla**, *t.* in Greece, on B. of Kavala; great tobacco preparing and exporting centre; p. 22,964.

**Kawakawa**, mining *t.* New Zealand, (nth. isl.) on Hokianga R., p. 3,010.

**Kazan**, *old govt.*, U.S.S.R., at confl. of Volga and Kama; area 24,610 sq. m., p. 2,800,000; mainly agr., cap. K. (p. 195,300), impt. tr. centre for E. U.S.S.R., Turkestan, Bokhara, and Persia; soap and candle factories.

**Kazvin**, *t.* in Irak-Ajemi, Persia; good transit tr.; p. 35,000. [U.S.A., p. 8,600.

**Kearney**, industrl. *vil.* Buffalo co., Nebraska.

**Kearny**, *t.* N.J., U.S.A., p. 42,000.

**Kearsage**, mftg. *t.* nr. Bolton, Lancs, Eng., p. 9,500.

**Kearsley**, *urb. dist.*, Lancs, Eng., p. *9,736*.

**Kecskemet**, thriving industrl. *t.* nr. Budapest, Hungary, p. 72,768.

**Kedarnath**, *place* of pilgrimage, Garwhal dist., India, famous temple.

**Kediri**, *prov.* in Java on S. coast, p. nearly 1,000,000; cap. K., t., p. 6,200.

**Kedoe**, or **Kedu**, Dutch settlement nr. centre of Java, cap. Megalung.

**Keeling Isls.**, called also Cocos and Cocos K. Isls., coral grp. in Indian Oc., included in Straits Settlements govt. Here the German raider "Emden" was destroyed by the Australian cruiser "Sydney" in 1914.

**Keen, Mt.**, nr. Ballater, in co.'s Forfar and Aberdeen, Scotl., alt. 3,077 ft. [U.S.A., p. 14,000.

**Keene**, mftg. *c.* in Chester co., New Hampshire.

**Keoper**, *min.* in co. Tipperary, nr. Newport, I.F.S., alt. 2,265 ft. [York, U.S.A., p. 4,000.

**Keeseville**, *vil.* on Au Sable R., Clinton co., New

**Keewatin**, *dist.* Canada, N.W. Terr., chiefly "barren lands."

**Kewgorth**, *t.* on R. Soar, nr. Loughborough, Leicestersh., Eng., p. 2,780.

**Kehl**, *t.* on R. Rhine, Baden, opp. Strasburg, p. 3,500.

**Keighley**, *mun. bor.*, mftg. *t.* nr. Bradford, W.R. Yorks, Eng., p. *40,440*. [agr. dist., p. *6,082*.

**Keith**, *t.* on R. Isla, Banff, Scotl., mftg. industr., in

**Kelat**, or **Khelat**, native state of Baluchistan, area 73,278 sq. m., p. 328,802; cap. K., p. 15,000.

**Kells**, mkt. *t.* on R. Blackwater, co. Meath, I.F.S., p. 2,240.

**Kelso**, *t.* on R. Tweed, co. Roxburgh, Scotl.; fishing tackle making, p. *4,279*.

**Kelung**, treaty *port* on N. coast of Formosa, bombarded by French, 1884.

**Kelvin**, R. of Scotl., flows (21 m.) S.W. to the Clyde at Partick.

**Kempston**, *urb. dist.*, Bedford, Eng., p. *5,390*.

**Kempton**, *t.* Tasmania, 28 m. N. Hobart, p. (dist.) 3,500. [1,850.

**Kemsing**, *vil.* Kent, Eng., nr. Sevenoaks, p. (dist.)

**Ken**, or **Kayan**, *R.* of India, United Provs., flows (230 m.) to the Jumna; also R. of Scotl., co. Kirkcudbright, trib. (28 m.) of R. Dee.

**Kendal**, or **Kirkby Kendal**, *mun. bor.*, mkt. *t.* on the River Kent, co. Westmorland, Eng., p. *15,575*.

**Kendrapara**, *t.* in Bihar and Orissa, India, p. 17,000. [15,750.

**Keneh**, *c.* tr. centre, Upper Egypt, on R. Nile, p.

**Kenia**, or **Kenya**, *mtn.* in Kenya Col., alt. 18,200 ft.

**Kenilworth**, *urb. dist.*, mkt. *t.* nr. Leamington, Warwicksh., Eng.; ruined castle; p. *7,592*.

**Kenmare**, *t.* on R. Blackwater, co. Kerry, I.F.S., p. 1,290; Kenmare R., or B. (28 m.), inlet of Kerry coast, I.F.S.

**Kennebec**, R. Maine, U.S.A., flows (200 m.) from Moosehead L. to the Atlantic. [R. Thames.

**Kennett R.**, Wilts and Bucks, Eng., trib. (44 m.) of

**Kennington**, S. *suburb*, London, Eng.

**Kenosha**, mftg. *t.* cap. of K. co., Wisconsin, U.S.A., on W. shore of L. Michigan, p. 51,250. [Eng.

**Kensal Green**, *dist.* Middlesex, subn. to London.

**Kensington**, *met. bor.* of W. London, Eng.; mainly residl., contains K. Palace and Gardens, p. *180,681*.

**Kent**, *R.* Westmorland, Eng., flows 20 m. past Kendal, to Morcambe B.; also maritime co. of S.E. Eng.; area 1,555 sq. m., p. *1,218,565*; agr., stock raising, hop and cherry growing.

**Kentish Town**, residl. industrl. *dist.* N.W. London.

**Kenton**, *vil.* on Scioto R., Hardin co., Ohio, U.S.A.; p. 7,050.

**Kent's Cavern**, bone *cave* nr. Torquay, Devon, Eng., 650 ft. long.

**Kentucky**, E. Centl. *st.* in the Mississippi basin, U.S.A.; area 40,181 sq. m., p. 2,580,000; agr., mining and manuf.; cap. Frankfort; large c. Louisville, at falls of Ohio. Kentucky R. flows (350 m.) from the Cumberland Mtns. to the Ohio.

**Kenya Colony and Prot.**, the new name for British E. Africa (*q.v.*), p. *17,285* Europeans, *56,903* Non-Europeans excluding Africans.

**Keokuk**, industrl. *c.* cap. Lee co., Iowa, U.S.A., on the Mississippi R., p. 15,200.

**Kerang**, *t.* on London R., Victoria, p. 1,870.

**Kerbela**, *t.* in Bagdad vilayet, Iraq, a place of pilgrimage, the sacred c. of the Shiites, p. 65,000.

**Kerguelen Land**, or **Desolation Isl.** (90 m. long), an uninhabited *isl.* in the Southern Oc., claimed by France.

**Kerkenna Isls.**, grp. in G. of Cabes, E. of Tunis.

**Kerkuk**, *t.* in Mosul vilayet, Iraq; mart for Arab horses, p. 10,500.

**Kermadec Isls.**, grp. (Brit.) in S. Pacific Oc.

**Kerman**, *prov.* of Persia, on P. G.; area 9,652 sq. m., p. 610,000; cap. Kerman Ghirdjan, p. 80,000.

**Kermanshah**, *prov.* of Persia, S. of Kurdistan, p. 400,500; cap. K., p. 35,000.

**Kerry**, maritime *co.*, I.F.S., prov. Munster; area 1,816 sq. m., p. 158,000, cap. Tralee.

**Kertch**, *spt.* on K. Strait, old govt. Taurida, U.S.S.R.; mineral baths, wheat export, p. 31,000.

**Kesteven**, *div.* of Lincoln co., Eng., embracing Stamford and Sleaford (*q.v.*).

**Keswick**, *urb. dist.*, mkt. *t.* nr. L. Derwentwater, Penrith div., Cumberland, Eng., on R. Greta, p. *4,635*.

**Ketcho**, or **Kesho**. (*See* Hanoi.)

**Kettering**, *urb. dist.*, *t.* (mkt. and mftg.) Northants, Eng., p. *31,220*.

**Kew**, *par.* on R. Thames, Surrey, Eng., opp. Brentford; contains Kew Gardens and Royal Observatory, p. 6,500; also township near Melbourne, Victoria, p. 16,026. [17,200.

**Kewanee**, *t.* in Henry co., Illinois, U.S.A., p.

**Kewaunaw Bay**, Michigan, U.S.A., inlet of L. Superior; K. Point, promontory on same, copper mining dist. [Arch., total p. 18,000.

**Key**, or **Ke Isls.**, group W. of Aru Isls., in Malay

**Keyser**, *vil.* on New Creek, Mineral co., W. Virginia, U.S.A., p. 6,250.

**Key West**, *cap.* Munro co., Florida, U.S.A., on sm. isl. same name; naval stn. and cigar factories; p. 12,000.

**Khabarovsk**, cap. *c.* Amur regn. U.S.S.R., and of Khabarovsk div. of same; impt. mil. centre; cathedral; p. 21,750.

**Khaibar**, or **Khyber**, difficult *mtn. pass* between the Punjab and Afghanistan, commanding route from Peshawur to Kabul, traversed by Alexander the Great and by two Brit. expeditions.

**Khairagarh**, nat. *st.* Chatisgarh div., Cent. Provs., India, area 940 sq. m., p. 136,770.

**Khairpur**, nat. *st.* Sindh prov., Bombay, India, area 6,050 sq. m., p. 193,152; cap. K., t., on canal nr. R. Indus; p. 6,450. [16,000.

**Khamgaon**, *t.* in Akola dist., Berar, India, p.

**Khandiva**, *t.* in Nimar dist., Cent. Provs., India; Jain and other temples; gd. tr.; p. 16,500.

**Khar**, sm. fertile *prov.* Persia; the anc. Choara; p. 10,000.

**Kharkov**, a *govt.* of Ukraine in basin of R.'s Don and Dnieper; area 21,041 sq. m.; mainly agr.; cap. K., gt. c. on R. Donets; university, cathedral, impt. com. and ind.; p. 258,360.

**Kharput**, *t.* in Memuret-el-Aziz, Armenia; old castle, Armenian atrocities, 1895; p. 20,050.

**Khartum**, *cap.* of Anglo-Egyptian Sudan, at union of White and Blue Nile; p. 23,083; the Sirdar's palace and the Gordon College are about a mile N.E. of this, and the latter stands where Gordon fell in 1885. City taken from the Mahdists by Lord Kitchener in 1898.

**Khasi and Jaintia Hills**, *dist.* in Assam, Brit. India; area 6,041 sq. m.; p. 200,000. Hdqrs. Shillong.

**Khatmandu**, *cap.* of Nepaul kingdom, on R. Vishnumati; picturesque architecture; anc. carved woodwork; great trade; p. (est.) 50,000.

**Khelat**. (*See* Kelat.)

**Kherson**, in Ukraine, Black Sea dst., area 27,523 sq. m., p. 3,550,000. Prolific grain-growing dist., cap. K., c., p. 76,000. Ch. t. Odessa (*q.v.*).

**Khingan**, Gt. and Little, *mtn. ranges*, Mongolia and Manchuria, separating the plateau from the plains

**Khiva,** *prov.* of Cent. Asia, formerly a Khanate under Russian vassalage, occupying the delta of the Amu Daria. Area 24,310 sq. m., p. 519,438; cap. K., c. (fortified), 235 m. W. of Bokhara, p. 12,750. [tr. centre, p. 30,550.

**Khojend,** *t.* on Sir Daria, Russ. Turkestan; impt.

**Khokand,** dist. *t.* prov. Ferghana, Cent. Asia; contains palace of the old Khans; exports silk and cotton; p. 86,000.

**Kholm,** *t.* in Poland, nr. Lublin; gd. tr., p. 20,220.

**Khorassan,** great *prov.* Persia, S. of Khiva and W. of Afghanistan; area 105,236 sq. m., p. 1,000,000; cap. Meshed (*q.v.*).

**Khurja,** *t.* in Bulandshahr dist., United Provs., India; active tr. centre; new Jain temple; p. 31,200.

**Khuzistan,** or **Arabistan,** fertile *prov.* of Persia, at head of P. Gulf; area 39,000 sq. m., the anc. Susiana; chf. t. Shuster.

**Kiang-Si,** inland *prov.* China, S. of the Yangtse Kiang, area 69,480 sq. m., p. 16,255,000; cap. Nanchang.

**Kiang-Su,** maritime *prov.* China, exports much silk; area 38,600 sq. m., p. 15,380,000; cap. Nanking.

**Kiania,** *spt.* N.S.W., 92 m. S. of Sydney; p. (dist.) 8,747. [sula, China.

**Kiaochow,** *B.*, inlet on S. side of Shantung Penin-

**Kicking Horse Pass,** over the Rocky Mtns., Brit. Columbia.

**Kidderminster,** *mun. bor.*, carpet mftg. *t.* in Worcestersh., Eng., p. *28,914.*

**Kidsgrove,** *urb. dist.*, mftg. *t.* in Staffordsh., Eng., p. *9,937.*

**Kidwelly,** *mun. bor.*, Carmarthen, Wales, p. *3,161.*

**Kiel,** *spt.* Schleswig-Holstein, Pruss., Germany's chf. naval port on the Baltic, shipbldg. and allied industries, p. 205,330.

**Kielce,** govt. in S.W. Poland, mineral and agr., area 3,896 sq. m., p. 2,537,127; cap. K., t., factories, p. 41,357.

**Kiev,** *govt.* of Ukraine, rich in minerals, area 19,600 sq. m., p. 4,500,000, agr. and mftg. industries; cap. K., c. on the Dnieper, sugar tr., p. 245,000.

**Kilbarchan,** *t.* nr. Glasgow, Renfrewsh., Scotl., industrl. p. *7,510.*

**Kilbride, E.,** *t.* E. Lanark, Scotl., p. *5,300.*

**Kilbride, W.,** *t.* nr. Ardrossan, Ayrshire, Scotl., p. *3,946.*

**Kilburn,** N.W. *suburb* of London, Eng.

**Kildare,** inld. *co.* Leinster prov., I.F.S., area 654 sq. m., p. 67,120; also mkt. t., cap. of foregoing co., p. 1,180. Close by is the famous racecourse, the Curragh of Kildare (*q.v.*).

**Kilimanjaro,** *mtn.*, volcanic, E. Africa, highest pk. in the cont., alt. 19,700 ft.

**Kilkee,** *wat. pl.* co. Clare, I.F.S., p. 1,620.

**Kilkeel,** *spt.* and fishery *t.* co. Down, N. Ireland, p. 1,460.

**Kilkenny,** inland co. Leinster prov., I.F.S., area 796 sq. m., p. 74,500; cap. K., t. on R. Nore p. 10,520.

**Kilkieran Bay,** large and intricate *indent.*, on Galway cst., I.F.S.

**Killala,** *spt.* on K. Bay, co. Mayo, I.F.S., p. 785.

**Killarney,** industrl. *t.* in co. Kerry, I.F.S., p. 6,440. Killarney, Lakes of, Lower, Middle, and Upper, all celebrated for their beauty; attractive tourist resorts.

**Killary Harbour,** *inlet* between co.'s Galway and Mayo, I.F.S.

**Killiecrankie, Pass of,** Perthsh., Scotl., on R. Garry.

**Kilmainham,** W. *suburb* of Dublin, I.F.S.

**Kilmalcolm,** *hydropathic resort* on Gryfe Water, Renfrewsh., Scotl., p. *5,402.*

**Kilmarnock,** *ry. centre* and *burgh* of the Kilmarnock grp. on K. Water, Ayrsh., Scotl., carpet factories, textile and ironworks, p. *36,393.*

**Kilmore,** *t.* nr. Melbourne, Victoria, p. (dist.), 1,790.

**Kilpatrick, New,** *vil.* on R. Clyde, Dumbartonsh., Scotl., p. *28,886.*

**Kilrush,** *spt.* S.W. Clare, on R. Shannon, I.F.S., p. 3,820. [quarries, p. *10,047.*

**Kilsyth,** *burgh* of Stirlingsh., Scotl., whinstone

**Kilwinning,** *t.* on R. Garnock, N. Ayrsh., Scotl., p. *8,531.*

**Kimberley,** *t.* on Vaal R., C. of Good Hope, S. Africa, centre of Griqualand West, diamond mining dist., p. *17,415*; also industrl. suburb of Nottingham, Eng., p. 5,550; also gold-field dist. in West Australia, and sm. t.'s in S. Australia and Queensland.

**Kincardine,** or the **Mearns,** E. maritime *co.* Scotl., between Forfar and Aberdeen; area 383 sq. m.; agr. and fishing; p. *39,864*; co. t. Stonehaven.

**Kinder Scout,** or **The Peak,** *mtn.* in N. Derbysh., Eng., alt., 2,080 ft. [ford-on-Avon, p. 1,230.

**Kineton,** mkt. *t.* in Warwicksh., Eng., nr. Strat-

**King George's Sound,** West Australia; fine harbr. and bay, nr. Albany. [caldy grp., p. *2,708.*

**Kinghorn,** *burgh,* Fife co., Scotl., one of the Kirk-

**King Isls.,** Behring Sea, U.S.A., possession; also isl. at ent. Bass Strait, Tasmania.

**Kingsbridge,** *urb. dist.*, mkt. *t.* on Devon cst., nr. Exeter, Eng., p. *2,978.*

**Kingsbury,** *urb. dist.*, Middlesex, Eng., p. *16,636.*

**Kingsclere,** mkt. *t.* nr. Basingstoke, Hants, Eng., p. 3,220.

**King's County,** *prov.* Leinster, I.F.S.; area 772 sq. m.; much marshy land (including Bog of Allen), also barren uplands (Slieve Bloom and other mtns.); p. 56,560; co. t. Tullamore.

**King's Langley,** *t.* nr. Berkhampstead, Herts, Eng., p. 1,590. [R. Ouse; p. *20,580.*

**King's Lynn,** *mun. bor.* and *spt.* Norfolk, Eng., on

**King's Norton** (with **Northfield**), industrl. *t.* Worcestersh., Eng., nr. Birmingham.

**King's River,** California, U.S.A., flows from Sierra Nevada to L. Tulare.

**Kingston,** *c.* Frontenac co. Ontario, Canada, on L. O., old fort and thriving port, p. *23,204*; also cap. Ulster co., New York, U.S.A., on R. Hudson, tobacco manuf.; p. 28,100; also cap. Jamaica, p. 115,000, disastrous earthquake, Jan. 1907, nearly 2,000 lives lost; also t. in St. Vincent, Brit. W. Indies, p. 3,836; also smaller t.'s in Victoria, S. Australia, Tasmania, New Zealand, New Brunswick, and many of the U.S.A.

**Kingston-on-Thames,** *mun. bor.* and mkt. *t.* of Surrey, Eng., on R. Thames, 12 m. W. of London Bridge, with Royal Park and fine scenery; p. *39,052.*

**Kingston-upon-Hull.** (*See* **Hull.**)

**Kingstown,** *spt.* in co. Dublin, I.F.S.; packet and fishy. station, and wat. pl.; p. 20,120.

**Kingswood,** *urb. dist.*, nr. Bristol, co. Gloucester, Eng., p. *13,297.*

**King-Te-Cheng,** *c.* of Kiang-se prov., China; porcelain manuf.; p. (est.) 500,000.

**Kington,** *urb. dist.*, mkt. *t.* co. Hereford, Eng., on R. Arrow, p. *1,742.*

**King William Land,** *isl.* of Franklin terr., Canada.

**King William's Town,** *t.* on Buffalo R., C. of Good Hope, S. Africa, nr. E. London; busy tr. centre; p. *6,542.*

**Kinnaird Head,** *prom.* with lighthouse, nr. Fraserburgh, on N.E. Aberdeensh. coast, Scotl.

**Kinross,** sml. inld. *co.* Scotl., between Fife and Perth, area 78 sq. m.; p. *7,454*; contains Loch Leven, on which stands co. t., K., p. *2,991.*

**Kinsale,** fishery *t.* on est. on R. Bandon, co. Cork, I.F.S., p. 4,260.

**Kintyre,** *pen.* S. Argylsh., Scotl., between Firth of Clyde and Atlantic, 40 m. long by 11 m. wide at greatest; southern pt., the Mull of Kintyre.

**Kiölen,** or **Kjölen,** *mtn.* range in Scandinavia, highest pt. Mt. Suliteima, 5,956 ft.

**Kioto,** *c.* in Honshiu Isl., Japan, former cap. of the Empire; many thriving manufs., and much nat. and artificial beauty; p. 591,305.

**Kippax,** industrl. *township* nr. Pontefract, W.R. Yorks, Eng., p. 3,149.

**Kiratpur,** commrcl. *t.* nr. Bijnaur, United Provs., India, p. 13,900. [nr. Chemnitz, p. 7,520.

**Kirchberg,** industrl. *t.* in Zwickau dist. Saxony,

**Kirghiz Steppes,** gt. plains and uplands N. of the Caspian and Aral Seas, inhabited by the wandering Mongolian Tartar race numbering nearly 3,000,000. The K.S. admin. div. of U.S.S.R. lies S.W. of Siberia, area 755,793 sq. m.

**Kiria,** *t.* in Chinese Turkestan, nr. Khotang; trade centre; p. 12,250.

**Kirin,** *prov.* Manchuria, S. of the Sungari R. and N. of Korea and the Liaotung Penin.; area 105,000 sq. m., p. 5,350,000, cap. Kirin on R. Sungari, p. 80,000.

**Kirkburton,** *urb. dist.*, mftg. *t.* nr. Huddersfield, W.R. Yorks, Eng., p. *3,184.* [*17,798.*

**Kirkby in Ashfield,** *urb. dist.*, Notts, Eng., p.

**Kirkby Lonsdale,** *urb. dist.*, mkt. *t.* on R. Lune, Westmorland, Eng., p. *1,370.*

**Kirkby Moorside,** mkt. *t.* on R. Dove, N.R. Yorks, Eng., p. 1,960.

**Kirkby Stephen,** mkt. *t.* on R. Eden, Westmorland, Eng., p. 1,690.

**Kirkcaldy,** *spt. t.* and burgh of co. Fife, Scotl.; gd. shipping tr.; p. *46,019.*

**Kirkcudbright,** maritime *co.* of S.W. Scotl., abutting on Irish Sea and Solway Firth; area 909 *sq.* m. chiefly agr., p. *30,341*, co. t. K. (one of the Dumfries Burghs), p. *3,188.*

**Kirkham,** *urb. dist.*, mkt. and mftg. *t.* nr. Preston, Lancashire, Eng., p. *4,031.*

**Kirkheaton,** *urb. dist.*, nr. Huddersfield, W.R. Yorks, Eng., p. *2,610.*

**Kirkintilloch,** iron fdg. *burgh* on the Firth of Clyde canal, Dumbartonsh., Scotl., p. *17,308.*

**Kirk-Killisseh,** *t.* in Adrianople sanjak, Thrace; many mosques, gd. tr.; p. 16,263.

**Kirk Leatham,** *t.* nr. Guisborough, in N.R. Yorks, Eng., p. (dist.) 4,660.

**Kirklington cum Upsland,** *urb. dist.*, N.R Yorks, Eng., p. *251.* [southerly pl. in S., p. *1,554.*

**Kirkmaiden,** *par.* in Wigtownsh., Scotl., the most

**Kirkstone Pass,** mtn. *rd.* in Westmorland, Eng., nr. Ambleside, between Ullswater and Windermere Lakes. [U.S.A., p. 8,400.

**Kirksville,** industrl. *t.* in Adair co., Missouri,

**Kirkwall,** *burgh* (of the Wick group) on Pomona Isl., one of the Orkneys, off the Scottish cst.; p. *4,398.*

**Kirman,** elevated *t.* in Persia, cap. of prov. same name; gt. tr.; p. 45,000. [p. *4755.*

**Kirriemuir,** *burgh* of Forfar, Scotl., linen factories,

**Kirton-in-Lindsey,** mkt. *t.* in N.W. Lincolnsh., Eng., nr. Brigg. p. 1,910.

**Kishenev,** *t.* in Bessarabia, Rumania; gt. annual fair; vineyards, distilleries, etc.; p. 120,100.

**Kishni,** or **Kishnia,** *ist.* nr. entrce. to Persian G., 70 m. long. [chobee.

**Kissemee,** *R.*, Florida, flows (90 m.) to L. Okee-

**Kissingen,** *wat. pl.* Bavaria, on the Franconian Saale; pop. spa (vis. by 15,000 persons annually); res. p. 5,020.

**Kistna,** or **Krishna,** dist. N.E. Madras Pres., India; area 8,397 sq. m., p. 2,252,000. Admin. hdqrs. Masulipatam, first Brit. settlement on the Coromandel cst. [Penn., U.S.A., p. 7,850.

**Kittanning,** *bor.* on Alleghany R., Armstrong co.,

**Kittatinny Mtns.,** or **Blue Mtns.,** *range* in Penn. and New Jersey, U.S.A., a continuation of the Appalachian system.

**Kiu-Kiang,** *c.* and treaty *pt.* on Yangtse-Kiang, China; p. 380,616.

**Kiung Chow,** *c.*, cap. of Hainan Is., N. coast of China, treaty port, p. 586,870.

**Kiu-Siu,** or **Ximo,** most S. of the large *isls.* of Japan, area 15,703 sq. m.; p. 6,500,000; chf. t. Nagasaki.

**Kivu,** *L.* Central Africa, N. of L. Tanganyika, length 55 m., area 1,100 sq. m.

**Kizil-Irmak** (or Red River), the largest *R.* of Asia Minor, rising in the Kizil Dagh and flowing past Zara to Sivas and (600 m.) to the Black Sea.

**Kladno,** mining *t.* nr. Prague, Bohemia, p. 19,104.

**Klagenfurth,** *t.* on R. Glan, cap. of Austrian prov. of Carinthia; white-lead, tobacco, and silk factories; p. 19,000.

**Klamath,** *L.* California and Oregon, U.S.A., discharges by K. R. (275 m.) to Pacific.

**Klattagu,** mftg. *t.* nr. Pilsen, Bohemia, p. 13,920.

**Klausenburg,** or **Kolosvar,** *cap.* of K. co., Transylvania, on R. Szamos; seat of learning and tr., gt. fairs, p. 35,720.

**Klausthal,** mining *t.* in Hanover, Pruss., in the Upper Hartz Mtns., p. 8,760.

**Klondyke R.,** in N.W. Terr., Canada, trib. of Yukon, in gold-mine region, area 1,500 sq. m.

**Knaresborough,** *urb dist.*, mkt. *t.*, W.R. Yorks, Eng., on R. Nidd; old castle, petrifying well; p. *5,942.*

**Knighton,** *urb. dist.*, mkt. *t.* in Radnorsh., Wales, on R. Teme, p. *1,836.* [sington.

**Knightsbridge,** *dist.* between Hyde Park and Ken-

**Knin,** mftg. *t.* in Dalmatia, Jugo-Slavia, p. 23,000.

**Knockmealdown Mtns.,** co.'s Waterford and Tipperary, I.F.S., highest pt. 2,609 ft.

**Knottingley,** *urb. dist.*, W.R. Yorks, Eng., p. *6,842.*

**Knowlton,** *t.* in Brome co., Quebec, Canada, p. (dist.) 3,010.

**Knoxville,** *c.* cap. of Knox co., Tennessee, U.S.A.; university and manuf., p. 108,500; also t. in Marion co., Iowa, U.S.A., p. 4,860; also sml. t. in Illinois, U.S.A.

**Knutsford,** *urb. dist.*, mkt. *t.* in Cheshire, Eng.; cotton, worsted, leather factories, p. *5,878.*

**Kobdo,** *t.* in W. Mongolia, China; impt. cattle tr., p. 6,500; in stock raising dist. same name.

**Kobe,** *t.* nr. Hiogo, Japan, flourishing port; great tr., p. 608,682.

**Koesfeld,** *t.* nr. Dortmund, Westphalia, Prussia; castle, p. 7,500.

**Kohat,** *t.* Punjab, India, p. 31,000.

**Koh-i-Baba Mtns.,** Afghanistan, spur of the Hindu Kush, highest pt. 17,640 ft.

**Kokomo,** *c.* in agr. region on Wild Cat R., Howard co., Indiana, U.S.A., p. 33,000.

**Koko-Nor,** salt *L.* Mongolia, China; area 2,040 sq. m., no outlet.

**Kola,** *penin.* N. Europe (Russ. terr.), extension of Lapland; also fort. t. in same, Archangel govt.

**Kolaba,** *dist.* in nat. State Mysore, India, area 2,845 sq. m., p. 726,000; cap. K., t., 43 m. E. of Bangalore, p. 13,250.

**Kolberg,** *spt.* in Pomerania, Pruss., near the Baltic shore; wat. pl. with brine and mud baths, p. 22,750. [and tr., p. 13,820.

**Kolding,** mkt. *t.* Vejle co., Denmark; good harbour

**Kolhapur,** nat. *state* in Deccan div., Bombay, India, area 3,217 sq. m., p. 832,376; cap. Kolapur of Karvir, p. 48,122.

**Kolo,** *t.* in Poland, on an isl. of the Warta; pottery works, p. 10,550.

**Kolomea,** mftg. *t.* in dist. same name on R. Pruth, Galicia, Ukraine, p. 42,500 (half Jews).

**Kolonna,** *t.* on R. Moskva, Muscov Rep., U.S.S.R.; silk and other factories, p. 23,000.

**Kolozvar.** (*See* **Klausenburg.**)

**Kolpino,** Ironwks. (crown), *t. on* R. Izhora, U.S.S.R., nr. Leningrad, p. 13,120.

**Kolyvan,** *t.* in Tomsk govt., W. Siberia, U.S.S.R.; impt. tr., p. 13,700.

**Komarom,** industrl. *t.* cap. of Hungarian co. same name, on R. Danube, p. 21,860.

**Komatau,** *t.* in govt. dist. same name, Bohemia, nr. Aussig; ry. works, watch and toy-making, p. 10,950.

**Kong Mtns.,** in nat. State same name, West Africa, between Sudan and Upper Guinea; alt. 2,500 ft.

**Konia,** agr. and pastl. *vilayet*, Asia Minor, with carpet and silk industries, p. 1,069,000; chf. t. K. (the anc. Iconium), many fine mosques, and impt. tr., p. 45,000.

**Koniggratz,** garrison *t.* in Bohemia, nr. Prague; here was fought the battle of Sadowa in 1866, p. 10,270.

**Koniginhof,** *t.* nr. Gitchin, N.E. Bohemia, cotton-weaving, etc., p. 11,340.

**Konigsberg,** *c.* Prussia, first-class fortress and army hdqrs.; cathedral, splendid bldgs., impt. industrl., p. 260,895. [ironworks, p. 74,811.

**Konigshutte,** *t.* in Polish Silesia, colliery dist. and

**Konigswinter,** summer *resort* on R. Rhine, Prussia, at ft. of the Drachenfels, nr. Cologne, p. 3,400.

**Kooringa,** or **Burra,** mining *t.* on Burra Creek, South Australia, in fine wheat-growing area, p. (dist.) 5,010.

**Kootenay R.,** or **Flat Bow R.,** *trib.* (450 m.) of the Columbia R., flowing in Montana, U.S.A., and Brit. Columbia. [tr. centre, p. 6,400.

**Korat,** walled *t.* in Siamese prov. same name, busy

**Kordofan,** *country* of the E. Sudan, Africa, area est. by Gordon at 100,000 sq. m., p. 300,000; cap. El-Obeid.

**Korea.** (*See* **Corea.**)

**Korenburg,** *t.* on R. Danube, Lower Austria; salt and corn tr., textile ind., p. 8,700.

**Korets,** old *t.* in Volhynia, Ukraine; often plundered by Cossacks, Poles, and Lithuanians; now a busy industrl. centre, p. 10,150.

**Korsor,** *spt.* on Zealand Isl., Denmark, E. shore of the Gt. Belt; fine harbr., p. 6,000.

**Kosel,** *t.* on R. Oder, Prussn. Silesia; good river tr., former royal stud farm, p. 7,750.

**Koskiusko,** *t.* in Attala co., Mississippi, U.S.A., p. 3,300; also p. in Australian Alps, alt. 7,308 ft.

**Koslin,** *t.* in Pomerania, Pruss., cadet acad., p. 22,000.

**Koslov,** industrl. *t.* in old Tambov g●t., U.S.S.R., large tr., p. 39,010. [p. 1,750.

**Kossier,** or **Cossier,** *spt.* Egypt, on the Red Sea,

**Kostroma,** *old govt.* U.S.S.R., area, 32,702 sq. m., mainly woodland, p. 1,700,200; cap. K., c. with univ., at conflu. of Volga and K. R.'s, p. 42,642.

**Kotah,** nat. *sta.* Rajputana Agency, India; area 5,684 sq. m., p. 629,962; cap. K., c. on Chambal R.; p. 32,000.

**Kota Rajah,** *t.* in Sumatra, cap. prov. Acheen, p. 11,470.

**Kotelna,** *t.* in Kharkov Rep., on Poltava frontier; oil works, p. 14,500.

**Köthen,** industrl. *t.* in Anhalt, Germany, nr. Halle, p. 24,010.
**Kotri,** *port* on R. Indus, Karachi dist., Bombay, India, p. 9,260.
**Kovel,** *t.* in Volhynia, Ukraine, on banks of R. Turiya; good tr., p. 18,640.
**Kovno,** *govt.* Lithuania, on Polish frontier; area 15,691 sq. m., p. 1,857,100; cap. K., fortfd. c. on R. Niemen; great tr., p. 90,300.
**Kovroff,** *t.* in old Vladimir govt., U.S.S.R., on Nijni-Novgorod line; ry. wks. and cotton mills, p. 21,020.
**Kozlov,** *t.* on R. Eyesnoi Voronezh, old Tambov govt., U.S.S.R.; impt. agr. export centre, p. 52,000.
**Kragero,** *t.* in Bratsberg co., Norway; exports ice, timber, wood-pulp, etc., p. 5,850.
**Kraguyevatz,** *t.* in Central Serbia; arsenal, garrison, cathedral, college, p. 18,376.
**Krah, Isthmus of,** betwn. Malay Penin. and Siam.
**Krajova,** industrl *t.* on R. Schyl, Rumania; p. 51,877.
**Krakatoa,** volcano on isl. same name, Strait of Sunda, destructive eruption, 1883.
**Krasnoyarsk,** *t.* on R. Yenesei, Siberia, p. 59,000.
**Kremenets,** *t.* in old Volhynia govt., Ukraine; tobacco and grain tr., p. 19,120.
**Kremenskaya,** Cossack industrl. and tr. *t.* nr. Taaritzyn, U.S.S.R., p. 20,980.
**Krementchug,** *t.* on R. Dnieper, Poltava govt., U.S.S.R., big centre for timber, grain, tobacco, etc.; p. (with Kryukov sub.) 73,950.
**Krems,** industrl. *t.* on R. Danube, Austria; vinegar, white lead, etc.; p. 14,020.
**Kremster,** mftg. *t.* in Moravia, Czecho Slovakia, p. 14,630. [12,100.
**Kreuzburg,** *t.* nr. Oppeln, Silesia, Pruss.; mftg.; p.
**Kreuznach,** *watt. pl.* on R. Nahe, Rhine prov., Pruss., nr. Bingen, p. 24,060.
**Krishnagar,** *t.* in Nadia dist., Bengal, Brit. India, on R. Jalangi; coloured clay figures manuf.; p. 26,760.
**Krivoi Rog.,** *t.* on Ingulats R., Kherson govt.; rich minl. dist.; p. 10,960.
**Krivoscie,** barren and mtn. *dist.* Dinaric Alpine regn. of Austria; inhabited by Serbians (who revolted in 1869 and 1881 agnst. mil. serv.).
**Kronstadt,** *t.* in S.E. Transylvania, Rumania, gt. commercl. and tr. centre.; p. 39,770.
**Kroonstad,** *t.* on the Valasche R., Orange Free State, S. Africa, p. *5,175.*
**Krumau,** *t.* on R. Moldau, Bohemia; Prince Schwarzenberg's château; textile industr.; p. 9,020.
**Krushevatz,** *t.* in Serbia, 95 m. E.S.E. of Belgrade; p. 6,750.
**Kuala Lumpur,** *port,* Selangor, Malay Pen., p. 60,000.
**Kuban,** *prov.* N. Caucasia, U.S.S.R., on Black S. and S. of Azov; area 36,495 sq. m., p. 1,150,000; cap. Yekaterinoslav.
**Kubina R.,** U.S.S.R., trib. (170 m.) of R. Kubinskoe.
**Kuch Behar,** nat. *st.* Rangpur dist., Bengal; area 1,307 sq. m., p. 606,700; cap. K.B. c., p. 10,000.
**Kuchinserabujima,** *isl.* Japan (8 m. by 2½) S. of Kiu-Siu; mtns., highest pk., 2,313 ft.
**Kuen-Lun Mtns.,** range in Centl. Asia, separating Tibet from Chinese Turkestan; highest pks. 22,000 ft.
**Kulja,** *terr.* in Sin-Kiang, China; area 19,000 sq. m., p. abt. 125,000 (50,000 nomads); agr., forest, and mtn. lands; ch. ts. Suidun (cap.) and Old Kulja, on the Ili R., p. 10,000.
**Kuhn,** *t.* on R. Vistula, W. Prussia; anc. wells, large oil mills, impt. tr., p. 12,647.
**Kulmsee,** *t.* nr. Thorn, W. Prussia; cathedral; sugar, butter, and cheese making, p. 9,360.
**Kum, sml.** *prov.* Persia, S. of Teheran prov., cap. Kum, a pl. of pilgrimage, p. 35,000.
**Kumta,** *t.* in S. Kamara dist., Bombay, India, on sea cst. 40 ● m. S. of Karwar; sandalwood carvg., gd. tr., p. 11,250.
**Kun-Czent-Matony,** industrl. *t.* on Körös R., Hungary, p. 12,750.
**Kunene or Nourse R.** (700 m.) S.W. Africa, forming boundy. betwn. Angola and Brit. S.W. Africa, and mainly in Portuguese terr.
**Kungur,** *t.* on Sylva R., govt. Perm, U.S.S.R., on the Siberian highway, tanneries, leather factories, over-ct. mkg., etc., p. 22,010.
**Kuopio,** *govt.* of Finland, U.S.S.R., area 17,014 sq. m., cap. K., t. on Lake Kalla-vesi, gd. tr., p. 18,137.
**Kuprolü,** *t.* in Macedonia, Greece, on R. Vardar, cocoon tr., p. 23,000. [to Caspian S.
**Kur** *R.* of Transcaucasia, U.S.S.R., flows (520 m.)
**Kurdistan** (or *country of the Kurds*), *region* comprised in Irak-Ajemi prov., Persia, and Turkish vilayet Bagdad, area (abt.) 500,000 sq. m., p. nearly 3 mill., chf. ts. Arbil, Abtum-Kupri, and Kerkuk.
**Kurgan,** dist. *t.* on the Siberian Rly., Tobolsk area, in agr. dist. U.S.S.R., flourishing trade in cattle and foodstuffs, p. 15,250.
**Kuria Muria Isls.** (Brit. poss.), *grp.* in Arabian Sea.
**Kurile Isls.,** chn. of sm. *isls.* in N. Pacific, extending from Kamschatka to Yezo, Japanese poss.; mainly mtns., total p. about 5,000.
**Kursk,** *govt.* U.S.S.R., area 17,937 sq. m., p. 3,520,000, cap. K., t. in fruit growing dist., with thriving manuf. and good tr., grt. annual fair, p. 82,000. [River, p. 4,720.
**Kuruman,** *t.* in Bechuanaland, S. Africa, on K.
**Kuskoquini,** *R.,* Alaska, flows (450 m.) to K. Bay.
**Kustanaisk,** *t.* on Tobol R., U.S.S.R., in fertile prairie dist., cathedral, flourishing tr., p. 16,700.
**Kustendil,** chf. *t.* of mtns. dept., Bulgaria, on trib. of R. Struma, hot minrl. springs, p. 15,086.
**Kustenland,** formr. Crownld. of Austria, on the Adriatic (now Görz-with-Gradisca, Istria, and Trieste). [impt. tr., p. 31,200.
**Kutaieh,** *t.* of W. Asia Minor, on trib. of Sakaria R.,
**Kutais,** in Georgia, on Black S., area 14,082 sq. m., total p. 1,035,000; cap. K. on R. Rion, thriving tr. and industries, p. 85,151. [p. 17,120.
**Kutno,** mnftg. *t.* of Poland, 83 m. W. of Warsaw.
**Kuttenberg,** mining *t.* in Bohemia 40 m. from Prague, has anti-Semitic troubles, p. 15,750.
**Kuznetsk,** *t.* in Saratov, U.S.S.R., hardware manf., p. 25,400; also *t.* in Altai regn., W. Siberia, U.S.S.R., in mining dist., p. 11,870
**Kwangchow Bay,** coaling *stn.* on S. cst. China, Kwantung prov., opp. Isl. of Hainau, held on lease by France. [p. 23,700,000.
**Kwantung,** *prov.* S. China, area 99,970 sq. m.,
**Kwanza,** *R.* of W. Africa (700 m.) within the Portuguese terr. of Angola.
**Kyaukse,** *dist.* Meiktila div., Upper Burma, area 1,273 sq. m., p. 145,000, cap. K. t. on Zawgyi R., notable pagodas, gd. tr., p. 7,500.
**Kyffhäuser,** range of *hills,* in Thuringia, Germany, with ruined castles of Rothenburg and Kyffhäusen, and imposing monument to Emp. William I.
**Kyles of Bute,** *sound* between Argyllsh. coast and N. Bute, Scott. [the Ouse.
**Kym R.,** of Bedfordsh., Eng., trib. (16 m.) of
**Kyneton,** *t.* in co. Dalhousie, Victoria, p. (dist.) 6,975. [3,900.
**Kyparissia,** *t.* on G. of Arkadia, Morea, Greece, p.
**Kyrenia,** sml. *t.* in Cyprus, 11 m. N. of Nicosia.
**Kythtul,** *t.* Punjab, India, p. 15,000.
**Kyul R.,** of Behar, Bengal, India, trib. of the Son, an affit. of R. Ganges.

## L

**Laaland,** Dan. *isl.* in the Baltic, Sea of Zealand, area 462 sq. m., p. 69,000.
**La Bassée,** *t.* France, dep. Nord, nr. Lille, p. 3,890.
**Labrador,** *penin.* of Brit. N. America, area 120,000 sq. m., sterile, climate severe, impt. fisheries; it is dependent on Newfoundland, p. 3,650.
**Labuan,** Brit. *isl.* in Malay Arch.; area 30 sq. m., p. 3,400.
**Laccadive Isls.,** group of fourteen low coral isls. off Malabar coast, Madras, in Arabian Sea, partly Brit., p. 10,690.
**Lachine,** *t.* and summer *resort,* and *L.,* St. Louis, Jacques Cartier co., Quebec, Can., p. *18,642.*
**Lachlan R.** (700 m.), N.S.W., trib. R. Murrumbidgee.
**Lackawanna R.,** Penn., U.S.A., in anthracite coal region (length 55 m.), affit. of Susquehanna; on banks, L. *t.,* p. 24,500.
**Laconia,** *c.* New Hampshire, U.S.A., on L. Winnepesaukee; railway works, p. 12,600.
**Lacroma,** *isl.* Dalmatia, Jugo-Slavia, beautiful scenery, royal château, ruined monastery.
**Lacrosse,** *c.,* L. co., on Mississippi R., Wisconsin, U.S.A.; timber industry; p. 40,500.
**Ladakh,** *prov.* of the Upper Indus, Kashmir, India; area 30,000 sq. m., p. 24,000; cap. Leh, gt. tr. centre for Lhasa and the Tibetan highlands. The most elevated inhab. country in the world.

**Ladoga,** *L.* nr. Leningrad, U.S.S.R. (largest in Europe), area 6,190 sq. m., drained to G. of Finland by R. Neve.

**Ladrones,** *arch.* in N. Pacific; total area 420 sq. m.; p. 12,250. [four months, *1899–1900*; *p. 3,659.*

**Ladysmith,** *t.* in Natal, S. Africa, besieged by Boers

**Lafayette,** *c.* on Wabash R., Tippecanoe co., Indiana, U.S.A.; manuf. and university; p. 26,500; also sm. t.'s in Alabama and Oregon, U.S.A.; also pk. in White Mountain range, New Hampshire, U.S.A., alt. 5,259 ft.

**Lagan R.,** of N. Ireland (35 m.), flows to Belfast Lough.

**Lago Delo Patros,** *L.* of Brazil (140 m. long), drained by Rio Grande do Sul.

**Lagonegro,** *t.* in Potenza prov., Italy; French victy. 1806; p. 4,750.

**Lagos,** former Brit. colony in W. Africa, now absorbed in S. Nigeria; L. *t.* is the seat of government. Also name of a t. in Jalisco, Mexico, p. 20,500; and of a fort. t. and spt. in Algarve, Portugal, p. 8,140.

**La Grange,** *t.* Georgia, U.S.A., p. 20,250.

**Laguna,** *t.* of Teneriffe, Canary Isls. (Spanish), in prosperous fruit-growing dist., p. 12,200.

**Laguna del Madre,** *lagoon* (110 m. by 14 m.) in S. Texas, U.S.A., coast of Rio Grande.

**Laguna de Terminas,** *inlet* of G. of Campeachy, Mexico (70 m. by 40 m.): also t. on bank of same.

**La Have,** *R.* Nova Scotia, flows (60 m.) to Atlantic at port of La Have Cross Roads.

**Lahn,** *R.* of Pruss., in Rhine prov. and Hesse-Nassau, flowing (135 m.) from its source in Westphalia to the Rhine.

**Lahore,** *t.* Punjab, India, on R. Ravi; silk, gold, and silver lace, and metal indust.; p. 279,558.

**Laibach,** *cap.* Carniola, Jugo-Slav., garrison t. on R. Laibach, nr. Klagenfurt; match-making and pottery ind.; p. 42,700. [Eng.

**Laisterdyke,** *mftg. sub.* of Bradford, W.R. Yorks,

**Laitcheu,** spt. *t.* on G. of Pechili, Shantung prov., China, p. 60,020.

**Lai Yang,** *t.* nr. Che-fu, prov. Shantung, China, p. 51,120. [U.S.A.; timber tr.; p. 16,000.

**Lake Charles,** *t.* on the Calcasieu R., Louisiana,

**Lake City,** on *L.* Pepin, Wabasha co., Minnesota, U.S.A., p. 3,250; also wint. rest. Columbia co., Florida, U.S.A., p. 4,500.

**Lake District,** mtns. *dist.* Cumberland and Westmorland, Eng.; tourist resort, beautiful scenery, includ. L.'s Windermere, Ullswater, Derwentwater, etc.

**Lakewood,** winter *resort* in the pine woods of Ocean co., New Jersey, U.S.A., p. 6,110; also t. Ohio, U.S.A., p. 73,000. [gd. t.; p. 17,800.

**Lalin,** *t.* in Pontevedra prov., Spain; agr. dist.,

**La Mancha,** old Castilian *prov.* Spain, now part of Ciudad Real, the Don Quixote country.

**Lambayeque,** *dep.* N. Peru, area 4,614 sq. m., p. 130,000; Lambayeque, t. in same, p. 7,000.

**Lambeth,** *met. bor.* of S. London, Eng., industrl. and residentl., p. *296,162.*

**Lambezellec,** *t.* in Finistère dep., France, nr. Brest, impt. tr., p. 13,240. [Eng., p. 1,650.

**Lambourn,** *par.* on R. L., nr. Hungerford, Berks,

**Lammermuir Hills,** co. Haddington, Scotl., highest pk. Lammer Law, alt. 1,733 ft.

**Lampedusa,** *isl.* betwn. Malta and African cst., belonging to Girgenti prov., Italy, area 11½ sq. m., p. 1,220. [p. 6,548.

**Lampertheim,** *t.* on R. Rhine, Hesse, Germany,

**Lampeter,** *mun. bor.*, mkt. *t.* Cardigansh., N. Wales, St. David's College, p. *1,742.* [120,000.

**Lampong,** *dist.* (and *t.*) at S. extrem. Sumatra, p.

**Lanark,** inland *co.* Scotl., S. of Dumbarton and Stirling, area 886 sq. m., p. *1,585,963*, rich in collieries and iron; co. t. Lanark, on R. Clyde, one of the Falkirk Burghs, p. *9,133*; also t. in Ontario, Can., nr. Perth, p. 2,890.

**Lancashire,** mftg. and industrl. *co.* of N.W. Eng., adjoining Yorks, and extending W. to the Irish S., area 1,887 sq. m., p. *5,039,097*, Liverpool the most impt. spt., and Manchester the greatest city; cap. and *mun. bor.*, Lancaster, on R. Lune, p. *43,396.*

**Lancaster,** *c.* of Lancaster co., Penn., U.S.A., on Conestoga R., cotton mftg., p. 60,500; also t. in nat. gas regn., Fairfield co., Ohio, U.S.A., p. 19,000; also t. on R. St. Lawrence, Glengarry co., Ontario, Can., p. 5,320.

**Lancaster Sound** (50 m. wide), connects Barrow Strait with Baffin B. (*q.v.*).

**Lan-Chau, or Lan Tcheu,** *c.* of China, cap. of Kan-su prov., on the Hoang Ho R., grt. tr. centre, p. 100,000.

**Lanchester,** industrl. *t.* nr. Durham, Eng., p. 4,960.

**Lanciano,** *t.* in prov. Chieti, Italy, nr. site of the anc. Anxanum of the Frentani, p. 18,570.

**Lancing,** *par.* in Sussex, Eng., p. 1,784.

**Landau,** *t.*, Bavaria, on the Queich R.; cigar mftg., tr. in wine and corn; here the carriages called after the name of the town were first made; p. 17,890.

**Landes,** *dep.* S.W. France, on Atlantic cst., area 3,604 sq. m., agr., vineyds., minrls., p. 283,937.

**Landport,** *sub.* of Portsmouth, Hants, Eng.

**Landrecies,** fortfd. *t.* dep. Nord, France, on R. Sambe, p. 4,550.

**Landsberg-an-der-Warthe,** *t.* in Pruss., mftg. and technical schools, p. 36,120. [Cornish cst.

**Land's End,** prom. extreme S.W. pt. of Eng., on

**Landskron,** mftg. *t.* on Moravian frontier, N.E. Bohemia, p. 6,370.

**Landskrona,** *spt.* on E. side of the Sound, Sweden, beetroot sugar mftg., p. 20,173.

**Lane End,** Eccles, *dist.* in Staffordsh. Potteries, Eng., p. 7,010. [highest pk. 8,101 ft.

**Langefjeld,** *mtn. group* in Romsdal, Norway,

**Langeland,** *isl.* in Gt. Belt, Denmark, area 111 sq. m., p. 20,270; cap. Rudkiöbing.

**Langensalza,** industrl. *t.* in Prussian Saxony, nr. Erfurt, p. 12,110.

**Langholm,** mkt. *t.* Dumfriessh., Scotl., on R. Esk; cloth mills, p. *2,770.*

**Langley,** industrl. *dist.* near Birmingham, Worcestershire, Eng. [Emmenthal, p. 7,970.

**Langnau,** *t.* in Switzerl., cant. Bern; chf. t. of the

**Langreo,** *t.* in Oviedo prov., Spain; hilly agr. and fruit-growing dist., with colliery and iron industries; p. 16,750.

**Langres,** fort. *t.* in Haute Marne, France, the anc. Andematunnum; cathedral, p. 12,110.

**Langside,** *sub.* of Glasgow, Scotl.; battle, 1568.

**Languedoc,** old French *prov.*, now divided; Languedoc Canal unites the Mediterranean with the R. Garonne at Toulouse. [set, Eng.

**Lansdown,** elevated *dist.* N.W. Bath City, Somer-

**Lansdowne,** *t.* in Leeds co., Ontario, Canada, p. 3,890.

**Lansford,** *bor.* Carbon co., Penn., U.S.A., p. 9,625.

**Lansing,** *c.* on Grand R., Ingham co., Michigan, U.S.A.; agr., imp. manuf., p. 80,500.

**Lansingburg,** *t.* Rensselaer co., New York, U.S.A.; clothing mftg., p. 14,000. [m., p. 15,150.

**Lanzarote,** *isl.* of the Canaries grp.; area 311 sq.

**La Paz,** *dep.* Bolivia, traversed by the Andes, area 40,686 sq. m., p. 726,357. Also L. P., t. on Bay of L. P., Lower California, Mexico; pearl fishery.

**Lapland,** *terr.* of N. Europe, in Norway, Sweden, and U.S.S.R.; extending from the Norwegian cst. to the White S.; mainly mtn. and moorland, with many lakes; area 130,000 sq. m.

**La Plata,** *c.* and *spt.* of the Argentine Repub.; cap. of Buenos Aires prov., p. 260,000. [p. 15,800.

**Laporte,** summer *rest.* Laporte co., Indiana, U.S.A.,

**Lar,** *t.* in Persia, cap. of Laristan; impt. tr., p. 12,950.

**Lara,** *t.* nr. Melbourne, Victoria, p. 2,900.

**Larahie,** (or El Araish), *port* of N. Morocco; fortfd.; impt. trade centre for Fez.

**Laramie,** *c.*, cap. Albany co., Wyoming, U.S.A., on L. R., in cattle feeding regn., p. 8,750; University of Wyoming here. [*13,029.*

**Larbert,** *par.* Stirlingsh., Scotl., nr. Falkirk, p.

**Laredo,** cst. *t.* Santander prov., Spain; fortfd., p. 5,120; also c. on the Rio Grande, Webb co., Texas, U.S.A., large tr. with Mexico, p. 38,750.

**Largo,** fish. *vil.* Fife, Scotl., on Largo B., F. of Forth; Alex. Selkirk, "Robinson Crusoe," born here, 1676, p. *2,299.*

**Largs,** mkt. *t.* Ayrsh., on F. of Clyde; battle 1263; p. *3,470.*

**Larissa,** *t.* in Thessaly, Greece, on the Peneios (Salembria); formerly Turkish; p. 20,713.

**Laristan,** *prov.* S. Persia, bordering on the Persian G., area 20,000 sq. m., mainly mtns.; p. (abt.) 90,000.

**Lark R.,** Cambridgesh., Eng., *trib.* (26 m.) of R. Ouse.

**Larkhall,** mining *t.* Lanarksh., Scotl., nr. Glasgow; high bridge over R. Avon; p. 14,870.

**Larne,** *spt.* nr. Belfast, N. Ireland, on Lough Larne, co. Antrim, p. 4,020.

**Larnica, Larneca,** or **Larnaca,** *t.* in Cyprus; the anc. Citium, prin. port of the isl., p. 10,852.

**Lasalle**, *c.* Lasalle co., Illinois, U.S.A., in bituminous coal-field, p. 13,150.

**Las Palmas**, *t.* on cst. of Grand Canary; free port and harbour of refuge; p. 70,233.

**Lassa**, Tibet. (*See* **Lhassa.**) [p. *11,714.*

**Lasswade**, *t.* on R. Esk, nr. Edinburgh, Scotland.

**Lastra a Signa**, *vil.* nr. Florence, Italy, p. (*dist.*) 11,570. [p. 4,500.

**Las Vegas**, *t.* in New Mexico, U.S.A., nr. Santa Fé.

**Latacunga**, ch. *t.* prov. Leon, Ecuador; good tr.; nr. ruined pal. of the Incas and the volcano Cotopaxi; sevl. times destroyed by earthquakes, p. 16,500. [for tobacco; p. 22,570.

**Latakia**, *spt.* in Syria, the anc. Laodicia, famous

**Lathom** and **Burscough**, *urb. dist.*, mftg. *t.* nr. Ormskirk, Lancs., Eng., p. 7,633.

**La Trappe**, famous Benedictine *monastery*, dep. Orne, France, nr. Mortagne.

**Latrobe**, *t.* nr. Launceston, Tasmania, p. 2,400; also t. in Pennsylvania, U.S.A., p. 10,750.

**Latronico**, *t.* in prov. Potenza, Italy, p. 4,200.

**Lattaku**, or **Lattakoo**, *t.* in Bechuanaland, S. Africa, p. 4,750.

**Latvia**, Republic, on the S. part of the Baltic littoral, area 24,435 sq. m., p. 2½ mills.; cap. Riga, p. *271,000.*

**Lauban**, *t.* nr. Görlitz, Silesia, Pruss; potteries, linen and cotton mills, etc.; p. 14,700.

**Lauderdale**, beautiful *valley* of the Leader, W. Berwicksh., Scotl.

**Lauenberg**, *dist.* Schleswig, Pruss., area 457 sq. m., p. 50,500; chf. t. L., on R. Elbe, p. 5,250.

**Lauenburg**, mftg. *t.* in Pomerania prov., nr. Coslin, Pruss., p. 11,600.

**Laun**, *t.* on R. Eger, N.W. Bohemia; metal indust.; p. 13,110.

**Launceston**, *mun. bor.*, mkt. *t.* on the Kersey, a trib. of the Tamar, N.E. Cornwall, Eng., p. *4,071*; also c. in Tasmania, on R. Tamar, Cornwall co., in prolific fruit-growing region; p. 26,318.

**La Union**, *t.* in prov. Murcia, Spain, nr. Cartagena and the Mediterranean; mineral dist.; p. 22,750.

**Laurencekirk**, mkt. *t.* in S. Kincardinesh., Scotl., p. *1,713.*

**Laurentide Mtns.**, *range* running from Labrador to Lake Superior, Can., av. height, 1,600 ft.

**Laurieston**, *dist.* S. of Glasgow, Lanarksh., Scot., p. 12,030.

**Laurium**, formerly **Calumet**, *vil.* in copper regn., Houghton co., Michigan, U.S.A., p. 4,770.

**Laurium**, *hills* (with silver and lead mines), S. of Attica, Greece; worked anciently and lately revived.

**Laurvig**, **Larvig**, or **Laurvik**, *spt.* Norway, on Skager Rack; gt. tr. and pop. hydro. res.; p. 11,350.

**Lausanne**, *cap.* canton Vaud, Switzld., nr. L. of Geneva; cathedral and university; p. 68,533.

**Lauterbrunnen**, *vil.* Bern cant. Switzld., highest waterfall (Straubach, 900 ft.) in country; p. 2,280.

**Lauven**, *R.*, of Norway, flows (200 m.) to the fiord at Laurvig. [p. 37,600.

**Lavag**, *t.* Luzon, Philippine Isls.; cotton centre;

**Lavagna**, *t.* on Liguria, Genoa prov., Italy, on the Mediterranean; natl. monumental ch. of San Salvador; shipbldg. and marble quarries; p. 7,050.

**Laval**, chf. *t.* Mayenne, France; bed-ticking manuf.; p. 32,030.

**Lawrence**, *c.* on Kansas R., Douglas co., Kans., U.S.A., university, p. 13,850; also c. Essex co., Mass., U.S.A., on R. Merrimac; woollen and cotton gds.; p. 84,000. [Douglas, I. of Man.

**Laxey**, lead-mining *vil.* with picturesque glen, nr.

**Laybach**, or **Laibach** (*q.v.*).

**Lea**, *R.* (46 m.), Bedford to Middlesex, Eng.; falls into R. Thames. [Thames.

**Leach**, *R.*, Oxfordsh., Eng., trib. (15 m.) of

**Leader Water**, *R.* of Scotl., affit. (21 m.) of R. Tweed, which it joins nr. Melrose.

**Leadgate**, *urb. dist.*, industrl. *t.* near Lanchester, Durham, Eng., p. *6,395.*

**Leadhills**, mining *vil.* S.W. Lanarksh., Scot., p. 1,490.

**Leading Creek**, R. of W. Virginia, U.S.A.; also sml. t. on same; p. 2,500.

**Leadville**, mining *c.* Lake co., in the Arkansas Valley, U.S.A. (alt. 10,000 ft.), p. 15,000.

**Leam**, *R.* of Warwicksh., Eng. trib. (25 m.) of R. Avon.

**Leamington**, **Leamington Priors**, or **Royal Leamington Spa**, *t.* and health *resort*, Warwicksh., Eng.; iron foundries, brickworks, etc.; p. *29,662.*

**Learned Plain**, *township* Compton co., Quebec, Can., p. (dist.) 3,000. [*6,916.*

**Leatherhead**, *urb. dist.*, on R. Mole, Surrey, Eng., p.

**Leavenworth**, *c.* L. co. Kansas, U.S.A., on R. Missouri; railway centre and military post; p. 17,500.

**Lebanon**, *mtn. chn.* Syria and N. Palestine; highest pks. Dahr-el-Khadeb (10,052 ft.) and Timarum (10,539 ft.); also name of sanjak or prov., Syria, 87 m. long, including mtn. range and valleys, p. (abt.) 400,000.

**Lebanon**, *c.* on Swatara Creek, L. co., Penn., U.S.A., iron mftg., p. 24,643; also name of fifty smlr. places in various parts of the U.S.A.

**Lebedian**, *t.* U.S.S.R., p. 6,750. Famous anc. monastery and gt. annual fair.

**Lebedin**, *t.* in Kharkov, Ukraine; was hdqrs. of Peter the Great's operations against Mazeppa; tr. in grain and cattle, p. 18,850.

**Lecce** (formerly **Terra di Otranto**), *prov.* of Apulia, S. Italy, area 2,645 sq. m., p. 817,500; cap. L., c. (tobacco manuf.), p. 37,700.

**Lecco**, *t.* in Como prov., Lombardy, Italy, at S.E. of L. of C.; silk, cotton, and iron industr.; p. 6,000.

**Lech**, *R.* of Bavaria, trib. (177 m.) of the Danube, rising in Vorarlberg Alps.

**Lechhausen**, industrl. *t.* nr. Augsberg, Bavaria, on R. L., p. 10,600.

**Leck**, *R.* of Holland, an arm of the old Rhine, flowing from Utrecht to Rotterdam.

**Lectoure**, *t.* in Gers, France; the anc. Lactora; old cathedral; p. 5,850. [p. *3,283.*

**Ledbury**, *urb. dist.*, mkt. *t.* in Herefordsh., Eng.,

**Ledeberg**, industrl. *t.* in E. Flanders, Belgium, nr. Ghent, p. 11,600.

**Lee**, *R.* Cork co., I.F.S., flows (50 m.) past Cork c. to Cork harbour; also R. of Kent, Eng., trib. (10 m.) of Thames; also par. subn. of S.E. London, adjoining Greenwich, residtl. and industrial.

**Leeds**, *co. bor.*, *c.* chf. seat of Eng. woollen manuf., W.R. Yorks, on R. Aire, p. *432,789*; also par. nr. Maidstone, Kent, Eng., (with castle).

**Leek**, *urb. dist.*, mkt. and silk mftg. *t.* Staffs, Eng., p. *18,556*; also t. in Holland, prov. Groningen, p. 5,500.

**Leek Isl.**, nr. New Haven, on Long Isl. Sound, Connecticut, U.S.A., p. 3,750.

**Lees**, *urb. dist.*, Lancs, Eng., p. *4,738.* [2,500.

**Leeston**, *t.* nr. Christchurch, N. Zealand, p. (dist.)

**Leetonia**, *vil.* Ohio, U.S.A., nr. Alliance, Columbiana co., p. 4,120.

**Leeuwarden**, *t.* on R. Ee, in Friesland prov., Holland, gold and silver ware, p. 42,978.

**Leeuwin**, *C.*, S.E. pt. of Australia.

**Leeward Isls.**, grp. of Brit. W. Indian *isls.*, total area 715 sq. m., p. 130,000; comprises also (besides the Brit. possessns. of Antigua and Barbuda) Montserrat and Dominica, Virgin Isls., St. Christopher, Nevis, and Redonda; cap. of Brit. Leeward grp., St. John's, Antigua.

**Leghorn** (or **Livorno**), Italian *prov.* on Mediterranean, area 133 sq. m., p. 140,000; also c. cap. same, p. 108,585; straw hat manuf., hemp, marble, olive oil, etc.; exports, shipbldg., and glass-making indust.

**Legnago**, fort. *t.* in Verona prov., Lombardy, Italy, p. 3,600. [Lombardy, Italy, p. 5,450.

**Legnano**, cotton and silk mftg. *t.* in Milan prov.,

**Leh**, *t.*, cap. Ladakh div., Kashmir st., Punjab, India, on R. Indus, elevatn. 11,538 ft., p. 4,500.

**Lehansa**, *t.* in the interior of N. Madagascar, p. 2,874. [Delaware.

**Lehigh**, *R.*, Penn., U.S.A., trib. (120 m.) of R.

**Lehighton**, *bor.* on Lehigh R., Penn., U.S.A., in anthracite coal regn. of Carbon co., p. 6,500.

**Leicestershire**, inland (Midld.) *co.*, Eng., area 800 sq. m., mainly undulatg. agr. land, p. *541,794*; cap. Leicester, *co. bor.*, industrl. t. (hosiery mftg.) on R. Soar, p. *239,111.*

**Leichhardt**, *R.* of Queensland, flows to G. of Carpentaria; also name of W. sub. of Sydney, N.S.W.

**Leigh**, *mun. bor.*, mkt. and mftg. *t.* S.W. Lancash., Eng., nr. Wigan, p. *45,313.* [of Thames.

**Leigh-on-Sea**, *wat. pl.* on Essex cst., Eng., at mth.

**Leigh's Lake**, communicating with Snake R., S. of the Yellowstone regn., Wyoming, U.S.A.

**Leighton Buzzard,** *urb. dist.*, mkt. *t.* Bedfordsh., Eng., p. *7,031.* [Aller.
**Leine,** *R.*, N.W. Germany, trib. (130 m.) of R.
**Leinster,** S.E. *prov.* I.F.S., area 7,620 sq. m., p. 1,149,000. [fordsh., Eng., p. 1,620.
**Leintwardine,** *vil.* on R.'s Teme and Clun, Here-
**Leipa,** industrl. *t.* on R. Polzen, Bohemia, 42 m. N. of Prague, p. 11,560.
**Leipsic,** or **Leipzig,** commercial and university *c.* of Saxony, on R. Elster, flourishing industr., p. (with incorporated suburbs) 604,380.
**Leisnig,** *t.* on R. Mulde, nr. Leipsic, Saxony, p. 7,520. [Eng., p. *4,184.*
**Leiston,** *urb. dist.*, *t.* nr. Saxmundham, Suffolk,
**Leith,** *spt.* and commercial *centre*, co. Midlothian, Scotl., on F. of Forth, suburban to Edinburgh, gt. shipping port for whisky, p. 82,100.
**Leith Hill,** Surrey, Eng., nr. Dorking, alt. 993 *ft.*, fine views.
**Leitmeritz,** mftg. and tr. *t.* (brewg., malt, hops, etc.) on R. Elbe, Bohemia, p. 15,270.
**Leitrim,** *co.* of Connaught prov., I.F.S., area 613 sq. m., p. 62,800, agr.; cap. Carrick-on-Shannon.
**Leixoes,** *spt.* and harbr. nr. Oporto, at mouth of R. Douro, Portugal, p. 7,860.
**Lema,** *isls.* S. of Hong Kong, in China Sea.
**Le Maire,** *strait* between Staten Island and Tierra del Fuego, S. America; also alternative name for Tasman Isls. in Solomon grp., S. Pacific.
**Leman, Lake.** (*See* Geneva.)
**Leman Republic,** name assumed by canton Vaud, Switzld., 1798; entd. Helvetic Repub. as cant. Leman.
**Le Mans,** *cap.* of the dep. Sarthe, France, hdqrs. of Army corps, the anc. Vindinum; linen manuf. and poultry tr., p. 71,783.
**Lemberg,** university *c.* Galicia, Poland, p. 208,500.
**Lemgo,** old *t.* (formerly of the Hanseatic League) in Lippe, Germany, meerschaum pipe mkg., p. 9,200.
**Lemnos,** *isl.* S. of the Dardanelles in the Ægean S. (20 m. long), fertile valleys, sheep and goat farming, p. 28,000, mainly Greeks.
**Lena,** *gt. R.* of Siberia, rising in mtns. W. of Lake Baikal, and flowing 2,800 m. to the Arctic Oc.
**Leningrad.** This Russian city was, until the beginning of the Great War, known as St. Petersburg, and thence until the death of Lenin called Petrograd (*q.v.*).
**Lennox,** anc. Scottish *div.*, comprising Dumbartonsh., parts of Stirling, Perth and Renfrew.
**Lennox Hills,** *range* betwn. Dumbarton and Stirling, Scotl. [4,130.
**Lennoxtown,** nr. Glasgow, co. Stirling, Scotl., p.
**Lennoxville,** *t.* on St. Francis R., Sherbrooke co., Quebec, Can., p. (of dist.) 3,010.
**Lens,** *t.* on the L. Canal, in dep. Pas-de-Calais, France; iron foundries; p. 20,450.
**Lentini,** or **Leontini,** *t.* in Syracuse prov., Sicily, Italy (the anc. Leontini), on hill by Biviere L., citadel destroyed by earthquake, 1693, p. 5,760.
**Leoben,** old mining *t.* in Styria, Austria; walls and towers; p. 11,510.
**Leobschutz,** industrl. *t.* nr. Oppeln, Prussn. Silesia, on R. Zuina, formerly cap. of principality of Jägerndorf; divided between Austria and Pruss. in 1742. Carriage bldg., glass-mkg., p. 13,100.
**Leominster,** *mun. bor.*, mkt. *t.* in Herefordsh., Eng., in hop-growing dist., p. *5,707*; also mftg. t. in Worcester co., Mass., U.S.A.; p. 22,000.
**Leon,** old *prov.* (former kingdom), N.W. Spain; now div. into provs. of Salamanca, Zamora, and Leon; area of latter 5,936 sq. m.; rich in minerals, p. 391,855; cap. L., c., fine Gothic Cathedral, p. 16,010; also name of t. in Nicaragua, with large leather tr.; p. 21,000.
**Leonforte,** *t.* in prov. Catania, Sicily, sulphur mines; p. 15,760.
**Leopoldville,** *t.* above the cataracts on R. Congo,, in Belgian Congo; founded by Stanley.
**Lepanto,** *spt.* of Ætolia, Greece, on G. of Lepanto; p. 6,220; the anc. Naupaktus.
**Lepton,** *urb. dist.*, nr. Huddersfield, W.R. Yorks, Eng., p. *3,322.* [p. 2,920.
**Lequettio,** cst. *t.* nr. Bilbao, prov. Biscay, Spain,
**Lercara,** *t.* in Palermo prov., Sicily, macaroni manuf.; sulphur mines; p. 15,710.
**Lerici,** cst. *t.* and summer *rest.* G. of Spezia, Genoa, Italy; old castle, macaroni factories; p. 6,320.
**Lerida,** *prov.* Catalonia, Spain, on French frontier, area 4,690 sq. m.; agr. and industrl.; p. 292,428; cap. Lerida, fortif. *c.* on R. Segre, p. 22,750.
**Lerins, Iles de,** sml. grp. of French *isls.* in Mediterranean opp. Cannes, included in dep. Var; St. Honoré and St. Marguerite are fortified.
**Lervigs Fiord,** *inlet* of the Faroe Isls., Denmark.
**Lerwick,** *burgh* and co. *t.* of Shetland on isl. or mainland of Pomona; fishy., woollen manuf. and tr. with Scottish ports, p. *6,506.*
**Lesbos,** or **Mitylene,** *isl.* in the Ægean Sea; mtns. (Olympus, alt. 3,080 ft.), area 618 sq. m.; prod. olives, figs, lemons, oranges, grapes; also antimony and marble; p. 130,000, mainly Greek, ch. t. Mitylene.
**Lesina,** *isl.* off Dalmatia cst. 43 m. long; p. 28,630, naval stn. and arsenal, p. 3,850.
**Leskovatz,** *t.* in Serbia, nr. R. Veternitza; centre of hemp industry, dist. produces also flax and tobacco; p. 13,240.
**Lesmahagow,** or **Abbey Green,** *vil.* on R. Nethan, Lanarksh., Scotl., p. *11,661.*
**Lesparre,** *t.* in Gironde dep., France, p. 4,260.
**Letchworth** (Garden City), *urb. dist.*, Herts., p. *14,454*, model residential and industrial town. (*See* Garden Cities in "Gen. Inform." sectn.).
**Lethbridge,** *t.* Alberta, Canada, p. 9,436.
**Lettere,** *t.* nr. Castel-a-Mare, prov. Napoli, Italy, p. 6,620.
**Letterkenny,** *t.* on R. Swilly, co. Donegal, I.F.S., p. 2,200.
**Leucadia,** or **Santa Maura,** one of the Ionian Isls., area 110 sq. m.; mtns.; Sappho's Leap, steep cliff, on S.W.; produces grapes, currants, etc.; chf. t., Leucas (or Santa Maura) on N. cst.
**Leutschau,** industrl. *t.* in Czecho-Slov., Zips co., p. 7,200.
**Levant,** French and Italian name for the E. est. of the Medit., including Greece and Egypt.
**Leven,** salt-water *loch*, or arm of the sea, on boundary of co.'s Argyll and Inverness, Scotl., joins Loch Linnhe; also beautiful L. (Loch Leven) in Kinross co., Scotl. (3½ m. long by 2 m. wide) with 7 isls. (largest St. Serf's, ruined priory); on Castle Isl. Mary Queen of Scots was imprisoned in 1567; partly drained by R. Leven (14 m. long) to Largo Bay. Also name of R. flowing from Loch Lomond to R. Clyde (10 m.) at Dumbarton; of R. of Argyll and Inverness (11 m.), emptying into Loch Leven inlet first mentioned; and of R. of Lancs, Eng., flowing from L. Windermere to Morecambe Bay. Also burgh of Fifesh., Scot., on Firth of Forth; linen weaving industry, fine golf course; p. *7,411.*
**Levenshulme,** industrl. *t.* of Lancs, Eng., suburban to Manchester.
**Lévis,** chf. *t.* Lévis co., Quebec, Canada, on the St. Lawrence R., opp. Quebec, landing pl. for transatlantic passengers and ry. terminus, p. 8,200.
**Lewes,** *mun. bor.*, mkt. *t.* co. Sussex, Eng., nr. Brighton, p. *10,785.*
**Lewis,** or **Lews,** forms (with Harris) the long *isl.* of the Outer Hebrides, Scot., area 770 sq. m.; embraces St. Kilda and several smaller isls. in civil par.; p. (of Lewis alone), 29,420, nearly all Gaelic-speaking; chf. t. Stornoway. Industries: fishing, cattle-rearing, etc.
**Lewisham,** S.E., *met. bor.* of London, Eng., mainly residtl., p. *219,942.*
**Lewiston,** *c.* of Androscoggin co., Maine, U.S.A., on the A. R.; extensive manuf., p. 35,250.
**Lexington,** *c.* Fayette co., Kentucky, U.S.A., seat of state university, in the Blue Grass tobacco and horse-rearing region, p. 46,000; also mftg. t. in Lafayette co., Mass., U.S.A., nr. Boston, scene of the first conflict between Brit. and American troops in 1775; p. 9,750.
**Lexington Courthouse,** *vil.* of L. co., S. Carolina, U.S.A., nr. Columbia, p. 5,254. [dale.
**Leyburn,** mkt. *t.* N.R., Yorks, Eng., in Wensley-
**Leyden,** *c.* of S. Holland on the Old Rhine, 10 m. N.N.E. of The Hague; seat of famous university; woollen, cloth and linen manuf.; resisted Spanish siege successfully 1573–74; birthplace of Rembrandt, good modern tr.; p. 65,635. [Eng., p. *10,573.*
**Leyland,** *urb. dist.*, mftg. *t.* nr. Preston, Lancs,
**Leyre,** *R.* France, deps. Gironde and Landes, flowing (40 m.) to G. of Arcachon. [p. 225,000.
**Leyte,** one of the Philippine Isls., area 2,799 sq. m.,
**Leytha,** or **Leitha,** *R.* flowing between Austria and Hungary to the Danube below Vienna.
**Leyton,** *urb. dist.*, Essex, Eng., suburban to E. London, p. *128,317.*
**Leytonstone,** *dist.*, N.E. of Leyton, Essex, Eng.

**Lhasa, Lhassa,** or **Lassa,** *the "Holy" or "Forbidden" c.* of Tibet; contains the royal hill palaces (Potala) of the Dalai Lama and the sacred shrine (Cho Kang or Kilkording) of the image of Buddha. Entered by British expedition in 1904, and trading treaty secured, p. 18,000. [in the Arctic Oc.

**Liakhov Isls.,** large *isl.* of the New Siberia group

**Liau-tung,** *prov.* of the Chinese Empire, mainly in Manchuria (also called Mukden and Shing-King), area 37,269 sq. m., p. 2,230,000. Scene of much fighting in the Russo-Japanese War, 1904–05. Liau-tung Gulf, arm of the Yellow S., 150 m. long by 70 to 120 m. wide. [prov., p. 81,000.

**Liau-yang,** *c.* Manchuria, China, in the Laiu-tung

**Liban,** *spt.* of Latvia, on the Baltic S.; great tr. and many flourishing industries, p. 74,500.

**Liberia,** *Republic* of W. Africa, on the Guinea coast, area 40,000 sq. m., p. about 2,000,000, including 20,000 civilised negroes; cap. Monrovia. Exports coffee, palm oil, ivory, sugar, etc.

**Libertad,** maritime *prov.* N.W. Peru; area 10,206 sq. m., p. 250,931; cap. Trujillo.

**Liberton,** *par.* of Midlothian, Scotl., suburban to Edinburgh, p. 6,530.

**Libia Italiana** (Tripolitania and Cyrenaica). Italian possession on N. coast of Africa, between Egypt and Tunis; area 406,500 sq. m., p. over 1 million.

**Libourne,** *port* on R. Dordogne, Gironde dep., France; in vineyd. dist.; 20,450.

**Libya,** anc. Greek name of Africa. [and Fezzan.

**Libyan Desert,** part of the Sahara, E. Wadai

**Licata,** *spt.* at mth. of R. Salso, nr. Girgenti, Sicily; good harbr., sulphur exports; p. 25,100.

**Lichfield,** *mun. bor.*, *c.* Staffordsh., Eng., cathedral; p. *8,508.*

**Lick Observatory,** on Mt. Hamilton, nr. Santa co., California, U.S.A., nr. San José. [R. Ohio.

**Licking,** *R.* Kentucky, U.S.A., trib. (220 m.) of

**Liddel,** *R.* of Roxburgh and Dumfriessh., Scot., trib. of R. Esk.

**Liddelsdale,** *valley* in Dumfriessh., Scot., along English border and Liddel Water.

**Liddord,** *par.* Devon, Eng., on R. Lid, p. 2,760.

**Lidköping,** *t.* on L. Wener, nr. Mariestadt, Sweden, p. 4,800.

**Lieben,** mftg. *dist* Karolinenthal, Bohemia, N.E. of Prague, p. 23,000.

**Liechtenstein,** sml. *principality* in the Tyrol, betwn. Vorarlberg and the Upper Rhine; area 65 sq. m., p. 11,000; cap. Vaduz.

**Liège,** *prov.* of Belgium, partly hilly, pastoral, forest and minrl., area 1,117 sq. m., p. 806,770; cap. Liège, c. at conflu. of R.'s Meuse and Ourthe; cathedral, university, many fine bldgs.; gt. tr. and proc. ind.; p. 165,117.

**Liegnitz,** *t.* in prov. Silesia, Pruss.; vegetable-growing dist., piano and sewing-machine factories; p. 70,337.

**Lierreb,** or **Lier,** boot-mftg. *t.*, prov. Antwerp, Belgium. p. 23,850. [p. 5,700.

**Liestal,** *cap.* of the half cant. Basel-Stadt, Switzld.

**Liévin,** mftg. *t.* nr. Bethune, Pas-de-Calais dep., France, adjoining Lens, p. 12,620.

**Lièvres, Rivière du,** *R.* of Quebec, Canada, trib. of St. Lawrence, flows past Ottawa.

**Liffey, R.,** I.F.S., flows (50 m.) from Wicklow through Kildare to Dublin Bay.

**Lifu Isl.,** largest of the Loyalty grp. in the Pacific, French possessn. E. of New Caledonia.

**Ligas,** *t.* in Albay prov., Luzon, Philippine Isls.; rice, sugar, etc., p. 18,000. [3,490.

**Lignières,** *t.* in dep. Cher, France, nr. Bourges, p.

**Ligny,** *t.* nr. Bar-le-duc, dep. Meuse, France, p. 4,650; also sml. t. nr. Namur, Belgium, p. 1,650.

**Liguria,** *terr.* of N. Italy, betwn. the Mediterranean and Alps and Apennines, and adjng. the E. frontier of France, embracing the provs. of Genoa and Porto Maurizio (*q.v.*).

**Ligurian S.,** part of the Mediterranean, N. of Corsica.

**Lika, R.,** Croatia, flows along former Austrian military frontier (30 m.) and sinks undergrd. at Mt. Tuliba. [p. 45,000.

**Li-Kiang,** *c.* Yun-Nan prov., China; great tr.,

**Lille,** or **Lisle,** fort. *t.* in France, cap. Nord dep., on R. Deule; seat of University, and chief centre of French linen and cotton manuf., ch. of Notre Dame de la Trielle, finest in French Flanders, p. 200,952. [Victoria, p. (dist.) 9,412.

**Lilydale,** *vil.* nr. Melbourne, in co. Evelyn,

**Lima,** *cst.* dep. Central Peru; area 13,310 sq. m., p. 325,000; also Lima c., cap. of Peru, in dep. and prov. same name on plain sloping from the Andes to the Pacific; university, great commercial and industrl. activity, foreign tr. through pt. of Callao (7 m. W.), p. 176,467; also c. of Allen co., Ohio, on the Ottawa R., in petrol region, p. 42,300.

**Limari,** *R.* (100 m. long), Coquimbo prov., Chili.

**Limasol,** *spt.* Cyprus isl., 38 m. S.W. Larnaca; wine exports, p. 11,843. [I.F.S.; p. 2,990.

**Limavady,** mkt. *t.* on R. Roe, nr. Londonderry,

**Limbach,** industrl. *t.* nr. Chemnitz, Saxony; hosiery manuf., p. 12,760.

**Limbourg,** frontier *prov.*, Belgium, agr., stock fdg., gin distillery, beet-root sugar manuf.; area 931 sq. m., p. 302,988; cap. Hasselt.

**Limburg,** S. *prov.* of Holland, bordering on Belgium and Rhenish Pruss.; arable forest, meadow, pastoral and mineral; area 847 sq. m.; p. 440,843; chf. t. Maestricht (*q.v.*).

**Limburg,** *t.* in Hesse-Nassau, Germany, on R. Lahn, p. 6,890; also *t.* on R. Leine, in Westphalia, p. 6,320.

**Limerick,** *co.* (maritime) of I.F.S., prov. Munster, area 1,064 sq. m., p. 142,560. Industries: agr. (declining), fishery, etc.; cap. L., c. at head of Shannon est., most impt. port in W. of I.F.S.; good bacon tr.; p. 38,390.

**Limmat,** *R.* of Switzld., trib. (80 m.) of R. Aar, which it joins nr. Brugg.

**Limoges,** ch. *t.* of the Haute-Vienne dep., France; famous for its still flourishing porcelain factories, and kaolin paste preparation, p. 90,187.

**Limon,** or **Port Limon,** chf. Atlantic port of Costa Rica; gt. coffee export, p. 16,500.

**Limousin,** old *prov.* France (now Corrèze) and port of Haute-Vienne.

**Limpopo,** *R.* of S.E. Africa, rising in S. Transvaal col. and sweeping round on its N. frontier into Portuguese terr. and the Indian Oc., length 900 m.

**Linares,** *t.* in lead-mining dist. prov. Jaen, Spain, p. 37,039; also prov. in S. Chili, area 3,969 sq. m., p. 119,284; cap. L., p. 12,200; also San Felipe de Linares, *t.* in Nuevo Leon, Mexico, p. 6,200.

**Lincoln,** maritime *co.* in E. of England; generally flat, and in gt. part fenny, area 2,761 sq. m., p. *624,553*; cap. Lincoln c. on Witham, with fine cathedral, p. *66,246*; also c. cap. of Nebraska, U.S.A., p. 78,000; also c. cap. of Logan co., Illinois, U.S.A., p. 12,900, university; also c. of Rhode Isl., U.S.A., p. 9,543.

**Linden,** *sub.* of Hanover, Pruss., p. 82,374.

**Lindisfarne,** alternative name for Holy Isl. off cst. Northumberland, Eng.

**Lindsay,** *t.* in Ontario, Can., cap. of Victoria co.; sawmills, carriage works, p. *7,447*.

**Lindsey,** N. div. of co. Lincoln, Eng.

**Lines, La,** or **Lines de la Concepcion,** *t.* in Cadiz prov. Spain; frontier post nr. Gibraltar, p. 24,000.

**Lingazen,** or **Lingayen,** *t.* on G. of L., W. cst. Luzon, Philippine Isls.; fertile agr. dist., p. 20,000.

**Lingköping,** or **Ostergötland,** *dist.* Sweden, on the Baltic; area 4,265 sq. m., p. 305,463; cap. L., mftg. t. nr. L. Roxen, p. 26,920.

**Linlithgow,** *burgh* (Falkirk grp.) of L. co., Scotl.; shoemkg. and leather inds., p. *3,666*; area of L. co. 120 sq. m., p. *81,426*.

**Linnhe, Loch,** arm of sea cst. of Argyll and Inverness, Scotl., extending (30 m.) from Upper Loch Eil to Sound of Mull.

**Linslade,** *urb. dist.*, Bucks, Eng., p. *2,433*.

**Linthwaite,** *urb. dist.*, S.W. of Huddersfield, W.R. Yorks, Eng., p. *9,689*.

**Lintons,** mining *t.* in Victoria, nr. the Happy Valley, Ballarat dist., p. 1,760.

**Lintz,** or **Linz,** fortfd. *c.* on the Danube, nr. Steyr, cap. of Upper Austria, p. (including Urfahr on opp. bank of D.) 94,072; garrison, brewing, printing, and many manuf.

**Lipa,** *t.* in Batangas prov., Luzon, Philippine Isls.; centre of fertile agr. reg., p. 41,000.

**Lipari Isls.,** volcanic grp. N. of Sicily, attached to the Italian prov. of Messina, total area 45 sq. m., 18,200. Lipari is the largest isl. of the grp., and its cap., also named L., has a p. 10,640; the anc. Æoliæ, etc., they were occupied in turn by Saracens and Normans.

**Lipetsk,** industrl. *t.* on the Veronezh R., U.S.S.R., p. 19,100. [Rhine at Wezel.
**Lippe,** *R.* of Germany (110 m. long), joins the
**Lippe,** or **Lippe Detmold,** *principality* Germy., enclo. by Hanover and Westphalia; area 469 sq. m., p 154,318, cap. Detmold.
**——aumburg.** (*See* **Schaumburg-Lippe.**)
*t.* on R. Lippe, Westphalia, Germy., ——g, tobacco mftg.; p. 13,360.
**Lisbon,** *c.* in prov. Estremadura, on N. bank of Tagus est., cap. of Portugal, p. 489,667.
**Lisburn,** *t.* on R. Lagan, nr. Belfast, North Ireland; linen mftg., cathedral, p. 12,180.
**Lisieux,** *t.* in Calvados dep., France; fine Norman cathedral, the anc. cap. of the Lexovii; flannel mftg., p. 17,230.
**Liskeard,** *mun. bor.*, mkt. *t.* Cornwall, Eng.; woollen mill, foundry, etc., p. *4,266.*
**Lisle,** gold-field *t.* nr. Launceston, Tasmania, p. (dist.) 3,010. [Waterford, I.F.S., p. 1,860.
**Lismore,** mkt. *t.* on R. Blackwater, co.'s Cork and
**Lissa,** *isl.* Dalmatia, in the Adriatic (11 m. long), the anc. Issa; famous for its wine.
**Listowel,** *t.* on R. Feale, co. Kerry, I.F.S., nr. Tralee, p. 2,960. [ranean, nr. Tyre.
**Litany,** *R.* of Palestine (100 m.), flows to Mediter-
**Litchfield,** *c.* in natural gas and petrol regn., Montgomery co., Illinois, U.S.A., p. 6,650.
**Litherland,** or **Waterloo,** *urb. dist.*, Lancs., Eng., p. *15,967.*
**Lithgow,** *t.* in Cork co., N.S. Wales; mining, pottery, etc.; p. 5,850.
**Lithuania,** former *grand duchy,* Europe; is bounded by Poland, Russ., Courland and U.S.S.R. Passed to Poland in 1501 and later became absorbed by Russia and (to a small extent) Prussia. Now republic. Cap. Kovno.
**Litin,** *t.* on Bug R., Ukraine, old industries; p. 11,500.
**Littleborough,** *urb. dist.*, *t.* nr. Rochdale, Lancs., Eng.; cotton, woollen and dyeing industries; p. *12,028.*
**Little Crosby,** *urb. dist.*, Lancs, Eng., p. *1,086.*
**Little Falls,** *c.* on Mississippi R., Minnesota, U.S.A., timber tr., p. 5,000; also mftg. c. on Mohawk R., Herkimer co., New York, U.S.A., p. 11,000.
**Littlehampton,** *urb. dist.*, *spt.* and *cst. rest.* at mth. of R. Arun, Sussex, Eng.; p. *10,181.*
**Little Hulton,** *urb. dist.*, industl. *t.* in Lancash., Eng., nr. Bolton, p. *7,878.*
**Little Lever,** *urb. dist.*, industrl. and residtl. *t.* nr. Bolton, Lancash., Eng., p. *4,944.*
**Littleport,** *par.* Cambridgesh., Eng., nr. Ely, p. 6,450.
**Little Rock,** *c.* of Arkansas, U.S.A., cap. of Pulaski co., on A. R.; oil and oil-cake manuf.; p. 81,700.
**Little Russia,** *part* of Ukraine, formerly comprising govts. of Chernigov, Poltava, Kiev, and Kharkov; area 80,226 sq. m., p. 10,000,000.
**Little Sioux R.,** Iowa, U.S.A., flows (300 m.) to the Missouri.
**Littleton,** mftg. *t.* in New Hampsh., U.S.A., on the Ammonoosuc R., p. 5,550. [Eng., p. 1,120.
**Little Woolton,** industrl. *par.* nr. Prescot, Lancash.,
**Liverpool,** *co. bor.*, *c.* and *spt.* on R. Mersey, Lancash., Eng.; immense shipping commerce and manuf.; cathedral, splendid docks; p. *855,539.*
**Liversedge,** woollen mftg. *t.* nr. Dewsbury, W.R. Yorks, Eng., p. 14,800.
**Livingston,** industrl. *t.* in Montana, U.S.A., on the Yellowstone R., p. 6,400; also name of numerous other places in various pts. of the U.S.A.
**Livingstone Falls,** *cataracts* on R. Congo, Africa.
**Livingstone Mtns.,** *range* and upland *plateaus* of Kenya Colony, nr. L. Nyassa, highest pt., 9,600 ft.
**Livingstonia,** mission *stns.* W. shore of L. Nyassa, E. Africa. [p. 28,640.
**Livny,** mftg. *t.* nr. Orel, U.S.S.R., on R. Sosna;
**Livonia,** former Russian prov., now included in Esthonia (*q.v.*). [6,750.
**Livorno,** *t.* in Novara prov., Italy, nr. Vercelli, p.
**Lizard Point,** *C.* southernmost pt. Eng., S.W. Cornwall.
**Llanberis,** *t.* in Carnarvonsh., Wales, nr. Bangor, tourist centre at base of Snowdon mtn., p. 3,200.
**Llandaff,** sml. *c.* nr. Cardiff, on R. Taff, Glamorgansh., S. Wales, cathedral, p. 1,820.
**Llandilo,** *urb. dist.*, mkt. *t.* on R. Towy, E. Carmarthensh., Wales, p. *1,886.*
**Llandovery,** *mun. bor.*, N.E. Carmarthensh., Wales, p. *1,980.*
**Llandrindod Wells,** *urb. dist.*, health *rest.* mid-Radnorsh., Wales, medicinal waters, p. *2,925.*
**Llandudno,** *urb. dist.*, seaside *rest.*, Carnarvonsh., Wales, p. *13,677.*
**Llandyssil,** *par.* on R. Teifi, Cardigansh., Wales, p. 3,040.
**Llanelly,** *mun. bor.*, *spt.* Carmarthensh., Wales, collegiate establishts., p. *38,393.*
**Llanfair Caerinion,** mkt. *t.* on *R.* Elnon, Montgomeryesh., Wales; p. 2,346.
**Llanfairfechan,** *urb. dist.*, *t.* nr. Conway, Carnarvonsh., N. Wales; p. *3,162.*
**Llanfrechfa, Upper,** *urb. dist.*, nr. Caerleon, Monmouthsh., Eng.; p. *4,482.*
**Llanfyllin,** *mun. bor.* nr. Oswestry, Montgomeryshire, Wales; p. *1,449.*
**Llangadock,** *par.* nr. Llandilo, Carmarthensh., Wales; p. 2,060. [Amlwch; p. *1,782.*
**Llangefni,** *urb. dist.*, mkt. *t.* Anglesey, Wales, nr.
**Llangollen,** mkt. *t.* on R. Dee, Denbighsh., Wales; p. *2,937.*
**Llanidloes,** *mun. bor.* on R. Severn, Montgomeryshire, Wales; p. *2,356.*
**Llano Estecado,** or **Staked Plain,** New Mexico and N.W. Texas, U.S.A., area 40,000 sq. m.
**Llanstephan,** *vil.* at mouth of R. Towy, Carmarthensh., Wales.
**Llantarnam,** *urb. dist.*, *t.* nr. Newport, Monmouthsh., Eng., in colliery dist.; p. *7,234.*
**Llantrissant,** *bor.* Glamorgansh., Wales, nr. Cardiff; p. 12,600. [bighsh., Wales; p. *2,366.*
**Llanwrst,** *urb. dist.*, mkt. *t.* on R. Conway, Den-
**Llanwrtyd,** *urb. dist.*, Brecknock, Wales, p. *742.*
**Llerena,** old walled *t.* Barcelona prov., Spain, nr. Seville frontier; p. 6,400.
**Loanda, or Sao Paulo de Loanda,** *c.* (p. 15,000) of Angola, Portuguese W. Africa; cap of dist. same name.
**Loango,** *regn.* on W. cst. Africa, divided between France, Portugal, and Belgium; cap. Loango; p. 12,000. [3,490.
**Loanhead,** *burgh* 5 m. S.E. Edinburgh, Scot., p.
**Lobau,** *t.* on the L. Water nr. Bautzen, Saxony; dye-works, piano factory; p. 10,350.
**Locarno,** *t.* a Swiss resort at the head of Lake Maggiore, near Italian frontier. Scene of the International Conference, 1925.
**Lochaber,** *mtns. dist.* Scotl., S. Inverness; 33 m. by 21 m.; contains Ben Nevis. [13,460.
**Lochee,** N.W. suburb of Dundee *c.*, Scotl., p.
**Lochgelly,** *burgh* of Fifesh., Scotl., nr. Dunfermline; ironwks. and colliery dist.; p. *9,297.*
**Lochgilphead,** *t.* at head of L. Gilp, Argyllsh., Scotl., p. *716.*
**Lochmaben,** *burgh* nr. R. Annan, Dumfriessh., Scot., p. *2,460.*
**Lochy, Loch,** *L.* Inverness-sh., Scot. (10 m. long), part of the Caledonian Canal; R. Lochy flows to Fort William (8 m.) from S. end of the loch.
**Lockerbie,** *burgh* of Annandale, Dumfriessh., Scotl.; impt. sheep mkt.; p. 2,510.
**Lockhaven,** *c.* of Clinton co., Penn., U.S.A., on Susquehanna R.; timber yards; p. 9,750.
**Lockport,** *rly. centre,* Des Plaines R., Will co., Illinois, U.S.A., p. 3,500. Also mftg. c., cap. Niagara co., New York, U.S.A., on Erie Canal, p. 23,500.
**Lockwood,** mftg. *t.* nr. Huddersfield, W.R. Yorks, Eng., p. 10,900. [industry; p. 13,360.
**Locle, Le,** *t.* cant. Neuchatel, Switz.; watchmaking
**Lodève,** *t.* dep. Hérault, nr. Montpellier, France; cloth mftg., cathedral; p. 11,450.
**Lodi,** *c.* on R. Adda, prov. Milan, Italy; famous for Parmesan cheese and majolica ware; cathedral; p. 26,270.
**Lodore,** *waterfall,* nr. Keswick, Cumberland, Eng.
**Lodz,** textile mftg. *t.* govt. Piotrkow, Poland, the "Manchester of Poland," p. 451,813.
**Lofoden,** or **Lofoten Isls.,** storm-swept grp. off N.W. coast Norway, stretching 175 m., mainly mtns., p. 40,000, engaged chfly. in cod and herring fishing.
**Loftus,** *urb. dist.*, in N.R. Yorks, England, nr. Saltburn-by-the-Sea, p. *7,631.*
**Logan,** *c.* of Cache Valley, Utah, U.S.A., chfly. inhab. by Mormons, p. 10,000.
**Logansport,** mftg. *c.* on the Wabash and Erie canal, Cass co., Indiana, p. 18,000.
**Logrono,** inld. *prov.* N. Spain, area 1,936 sq. m.; Castilian wine-growing dist.; p. 182,390; cap. L., t., on R. Ebro, spacious bull-ring, p. 21,750.

**Loir, R.** France, dep. Eure-et-Loir (150 m.), trib. of R. Sarthe. [from Cévennes Mts. to Atlantic.
**Loire, R.** France, largest in country, flows (620 m.)
**Loire,** *dep.* Centrl. France, area 1,853 sq. m., p. 637,930, agr., potato growg., vineyds., mining, and mftg.; cap. Montbrison.
**Loire Inférieure,** *dep.* W. France, at mth. of R. Loire, area 2,695 sq. m., p. 649,723; agr., fruit-growing, etc.; cap. Nantes.
**Loiret,** *dep.* Centrl. France, area 2,630 sq. m., p. 337,224; agr., vineyds., distilleries, mftg.; cap. Orleans.
**Loir-et-Cher,** *dep.* Centrl. France, area 2,479 sq. m., p. 251,528; agr.; cap. Blois.
**Loja, or Loxa,** *t.* in Ecuador, famous for cinchona, p. 9,700. [gium, on R. Durme, p. 21,200.
**Lokeren,** flourishing mftg. *t.* in E. Flanders, Bel-
**Lombardy,** *dep.* N. Italy, lying in the valley of the Po, area 9,333 sq. m., p. 5,000,000; pastoral and vintage country, with many summer resorts, among the Alpine valleys; includes provs. of Como, Cremona, Mantua, Milan, Pavia, Bergamo, Brescia, and Sondrio.
**Lombok,** one of the Lesser Sunda Isls. in the Malay Arch., area 3,136 sq. m., mtns. (peak of Lombok, 11,810 ft., volcanic), p. (with Bali) 524,000; under Dutch rule; chf. t. Mataram. [28,100.
**Lomja, or Lomzha,** *t.* on the Narev R., Poland, p.
**Lomond, Loch,** largest Scottish *L.*, in co.'s Stirling and Dumbarton, over 20 m. long, area 27 sq. m., contains thirty isls., largest Inchmurrin; waterfall Inversnaid; tourist centre for the Trossachs; Ben Lomond ascended from Rowardennan.
**Lomond Hills,** co.'s Kinross and Fife, Scotl., alt. 1,713 ft. and 1,471 ft.
**London,** cap. *c.* of England, metrop. and seat of govt. of Brit. Empire; situated on R. Thames, mainly in co.'s Middlesex and Surrey, but extending into Kent and Essex. Comprises 28 met. bors., and has a p. (including immediate subn. area surrounding these) of *8,202,818*; p. adm. county, *4,396,821*; p. city, *10,996*. Exports exceeding a quarter of those of the entire kingdom. London on R. Thames, Ontario, Can., is a c. with p. (including subs. of London Jn., and Ealing), 55,240.
**Londonderry,** maritime *co.*, North Ireland, area 816 sq. m., p. 140,600, agr. and fishery; cap. L. (or Derry) c. on R. Foyle, flourishing shirt-making indust., p. 40,780.
**London, East,** *spt.* at mth. of Buffalo R., C. of Good Hope, S. Africa, p. 17,592. [*14,072*.
**Longbenton,** *urb. dist.*, Northumberland, Eng., p.
**Long Branch,** *c.* Monmouth co., New Jersey, U.S.A., pop. seaside res., for New York, with drive (Ocean Avenue) 5 m. long, res. p. 18,750.
**Long Eaton,** *urb. dist.*, mftg. *t.* nr. Derby, Eng., p. *22,339*.
**Longford,** inland *co.*, I F.S., prov. Leinster, area 421 sq. m., p. 43,760, chfly. peasantry; cap. Longford, t. on R. Camlin, p. 4,310.
**Long Island,** part of the *State* of New York, U.S.A., div. from Connecticut by Long Isl. Sound, and from the mainland of New York and Manhattan Isl. by Long Isl. Sd. and the East R.; bordered on the W. by N.Y. Bay; it has many pop. wat. places; 118 m. long and 23 m. wide; L. I. has an area of 1,682 sq. m., containing Brooklyn city. Long Island city, sep. from Brooklyn by Newtown Creek, is now incorporated with New York City. [and Argyllsh., Scotl.
**Long, Loch,** arm of sea (17 m.) co.'s Dumbarton
**Longridge,** *urb. dist.*, mftg. *t.* nr. Preston, Lancs., Eng., p. *4,153*.
**Long Sutton,** *urb. dist.*, *t.* nr. Holbeach, Lincolnsh., Eng., p. *2,902*. 38,010.
**Longton,** mkt. *t.* in the Potteries dist., Staffs., Eng.,
**Long View,** industrl. *t.* in Texas, U.S.A., nr. the Sabine R., p. 4,950.
**Longwy,** fort. *t.* dep. Meurthe-et-Moselle, France, iron mines and furnaces; p. 12,640. [p. 10,310.
**Lonigo,** *t.* on the R. Gua, prov. Vicenza, N.E. Italy.
**Lons-le-Saunier,** anc. *t.* cap. dep. Jura, France, salt springs; p. 12,200.
**Loo Choo, or Riukiu** (sometimes called **Liu-Kiu**), chain of 52 isls. belonging to Japan, stretching S.W. to Formosa. Ch. pt. Napa, on Okinawa isl., total p. 450,000; area 950 sq. m.
**Loodiana.** (*See* **Ludhiana.**) [Eng., p. *2,878*.
**Looe,** *urb. dist.*, fishg. *t.* on R. Looe, Cornwall,
**Loon,** *c.* in dep. Aisne, France; military post and citadel, p. 16,230. [of R. Shannon.
**Loop Head,** *cape* S.W. of co. Clare, Ireland, side
**Loos,** *t.* nr. Lille, prov. Nord, France, p. 6,850.
**Lorain,** on Lake Erie, Lorain co., Ohio, U.S.A., good coal tr., p. 45,250. [palace; p. 70,807.
**Lorca,** mftg. *t.* Murcia prov., Spain; bishop's
**Lord Howe Isl.,** in S. Pacific (7 m. by 1½ m.) between Australia and New Zealand.
**Lorenzo Marques, or Lorenço Marques,** *pt.* and *cap.* of Portuguese E. Africa on Delagoa Bay; p. 9,849 (4,691 European).
**Loreto,** interior dep. Peru; area 288,456 sq. m., p. 110,000; also a famous pilgrimage place and see in Ancona prov., The Marches, Italy; p. 5,150.
**L'Orient,** military *port*, Morbihan prov., France; govt. shipbldg. yds. and docks; p. 49,950.
**Lorne,** *dist.*, between Loch Leven and Loch Awe, Argyllsh., Scotl.
**Lorrach,** *t.*, Baden, Germany; p. 12,350.
**Lorraine,** *prov.* France, taken from France in 1871, retroceded 1919. (*See* **Alsace-Lorraine.**)
**Los Angeles,** *c.* cap. Los Angeles, co., California, U.S.A., in orange and grape-growing dist.; pop. winter resort; p. 1,238,000; also t. in Chili, cap. of Biobio prov., p. 13,250.
**Losoncz,** industrl. *t.* Nogrod co., Upper Hungary; enamelling and glue factories; p. 10,320.
**Lossiemouth,** *burgh* on the Lossie R., Elginsh., Scotl.; boatbldg. and fishg.; p. 4,220.
**Lossnitz,** industrial *t.* nr. Chemnitz, Saxony, p. 5,854.
**Lostwithiel,** *mun. bor.*, mkt. *t.* in Cornwall, Eng., nr. Truro, p. *1,325*.
**Lot R.,** S. France, trib. (272 m.) of R. Garonne.
**Lot,** *dep.* S.W. France, area 2,018 sq. m. Sheep and cattle rearing, nut-growing; p. 176,889; cap. Cahors.
**Lota,** coast *t.* nr. Concepcion, Chili, p. 17,500.
**Lot-et-Garonne,** *dep.* S.W. France, area, 2,079 sq. m. Vineyds., agr., stock-rearing; p. 239,972; cap. Agen.
**Lothians,** the Scottish *dist.* S. of Firth of Forth, embracing co.'s Haddington, Edinburgh, and Linlithgow.
**Loudeac,** *t.* in prov. Côtes-du-Nord, France, nr. St. Brieuc, p. 6,160. [Leicestersh.; Eng., p. *26,945*.
**Loughborough,** *mun. bor.*, hosiery. mftg. *t.*,
**Loughrea,** mkt. *t.* on Lough Rea, co. Galway, Ireland, p. 2,570. [of Epping Forest; p. *7,390*.
**Loughton,** *urb. dist.*, *t.* in Essex, Eng., on border
**Louisiana,** *st.* (s.) of U.S.A., area 45,409 sq. m.; p. 1,982,000 (one-half coloured); agr., tobacco, cotton, sugar, timber, minrls., and manufs.; cap. New Orleans (*q.v.*). Also c. of Pike co., Missouri, U.S.A., on R. Mississippi, p. 3,500.
**Louisville,** *c.* of Jefferson co., Kentucky, U.S.A., on Ohio R., at the Falls; many thrvg. manufs.; p. 315,500. Exports flour, pork, tobacco, etc.
**Loulé,** *t.* in Faro dist., Portugal; esparto grass tr., and porcelain manuf.; p. 24,750.
**Lourdes,** fortfd. *t.* nr. Tarbes, in dep. Hautes-Pyrénées, France; famous grotto and pilgrim shrine, many convents and ch of the Rosary; res. p. 9,450. Visited by 500,000 pilgrims annually.
**Louth,** *mun. bor.*, mkt. *t.* on R. Lud, Lincolnsh., Eng.; p. *9,673*. Also maritime co., of Leinster prov., Ireland; area 316 sq. m., p. 63,390; much turf, bog, and barren land; salmon fishg. prosperous; cap. Dundalk (*q.v.*).
**Louvain,** impt. mftg. *t.* (breweries) Belgium, Brabant prov., 27 m. E. of Brussels; famous university; sacked by Germans at beginning of Gt. War; p. 39,450. [Rack.
**Louven,** *R.* (100 m.) of Norway, flows to Skager
**Louviers,** *t.* on R. Eure, nr. Rouen, France; cloth manuf.; p. 10,470.
**Low Archipelago, or Tuamotu,** grp. of sm. *isls.* on the Pacific, S. of Marquesas; chiefly coral. French protectorate.
**Lowell,** *c.* at jn. of Merrimac and Concord R.'s, Middlesex co., Mass., U.S.A.; many manufs.; p. 99,000.
**Lowenburg,** old *t.* in Silesia, Pruss., gypsum, textile factories, p. 5,570.
**Lower Austria,** prov. of Austria, traversed by R. Danube, area 7,462 sq. m., p. 1,458,000; cap. Vienna (*q.v.*).
**Lower Bebington,** *urb. dist.*, industrl. *t.* in Cheshire, Eng., hundred of Wirral, p. 14,696.
**Lower Brixham,** cst. *t.* S. Devon, Eng., nr. Torquay. (*See* **Brixham.**)
**Lower Mitcham,** S. *suburb* of Adelaide, S. Australia.
**Lowestoft,** *mun. bor.*, *wat. pl.* and *spt.* Suffolk, Eng., gt. fishg. industry, p. *41,768*.

**Lowthers, The, or Leadhills,** *mtns.* Dumfries and Lanark, Scotl., highest pt. 2,403 ft.

**Lowtherstown, or Irvinestown,** *sml. t.* nr. Enniskillen, co. Fermanagh, N. Ireland.

**Loyalty Isls.,** *grp.* in S. Pacific, belonging to France, and included in the New Caledonia col., area 800 sq. m.

**Lozère,** *dep.* S.E. France, traversed by Cévennes Mtns., area 1,996 sq. m., p. 108,822, agr., silkworm-rearing, stock-raising; cap. Mende.

**Lualaba,** name of the upper part of the Congo R., Africa.

**Luang Prabang,** on the Me Kong R., *cap.* of the Laos state, same name, French Indo-China, many pagodas, p. 10,000.

**Lubao,** *t.* Luzon, Philippine Isls., sugar-growing and alcohol-distilling, p. 22,000.

**Lubben,** *t.* on R. Spree, Brandenburg, Prussia, famous for gherkin growing, p. 7,070.

**Lübeck,** free *state*, Germany, area 115 sq. m., embracing Lübeck co., the t. of Travemünde, and various neighbouring villages. Lübeck co. stands on R. Trave, 10 m. above its entrance to the B. of L., an arm of the Baltic betwn. Holstein and Mecklenburg. A famous old Hanse t. with flourishing commerce, extensive industries, and many wealthy institutions; p. 120,568.

**Lublin,** *prov.* Poland, covered with forests, mainly a thinly popltd. plain, area 6,499 sq. m., p. 2,009,010; cap. L. c. on R. Bistritza, p. 51,240.

**Lubnaig, Loch,** Perthsh., Scotl., drains to R. Teith by the Leny.

**Lubni,** old *t.* in Poltava govt., Ukraine, gardening and jam-making, p. (with suburbs) 13,250.

**Lucca,** *c.*, cap. of Lucca prov. Tuscany, Italy, nr. Pisa; cathedral, many churches, jute manuf., tobacco, silk, cotton, and oil refining industries, p. 79,110. [townsh., Scotl.

**Luce Bay** (16 m. long) off Irish Sea, S. of Wig-

**Lucena,** mftg. *t.*, Cordoba prov., Spain, matches, brandy, wine, etc., p. 22,450.

**Lucera,** *t.* in prov. Foggia, Italy, the anc. Lucceria, castle, cathedral, p. 16,750.

**Lucerne,** *cant.* Switzld., area 579 sq. m., mainly arable and pasture, with a few vineyds., loftiest pt., Pilatus (6,995 ft., mtn. ry.). Righi ridge, opp. side of lake, 5,906 ft., p. of cant. 177,073; cap. L. c. at W. end of L., p. 44,029, length of L. 23 m., height above sea-level 1,435 ft., beautiful scenery.

**Luckenwalde,** *t.* in River Nuthe, Brandenburg prov., Prussia, enamel factories, cloth works, p. 22,370.

**Lucknow,** *t.* of United Provs., India, on the winding bank of the R. Gumti, 42 m. from Cawnpore. Famous for its defence against the Sepoys in the Mutiny, 1857. Large garrison, many fine bldgs., flourishing native manufs., muslin, embroidery, brocade, etc.; p. 243,533.

**Ludborough,** *par.* and *wapentake* on Lincolnsh. wolds, nr. Louth, Eng.

**Luddendenfoot,** *urb. dist.*, on R. Calder, nr. Halifax, W.R. Yorks. Eng., p. *2,381.*

**Ludenscheid,** hardware mftg. *t.* in Westphalia, Pruss., nr. Cologne, p. 29,010.

**Luderitz Bay,** otherwise **Angra Pequeña,** formerly German S.W. Africa, on coast of Lüderitzland, Great Namaqualand. [Cornwall, Eng., p. *1,897.*

**Ludgvan,** or **Ludjan,** *urb. dist.*, *t.* nr. Penzance,

**Ludhiana,** *t.* Punjab, India, cap. of dist. of same name; manufs. shawls; p. 51,000.

**Ludington,** *c.* Mason co., Michigan, U.S.A., on shore of the lower peninsula of Lake M.; wood working; p. 8,900. [*5,642.*

**Ludlow,** *mun. bor.* on R. Teme, Shrops., Eng., p.

**Ludwigsburg,** military *depot* and mftg. *t.* of Würtemberg, Germany, nr. Stuttgart, p. 23,306.

**Ludwig's Canal,** in Bavaria (110 m.), uniting the R.'s Danube and Main.

**Ludwigshafen,** industrl. *t.* of Bavaria, on R. Rhine, factories and foundries, p. 90,721.

**Lugano,** industrl. *t.* in cant. Ticini, Switz. (p. 10,350), on Lake of Lugano (16 m. long) at the Italian frontier.

**Lugo,** maritime *prov.* N.E. Spain, area 3,814 sq. m., p. 474,037, fishery and leather indus.; cap. L., t. on the Minho R.; tanning and textiles, p. 28,400. Also t. in Ravenna prov., Emilia, Italy; rope, furniture, and hardware factories, p. 28,750.

**Lukuga,** intermittent outlet of **Lake Tanganyika, Africa,** on W. shore, communicating with Congo River.

**Lulea,** *sp.* Norbotton co., Sweden, on R. Lule nr. N.W. corner G. of Bothnia, p. 10,545.

**Lumphannan,** picturesque *hamlet* nr. Aboyne, Aberdeensh., Scotl., p. *830.*

**Lund,** university *t.* nr. Malmo, Sweden; ironworks, sugar refining, etc.; p. 23,211.

**Lundenburg,** *t.* on Thaya R., S. Moravia, Czecho-Slovakia; fine château, good trade; p. 7,250.

**Lundy Isl.,** in mouth of Bristol Channel, S.W. coast Eng., 2½ m. long by 1 m. wide.

**Lune,** *R.*, Lancash. and Westmorld., Eng., flows (45 m.) to Irish Sea.

**Luneberg,** *t.* on the Ilmenau R., prov. Hanover, Pruss.; salt works, cement factories, wine tr.; p. 27,100.

**Lunenburg,** *spt.* Nova Scotia, cap. of L. co., nr. Halifax, p. *2,683.*

**Lunéville,** industrl. *t.* in dep. Meurthe-et-Moselle, France; hosiery, watch-glasses, porcelain, motor cars; salt works in suburbs; p. 25,270.

**Lungchow,** *t.* in prov. Kwangsi, China, nr. Tongking frontier; great tr. centre and military station; p. 200,000.

**Lupata Mtns.,** African range N.W. of Sofala, between Zanzibar and Mozambique.

**Lurgan,** *t.* nr. Belfast, co. Armagh, N. Ireland, thriving industries, p. 12,140.

**Lushai Hills,** *dist.* S. Assam, India; S. Lushai Hills is now included in the dist. instead of Bengal, area 3,500 sq. m., p. 84,200.

**Lussin,** *isl.* Dalmatia, Jugo-Slavia, in the Adriatic, length 20 m., p. 12,720; trade centre and pop. summer resort. [shire Eng., p. *68,526.*

**Luton,** *mun. bor.*, Industrl. *t.* (straw plait), Bedford-

**Lutsk,** *t.* nr. Vladimir, in Volhynia, Ukraine; industrl. and commercl.; p. 15,760.

**Lutterworth,** *t.* in Leicestershire, on the Swift, 8 m. N.N.E. of Rugby; pop. of parish, 1,830.

**Luxembourg,** *prov.* S.E. Belgium, on French border; wooded and hilly; area 1,706 sq. m., p. 228,613; cap. Arlon.

**Luxembourg,** *grand-duchy*, and independent European State adjoining the Belgian prov. just mentioned, and bounded by S. France, E. and and N.; area 999 sq. m. Considerable mineral wealth; p. 264,000; cap. L., industrl. c., 43 m. N. of Metz, p. 45,986.

**Luxor,** *vil.* adjoining Karnack, Upper Egypt, nr. site of anc. Thebes; magnif. ruined temple.

**Luzech,** *t.* nr. Cahors, Lot dep., France, p. 2,270.

**Luzerne,** *bor.* Penn., U.S.A., on the Susquehanna R., in Luzerne co., p. 7,000.

**Luzon,** largest of the Philippine Isls., area 40,814 sq. m.; mountainous, but very productive; p. nearly 4,000,000; cap. Manilla (*q.v.*). [p. 2,589.

**Lychen,** *t.* in prov. Brandenburg, Pruss., nr. Berlin,

**Lydd,** *mun. bor.* mkt *t.* nr. Romney, Kent, Eng., p. *2,772.*

**Lydenberg,** or **Leydenburg,** *t.* in Transvaal, S. Africa; 180 m. N.E. of Pretoria, p. *1,682.*

**Lydney,** *par.* in Forest of Dean, Gloucestersh., Eng., p. 3,560. [*12,245.*

**Lye and Wallescote,** *urb. dist.*, Worcester, Eng., p.

**Lyell,** *mtn.*, Stanley Range, N.S.W., alt. 2,000 ft.; also pk. nr. the Yosemite, California, U.S.A., belonging to the Sierra Nevada system, alt. 13,190 ft.

**Lyk,** *t.* in E. Prussia, on the Polish frontier, beside a L. same name; old castle prison, iron foundries, breweries, etc., p. 12,730.

**Lyme Regis,** *mun. bor.* and *spt.* Dorsetsh., Eng., on R. Lyme, nr. Dorchester, p. *2,620.*

**Lym Fiord,** shallow *strait* in Jutland, Denmark, between Cattegat and North Sea, 100 m. long.

**Lymington,** *mun. bor.* and *spt.* Hants, Eng., p. *5,157.*

**Lymm,** *urb. dist.*, t. nr. Warrington, Cheshire, Eng., p. *5,642.*

**Lynchburg,** c. on the James R., Virginia, U.S.A; gt. tobacco mftg. centre, p. 41,500. [S. Africa.

**Lynden Glen,** *valley* nr. Bedford, C. of Good Hope,

**Lynher** *R.* of Cornwall, Eng., flows 26 m. to the Hamoaze at Saltash.

**Lynn (King's Lynn,** or **Lynn Regis).** (*See* **King's Lynn**); also Lynn, spt. Essex co., Mass., U.S.A., on Mass. Bay; gt. boot mftg. centre, p. 102,500.

**Lynn Canal,** *fiord* in Alaska (100 m. by 6 m.) forming a continuation of the Chatham Strait.

**Lynton, and Lynmouth,** *urb. dist.* and seaside *vils.* of N. Devon. Eng., on the Bristol Channel, connected by a cliff ry., p. (of Lynton only), *2,012.*

**Lyon,** *R.* of Perthsh., Scotl., trib. (38 m.) of the R. Tay below Loch T.

name of old French *prov.* divided into [illegible] of Loire, Rhône, and Saône-et-Loire.

**Lyonnais, Montagnes du,** *range* in the Rhône prov., France, nr. Villefranche.

**Lyons,** *c.* cap. of dep. Rhône, at the confl. of R.'s Saône and Rhône, France; centre of silk-weaving industry and tr., dyeing and other impt. enterprises, stained glass works, etc.; many splendid churches and other bldgs., strong fortifications, p. over 561,592.

**Lyons,** formerly *c.* Clinton co., Iowa, U.S.A., on Mississippi R., now part of Clinton c.; also t. cap. Wayne co., New York, U.S.A., on Erie Canal, p. 8,900.

**Lyons, Gulf of,** wide *bay* of the Mediterranean, on S. cst. of France, into which flows the R. Rhône.

**Lys R.,** of Belgium and France, trib. (100 m.) of R. Scheldt. [long), Norway.

**Lysterfiord,** N.E. arm of the Sogne fiord (25 m.

**Lytham,** *urb. dist.,* mftg. *t.* on R. Ribble, N. Lancash., Eng., nr. Preston, p. *25,760.*

**Lyttleton,** *spt.* Selwyn co., Canterbury dist., New Zealand; fine harbour, p. 3,850. [Eden.

**Lyvenet R.,** of Westmorland, Eng., trib. of R.

## M

**Maas,** or **Meuse,** *R.* rising in Haute-Marne dep., France, and flowing (580 m.) through Holland and Belgium; joins the Waal to form the Rhine.

**Mabelthorpe,** *urb. dist.,* and *wat.-pl.,* Lincs, Eng., p. *3,928.*

**Macao,** Portuguese *c.* and *settlement* of isl. at mth. of Canton R., China; forml. an impt. commercl. centre; area 4 sq. m., p. 74,866 (abt. 2,200 Portuguese). [etc., p. 11,650.

**Macarsca,** *spt.* Dalmatia, Jugo-Slavia, wine, fruit,

**Macassar,** ch. *t.* and *port* of Celebes, Dutch E. Indies; p. 21,000. The Strait of Macassar separates Borneo from Celebes.

**Macayo,** or **Macelo,** *t.* cap. Alagoas, Brazil, nr. the cst. (lighthouse), p. 12,940.

**Macclesfield,** *mun. bor.,* mftg. *t.* (silk) Cheshire, Eng., p. *34,902.*

**McClintock Channel,** between Prince of Wales's Land and Victoria, Brit. N. America, communicating with Melville Sound, in the N. Polar [illegible]

[illegible]e Strait, between Banks's Land and Melville Isl., Brit. N. America.

**MacDuff,** *wat. pl.* on cst. of Banffsh., Sctl., p. 3,420.

**Macedonia,** up to 1913 an anc. region of Turkey, and at one time a powerful empire, now divided betwn. Greece, Bulgaria and Jugo-Slavia; p. 1,150,000.

**Macerata,** *prov.* in The Marches, Italy; area 1,070 sq. m., p. 267,373, cap. M., c. betwn. the Adriatic and the Apennines; terra-cotta manuf., cathedral; p. 23,860.

**Macgillicuddy's Reeks,** *mtns.* co. Kerry, I.F.S.; highest pk., Carrantuohill, alt. 3,414 ft.

**Machias,** *spt.* on M. R., Washington co., Maine, U.S.A., p. 3,000. [R. Dovey; p. *1,892.*

**Machynlleth,** *urb. dist.,* Montgomerysh., Wales, on

**MacIntyre R.,** N.S.W., trib. (350 m.) of R. Darling.

**Mackay,** *spt.* Queensland, co. Carlisle, on the Pioneer R., in sugar-farming dist.; p. 5,500.

**MacKeesport,** *c.* on Monongahela R., Allegheny co., Penn., U.S.A.; iron and steel manuf.; p. 45,975.

**MacKees Rocks,** *t.* on the Ohio R., Allegheny co., Penn., U.S.A.; iron and glass; p. 16,713.

**Mackenzie,** *R.* N.W. Territory, Can., rises in Rocky Mtns., discharges the waters of the Gt. Slave Lake into the Arctic Oc., total length (including trib. R. Peace) 2,350 m.

**Macknac Sound,** connects Lakes Michigan and Huron.

**MacKinney,** *c.* Collin co., N.E. Texas, U.S.A., in cotton-growing dist., p. 6,677. [(dist.) 8,500.

**Maclean,** agr. *township,* Clarence co., N.S.W., p.

**McMillen,** *vil.* in mining dist. Gila co., Arizona, U.S.A.; p. 3,700. [U.S.A., p. 8,600.

**Macomb,** industrl. *c.* in McDonough co., Illinois,

**Macon,** *mftg. t.* in France, on R. Saône, ruined cathedral, suffered in Huguenot wars, p. 20,380; also c. of Bibbe co., Georgia, U.S.A., on Ocmulgee R., in cotton belt; p. 54,000; also c. of Missouri, U.S.A.; cap. M. co., p. 3,900.

**Macquarie Harbour,** *t.* and *pt.* Franklin co., Tasmania; p. (dist.) 85,000. [seal fishery stn.

**Macquarrie Isl.,** S. Pacific Oc., 20 m. long; Brit.

**Macquarrie R.,** N.S.W., trib. (750 m.) of Darling River.

**Macroom,** *t.* in co. Cork, I.F.S., on R. Sullane, p. 3,060.

**Madagascar,** large *isl.* in Indian Oc., off E. cst. of Africa; French protectorate; area 228,000 sq. m., p. 3,500,000. Cap. Antananarivo, chf. pt. Tamatave.

**adawaska,** *R.* of N. Ontario, Can., flows (230 m.) through lake region to R. Ottawa.

**Maddaloni,** *mftg. t.* in prov. Caserti, Italy, nr. Naples; p. 20,950. [Can., p. 1,920.

**Madoc,** *vil.* on Deer R., co. Hastings, Ontario,

**Madeira,** *grp.* of salubrious Portuguese isls. in Atlantic Oc.; total area 315 sq. m., p. 169,777. Produce wine, sugar, etc. A much favoured winter resort; cap. Funchal.

**Madeira,** *R.* of Brazil, trib. (780 m.) of R. Amazon.

**Madeley,** mkt. *t.* on R. Severn, Shropsh., Eng., p. 8,900; also par. nr. Crewe, Staffs, Eng., p. 2,600.

**Madison,** mftg. *c.* on R. Ohio, Jefferson co., Indiana, U.S.A., p. 6,500; also university c. of Dane co.; Wisconsin, U.S.A., p. 60,000; also smlr. t.'s in S. Dakota, N. Jersey, and Georgia, U.S.A.

**Madisonville,** *t.* in Ohio, U.S.A., p. 4,740; also t. in Kentucky, U.S.A., p. 7,100.

**Madras** (or Pres. of Fort St. George), a large div. of the S. Penin., Brit. India (including nat. States), area 142,000 sq. m.; p. 42,500,0000; cap. Madras *c.* on B. of Bengal, p. 522,951; third c. of Ind.; great commerce, poor harbr., university.

**Madre de Dios,** *arch.* Patagonia, rocky grp. off cst. of S. America in the Pacific Oc.

**Madrid,** cap. *c.* of Spain and prov., New Castile; area of M. prov. 3,084 sq. m.; p. 953,560; agr., vine-growing and manuf. The c. of M. has university, Nat. Library, Royal Museum of Art, and many fine bldgs.; a cathedral, palace, etc.; p. 608,793. [p. *3.276.*

**Madron,** *urb. dist.,* *t.* nr. Penzance, Cornwall, Eng.,

**Madura,** *c.* of Madras, India, cap. of dist. of same name, with colleges, a splendid pagoda, and many industries, p. 138,894; also an isl. of the E. Indian Arch., sep. from Java by Strait same name, area 1,770 sq. m., p. 1,170,000; fishing and cattle-rearing.

**Maelar,** or **Mälar,** *L.* in S.E. Sweden, area 477 sq. m.; has 1,260 isls., with Stockholm c. at its E. extrem.

**Maëlstrom,** *whirlpool* N.W. cst. Norway, at S. extrem. Lofoden Isls. [p. *25,552.*

**Maesteg,** *urb. dist.,* mining *t.* Glamorgansh., Wales,

**Maestricht,** *cap.* Dutch prov. Limburg; earthenware, glass and textile factories; p. 54,012.

[illegible], *isl.* off cst. E. Africa, S. of Zanzibar.

[illegible]ing, *t.* in N. of C. of Good Hope, S. Africa; held for seven months against Boer siege by Baden-Powell, 1899–1900, p. *2,310.*

**Magdala,** hill *fort* Abyssinia, alt. 9,110 ft.; captured in 1868 by British under Napier.

**Magdeburg,** fort. *t.* on R. Elbe, Saxony, Pruss., one of the prin. indust. and commercl. centres in N. Germany; hdqrs. of Army corps; fine Gothic cathedral; p. (with subs. of Buckau and Neustadt), 285,856.

**Magelang,** *t.* in Java, nr. Samarang, impt. tr., p. 36,000.

**Magellan, Strait of,** between Tierra del Fuego and S. of cont. of America. The town of Punta Arenas (Sandy Point) is sometimes referred to as Magallanes, p. 27,500.

**Magenta,** *t.* nr. Milan, S. Italy, nr. the Ticino; great battle (Austrian defeat) 1859; p. 5,750.

**Magersfontein,** *t.* n Orange Free State, S. Africa. Here the Brit. under Lord Methuen were defeated by the Boers in 1899.

**Maggiore, Lago,** N. Italy and Switzerland, at foot of Lepontine Alps, area 82 sq. m., contains the Boromean isls., beautiful scenery.

**Mahabaleshwar,** *t.* and health *res.* W. Ghats, Bombay, India; alt. 4,500 ft., p. 4,750.

**Mahanadi,** *R.,* India, flows (520 m.) from Orissa to B. of Bengal. [colliery dist.; p. 14,500.

**Mahanoy,** *t.* in Schuylkill co., Penn., U.S.A.,

**Mahé,** French *settlement,* Madras, Malabar cst., India; p. 8,600.

**Mahi Kantha,** grp. of nat. *states,* Gujarat div., Bombay, India; total area 9,300 sq. m., p. (greatly decreased by famine) 260,000.

**Mahim,** *spt.* Thana dist., Bombay, India, p. 7,240.

**Maidenhead,** *mun. bor.* Berks, Eng., nr. R. Thames; p. *17,520.* [off Antrim cst., Ireland.

**Maidens, The,** *grp.* of dangerous rocks, nr. Larne,

**Maidstone,** *mun. bor.* and co. *t.* Kent, Eng., on R. Medway, in hop garden dist.; p. *42,259.*

**Malhar,** native *state* Bagelkhand Agency, Centrl. India, area 400 sq. m., p. 78,000; cap. M., t., p. 6,750.

**Maimansingh,** or **Mymensing,** dist. Dacca div., Bengal, India; area 6,287 sq. m., p. 3,900,000; cap. Naisarabad.

**Main R.,** Germany, affit. (304 m.) of R. Rhine.

**Main,** *fort* at mth. of E. Main R., Labrador.

**Maine,** N.E. *state* New Engld., U.S.A., area 29,895 sq. m., p. 814,000; mtns., with much forest land; cap. Augusta, chief port, Portland.

**Maine,** *R.* of France, formed by junctn. of Sarthe and Mayenne, flows 7 m. to R. Loire at Angers.

**Maine-et-Loire,** *dep.* of France, area 2,812 sq. m., p. 474,786; agr., vineyds; cap. Angers.

**Mainz,** or **Mayence,** *t.* on *R.* Rhine, Hesse-Darmstadt, Germany; fort., many manufs., large trade; p. 107,930.

**Maisons-Alfort,** S.E. *sub.* of Paris, France.

**Maisonneuve,** *c.* Quebec, Can., p. 20,000.

**Maitland,** E. and W., *t.*'s Cumberland co., N.S.W., on Hunter *R.*, p. (E.) 4,010, (W) 7,560.

**Majorca,** or **Mallorca.** (*See* Balearic Isls.)

**Mako,** or **Makovia,** industrl. *t.*, cap. co. Csanad, Hungary, nr. R. Maros, p. 35,000.

**Malabar,** *dist.* Madras, Brit. Ind., area 5,585 sq. m., p. 2,850,000; cap. Calicut.

**Malacca** (with **Nanning**), one of the Straits Settlements (Brit.) on W. coast Malay Pen.; area (about) 1,000 sq. m., p. 111,000; cap. M., 130 m. N.W. Singapore. The Strait of Malacca separates Sumatra from the Malay Pen.

**Maladetta,** with **Pic de Nethou,** highest pt. in the Pyrenees, alt. 11,168 ft.

**Malaga,** maritime *prov.* S. Spain, area 2,812 sq. m., p. 527,250; agr.; exports wine, fruits, olive oil, etc.; p. of city, 136,365.

**Malakoff,** *t.* S. by W. of Paris, close to fortifications, mainly residentl., p. 15,250.

**Malay Archipelago,** otherwise called the Indian or Eastern A.; extensive grp. of tropical isls., extending from the Nicobar Isls. in the B. of Bengal to the Solomon Isls. in the Pacific, a distance of 4,800 m., and including Sumatra, Java, Borneo, the Celebes, the Philippines, New Guinea, the Bismarck Arch., etc. (*See* separate entries.)

**Malay Peninsula,** the most S. portion of the continent of Asia, jutting out lozenge-shaped into the China Sea; area abt. 70,000 sq. m.

**Malay States, Federated,** group of states in the S. portion of the Malay Pen. They include Perak, Selangor, Negri Sembilan and Pahang; area 27,506 sq. m., p. 1,036,999.

**Malay States, Unfederated,** include Johore, Kedah, Perlis, Kelantan and Trengganu in the Malay Pen. (*See* under the various headings.)

**Malaysia** is that portion of the Malay Arch., lying W. of the Moluccas and Timor.

**Mal Bay,** an *inlet* of the Gaspé Pen., Quebec, Canada.

**Malchin,** old *t.* on the R. Peene, Mecklenburgh-Schwerin, Germany, p. 7,750.

**Malden,** *c.* nr. Boston, Mass., U.S.A., of which it is the mftg. sub., p. 49,103.

**Malden and Coombe,** *t.* nr. Kingston-on-Thames, Surrey, Eng., p. *23,412.*

**Maldive Isls.,** coral grp. in Indian Oc., 400 m. S.W. of Ceylon, p. 70,000 (Moslems), ruled by a Sultan subject to Brit. govt. of Ceylon.

**Maldon,** *mun. bor.* on R.'s Blackwater and Chelmer, Essex, Eng., p. *6,559*; also t. in gold-mining and farming dist. Victoria, 89 m. N.N.W. of Melbourne, p. 3,138.

**Maldonado,** *dep.* of Uruguay; also fort. spt. in same, 60 m. E. of Montevideo, p. 5,500.

**Malines.** (*See* Mechlin.)

**Malin Head,** *co.* Donegal, the most northerly pt. [in I.F.S.

**Malkapur,** *t.* in Buldana dist., Berar, India, p. 79,120.

**Mallanwan,** *t.* in Hardoi dist., Oudh, India, p. 10,750.

**Malleco,** *prov.* S. Chili, area 3,303 sq. m., p. 121,429; cap. Angol. [Kent, Eng., p. 2,570.

**Malling, West** (or Town), mkt. & nr. Maidstone,

**Mallow,** mkt. *t.* on R. Blackwater, co. Cork, I.F.S., p. 4,560.

**Mallwyd,** *urb. dist.*, Merioneth, Wales, p. *679.*

**Malmesbury,** *mun. bor.*, mkt. *t.* Wilts, Eng., on R. Avon, p. *2,334.*

**Malmo,** *spt.* on The Sound, S. Sweden, exports bacon, matches, etc.; thriving trade and industries, p. 113,558.

**Malo,** *t.* in Italy, nr. Vicenza, p.

**Malone,** *vil.* in iron ore dist., co., New York, U.S.A., p. 8,700.

**Malpas,** mkt. *t.* in Cheshire, Eng., p. 1,050.

**Malplaquet,** *vil.* in Avesnes arrond., dep. Nord, France, Marlborough's victory, 1709.

**Malstädt Burbach,** *t.* on R. Saar, Rhine prov., Pruss., large ironworks, p. 36,100.

**Malta,** *isl.* in the Mediterrn., 60 m. S. of Sicily, belongs to Britain, area 117 sq. m., p. 224,860 (with Gozo and Comino); cap. Valetta, strongly fortified, arsenal, dockyd., military stn.

**Malton,** *urb. dist.*, mkt. *t.* N.R. Yorks, Eng., on R. Derwent, p. *4,418.*

**Maluti Mtns.,** *range* in Basutoland, S. Africa, highest pt. Machacha, alt. 10,990 ft.

**Malvern,** or **Great Malvern,** *urb. dist.*, health *res.*, Worcestersh., Eng., at foot of Malvern Hills (highest pt., 1,395 ft.), scholastic centre, p. *15,632.*

**Malwa,** *prov.* Centrl. India, comprising States of Bhopal, Indore, Dhar, Jaora, Ratlam, Rajgarh, etc., formerly a Mogul kingdom.

**Malwan,** *t.* India, Ratnagiri dist., on fortfd. isl. Malabar cst., Bengal Pres., p. 18,750. [p. 8,250.

**Mammola,** *t.* in prov. Reggio di Calabria, Italy.

**Mammoth Cave,** Calaveras co., California; also Mammoth Caves, Kentucky, on Green R., Edmonson co., stalactite formations in avenues aggregating 150 m. long. [R. Beni.

**Mamore,** or **Rio Grande,** *R.*, Bolivia (500 m.), trib.

**Mam Soul** *mtn.* Ross and Inverness, Scotl., alt. 3,862 ft.

**Man, Isle of,** in Irish Sea, area 227 sq. m., p. 145,325, chf. t. Douglas; old cap., Castletown.

**Mana,** *R.*, French Guiana, S. America, flows 175 m. to Atlantic. [p. 135,000; cap. Puerto Viejo.

**Manabi,** *prov.*, Ecuador, on W. slope of the Andes,

**Manacor,** *t.* in isl. of Majorca, wine, p. 12,750.

**Managua,** *cap.* Nicaragua, Centl. America, nr. Lake M., 32 m. S.E. of Granada, gt. coffee tr., p. 23,000.

**Manaoag,** *t.* in prov. Pangasinan, Luzon, Philippine Isls., rice-growing dist., p. 17,740.

**Manaos,** *t.* at mth. of Rio Negro, Amazonas prov., Brazil, impt. tr. in fine rubber, p. 59,500.

**Manar Gulf,** betwn. S.E. India and Ceylon.

**Manasarowar,** sacred *L.*, Tibet, nr. source of R. Sutlej, S. of Mt. Kailas, at alt. 15,200 ft.

**Manche,** maritime dep. N.W. France, on Eng. Chan.; area 2,475 sq. m., p. 425,512. Agr. and dairying; cap. Saint Lô; Cherbourg (*q.v.*) largest town.

**Manchester,** *co. bor., c.* Lancash., Eng., on R. Irwell (which separates it from Salford), centre of the world's greatest mftg. dist., staple cotton; fine cathedral, town hall and other publ. bldgs.; p. *766,333.* Also c. on the R. Merrimac, Hillsboro' co., New Hampsh., U.S.A., at Amoskeag falls; many flourishing manuf., p. 78,384; also mftg. t. (chiefly textiles) of Hartford co., Connecticut, U.S.A., p. 18,370; also mftg. c. of Virginia, U.S.A., on James R., opp. Richmond, p. 11,120; also t. on Makoquetta R., Delaware co., Iowa, U.S.A., p. 3,450.

**Manchuria,** dependency of China, outside the Gt. Wall, including the provs. of Liao-tung, or Shenking, Kirin, and Hei-lung-chiang, area 379,150 sq. m., p. 19,290,000; scene of much of the fighting in the Russo-Japanese War. Manchuria having been claimed by Russia as her sphere of influence. Chf. t. Mukden; princ. pt. Newchang.

**Mandahata,** *isl.* on Narbuda R., Nimar dist., Central Provs., India, famous for its temple.

**Mandal,** most S. *t.* of Norway, on Skager Rack, 23 m. W.S.W. of Christiansand, p. 4,240.

**Mandalay,** *c.* on the Irawadi R., Upper Burma; formerly cap. of kingdom, p. 147,429. Old carved wooden palace, and many pagodas.

**Mandane,** *t.* on cst. Cebu, Philippine Isls., in rice-growing dist.; p. 15,760.

**Mandla,** *dist.* Jubbulpore div., Cent. Provs., India, among the Satpura hills; area 5,056 sq. m., p. 300,000 (decreased by famine); cap. M., t., on Nerbudda R., p. 5,085. [thriving tr.; p. 11,120.

**Manduria,** *t.* nr. Taranto, prov. Lecce, Italy,

**Mandvi,** *spt.* in nat. st. Cutch, Bombay, India, on Gulf of Cutch, p. 45,000.

**Manfalut,** *t.* on R. Nile, bordr. Upper Egypt; mpt. tr.; p. 13,600.

**Manfredonia,** fort. *spt.* prov. Foggia, Italy, nr. site of anc. Sipontum, p. 11,010.

**Mangaldan,** *t.* of Luzon, Philippine Isls.; rice culture; p. 17,100.

**Mangalore,** *spt.* and admin. hdqrs. S. Kanara dist., Madras, Brit. India; exports coffee, cocoa-nuts, rice, spices, etc.; p. 45,000. [13,100.

**Mangrol,** *spt.* Kathiawar, Bombay Pres., India, p.

**Manhattan,** *wat. pl.* Coney Isl., New York, U.S.A., Manhattan Isl., at mth. of Hudson R., area 22 sq. m., forms princ. part of N.Y. city (*q.v.*).

**Manihiki Isls.,** *grp.* in Pacific Oc., W. of Marquesas Isls. and E. of Union Isls.

**Manila,** *cap.* of Luzon, Philippine Isls.; flourishing spt., walled (Fort Santiago contains "Black Hole of Manila" dungeons); fine cathedral and many impt. bldgs.; great tr.; p. 283,613.

**Manipur,** native state, N.E. India; area 8,456 sq. m., p. 383,672. Brit. Resident murdered 1891; punitive expedition followed.

**Manissa,** *t.* nr. Smyrna, Asia Minor, at foot of Mt. Sipylum, an impt. commercl. centre; p. 38,750. Seat of the Byzantine impl. govt. in the 13th cent., and res. of Murad II., after abdicating the Turkish throne in the 15th cent.

**Manistee,** mftg. *c.* on L. Michigan, Mich., U.S.A., p. 7,800. [U.S.A., p. 5,000.

**Manistique,** *vil.* on M. R., nr. L. Michigan, Mich.,

**Manitoba,** wheat-growing *prov.* of Canada, N. of Minnesota and Dakota States of the U.S.A., contains most of L. s Winnipeg, Winnepegosis and Manitoba, area 252,732 sq. m., p. *699,841*. Cap. Winnipeg (*q.v.*). L. M. has an area of 1,711 sq. m.

**Manitoulin,** *isl.* in L. Huron, Can., 80 m. by 20 m.

**Manitowoc,** *c.* Wisconsin, U.S.A., on L. Michigan, large tr., p. 23,500 [farming dist.; p. 12,460.

**Mankato,** *c.* in Blue Earth co., Minnesota, U.S.A.;

**Mannargudi,** *t.* in Tanjore dist., India, thriving tr.; p. 21,350.

**Mannheim,** *t.* on R. Rhine, Baden, Germany, extens. tr. and manuf.; grand-ducal castle; p. 229,576.

**Manningtree,** mkt. *t.* Essex, Eng., p. 1,150.

**Manopello,** *t.* prov. Chieti, Italy, p. 4,810.

**Manorhamilton,** *t.* nr. Sligo, co. Leitrim, I.F.S., p. 1,020. [and other textiles; p. 27,250.

**Manresa,** *t.* in Barcelona prov., Spain; woollen

**Mans, Le.** (*See* **Le Mans.**) [of M., p. 2,780.

**Mansfield,** *t.* in Saxony, Pruss., cap. of former prov.

**Mansfield,** *mun. bor.*, boot mftg. *t.* in Notts, England, on border of Sherwood Forest, p. *46,075*; also agr. and imp. mftg. c. of Richland co., Ohio, U.S.A., p. 34,000.

**Mansfield Woodhouse,** *urb. dist.*, Notts, Eng., p. *13,707*.

**Mansurah,** *cap.* Dakahlieh prov., Lower Egypt; cotton factories; p. 49,238.

**Mantes,** *t.* in Seine-et-Oise dep., France, opp. Limay on R. Seine; cathedral, artif. incubator and musical inst. manuf.; p. 8,850. [ft.

**Mantiquira,** *mtn. range* in Brazil, highest pk., 6,000

**Mantua,** *prov.* Lombardy, Italy, area 903 sq. m., p. 36,410; cap. M., fort. t. on R. Mincio; ironworks; p. 34,507. Andreas Hofer, champion of Tyrolese liberty, shot here by the French, 1810.

**Manytch,** *R.* U.S.S.R., trib. (300 m.) of R. Don.

**Manzanillo,** commercl. *c.* of Cuba, Santiago prov.; exports sugar, tobacco, and beeswax; last battle of Spanish war fought here; p. 23,750.

**Manzaranes,** *t.* in Spain, prov. Ciudad Real; anc. castle, chalk and brick works, tr. in wine, saffron, etc.; also name of Spanish R., which joins the Henares at Madrid.

**Mar,** anc. *dist.* Aberdeen co., Scotl., between R.'s Don and Dee.

**Maracay,** *t.* in Aragua State, Venezuela, p. 12,500.

**Maracaybo,** *c.* cap. of Zulia state, Venezuela, on L. M.; great coffee, cocoa, and hide exports; p. 105,000. G. of Maracaybo is the name given to an inlet of the Caribbean S., between Colombia and Venezuela.

**Marajo,** *isl.* at mouth of the Amazon and Paros R.'s, Brazil; area 173 sq. m., p. 26,200.

**Maramaros-Sziget,** *t.* in Rumania, timber industry and scholastic centre; p. 18,950.

**Maranhão,** *state* of N.E. Brazil, on the Atlantic coast; area 177,515 sq. m., p. 853,050; gr. tr.; cap. San Luis.

**Marans,** *t.* (industrl.) in dep. Charente-Inférieure.

Athens; Miltiades won his gt. victory over the Persian host, 490 B.C.

**Marbella,** *spt.* in prov. Malaga, Spain, on the Mediterranean, old castle, porcelain manuf., fish, raisins, figs, and cork exported, p. 10,470.

**Marblehead,** port on Massachusetts Bay, Essex co., Mass., U.S.A., summer rest. for Boston, shoe factories, p. 8,750.

**Marburg,** garrison *t.* in Styria, Jugo-Slavia, fruit-growing dist., p. 25,200; also t. on R. Lahn, Hesse-Nassau, Pruss., university and manuf., p. 20,150.

**Marcaria,** industrl. *t.* on R. Oglio, Mantua, Italy, p. 9,010.

**March,** *urb. dist.*, mkt. *t.* in Cambridgesh., Eng., on R. Nen, in the Isle of Ely dist., p. *11,276*.

**Marchena,** mftg. *t.* on the Guadalquivir, prov. Seville, Spain, p. 14,750.

**Marches, The,** an Italian *dep.* on the Adriatic btwn. Abruzzi and Emilia, area 3,741 sq. m., p. 1,133,265, embracing provs. of Marcerata, Ascoli-Piceno, Ancona, and Pesaro and Urbino (*q.v.*).

**Marchienne-au-Pont,** *t.* prov. Hainault, Belgium, on R. Sambre, flourishing tr., p. 21,020.

**Mardin,** fort. *t.* Armenia, Diarbekr vilayet, p. 12,500, half Christians, attacked during Armenian massacres, 1895.

**Maree, Loch,** beautiful Scottish lake in Gairloch par., West Ross, skirted by mtns. and studded with isls., length 12½ m., breadth 2½ m. at widest.

**Mareg-en-Bareuil,** industrl. *t.* dep. Nord, nr. Lille, France, p. 10,200.

**Marengo,** *vil.* in Alessandria prov., Italy; Napoleon's great battle, 1800, p. 3,310; also t. on M. Creek, Monteagle co., N.S.W., p. 1,863.

**Mareotis,** *L.* in Lower Egypt, S.E. of Alexandria (50 m. by 20 m.), the modern Birket-et-Marieut.

**Margam,** *urb. dist.*, *t.* in Glamorgansh., Wales, p. 17,786.

**Margar,** industrl. *t.* nr. Panjun, Goa, India, p. 13,020.

**Margarita,** *isl.* of Venezuela, in the Caribbean S., pearl fisheries, area 450 sq. m., p. 40,000, cap. Asuncion.

**Margate,** *mun. bor.* and *seaside res.* on coast of Kent, Eng., W. of the N. Foreland, in the Isle of Thanet, res. p. *31,312*.

**Margilhan,** *cap.* of the former prov. Ferghana, Asiatic Russ., flourishing tr., p. 30,000.

**Mariana,** *c.* Minas Geraes prov., Brazil, gd. tr., p. 8,020.

**Marianne Isls.** (*See* **Ladrones.**)

**Marico,** *dist.* (extreme W.) Transvaal, S. Africa.

**Marienbad,** *wat. pl.* Bohemia, Czecho-Slov.; p. 4,860.

**Marienberg,** *t.* in Zwickau circle, Saxony, Germany, wool, flax, and lace industries, also silver mines, p. 7,730.

**Marienburg-Kalthof,** *t.* on the Nogat R., nr. Danzig, famous castle fortress, busy mod. manuf., p. 1,791.

**Marienwerder,** *t.* nr. the R. Vistula and Marienburg, West Pruss., old cathedral, ironworks, etc., p. 11,870.

**Marietta,** *t.* at mth. of R. Muskingum, Washington co., Ohio, U.S.A., sawmills, foundries, etc., p. 14,200.

**Marigliano,** industrl. *t.* nr. Nola, Caserta prov., Italy, p. 12,760. [and mining centre, p. 10,460.

**Marinsk,** *t.* in Tomsk govt., Siberia; agr. dist.

**Marinee,** *t.* nr. Palermo, Sicily, p. (industrl.) 11,030.

**Marinette,** *vil.* on Green Bay, L. Michigan, Wisconsin, U.S.A.; large L. commerce, p. 13,750

**Marion,** *c.* cap. of Marion co., Centl. Ohio, U.S.A.; agr. imp. manuf., p. 31,250; also c. in nat. gas region, Grant co., Indiana, U.S.A., p. 24,500.

**Mariopol,** spt. *t.* on Sea of Azov, Yekaterinoslav, Ukraine, p. 22,200.

**Maritime Alps,** *ranges* extending from Monte Viso to G. of Genoa, along the border of France and Italy.

**Maritza,** *R.*, Thrace, flows past Philippopolis and Adrianople (260 m.) to the Ægean Sea.

**Markelo,** *t.* (industrl.) nr. Deventer, Overyssel, Holland, p. 4,720.

**Market Deeping,** *t.* on R. Welland, in the Lincolnsh. fens, Eng., p. 1,010.

**Market Drayton,** *urb. dist.*, *t.* on R. Terne, Shropsh., Eng., p. *4,749*.

**Market Harborough,** *urb. dist.*, mftg. *t.* on Grand Union Canal, Leicestersh., Eng., p. *9,312*.

**Market Rasen,** *urb. dist.*, *t.* in agr. centre, N.E. Lincolnsh., Eng., p. *2,048*.

**Market Weighton,** *t.* on edge of N.E. Yorks. Wolds, nr. Selby, Eng., p. 4,400.

**Markirch,** *t.* nr. Schelttstadt, Alsace, France; manuf., p. 13,720.

**Marlboro,** *c.* Middlesex co., Mass., U.S.A.; boot factories, p. 15,028.

**Marlborough,** *mun. bor., t.* Wilts, Eng.; commercl. and educational (Marlborough College); centre of agr. dist., p. *3,492*; Marlborough Downs is an adjacent ridge of pastoral hills, highest pt., Milk Hill, 976 ft.

**Marlborough,** prov. *dist.* New Zealand (N.E. pt. S. isl.) area, 4,225 sq. m., p. 17,788.

**Marlow** (or **Great Marlow**), *urb. dist.*, mkt. *t.* on R. Thames, Bucks, Eng., p. *5,087*.

**Marmande,** old *t.* nr. Agen, dep. Lot-et-Garonne, France; brandy and liqueur manuf., p. 9,270.

**Marmolada,** highest *pt.* of the Dolomite Alps, nr. the S. Tyrol, alt. 11,045 ft.

**Marmora, Sea of** (170 m. by 50), lies betwn. Asia and Europe, communicating by the Strait of Bosphorus with the Black Sea, and by the Dardanelles with the Ægean; the anc. Propontis.

**Marne,** *dep.* of N.E. France, in the old prov. of Champagne; area 3,168 sq. m.; wine-growing (of the highest quality) and agr. are the staple industries, but textile factories flourish round Rheims, p. 366,734; cap. Châlons-sur-Marne; the R. Marne flows (210 m.) to the Seine above Paris.

**Marne, Haute.** (*See* **Haute-Marne.**)

**Maromme,** *vil.* nr. Rouen, prov. Seine-Inférieure, France, p. 3,250. [(dist.) 5,878.

**Marong,** mining *t.* in Bendigo co., Victoria, p.

**Maros R.,** Hungary, flows (400 m.) from Transylvania to the R. Theiss, nr. Szedin.

**Maros Vásárhely,** *t.* of Rumania on R. Maros; famous old fort, with Gothic Calvinist cathedral, where in 1571 religious liberty was promulgated for the first time in Europe. Protestant college, good tr.; p. 21,200.

**Marple,** *urb. dist.*, industrl. *t.* on R. Goyt, Cheshire, Eng., p. *7,390*.

**Marquesas,** or **Mendani Isls.,** *grp.* in the Pacific Oc., n. of the Low Arch.; under French protection; area 480 sq. m., p. 3,424; Nukahiva and Hivaoa are the largest of the grp.

**Marquette,** *vil.* nr. Lille, Nord dep., France, p. 3,870; also c. on Marquette Harbr., L. Superior, Michigan, U.S.A., in the world's richest iron region, p. 15,000.

**Marradi,** *t.* nr. Florence, Italy, p. (industrl.) 8,710.

**Marsala,** *spt.* (fort.), Sicily, nr. Trapani, Italy, centre of famous wine-producing dist.; p. 50,200.

**Marsciano,** industrl. *t.* nr. Perugia, Italy, p. 12,860.

**Marsden,** *urb. dist.*, on R. Colne, W.R. Yorks, Eng.; p. *5,720*.

**Marseilles,** *c.* and *spt.* of France, on the Mediterrn.; cap. of Bouches-du-Rhone dep.; extensive expts. wine, silk, woollens, cottons, fruit, etc., flourishing industries, capacious docks, fine new Byzantine cathedral; p. 586,341.

**Marshall,** *c.* of Harrison co., Texas, U.S.A., mftg. centre in agr. dist., p. 14,271; also c. on the high prairie nr. Salt Fork of Lamine R., Saline co., Missouri, U.S.A., p. 8,250.

**Marshall Isls.,** grp. of atolls in N. Pacific Ocn., total area, 150 sq. m., p. 9,000. Largest isl. and seat of govt., Jaluit.

**Marshalltown,** *cap.* of Marshall co. on the Iowa R., Iowa, U.S.A.; mftg. and tr. t. in farming dist.; p. 17,500.

**Marshfield** *t.* in Wood co., Wisconsin, U.S.A.; mftg. centre in timber region; p. 8,800.

**Marsivan,** *t.* nr. Amasia, Asia Minor, in Sivas vilayet at foot of Tavshan Dagh; good tr.; also missionary centre; p. 31,000.

**Marston, Long,** *par.* nr. York City, Eng., close by Marston Moor, where Cromwell defeated Prince Rupert in 1644.

**Martaban,** sm. *t.* and former fortress opp. Maulmain, Lower Burma, on R. Salwin; the mediæval cap. of Pegu; it was stormed and taken by the British in 1825 and again in 1852. The G. of Martaban is an arm of the Bay of Bengal, W. of Burma.

**Martha Vineyard,** *isl.* and summer *res.* (21 m. long), 4 m. from cst. of Mass., U.S.A., separated from the mainland by Vineyard Sound.

**Martigues,** *t.* nr. Marseilles, Bouches-du-Rhône dep., France; formerly the cap. of principality, p. 6,610.

**Martina,** *t.* nr. Taranto, S.E.-most in Italy, industrl. and trdg., p. 21,180.

**Martinique,** one of the French W. India isls., in the Antilles grp.; area 390 sq. m.; devastated by volcanic eruption in 1902. The p. of the isl. at the time of the terrible calamity was about 204,000, now abt. 193,000.

**Martinsburg,** *c.* in the Shenandoah valley, Virginia, U.S.A.; ry. works; p. 15,000.

**Martin's Ferry,** iron and steel mftg. *t.* Belmont co., Ohio, U.S.A., on the Ohio R.; p. 14,750.

**Martos,** *t.* in Jaen prov., Spain; sulphur springs and baths; farming region; p. 18,120.

**Maryborough,** mkt. *t.* Queen's co., I.F.S., p. 2,860; also t. in agr. dist. nr. Gympie goldfield, Maroh co., Queensland, p. 11,626; also bor., co. Talbot, Victoria; railway centre and works, p. 4,747.

**Maryburgh,** former name of Fort William, Inverness, Scotl.; also vil. on R. Conon, co. Ross and Cromarty, Scotland.

**Maryland,** middle *state*, U.S.A., bounded by Virginia, Delaware, Pennsylvania, and the Atlantic Oc., area 9,941 sq. m., p. 1,648,000. Crossed by the Allegheny Mts.; cap. Annapolis, largest c. Baltimore. Industries: agr., tobacco-growing, mining, manuf., etc.

**Marylebone,** *met. bor.*, Middlesex co., Eng., N.W. dist. London, p. *97,620*.

**Maryport,** *urb. dist.*, mkt. *t.* and *spt.* Cumberland, Eng.; on the Irish Sea, p. *10,182*.

**Marysville,** *t.* in fruit-growing dist., Yuba co., California, U.S.A., p. 5,770.

**Masai Land,** *country* in E. Equatorial Africa.

**Mascali,** industrl. *t.* in Oran dep., Algeria; wine-producing; p. 23,000.

**Mascarene Isls.,** collective name of Mauritius, Rodriguez, and Réunion in the Indian Ocean.

**Masena,** *t.* nr. L. Chad and the Cameroon border, Cent. Sudan, Africa, cap. of Bhagirmi, p. 10,100.

**Masham,** *urb. dist.*, mkt. *t.* on R. Ure, N.R. Yorks, Eng.; p. *1,995*.

**Mashonaland,** gold-bearing *dist.* of Africa between the Zambesi and Matabeleland, annexed by Britain in 1888, and now forming part of South Rhodesia; cap. Salisbury. [by 2 to 4 m.

**Mask, Lough,** co.'s Mayo and Galway, I.F.S., 12 m.

**Mason City,** *cap.* Cerro Gordo co., Iowa, U.S.A., on the Shell Rock R., in rich agr. dist., p. 23,500.

**Massa,** or **Massa e Carrara,** *t.* nr. the Mediterranean coast, Tuscany, Italy; extensive marble quarries, p. 33,299.

**Massachusetts,** one of the New England *states* of U.S.A., bordering on the Atlantic, area 8,029 sq. m., traversed by Connecticut R.; has thriving mftg. trade and fisheries, and many excellent educational institutions, p. 4,377,000; cap. Boston (*q.v.*).

**Massafra,** *t.* in prov. Lecce, Italy, p. (industrl.) 11,470. [Tuscarawas R., p. 27,250.

**Massillon,** mftg. *c.* of Stark co., Ohio, U.S.A., on

**Massowah,** *t., isl.* and Italian *settlement* in Eritrea, on W. coast of Red Sea; chief port for Abyssinia, p. (town only) 2,645.

**Masterton,** *t.* in New Zealand (N. Island), 71 m. N.E. Wellington, p. 2,520.

**Masulipatam,** or **Bandar,** *spt.* Kistna dist., Madras, India, on the Coromandel coast; cotton and chintz manuf., p. 40,000.

**Matabeleland,** *terr.* S. Africa, in Limpopo and Zambesi basin, now part of S. Rhodesia.

**Matagalpa,** industrl. *t.* Nicaragua, p. 8,000.

**Matamoros,** *t.* on Rio Grande, Tamaulipas State, Mexico, opposite Brownsville in Texas; gd. tr.; p. 15,120.

**Matanzas,** commercl. *c.* on N. coast, Cuba; many manufs.; bombarded by American warships in 1898; p. 71,500. [industries; p. 20,750.

**Mataro,** cst. *c.* nr. Barcelona, Spain; thriving

**Matera,** *t.* nr. Potenza, Italy; gd. tr., p. 17,860.

**Matlocks, The,** *urb. dist.*, *t.* on R. Derwent, Derbysh., Eng., famous for its hydropathics and beautiful scenery; p. *10,599*

**Matsumoto,** *t.* Japan, 110 m. N.W. of Tokyo, p. 50,356.

**Matsuyama,** *t.* in prov. Iyo, Honshiu, Japan, p. 58,346.

**Matsuye,** *t.* Honshiu, Japan, p. 38,000.

**Matterhorn,** German name for Mt. Cervin, in the Pennine Alps; alt. 14,771 ft.

**Matto Grosso,** *prov.* Brazil, area 532,709 sq. m.; great mini. wealth, iron, gold, diamond, rock-salt, etc.; cattle-ranching; p. 274,138; cap. Cuyaba.

**Mattoon,** *c.* Coles co., Illinois, U.S.A.; tr. centre of farming dist.; p. 14,750.

**Mature,** *spt.* on S. coast Ceylon; large tr., p. 19,760.
**Maturin,** *t.* (commcl.) in Venezuela, 90 m. S.E. Cumana; p. 15,465.
**Maubeuge,** fort. *t.* in Aresnes, Nord dep., France; glassworks; p. 23,980.
**Mauchline,** *t.* nr. Kilmarnock, Ayrsh., Scotl., p. *2,484.*
**Maui,** one of the Sandwich Isls.; area 728 sq. m., 25 m. W. of Hawaii; chf. t. Lahaina.
**Maulmain,** or **Moulmein,** *port* on R. Salwin, Amherst dist., Lower Burma; p. 57,582.
**Maumee,** *R.* Indiana, U.S.A., flows (180 m.) to L. Erie, in Ohio.
**Mauna Kea** (alt. 13,840 ft.) and **Mauna Loa** (alt. 13,650 ft.), *volcanoes* of Hawaii, Sandwich Isls.
**Mauritius, or Isle of France,** Brit. isl. col., Indian Oc.; area 720 sq. m.; p. 376,108 (two-thirds Hindu coolies); cap. Port Louis; chf. product, sugar.
**Mawddach R.,** and estuary (19 m.), Merionethsh., Wales.
**Maxwelltown,** on R. Nith, Kircudbrightsh., Scotl.; part of parly. burgh of Dumfries, p. 6,230.
**May, Isle of,** in F. of Forth, co. Fife, Scotl., lighthouse, p. 22. [in coffee, p. 19,069.
**Mayaguez,** *spt.* Porto Rico, West Indies; gd. tr.
**Mayavaram,** *t.* Tanjore dist., Madras, India, on R. Kaveri; p. 25,010.
**Maybole,** industl., *t.* in Ayrshire; ancient cap. of Carrick; burgh of barony since 1516; p. *6,180.*
**Mayence.** (*See* Mainz.)
**Mayenne,** *dep.* N.W. France, area 1,987 sq. m., p. 262,447. Chiefly pastoral and agr.; cap., Laval.
**Mayenne R.,** of Mayenne and Maine-et-Loire *deps.*, France; (flows 125 m.) to join the Sarthe. On its bank is the *t.* of Mayenne; ticking manuf., p. 10,246. [U.S.A., p. 7,200.
**Maynard,** *t.* nr. Concord, Middlesex co., Mass.,
**Maynooth,** *t.* in co. Kildare, I.F.S., Roman Cath. Coll., p. 1,330.
**Mayo,** maritime *co.* in prov. Connaught, I.F.S., area 2,126 sq. m.; broken coast, much barren mtn. land, many large lakes; industries, agr. and fishery; p. 191,920, co. t. Castlebar.
**Mayosodie,** *c.* on the Ohio R., Mason co., Kentucky, U.S.A.; mftg. centre in agr. region; p. 7,020.
**Mayotte,** *isl.* of the Comoro grp., Mozambique Chan., p. 97,000; French possn. since 1843.
**Mazagan,** *spt.* Morocco, 110 m. N. of Marrakesh (or Morocco c.); grain and wool tr.; p. 21,495.
**Mazamet,** *t.* nr. Castres, dep. Tarn, France; tanneries, leather wks., etc.; p. 10,510.
**Mazarron,** *t.* nr. Cartagena, prov. Spain; metal works; p. 21,940.
**Mazatlan,** *port* of California, Sinaloa, Mexico; impt. tr.; p. 32,000.
**Mazzara,** industrl. *t.* nr. Trapani, Sicily; cathedral and ruined castle; p. 14,150.
**Mazzarino,** *t.* nr. Caltanisetta, Sicily; manuf., p. 14,090.
**Meadville,** *c.* of Crawford co., Penn., U.S.A., on French Creek; manuf., and seat of Allegheny Col.; p. 16,750.
**Mealfourvonnie,** *mtn.* on side of Loch Ness, Scotl., alt. 2,284 ft.
**Meath,** maritime *co.*, Leinster prov., Ireland; area 906 sq. m., mainly pastoral land; p. 64,750; co. t. Trim.
**Meaux,** *t.* on R. Marne, dep. Seine-et-Marne, France; great wool mart; p. 12,630.
**Mecca,** or **Mekka,** holy *c.* of Arabia, 65 m. E. Jeddah. Centre of Islamism, and birthplace of Mahomet, annually visited by many thousands of pilgrims; res. p. 70,000. [U.S.A., p. 7,900.
**Mechanicsville,** *t.* on the Hudson R., New York,
**Mechlin, or Malines,** *c.* on R. Dyle, Belgium; chf. industries, cabinet-mkg., carpentry, chair-mkg., etc.; p. 60,118.
**Mecklenburg-Schwerin,** former *grand-duchy* of Germany, bordering on the Baltic, area 5,068 sq. m., p. 657,330; cap. Schwerin.
**Mecklenburg-Strelitz,** former *grand-duchy* of Germany, S.E. of Schwerin, area 1,131 sq. m., p. 106,394; cap. Neu Strelitz.
**Medellin,** *c.* cap. Antioquia State, Colombia, S. America, t. exports coffee, hides, and precious metals; p. 121,500.
**Medford,** *t.* nr. Boston, Middlesex co., Mass., U.S.A.; mftg. and educational; p. 61,500.
**Medicine Bow Mtns.,** Colorado and Wyoming, U.S.A.
**Medicine Hat,** *t.* of Alberta, on S. Saskatchewan R. and C. P. Ry., p. 9,300.
**Medina R.,** Isle of Wight, flows to the Solent; also *c.* of Arabia, 248 m. N.W. of Mecca, contains tomb of Mahomet in mag. mosque, second holy c. of Islam; p. under 10,000; also c. of Orleans co., New York, U.S.A., on the Erie Canal, sandstone quarries, p. 6,075.
**Medina-Sidonia,** *t.* in Cadiz prov., Spain; gt. tr. in agr. produce, olives, etc.; p. 11,750. Here is ancestral pal. of Medina.
**Medinet-el-Fayoum,** *t.* on the Bahr Yusuf, Middle Egypt; tr. centre of rich agr. dist., many mosques; p. 44,400.
**Mediterranean,** the great inland *sea*—almost tideless—dividing Europe from Africa, and communicating with the Atlantic Oc. by the St. of Gibraltar and the Black S. by the Dardanelles, S. of Marmora, and the Bosphorus, Eastern part touches Asia in the Levant. Total length W. to E. 2,200 m.; greatest width of sea proper about 700 m.; water area 900,000 sq. m.; greatest ascertained depth 14,695 ft. Contains many isls.; Corsica, Sardinia, Sicily, Crete, Cyprus, and the Balearic, Lipari, Maltese, and Ionian grps., besides the Grecian arch., being the chief. (*See* sep. articles.)
**Medjmaa,** fort. *t.* in Nejd, Arabia, p. (abt.) 18,500.
**Médoc,** old *dist.* of France, extending along R. Garonne (abt. 48 m.), noted for its wines; now part of Gironde dep.
**Medvieditza,** *R.* of U.S.S.R. trib.(330 m.) of the Don.
**Medway,** *R.* of Kent, Eng., flows from Surrey and Sussex (70 m.), past Maidstone and Rochester, to the Thames.
**Meean Meer,** *cantonment* of the Punjab, India, nr. Lahore, p. 18,900. [cloth manuf.; p. 21,927.
**Meerane,** *t.* in Saxony, Germany, nr. Zwickau;
**Meerut,** *div.* (area 11,326 sq. m.), *dist.* (area 2,370 sq. m.), and *c.* (p. 122,567) of United Provs., Brit. India, chfly. in the Doab tract between the Ganges and Jumna R.'s; M. c. is an impt. military stn., and was the scene of the outbreak of the Sepoy Mutiny in 1857. The entire div. contains a p. of 6,000,000.
**Megara,** *t.* nr. Athens, Attica, Greece, on the site of anc. c. same name, p. 5,480.
**Mehallet-el-Kebir,** *t.* nr. Cairo, Lower Egypt, p. 10,250.
**Mehun,** *t.* nr. Bourges, prov. Cher, France; ruined castle, p. 6,500.
**Meiderich,** *t.* in the Rhine prov., Pruss., nr. Ruhrort iron and steel works; p. 37,200.
**Meiktila,** *div.* (area 10,845 sq. m.) and *dist.* (area 2,178 sq. m.) of Upper Burma in the dry or so-called rainless zone; total p. about 1,000,000.
**Meiningen,** *cap.* Saxe-Meiningen, Germany, on R. Werra, amid dense forest; castle, ducal theatre, arsenal; p. 15,780.
**Meissen,** *t.* on the R. Elbe, Saxony, nr. Dresden; royal porcelain factory; p. 37,493.
**Me Kong,** or **Cambodia,** *R.* of S.E. Asia, rising in the Tibetan highlands, and flowing 2,800 m. to the China S. through Yunan, Burma, Siam, Cambodia, and French Cochin-China.
**Mekran,** maritime *prov.* Baluchistan, area (about) 100,000 sq. m., p. 200,100; cap. Kedje.
**Melanesia,** a comprehensive name sometimes applied to Australasia, because of the colour of the aborigines.
**Melbourne,** cap. *c.* of Victoria, on the Yarra-Yarra R. second most populous *c.* in Australia, many splendid bldgs., gt. commercl. and industrl. importance; p. 795,000.
**Melegnano,** or **Marignano,** *t.* in prov. Milan, Lombardy, Italy, textile manuf., battles 1515 and 1850, an anc. stronghold, p. 6,350.
**Melfi,** *t.* in prov. Potenza, Italy, noted cathedl., made Norman cap. of Apulia, 1041, p. 13,360.
**Melilla,** *spt.* Morocco, fortfd. Spanish settlement and convict stn., p. 42,592.
**Melinda,** *spt.* and *tr. stn.* on N. Zanzibar cst., E. Africa, p. 11,500.
**Melitopol,** *t.* in the Crimea, old govt. Taurida, p. 17,340.
**Melksham,** *urb. dist.*, mkt. *t.* on R. Avon, Wilts, Eng., p. *3,881.*
**Melrose,** mkt. *t.* co Roxburgh, Scotl., on R. Tweed, ruined abbey nr. Abbotsford, mansion built by Sir Walter Scott, p. *4,518*; also c. same name in Middlesex co., Mass., U.S.A., suburban to Boston, p. 23,500.
**Meltham,** *urb. dist.*, W.R. Yorks, Eng., p. *5,051.*

**Melton, *par.*** on R. Deben, Suffolk, Eng., p. 1,462; also *t.* nr. Melbourne, Victoria, p. 1,863.

**Melton Mowbray, *urb. dist.*,** mkt. *t.* Leicestersh., Eng., ironworks., famous pork pies, hunting dist., p. *10,437.*

**Melun, *t.*** on R. Seine, dep. Seine-et-Marne, France, the anc. Melodunum, p. 12,870.

**Melville,** B. and M. *isl.*, N. cst. Australia; Melville Isl. and M. Sound, Arctic America; Melville Penin., N. Canada, S. of Baffinland.

**Memel, *spt.*** and timber export *centre*, formerly German, now under League of Nations., nr. N. extrem. Kurisches Haff, p. 140,746.

**Memmingen, *t.*** in Swabia, Bavaria, formerly a free imperial city, p. 10,520.

**Memphis,** anc. Egyptn. *c.* on R. Nile, 10 m. S. Cairo, nr. are the ruins of Sakkara; also flourishing mftg. and cotton export c. of Tennessee, U.S.A., on R. Mississippi, p. 262,000.

**Menada,** Dutch *t.* on cst. of Celebes, cap. of residency, p. 6,450.

**Menai Bridge, *urb. dist.*,** Anglesey, Wales, p. *1,675.*

**Menai Strait** (14 m. long) separates Isle of Anglesey from Carnarvonsh., Wales, crossed by Britannia ry. and Menai suspension bridges.

**Menam, *R.*,** flowing (800 m.) from Yun-nan, China, to G. of Siam.

**Menasha,** industrl. *vil.* on Winnebago L., Wisconsin, U.S.A., p. 7,214.

**Mende, *t.*** on R. Lot, Lozere dep. France, p. 8,210; famous for serge mftg.

**Mender, *R.*** (200 m.) of Asia Minor; the anc. Mæander, falls into Ægean S. [p. 12,030.

**Mendhawal, *t.*** nr. Basti, United Provs., India;

**Mendip Hills,** Somerset, Eng.; range 20 m. long, highest pt., 1,067 ft. [nr. Chicago; p. 4,000.

**Mendota,** mftg. *c.* of La Salle co., Illinois, U.S.A.,

**Mendoza, *t.*** (p. 70,000) and prov. (area 56,502 sq. m., p. 397,000) in W. of Argentine Repub. Wheat growg. and stock raising; cap. M., in wine producing dist., p. 58,790.

**Menfi,** industrl. *t.* nr. Sciacca, Sicily, prov. Girgenti; p. 11,670.

**Mengtze,** dist. *c.* of Yun-nan prov., China, ruined in Tai-ping rebellion, tin and opium tr., p. 81,453.

**Menin, *t.*** on R. Lys., W. Flanders, Belgium, flourishing tobacco tr., p. 13,470.

**Menominee, *c.*** at mth. of M. R., M. co., Michigan, U.S.A., timber and iron, p. 10,450.

**Menomonie, *c.*** on Red Cedar R., Wisconsin, U.S.A., grain and timber, p. 5,104.

**Menshieh, *t.*** on R. Nile, nr. Girgeh, Upper Egypt, tr. centre, p. 11,245.

**Menteith,** *L.* (1¼ m. by 1¼ m.) and *dist.* S.W. Perthsh., Scotl., betwn. R.'s Forth and Teith.

**Mentone,** health *res.* nr. Nice on G. of Genoa, dep. Alpes-Maritimes, France, bridge on St. Louis (1¼ m E.) crosses the torrent separatg. Italy from France; scents and flower essences distilled, fruit-tr., noted bone-caves, p. 16,230.

**Menzelinsk, *t.*** in old Ufa govt., U.S.S.R., with one of the most important fairs in S. Ural regn. for cattle, hides, tea, etc., p. 10,250.

**Meppel,** mftg. *t.* nr. Zuyder Zee, Holland, in Drenthe prov., p. 10,750.

**Mequinez, *c.*** of Morocco, nr. Fez, one of the Sultan's residences, p. 36,592.

**Meran, *t.*** nr. Botzen, in the Tyrol, Italy, favourite health resort (annually visited by abt. 10,000 invalids), p. abt. 18,100.

**Merced, *R.*** of California, U.S.A., flows to San Joaquin through the Yosemite Valley; also t. in California, cap. M. co., p. 3,750.

**Mercedes, *t.*** in Argentina, in San Luis prov., p. 25,000; also t. on R. Negro, Uruguay, p. 16,000.

**Meredith, *t.*** in Victoria, in mining dist. nr. Ballarat, p. 2,600.

**Merend,** impt. tr. *t.* of Persia, prov. Azerbaijan, p. 10,500.

**Mergentheim,** or **Marienthal,** *t.* on R. Tauber, Würtemberg; long the seat of the Grand Master of the Teutonic Order; p. 4,750.

**Mergui,** S.-most dist. Lower Burma, in Tenaasserim div., on B. of Bengal; area 9,789 sq. m., p. 92,000; cap. Mergui, good coast tr., p. 11,200; M. Arch. is a large isl. group off the coast of the dist.

**Merida, *t.*** in Badajos prov., Spain; flourishing tr. in agr. prod.; p. 11,670; also *c.* in Venezuela, cap. Los Andes, State p. 16,200; also t. in Mexico, cap. Yucatan prov., on site of an old Maya city; cathedral, great tr., p. 80,000.

**Meriden, *c.*** New Haven co., Connecticut, U.S.A.; hardware manuf.; p. 39,500.

**Meridian, *t.*** in cotton-growing region, Lauderdale co., Mississippi, U.S.A., p. 32,750. [p. 2,000.

**Merino, *t.*** in Normandy co., Victoria, in agr. dist.,

**Merioneth,** maritime *co.* N. Wales; area 602 sq. m.; pastoral and mining; p. *43,198*; co. t. Dolgelly *(q.v.).*

**Meroë,** or **Merawe, Isle of,** Nubia, betwn. Atbara and the Nile; ruins of and cap. of Ethiopia on R. Nile.

**Merom, Waters of,** *L.* (4 m. long.), in Palestine, N. of the S. of Galilee, traversed by R. Jordan; where Joshua defeated Jabin, King of Hazor; the mod. Bahr-el-Huleh. [timber tr., p. 8,500.

**Merrill,** *c.* Lincoln co., Wisconsin, U.S.A., on W.R.;

**Merrimac R.,** New Hampshire and Mass., U.S.A.; rises in White Mtns. and flows to Newbury Port; on its banks, in Essex co., Mass., is the t. of M., p. 3,750.

**Merscheid,** mftg. *t.* in Rhenish Pruss., nr. Solingen (now generally known as Ohligs), p. 15,820.

**Mersea,** *isl.* (4½ m. by 2 m.) at mth. of R. Colne, Essex, Eng.

**Merseburg,** *t.* on R. Saale, Saxony, Pruss.; cathdl. and castle; noted for beer, p. 21,230.

**Mersey,** *R.* of Lancs. and Cheshire, Eng.; length 68 m., enters Irish S. by fine estuary at Liverpool.

**Mersina,** *spt.* S. cst. Asia Minor, port for Tarsus and Adana; good tr., p. 12,860.

**Merthyr Tydvil,** *t.* in colly. dist. Glamorgansh., S. Wales, p. *71,099.*

**Merton and Morden,** *urb. dist.*, Surrey, Eng., p. *41,228.*

**Merv,** *oasis* in Turkoman desert, Cent. Asia, along the R. Murgav; contains many large villages (one formerly the c. of Merv), total p. 250,000.

**Merville,** *t.* on R. Lys, Nord dep., France, p. 7,830.

**Merwara,** *div.* of dist. Ajmere-Merwara, Rajputana, India, p. 105,000.

**Mesagna,** mftg. *t.* nr. Brindisi, prov. Lecce, S. Italy; p. 9,910.

**Mescals,** on Rio de las Balsas *R.* (500 m.) of Mexico, flowg. betwn. Guerrero and Michoacan States to Pacific.

**Mesched,** or **Marsh-had,** *c.* on R. Tehjind, Khorassan; "the Mecca of Persia"; gt. tr. centre; p. (abt.) 75,000. Something like 100,000 pilgrims annually visit the shrine of Imam Riza, in a splendid Shiite mosque.

**Meschovsk,** *t.* in old Kaluga govt., U.S.S.R.; p. (industrl.) 6,520.

**Mesopotamia,** or **Iraq,** independent Kingdom, consists of a gt. *plain* between the Tigris and Euphrates R.'s; area 143,250 sq. m., p. 2,849,280.

**Messenia,** or **Karon, G. of,** inlet of the Mediterranean, S. and E. of the Grecian dist. of M., which has an area of 1,290 sq. m., and a pop. of 226,060, cap. Kalamata.

**Messina,** fortfd. *c.* spt. of Sicily, on Strait of M., opp. Reggio. Has famous univ., and flourishg. silk manuf.; exports fruit, wine, silk, oil, etc., p. 150,000. Almost destroyed by earthquake, Dec. 1908. In strait of M. (22 m. long), between Sicily and Calabria, were the anciently famous rock of Scylla and whirlpool of Charybdis.

**Messingham,** *par.* in agr. dist. nr. Brigg, Lincolnsh., Eng., p. 1,470.

**Mestre,** *t.* on lagoon nr. Venice, Italy, p. 10,200.

**Mesurado,** *R.* Liberia, W. Africa, flows (300 m.) to sea at Monrovia, nr. C. Mesurado, on the Grain Coast.

**Meta,** coast *t.* nr. Sorrento, prov. Naples, Italy, p. 7,510; also R. of Colombia and Venezuela (750 m., navigable about 400 m.), trib. of R. Orinoco.

**Metcalfe,** *t.* nr. Melbourne, Victoria, p. (dist.) 2,675.

**Metemneh,** *t.* in Nubia, on R. Nile, opp. Shendy; objective pt., Stewart's div., Wolseley's relief expedition, 1885.

**Methley, *urb. dist.*** in colliery dist. nr. Leeds, W.R. Yorks, Eng., p. *4,606.*

**Methuen,** *t.* in Essex co., Mass., U.S.A., 27 m. from Boston, p. (industrl.) 21,500.

**Metkovich,** mkt. *t.* nr. Herzegovina frontier of Dalmatia, on the Narenta R., Jugo-Slavia, p. 5,270.

**Metropolis,** *c.* on Ohio R., Massac co., Illinois, U.S.A., p. 5,600. [p. 8,350.

mftg. *t.* nr. Dusseldorf, Rhenish Pruss.,

**Metz,** fortfd. *t.* in Lorraine, France; H.Q. of Ger. operations on Meuse; cathedral, and many fine public bldgs. and statues; p. 62,311.

**Metzingen,** *t.* in Black Forest, Würtemberg, on R. Neckar, nr. Stuttgart, p. 5,670.

**Meudon,** *t.* nr. Versailles, France, dep. Seine-et-Oise; castle-observatory, Galliera almshouses and orphanage, military works; p. 10,130.

**Meulebeke,** industrl. *t.* nr. Courtrai, Belgium, p. 9,887.

**Meurthe,** *R.* of France, flowing (70 m.) from the Vosges Mtns. to the Moselle at Frouard.

**Meurthe-et-Moselle,** dep. of E. France, adjg. Lorraine, Belgium, and Luxembourg; area 2,037 sq. m.; agr., vineyards, and mining; p. 503,810; cap. Nancy (*q.v.*).

**Meuse,** *dep.* N.E. France, bordering on the Ardennes and Luxemburg; area 2,408 sq. m.; mining, manuf., and live-stock rearing; p. 207,309; cap. Bar-le-Duc (*q.v.*). Traversed by R. Meuse, which rises in the Langres plateau, Haute-Marne, and flows to North Sea through Belgium and Holland, a course of 500 m.

**Mevagissey,** fishing *t.* nr. St. Austell, Cornwall, Eng., p. 2,230.

**Mewe,** *t.* on R. Vistula, nr. Marienwerder, E. [Pruss., p. 4,760.

**Mexborough,** *urb. dist.*, mftg. *t.* nr. Doncaster, W.R. Yorks, Eng., p. *15,856*.

**Mexico,** federal *republic* in S. of N. America; area 767,198 sq. m. (inclusive of coast isls. covering 1,420 sq. m.). Extremely fruitful, but contains much forest and woodland, and also mountain dists. rich in minerals, especially silver and copper. Stock-raising and agr. are the chief occupations in the N. States, and p. reaches approx. 16,400,000, about one-fifth of European extraction. Cap. Mexico c. in plain nr. Texcoco, alt. 7,460 ft. above sea; fine House of Congress, many large public bldgs., and extensive tr. and industries; p. 950,000.

**Mexico,** *c.* of Audrain co., Missouri, U.S.A.; seat of Hardin College; p. 6,013; also name of t. in Luzon, Philippine Isls., p. 15,010.

**Mexico, Gulf of,** large *inlet* of the Atlantic (1,000 m. E. to W. by 800 m. N. to S.) lying S. of U.S.A. and E. of Mexico. Communicates by Florida Strait with the Atlantic and by the Channel of Yucatan with the Caribbean Sea. [p. 8,260.

**Mézières,** chf. *t.* of dep. Ardennes, France; fortified;

**Mezö Berény,** mftg. *t.* nr. Bekes, Hungary, p. 12,520. [manufs., p. 11,750.

**Mezö Kovesd,** *t.* in Borsad co., Hungary, flourishg.

**Mezö-Tur,** *t.* on R. Berettyó, nr. Debreczin, Hungary, thriving tr. and manuf., p. 25,210.

**Mezzojuso,** *t.* nr. Palermo, Sicily, p. 8,020.

**Miagao,** *t.* trading and mftg., on S. est. Panay isl., in the Philippines, p. 23,000.

**Miami Beach,** noted winter resort, Florida, U.S.A.; p. 115,000.

**Miamisburg,** *t.* on M. R., Montgomery co., Ohio, U.S.A., p. 5,600. [India, p. 7,010.

**Miani** (or **Meenee**), *t.* in Hushiarpur dist., Punjab,

**Miarim,** or **Maranhão,** *R.* of Brazil, flows (350 m.) to São Marcos Bay.

**Miasskiy Zavod,** gold-mining *t.* in the Orenburg govt. of the Urals, Russ., p. 12,500.

**Miava,** industrl. *t.* nr. Bratislava, Czecho-Slovakia, on the R. M., p. 12,950. [1,250.

**Micheldever,** *par.* nr. Winchester, Hants, Eng., p.

**Michigan,** N. central *st.* U.S.A., in the valley of the Great Lakes, partly agr., partly rich in minerals, area 57,480 sq. m., p. 4,775,000; cap. Lansing (*q.v.*).

**Michigan,** *c.*, Laporte co., Indiana, U.S.A., on L. Michigan, large lake tr., p. 27,500.

**Michigan,** *L.*, in the basin of R. St. Lawrence, enclosed by the two peninsulas of the State of M. and by Wisconsin, Illinois, and Indiana, area 23,900 sq. m., discharges by str. of Mackinaw to L. Huron. (to L. Superior.

**Michipicoten,** *R.* Ontario, Canada, flows (125 m.)

**Michoacan de Ocampo,** *st.* of Mexico, on the Pacific, area 22,621 sq. m., mountainous and rich in minerals, p. 1,003,490; cap. Morelia.

**Micronesia,** *div.* of Oceania, embracing many (mainly coral) sml. isls. and isl. grps. N. of the Equator and E. of the Philippines, includg. the Carolines, the Ladrones, and the Pelews.

**Middelburg,** *t.* in the isl. of Walcheren, Holland, nr. Flushing, anc. cap. of the prov. of Zceland, margarine factories and gd. transit tr. in timber, etc., p. 21,150; also t. and centl. dist. Transvaal, S. Africa, p. *2,811*.

**Middleboro,** *t.* in Mass., U.S.A., in agr. dist. of Plymouth co., 34 m. S.E. of Boston, p. 8,650.

**Middleham,** *par.*, with race-horse tr. stables, nr. Leyburn and Middleham Moor, N.R. Yorks, Eng., p. 3,750.

**Middlesbrough,** *co. bor.*, *spt.* in Cleveland dist., N.R. Yorks, Eng., on estuary of R. Tees, centre of iron tr., shipbldg. and coal export., p. *138,489*.

**Middlesex,** S.E. Midland *co.*, Eng., N. of R. Thames, containing the c. and much of the co. of London, area 283 sq. m., p. *1,638,521*.

**Middleton,** *mun. bor.*, mkt. and manuf. *t.* S.E. Lancash., Eng., nr. Manchester, p. *29,189*; also mkt. *t.* in co Cork, I.F.S., p. 3,350; also mkt. t. on R. Tees, co. Durham, Eng., p. 2,360.

**Middletown,** *c.* of Middlesex co., Connecticut, U.S.A. on C. R., p. 25,500; also c. Orange co., New York, U.S.A., on Walkill R., p. 21,500; also c. Butler co., Ohio, on Miami and Erie Canal, p. 30,500; also bor. Dauphin co., Penn., U.S.A., on Susquehanna R., p. 6,100

**Middlewich,** *urb. dist.*, *t.* nr. Northwich, Cheshire, Eng.; p. *5,458*.

**Midgley,** *urb. dist.*, nr. Halifax, W.R. Yorks, Eng.; p. *1,852*. [formerly a parly. bor.; p. 1,960.

**Midhurst,** mkt. on R. Rother, Sussex, Eng.,

**Midlothian,** *co.*, Scotland, p. *526,277*.

**Midsomer Norton,** *urb. dist.*, nr. Bath, Somerset, Eng.; p. *7,490*.

**Mieres del Camino,** *t.* on R. Leno, Spain, nr. Oviedo; tr. in ores and agr. prod.; p. 18,750.

**Mikhailov,** *t.* startg. pt. of Transcaspian Ry., U.S.S.R.; p. 8,670.

**Milan,** *c.* of Italy, on R. Olona, in Lombard Plain; cap. of M. prov., the Roman Mediolanum, it is the second c. in size of mod. Italy, and a place of great commercl. and industrl. as well as political importce. P. 663,050; the prov. has an area of 1,221 sq. m., and a p. of 1,833,950. Exports the agr. prod. of fertile surroundg. dist.; and much silk, wool and other textiles locally produced; also machinery, furniture, etc. A great art and educatnl. centre. Magnificent cathdl. of marble, decorated in Flamboyant style; many art galleries, museums, etc.

**Milazzo,** fort. *spt.* Sicily, on N. est., nr. Messina; here Garibaldi defeated the Neapolitans in 1860; p. 17,220.

**Mildenhall,** mkt. *t.* on R. Lark, Suffolk, Eng.; p. p. 3,870.

**Mildura,** *t.* and irrigation centre, Victoria, N.S.W. border, on Murray R.; p. (dist.) 8,083.

**Miles City,** *c.* on Yellowstone R., Montana, U.S.A.; cattle; p. 7,937. [4,270.

**Mileto,** *t.* in Calabria, Italy, prov. Catanzaro; p.

**Milford Haven,** *urb. dist.*, on Milford Haven, Pembrokesh., Wales; a centre for mackerel-fishery distributn., p. *10,116*, also t. in Worcester co., Mass., U.S.A.; boot manuf.; p. 14,800; also village, Hampshire, p. 1,630.

**Milianah,** *t.* in Algeria, 68 m. S.W. of Algiers; busy trade centre; p. 6,920.

**Militello,** industrl. *t.* in Sicily, Catania prov.; p. 11,070.

**Milk R.,** trib. (500 m.) of R. Missouri, Montana, U.S.A.

**Millau,** *t.* on R. Tarn, prov. Aveyron, France; kid-glove manuf.; p. 18,310.

**Millbrook,** *t.* N.W. Southampton, Hants, Eng., at mth. of R. Test; p. 3,450.

**Millbury,** *t.* Worcester co., Mass., U.S.A.; p. 7,100.

**Millchester,** *t.* nr. Charters Towers, Queensland; p. (dist.) 1,860.

**Millom,** *urb. dist.*, mkt. *t.* (with blast furnaces) on Duddon estuary, Cumberland, Eng.; p. *7,406*.

**Milltown Malby,** mkt. *t.* on Mal Bay, co. Clare, I.F.S.; p. 1,430. [Allegheny, p. 8,200.

**Millvale,** *bor.* Penn., U.S.A., betwn. Pittsburg and

**Millville,** *c.* on Maurice R., Cumberland co., New Jersey, U.S.A., glass, iron, and cotton manuf., p. 14,500. [*5,056*.

**Milngarvie,** *t.* in Stirlingsh., Scotl., nr. Glasgow, p.

**Milnrow,** *urb. dist.*, mftg. *t.* S.E. Lancash., Eng., subn. to Rochdale, p. *8,624*.

**Milo,** or **Melos,** *isl.* of the Cyclades, Greece, volcanic, length 13 m., p. 4,570. Here was found in 1820 the famous statue, Venus of Milo, a model of womanly form in sculpture.

**Milton,** *t.* in Norfolk co., Mass., U.S.A., subn. to Boston, and containing the Blue Hills Park and Observatory, p. 17,100; also iron wkg. t. of Northumberland co., Penn., U.S.A., on Susquehanna R., p. 8,500.

**Milton Abbas,** *vil.* Dorset, Eng., nr. Blandford, p. (dist.) 1,070; Milton Abbots, par. nr. Tavistock, Devon, Eng., p. 1,250; Milton-next-Sittingbourne, t. on R. Swale, Kent, Eng., p. 7,170.

**Milton Regis,** *urb. dist.*, Kent, Eng., p. 7,481.

**Miltsin,** *pk.* of the Atlas Mtns., Morocco, N. Africa, alt. 11,400 ft.

**Milverton,** mkt. *t.* Somerset co., nr. Taunton, Eng., p. 3,050; also t. on R. Avon, Warwicksh., Eng., p. 2,295.

**Milwaukee,** *c.* on L. Michigan, Milwaukee co., Wisconsin, U.S.A., meat-packg., brewing, and many manuf., gt. tr., p. 59,000.

**Minas Basin,** E. *arm* of Bay of Fundy, Nova Scotia.

**Minas Geraes,** *state* of Brazil, area 221,984 sq. m., mining and agric., p. 5,788,837; cap. Bello Horizonte.

**Minch, The,** *channel* betwn. isl. of Lewis and Scottish mainld., 24 m. to 40 m. wide. The Little Minch is another chan. to S. of foregoing, betwn. the Outer Hebrides and Skye.

**Minchinhampton,** mkt. *t.* nr. Stroud, Gloucestersh., Eng., p. 3,720.

**Mincio,** *R.* Italy, flows (38 m.) from Lago di Garda to R. Po.

**Mindanao,** *isl.* of the Philippine grp.; area 36,906 sq. m., p. 620,000; U.S.A. possession.

**Minden,** govt. *dist.* Westphalia, Pruss.; area 2,029 sq. m. Cap. M. fort. t. on R. Weser; p. 26,780.

**Mindoro,** *isl.*, Philippine grp., S. of Luzon; area 3,794 sq. m. [Eng., p. *6,315.*

**Minehead,** *urb. dist.*, mkt. *t.* and *wat. pl.* Somerset.

**Mineo,** industr. *t.* in Catania prov., Sicily; p. 10,270.

**Mineral Point,** *t.* nr. Madison, Wisconsin, U.S.A., p. 4,010. [R., p. 3,700.

**Miner's Mills,** *t.* in Penn., U.S.A., on Susquehanna

**Minersville,** *bor.* on Schuylkill R., Penn., U.S.A., p. 9,500. [Italy, p. 17,750.

**Minervino,** industr. *t.* nr. Barletta, prov. Bari, S.

**Mingrelia,** old Russ. *prov.* later part of Kutais govt.

**Minho,** *R.* flowg. (170 m.) from Galicia to the Atlantic, and forms, pt. of the northn. boundy. betwn. Spain and Portugal.

**Minho,** or **Entre-Douro-e-Minho,** N. *prov.* Portugal; area 2,790 sq. m., p. 1,289,860.

**Minieh,** *t.* on R. Nile, mid-Egypt; impt. tr. centre, p. 11,500. [pyramids.

**Miniet Dashur,** *vil.* nr. Ghizeh, Lower Egypt; four

**Minneapolis,** cap. *c.* of Minnesota, U.S.A., on both banks of the Mississippi R. at the Falls of St. Anthony, and adjoining the c. of St. Paul; has the largest flour mills in the world and an immense timber industry; seat of the University of Minnesota; p. 472,100.

**Minnesota,** a N. centl. *state*, U.S.A., adjng. Manitoba, Can.; p. 2,791,000; area 80,858 sq. m., agr. and flour-milling, timber-sawing and woodwork, meat-packing and mining; cap. St. Paul. Principal R.'s the Mississippi and Red R. (both of which rise in the st.) and the Minnesota R. (425 m.) trib. of the Mississippi. Besides St. Paul and its great "twin city," Minneapolis, Duluth is an immense commercl. centre. The State contains many lakes.

**Minnick, Water of,** *R.* of Ayrsh. and Kirkcudbrightsh., Scotl. (15 m.), trib. of R. Cree.

**Minni Wakan,** *L.* in Dakota, U.S.A., 40 m. by 12 m. [283 sq. m., cap. Fort Mahon.

**Minorca,** one of the Balearic Isls., Spanish; area

**Minsk,** *old govt.* U.S.S.R. area 35,293 sq. m.; agr., gdng., flour-milling, brewing; p. 2,300,000; cap. Minsk, t. on a trib. of R. Beresina; many manufs.; p. 95,000. M. was part of the anc. t. Lithuania.

**Minster,** *par.* in Isle of Sheppey, Kent, Eng., nr. Sheerness; p. 1,560. [N.E. of Oslo.

**Mjösen,** largest *L.* of Norway (55 m. long) 40 m.

**Miosvand,** smlr. Norwegian *L.* (24 m. long) in S.W. Christiania prov.

**Miquelon,** French *isl.* off S. cst. Newfoundland.

**Mira,** *t.* on the Brenta Morta, Venice, Italy, p. 10,350. [to M. Bay.

**Miramichi,** R. of New Brunswick, flows (220 m.)

**Miranda,** northn. *st.* Venezuela; area 33,963 sq.. m., pastoral and agr.; p. 174,226; cap. Ocumare. [former cap. of a duchy; p. 14,480.

**Mirandola,** *t.* (fortif.) in Modena prov., Italy;

**Mirano,** *t.* nr. Padua, N. Italy; p. 7,496.

**Mirfield,** *urb. dist.*, on R. Calder, nr. Huddersfield, W.R. Yorks, Eng.; p. *12,099.*

**Mirgorod,** old dist. *t.* U.S.S.R., on the Khorol R.; suffered in the Polish wars; p. 11,120.

**Mirim,** *L.* on border of Brazil and Uruguay, 115 m. by 20 m.

**Mirzapur,** *t.*, United Provs., India; on R. Ganges, formerly a gt. tr. emporium; p. 32,332.

**Mirzapur,** *t.*, United Provs., India; on R. Ganges.

**Mishawaka,** *c.* St. Joseph co., Indiana, U.S.A., on St. J. R.; manuf. of agr. implts., p. 30,000.

**Misilmeri,** industrl. *t.* on Bagaria, R., Palermo, Sicily, p. 11,510.

**Misiones,** *terr.* of the Argentine, area 11,511 sq. m.; farming and stock-raising, p. 85,250; cap. Posadas.

**Miskolcz,** *t.* nr. Erlau, Hungary; impt. tr. and traf. centre; p. 57,384. [R., Wabash.

**Mississinewa R.,** Ohio, U.S.A., affl. (140 m.) of

**Mississippi,** a S. *state* of U.S.A. lying E. of M. R. and N. of the G. of Mexico and Louisiana; area 46,362 sq. m., grows corn, tobacco, cotton, and pasture; p. 1,810,000 (three-fifths coloured—including Chinese and Red Indians); cap. Jackson.

**Mississippi R.** (with its affl., the Missouri, the longest R. of N. America), rises in Itasca L., Minnesota, and flows through Minnesota, Wisconsin, Iowa, Illinois, Missouri, Kentucky, Arkansas, Tennessee, Mississippi, and Louisiana, to the G. of Mexico, where it empties by five mouths. Navigable for 2,000 m. by steamboats to the Falls of St. Anthony, Minnesota. Total length of the Mississippi proper to L. Itasca, 2,547 m.; of the Lower Mississippi with the Missouri, about 3,900 m.

**Mississippi, R.,** Ontario, Canada, flows (100 m.) from M. L. to R. Ottawa.

**Missolonghi,** or **Mesolonghi,** *c.* on G. of Patras, Greece, p. 10,030. Taken by the Turks and Egyptians in 1826. Lord Byron died here in 1824.

**Missoula,** *c.* on Clark Fork of Columbia R., Montana, U.S.A., nr. the military post of Fort M.; seat of Montana Univ.; p. 14,750.

**Missouri,** centl. *state* U.S.A.; area 68,727 sq. m.; stock-raising, maize-growing, etc., coal and iron mining, pork-packing, etc.; p. 3,546,000 (5 per cent. coloured). Jefferson c. is the cap. but St. Louis in the E. is the chf. commercl. centre, next in importance being the gt. meat-packing Kansas c., on the W. border.

**Missouri (or Mud) R.,** gt. affit. of R. Mississippi; formed by the junction in Montana of the R.'s Jefferson and Madison, flowing through the State of Dakota, and dividing Nebraska and Kansas from Iowa and Missouri, and finally uniting with the Mississippi nr. St. Louis. Length (including the Madison) 3,047 m.; navigable 2,400 m. to Fort Benton.

**Missouri R. (Little),** *trib.* of M. R. proper, length 450 m.

**Mistassini,** *L.* within Quebec prov., Canada (100 m. long), drains by Rupert's R. to James Bay. Mistassinis, or the Little Mistassini L., stretches parallel on the E. side of the greater L.

**Mistretta,** mftg. *t.* in Messina prov., Sicily, p. 13,750.

**Mitau,** or **Mitava,** Latvia, *cap.* of Courland, on R. Aa, nr. Riga; formly. the resort of the Dukes of Courland; gt. tr.; p. 19,643.

**Mitcham,** *urb. dist.*, in Surrey, Eng., nr. Croydon; lavender and peppermint growing and residentl.; p. *56,856*; also suburb, Adelaide, S. Australia.

**Mitchell,** silver-mining *dist.*, N.S.W., 15 m. W. of Rydal; also vil. on R. Thames, Ontario, Canada; also dist. of Centl. Queensland.

**Mitchell, Mt.,** *pk.* of the Black Mtns., N. Carolina, U.S.A., alt. 6,610 *ft.*; also called the "Black Dome."

**Mitchelstown,** *t.* nr. Fermoy, co. Cork, I.F.S., p. 2,480.

**Mitrovicza,** old *t.* in Jugo-Slavia, on site of the Roman Syrmium, cap. successively of Pannonia and Illyricum, thriving mod. tr.; p. 11,780.

**Mittweida,** *t.* on R. Zschopau, nr. Leipsic, Saxony; cotton mills, engineering wks.; p. 19,020.

**Mitylene,** or **Mytilene,** Greece, *isl.* in Ægean S. (the anc. Lesbos), area 618 sq. m.

**Miya,** *spt.* on Bayo Ovari, Honshiu, Japan, p. 13,120.

**Miyatsu,** *t.* in prov. Tango, Honshiu, Japan, p. 13,433.

**Mizhiritch,** *t.* nr. Kharkov, Ukraine, p. (industl.) 9,477.

**Mlava,** or **Malwa,** *t.* of Poland; tanneries and gt. grain tr.; p. 17,150.

**Mobberley,** *par.* nr. Altrincham, Cheshire, Eng., p. 1,560. [U.S.A.; ry. wkshops; p. 13,800.
**Moberly,** *c.* on the prairie, Randolph co., Missouri.
**Mobile,** *c.* and *port.* on Mobile R., M. co., Alabama, U.S.A.; gt. cotton expt.; p. 68,210.
**Mocha,** or **Mokha,** fort. spt. *t.* on Red S., in Yemen, Arabia; coffee expt. has declined; p. 5,250.
**Modder River,** on border of C. of Good Hope, S. Africa, trib. of Orange R.; battle, Boer War, 1899; sml. t. and ry. stn. 24 m. S. Kimberley.
**Modena,** *prov.* Emilia, Italy; area 1,003 sq. m.; p. 373,520; cap. M., t. nr. Bologna, ducal palace (now a milit. sch.); fine town hall, Romanesque cathedl. Terra-cotta and other manufs.; p. 76,584.
**Modica,** *t.* nr. Syracuse, Sicily; cheese, macaroni, and sweetmeat factories; p. 44,030.
**Mödling,** *t.* nr. Vienna, Lower Austria, in the Brühl valley; sulphur baths, metal industry; p. 17,970.
**Moen,** Danish *isl.* in the Baltic, area 90 sq. m., p. 15,570.
**Moeris,** anc. artificl. *L.* in Middle Egypt W. of R. Nile, nr. the modn. Birket-el-Karun (35 m. by 7 m.).
**Moero,** or **Mwera,** *L.* of Central Africa, drains to R. Congo, area 2,700 sq. m.
**Moffat,** *burgh* and health *resort* Upper Annandale, Dumfriessh., Scot., p. *2,522.* [21,000.
**Mogador,** fort. spt. c. on W. coast Morocco, p.
**Moghilev,** or **Mohilev,** old govt. U.S.S.R., betwn. Minsk and Chernigov; area 18,551 sq. m., p. about 2,000,000 (mostly White Russians). Industries: agr. and stock kpg., with some manuf.; cap. Moghilev on R. Dnieper, a walled t. with impt. commerce; p. 46,000.
**Mogi-Mirim,** tradg. *t.* São Paulo prov., Brazil, p. 13,500.
**Mohacs,** *t.* on R. Danube, nr. Fünfkirchen, Hungary, battles 1586 and 1687 with the Turks; gd. mod. tr.; p. 15,750.
**Mohava Desert,** an extensive sterile tract below sea-level in San Bernardino co., S. Carolina, U.S.A. [R. Hudson.
**Mohawk R.,** New York, U.S.A., trib. (175 m.) of
**Moidart,** sea loch and coast *dist.*, Inverness-sh., Scotl.
**Moissac,** *t.* on R. Tarn, nr. Montauban, France; fine abbey ch.; p. 9,850.
**Moji,** Japanese *t.* on Shimonoseki Strait, Kiushiu side; gt. tr.; p. 73,377.
**Mola di Bara,** *spt.* of Apulia, S. Italy, on the Adriatic, nr. Brindisi, p. 14,200.
**Mola di Gaeta** (now generally called by its anct. name of Formia), *t.* nr. Gaeta, prov. Caserta, Italy, p. 8,250.
**Mold,** *urb. dist.*, *t.* on R. Alyn, nr. Chester and in co. Flintsh., N. Wales; colliery dist., p. *5,113.*
**Moldau,** *R.* of Bohemia, flows (262 m.) to R. Elbe, below Prague.
**Moldavia,** *div.* of Rumania, between Bessarabia and Wallachia; area 14,710 sq. m.; ch. t. Jassy.
**Molenbeek-Saint-Jean,** *t.* Brabant prov., Belgium, one of the communes included in the cap., a great mftg. centre.
**Molfetta,** *spt.* Bari prov., Apulia, Italy; olive oil and macaroni manuf., gd. cst. tr., p. 31,150.
**Moline,** *c.* on Mississippi R., Rock Isl. co., Illinois, U.S.A.; farm wagon and agr. imp. manuf., p. 32,500.
**Mologa,** industl. *t.* U.S.S.R., p. 7,770; on Mologa R. (250 m.) a trib. of R. Volga.
**Molsheim,** *t.* nr. Strassburg, in Alsace-Lorraine; sword and bayonet factories, p. 4,370.
**Moluccas,** or **Spice Isls.,** Dutch grp. betwn. Celebes and New Guinea in the E. Indian Arch., includg. Amboyna, Ceram, Gilolo, etc.; total area 20,460 sq. m., p. (abt.) 500,000.
**Mombasa,** *isl.* off E. cst. of Africa; hdqrs. of Kenya Colony, E. Africa; good harbrs. and naval depot; tr. in ivory, hides, and rubber, p. 40,000.
**Mompoj,** or **Mompox,** *t.* on River Magdalena, Colombia, p. 16,500.
**Monaco,** sml. *principality* on the Mediterranean nr. Nice, surrounded by the French dep. Alpes Maritimes; area 8 sq. m. only, p. 23,000; includes the t.'s of Gondamine, Monaco, and Monte Carlo, famous for its gambling Casino; beautiful climate and scenery, Prince's palace on the Rock of Monaco.
**Monadhliath Mtns.,** on W. side Strathspey, Inverness-sh., Scotl., highest pk. 3,087 ft.
**Monaghan,** inland *co.*, N. Irel.; area 500 sq. m., mainly pastl. and agr., p. 71,050. Monaghan, on the Ulster Canal, is the co. t., p. 2,920.
**Monaro,** *mountain plateau* (area 8,335 sq. m.) N.S.W., bordering on the S. Pacific and Victoria, comprising the highland sources of Murray and Murrumbidgee R.'s [p. 4,930.
**Monasterzyska,** industrl. *t.* nr. Bucracz, in Galicia,
**Monastir,** *spt.* on G. of Hammamet, Tunis, N. Africa, p. 12,450.
**Monastir,** or **Vitolia,** *c.* of Serbia, Jugo-Slavia, in the Karu Su Valley; many mosques, military hdqrs., great tr. in corn, grain, flour, hides, and woollen stuffs, p. 62,000.
**Mönch** (or "**The Monk**") **Mtn.,** Bernese Alps, Switzld., alt. 13,468 *ft.*
**Monchique,** *t.* on the Serra de Marchique, Faro dist., Portugal; baths, sanatorium, exports wine, oil, chestnuts, etc., p. 7,450.
**Moncton,** *c.* of Westmorland co., New Brunswick; ry. centre, gd. harbr., cotton and other manuf.; p. 12,150.
**Mondego,** *R.* of Portugal, flows (130 m.) to the Atlantic at Cape M. [cathedl.; p. 11,020.
**Mondonedo,** *t.* in Lugo prov., N.W. Spain;
**Mondovi,** *t.* in Cuneo prov., Piedmont, Italy; majolica manuf.; nr. is the famous sanctuary ch. of Vico, with a remarkable dome, declared a national monument; p. 9,680.
**Monessen,** *t.*, Pa., U.S.A., p. 20,400.
**Monforte,** *t.* in prov. Lugo, Spain; old tower and palace of the counts of Leon; Jesuit College; p. 12,950.
**Monghyr,** *t.* of Bengal, India, on the R. Ganges, 35 m. above Bhagalpur, p. 35,500.
**Mongolia,** *terr.* belonging to the Chinese Republic, W. of Manchuria, S. of U.S.S.R. (Siberian) frontier, and N.E. of China proper and Chinese Turkestan; area over 1,367,600 sq. m.; mainly occupied by mtn. ranges and the great Gobi and other deserts, and inhabited by nearly 2 million Mongols, Kalmucks, Tungus, Chinese, and various Turkish tribes; chiefly nomadic cattle breeders and traders. Capital Urga.
**Monistrol,** *t.* in Haute-Loire prov., France, nr. Le Puy, p. 5,121.
**Monk Bretton,** *urb. dist.*, nr. Barnsley, W.R. Yorks, Eng., coal, p. 5,139.
**Monmouth,** maritime *co.* Eng.; area 534 sq. m., p. *434,821*; industries: coal and iron mining, quarrying, manufs., and stock-keeping; *mun. bor.*, co. t. Monmouth, at conflu. of R.'s Wye and Monnow, p. *4,731*; also name of cap. Warren co., Illinois, U.S.A., mftg. t. in colly. regn., p. 8,675; and a vil. in Monmouth co., New Jersey, U.S.A., scene of a battle during the American War of Independence between Washington and the British troops.
**Monnow,** *R.* of Monmouthsh. and Herefordsh., Eng., trib. (28 m.) of R. Wye.
**Monongahela City,** Washington co., Penn., U.S.A., on the M. R.; mining and natural gas regn.; p. 8,688. Monongahela R. flows from West Virginia (150 m.) to join the Allegheny R. at Pittsburg and form the Ohio.
**Monopoli,** *spt.* S. Italy, Bari prov., p. 12,750. Trade declining through the expansion of Brindisi and other railway-favoured rival ports.
**Monreale,** *t.* nr. Palermo, Sicily; magnificent cathedral, the finest specimen of the Sicilian Norman-Saracenic style, built in the 12th cent.; p. 15,120.
**Monroe,** *c.* Louisiana, U.S.A., in cotton growing and pine forest regn., p. 27,500; also c. of Monroe co., Michigan, U.S.A., paper machiny. manuf., p. 10,500.
**Monrovia,** *t.*, cap. Liberia, at mth. of Mesurado R., Africa, p. (including Krutown) 6,000.
**Mons,** industrl. *t.* Hainaut prov., Belgium, on the Trouville R., in productive coalfield dist., p. 28,120; fine Gothic cathedral and t. hall.
**Monselice,** industrl. *t.* nr. Padua, Italy, p. (communal) 12,650.
**Monserrat,** or **Montserrat, a jagged** *mtn.* nr. Barcelona, Spain (alt. 4,000 ft.), with famous monastery and image of the Virgin.
**Monsummano,** industrl. *t.* nr. Lucca, Italy, stalactite grotto and health rest., p. 7,990.
**Montagnana,** *t.* nr. Padua, Italy, p. 11,050.
**Montalban,** *t.* nr. Valencia, Venezuela, gd. tr., p. 8,250.
**Montalcino,** *t.* in Siena prov., Italy; flourishing industr., p. 9,670.

**Montana, N.W. st., U.S.A.,** adjoing. **Canada, area** 146,131 sq. m.; two-thirds mountainous, with copper, silver, gold and lead mining; one-third pastoral and agr.; p. 771,000, cap. Helena.

**Montargis,** *t.* nr. Orleans, Loiret dep., France; fine town hall, gd. tr., p. 11,170.

**Montauban,** *t.* on R. Tarn, dep. Tarn-et-Garonne; silk manuf., cathedral, p. 32,750.

**Montbéliard,** *t.* nr. Besançon, Doubs dep., France, watch manuf., p. 10,420.

**Mont Blanc,** *mtn.* of the Alps, on the confines of Italy and France; highest pk. in Europe except the Caucasus, alt. 15,781 ft.

**Montbrison,** *t.* in France, cap. Loire dep., on R. Vizezy; cretonnes and silks, p. 7,510.

**Montceau-les-Mines,** *t.* in Saône-et-Loire dep., France, p. 25,310; weaving, spinning, metal working.

**Montclair,** *t.* on the slope of Watchung mtn., Essex co., New Jersey, U.S.A., residentl. sub. of New York, p. 43,500.

**Mont-de-Marsan,** *t.* in Landes dep., France; drugget manuf., resin distilling, p. 11,970.

**Mont d'Or,** *mtn.* grp. Puy-de-Dôme dep., France, highest pk., 6,188 ft.

**Monte Carlo,** *t.* in the small republic of Monaco, resorted to for its beauty and because of the splendid gambling casino, res. p. 2,247.

**Montecatini,** *t.* in Pisa prov., Italy, nr. Volterra, saline mineral baths, p. 5,240; also celebrated mineral bathing res., with large natural vapour baths, in the valley of the Nievole, Lucca prov., Tuscany, Italy, res. p. 7,120, visited by 40,000 persons annually.

**Monte Corno,** in the Apennines, 70 m. E.N.E. of Rome, alt. 9,583 ft.

**Montefrio,** *t.* in Granada, Spain, old Moorish fortress; cotton manuf., p. 10,970.

**Montego Bay,** *spt.* N. cst. Jamaica, p. 6,616.

**Monteith,** or **Menteith,** *dist.* Perthsh., Scotl., contains L. Monteith (7 m. round), with ruined castle.

**Monteleone di Calabria,** *t.* in Catanzaro prov., Italy, anc. Hipponium and later Vibo Valentium; old castle, p. 13,750.

**Montélimar,** *t.* in dep. Drôme, France, nr. Valence, brick and tile wks., p. 14,450.

**Montella,** *t.* nr. Avellino, Italy; *mftg.*, p. 9,283.

**Montelupo,** *t.* on R. Arno, nr. Florence, Italy, p. 6,340.

**Monte Maggiore,** *t.* nr. Palermo, Sicily; mftg., p. 8,785. [Maggiore, alt. 4,800 ft., magnif. view.

**Monte Motterone,** *mtn.* W. of Stresa, on Lago

**Montenegro,** *state* Jugo-Slavia, former *kingdom*; lies between Albania and Herzegovina, and cut off in great part by Dalmatia from the Adriatic; area 3,536 sq. m., mainly mtns.; chf. industry cattle raising; p. 238,423; cap. Cettinje, chf. commcl. centre Podgoritza, princ. pt. Antivari.

**Montereau,** *t.* on R. Seine, 51 m. S.E. Paris, France; here Napoleon defeated the Allies in 1814; p. 7,970.

**Monterey,** *c.* cap. Nuevo Leon st., Mexico, gt. tr., p. 87,000; also winter hlth. res. on B. of Monterey, **M.** co., S. Carolina, U.S.A., p. 4,010.

**Monte Rosa,** *grp.* of Pennine Alps on border of Italy and Switzld., highest pk. 15,217 ft.

**Monte Rotondo,** highest *mtn.* Corsica, alt. 9,071 ft.

**Monte Sant-Angelo,** *t.* and pilgrim *res.* in Foggia prov., Apulia, Italy, p. 20,760.

**Montespertoli,** *t.* nr. Florence, Italy, mftg., p. 9,980.

**Montevarchi,** industrl. *t.* on R. Arno, Tuscany, Italy, p. 11,020.

**Montevideo,** *spt. c.* on La Plata estuary, Uruguay, cap. of the repub.; large foreign tr., exports hides, tallow, wool, etc., p. 675,000.

**Monte Viso,** *pk.* of the Cottian Alps, nr. the French border of Italy, and 42 m. S.W. of Turin, alt. 12,615 ft.

**Mont Genèvre,** *pk.* of the Cottian Alps, in dep. Hautes Alpes, France, close to the Italn. border at Briançon, alt. 6,100 ft.

**Montgomery,** inld. *co.* N. Wales, area 797 sq. m.; mainly pastoral, p. *48,462*, co. t. Montgomery (p. *918*); Welshpool is the largest separate municipality, and Newtown the most populous urban dist.

**Montgomery,** *c.* cap. of M. co., Alabama, U.S.A., large tr. in timber and cotton, p. 66,080.

**Montigneis-sur-Sambre,** *t.* nr. Mons, Hainaut prov., Belgium, collieries, blast furnaces, nail works, p. 19,470.

**Montlucon,** *t.* on R. Cher, dep. Allier, **France,** cutlery and bronze manuf., p. 40,040.

**Montmartre,** a hilly, N. *sub.* of **Paris, France,** p. 37,360.

**Montmedy,** fort. *t.* on R. Chiers, dep. Meuse, France, p. 3,120, often besieged, last captd. by the Germans in 1870.

**Montoro,** *c.* of Andalusia, Spain, nr. Cordoba, on the R. Guadalquivir, oil mills, gd. trade, p. 13,650.

**Montpelier,** *c.* on the Winooski R., Vermont, U.S.A., cap. of the st., granite quarries, p. 7,125.

**Montpellier,** *c.* cap. of Hérault dep., France, 6 m. N. of Mediterranean, beautifully situated in the vineyd. dist., gt. tr. in wine and brandy, p. 81,548.

**Monte Perdu,** *pk.* of the Pyrénées, **Aragon** dep., Spain, alt. 10,997 ft.

**Montreal,** largest *c.* in Dominion of **Canada,** sitd. on an isl. same name at conflu. of Ottawa and St. Lawrence R.'s in Hochelaga co., Quebec; the *c.* has many impt. manuf., and gt. tr.; the R. St. Lawrence is crossed by the magnif. Victoria Jubilee bridge, 9,184 ft., and among the princ. pub. bldgs. are the McGill University, the Roman Catholic and Anglican cathedrals, p. *810,925*.

**Montreuil-sous-Bois,** hilly E. *sub.* of **Paris** with extensive peach orchards and numerous manuf., p. 36,000.

**Montreux,** *vil.* on L. of Geneva, cant. Vaud, Switzld., health resort, nr. the castle of Chillon, p. 8,350.

**Montrose,** *spt.* and *bor.* (of the M. grp.), Forfarsh., Scotl., chemical and rope wks., p. *11,889*.

**Mont St. Michel,** a fort. French *rock* off the cst. of Normandy, nr. Avranches, with vil. and picturesque church.

**Montserrat,** Brit. *isl.* of the Leeward group, West Indies, area 32 sq. m., p. 12,120; climate salubrious, sugar cane, arrowroot, and lime culture, manuf. lime juice, molasses, essential oils, etc.

**Monza,** *t.* nr. Milan, N. Italy, impt. commcl. centre, p. 12,760.

**Monzie,** *par.* nr. Crieff, Perthsh., Scotl., stone coffins, Fingal's fort, and the reputed tomb of Ossian.

**Mooltan.** (*See* **Multan.**)

**Moon, Mtns. of the,** anc. name applied to the African range of S. Abyssinia.

**Moonee Ponds,** subn. *dist.* Melbourne, Victoria.

**Moorfoot Hills,** range in Peebles and Midlothian, Scotl., alt. 2,136 ft.

**Moose Jaw,** *c.* Sask., Can., p. 20,600.

**Moosehead Lake,** Maine, U.S.A., source of Kennebec R., 35 m. by 10 m.

**Moose River,** Ontario, flows to James Bay, where also is Moose Fort, 700 m. from Montreal.

**Moquegua,** *prov.* S. Peru, area 5,549 sq. m., p. 42,694.

**Mora,** *t.* nr. Toledo, Spain; manuf.; p. 7,864.

**Moradabad,** or **Muradabad,** *t.*, United Provs., India; on R. Ramganga; p. 82,713.

**Morar,** *t.* nr. Gwalior, c. in native st. of Gwalior, Centl. India; formerly a British mility. cantonment; p. 25,000.

**Moratalla,** *t.* in Murcia prov., Spain; rough cloth manuf.; p. 12,570.

**Morava,** *R.*, Moravia, trib. (212 m.) of R. Danube.

**Moravia,** *prov.* Czechoslovakia, formerly Austrian Emp.; area 8,580 sq. m.; p. 2,660,740; agr. and forestry the chief industries; but consid. mftg. and tr.; cap. Brünn.

**Moray,** anc. *prov.* Scotl.; included Elgin and Nairn, with part of Banff and most of Inverness; now alternative name for Elgin co.; p. *40,805*.

**Moray Firth,** *arm* of the N. Sea on the Scottish cst. betwn. Clyde Ness, Caithness, and N. Aberdeensh.

**Morbihan,** *cst.* dep., France, on B. of Biscay; area 2,739 sq. m. Formed from part of anc. Brittany, it is hilly and marshy; industries, agr., apple-growing, mining, and sardine fishery off coast; p. 546,047; cap. Vannes.

**Morecambe,** *mun. bor., cst. wat. pl.* N. Lancs., Eng., on Morecambe B. (an inlet of the Irish S., 18 m. by 10 m.); p. *24,586*.

**Morelia,** formerly **Valladolid,** *c.* of Mexico; cap. Michoacan st.; thrivg. tr.; p. 37,500.

**Morelos,** inld. *st.* Mexico; area 1,895 sq. m.; p. 183,705.

**Morlaix,** *t.* in Finistère dep., France; gt. tobacco facty.; p. 18,216.

**Morley,** *mun. bor.* nr. Leeds, W.R. Yorks, Eng.; woollen-cloth manuf.; p. *23,397.*

**Morningside,** S. *sub.* of Edinburgh, Scotl.

**Morocco,** one of the old Barbary states, a sultanate of N.W. Africa, W. of Algeria and N. of the Sahara, and washed by Mediterranean and Atlantic; now a French protectorate except a northern portion which is Spanish, and the Tangier district which is internationalised; area 231,500 sq. m., traversed by the Atlas Mtns., p. 5,400,000. There are four capitals: Fez, Tafilelt, Morocco (Marakesh), and Rabat, the seat of govt. being at the last-mentioned town. Morocco city, famous for its leather manuf.; p. 102,107.

**Morpeth,** *mun. bor., t.* nr. Newcastle, Northumberld., Eng.; in mining dist.; p. *7,390.*

**Morrisania,** N. *sub.* New York, U.S.A.

**Morristown,** *t.* Morris co., New Jersey, U.S.A.; p. 15,400. Washington had here his hdqrs. 1776 and 1779. [p. 29,200.

**Morshansk,** U.S.S.R., *t.* on R. Tsna; mftg. and tr.;

**Morsö,** Danish *isl.* in the Lim Fiord; area 138 sq. m.; p. 20,020.

**Mortlake,** Thames-side *par.* Surrey, Eng.; subn. to London; associated with Oxford and Cambridge boat-race; mainly residentl.

**Morven,** *mtn.* nr. Ballater, Aberdeensh., Scotl., alt. 2,862 ft.; also mtn. nr. Berriedale, Caithness, Scotl., alt. 2,313 ft.

**Morwell,** *t.* in colliery dist. Victoria, p. 3,685.

**Moscow,** centl. *govt.* U.S.S.R; area 12,858 sq. m.; watered by R.'s Moskva and Yusma; p. 2,300,500, cap. M., c. on R. Moskva, former cap. R. Empire. Contains the famous Kremlin, with Palace of Czars of Muscovy. Seat of M. University; and is the chf. commcl. c. of U.S.S.R. Burned by the inhabitants during French occupatn., 1812; p. 1,050,010.

**Moselle,** *R.* (328 m.) of France and Pruss., trib. of R. Rhine.

**Moskva,** R. (249 m.) of Russ., affit. of R. Oka.

**Mosquito Terr.,** or **Mosquito Coast,** *dist.* of Nicaragua, from R. San Juan to Cape Honduras; formerly under Brit. protectn., it now forms a dep. called Bluefields. Cap. Bluefields.

**Moss,** spt. *t.* Norway, on fiord 32 m. S. Oslo; p. 9,246. Gt. timber export.

**Mossamedes,** *t.* on Little Fish Bay, Portuguese W. Africa; sanatorium for Angola prov.; exports rubber.

**Mossel Bay,** formerly called **Aliwal South,** *spt.* Cape Col., S. Africa, p. *2,864.* [3,842.

**Mossend,** *t.* nr. Glasgow, Lanarksh., Scotl.; p.

**Mossgiel,** *t.* n. Dunedin, New Zealand; woollen manuf.; p. 1,894.

**Mossley,** *mun. bor.,* mkt. *t.* in Prestwich div., Lancash., Eng.; foundries and woollen and cotton factories, p. *12,041.* [Engl.

**Moss Side,** manuf. dist. S. of Manchester, Lancash.,

**Mostaganem,** *t.* in Oran dep., Algeria, nr. the Mediterranean cst.; in vineyd. dist.; p. 27,375.

**Mostar,** walled *t.* on Narenta R., Herzegovina, Jugo-Slavia; govt. tobacco factory; p. (including garrison) 15,750.

**Mosul,** *t.* on R. Tigris, Mesopotamia, cap. of vilayet same name; great commcl. centre; p. (vilayet) 2,849,282.

**Motherwell,** *t.* nr. Glasgow, Lanarksh., Scotl., in mnl. dist.; bridge bldg. industry; p. 68,869.

**Motihari,** *t.* Bengal, India; gd. tr.; p. 12,000.

**Motril,** *t.* Granada, nr. the cst., Spain; sugar-cane and beetroot growing; exports grapes, esparto grass, figs, etc.; p. 18,570. [p. *2,636.*

**Mottram,** *urb. dist., t.* nr. Glossop, Chester, Eng.;

**Moulins,** *t.* on R. Allier, France; cathedral, fine town-hall, and ruined château; p. 23,170.

**Moulmein.** (*See* Maulmein.)

**Moundsville,** *c.* on Ohio R., Marshall co., W. Virginia; numerous manufs.; p. 14,750.

**Mount Adams,** *pk.* White Mountains, New Hampshire, U.S.A.; alt. 5,679 ft.

**Mountain Ash,** *urb. dist.,* mining *t.* nr. Aberdare, Glamorganssh., Wales; p. *38,381.*

**Mount Britton,** goldfld. Queensland, nr. Mackay; p. (dist.) 3,000.

**Mount Carmel,** *bor.* Northumberland co., Penn., U.S.A., on Wabash R.; gt. tr. in anthracite coal; p. 13,750.

**Mount Clemens,** *c.* Michigan, U.S.A., cap. Macomb co. on Clinton R.; mnl. springs; 13,750.

**Mount Desert,** *isl.* off cst. of Maine, U.S.A., area 100 m., mtnous.; summer rest.; res. pop. 8.750.

**Mount Gambier,** *t.* co. Grey, S. Australia, nr. Port Macdonnell, p. 3,120.

**Mountmellick,** mkt. *t.* Queen's co., Leinster, I.F.S., anciently called Ballycuillin, "the town in the woods," p. 3,120.

**Mount Morgan,** gold-mining *co.* Raglan, Queensland, nr. Rockhampton, p. 12,000.

**Mount Morris,** *vil.* New York, U.S.A., Livingstone co., p. 3,200.

**Mount's Bay,** *inlet* on S. coast Cornwall, Eng., 20 m. wide.

**Mountsorrel,** *t.* Leicestersh., Eng., p. 2,510.

**Mount Vernon,** *c.* Jefferson co., Illinois, U.S.A., in farmg. regn., p. 12,500; also c. on Ohio R., Posey co., Indiana, U.S.A.; ry. centre; p. 5,284; also c. on Bronx R., Westchester co., New York, U.S.A., subn. to N.Y. c.; p. 63,500; also c. on Kokosing R., Knox co., Ohio, U.S.A., furniture and waggon manuf., p. 9,375.

**Mourne Mtns.,** co. Down, N. Ireld.; highest pk. 2,796 feet.

**Mourzouk,** *t.* in the Fezzan Oasis, Tripoli, N. Africa; tr. centre; p. 9,000.

**Mouscron,** *t.* in W. Flanders, Belgium; cotton and wool weaving; p. 21,150.

**Mouse Water,** *R.* of Lanarksh., Scotl., trib. (14 m.) of R. Clyde; Mouse, or Souris R., Canada and U.S.A. (500 m.), trib. of R. Assiniboine.

**Moy,** *R.* co.'s Mayo and Sligo, I.F.S., flows (35 m.) to Killala B.

**Mozambique,** Portuguese possn. E. Africa, basin of the Zambesi R., and from C. Delgado N. to Delagoa B. on cst.; area 426,712 sq. m., p. 3,120,000; cap. M. on sml. isl. nr. cst.; p. 7,000. The Mozambique channel lies betwn. Madagascar and Port. E. Africa, 1,000 m. long by 250 m. wide at narrowest part.

**Mozyr,** *t.* on Pripet R., U.S.S.R.; impt. tr. centre; p. 15,120.

**Msta,** *R.* U.S.S.R., flows (250 m.) L. Ilmen.

**Mtzensk,** mftg. *t.* on R. Zusha, old govt. Orel, U.S.S.R., p. 19,120.

**Much Wenlock,** mkt. *t.* Shropsh., Eng. (*See* Wenlock.)

**Mudana,** *t.* on cst. S. of Marmora, Asia Minor, port for Brûsa; the anc. Myrlea; olive-oil export; p. 5,000.

**Muhalitch,** or **Mikhalitch,** *t.* nr. Brûsa, Asia Minor; extensive tr.; 11,020.

**Muhammadabad,** *t.* United Prov., India, p. 10,000.

**Mühlhausen,** *t.* on R. Ulstrut, Prussn. Saxony, nr. Erfurt; formerly a free impl. c.; woollen and cotton manuf.; p. 29,250.

**Muirkirk,** mining and mftg. *t.* Ayrsh., Scotl., p. *4,358.*

**Mukama,** *t.* on R. Ganges, Bengal, India, p. 14,700.

**Mukden** (Chinese "Shingking"), walled *c.,* cap. of Manchuria, on the Liao R., 110 m. N.E. of its port Newchwang; great commrcl. and political centre; formerly cap. of the Manchu dynasty, and contains the royal tombs; p. 158,130.

**Mula,** *t.* nr. Murcia, Spain; gd. tr.; p. 11,670.

**Mulde,** *R.* of Saxony and Anhalt, Germany, trib. (130 m.) of R. Elbe. [11,663 ft.

**Mulhacen,** *mtn.* of Sierra Nevada range, Spain, alt.

**Mulhausen,** *t.* in Alsace-Lorraine, France; gt. cotton industry centre; p. 99,226.

**Mülheim-am-Rhein,** mftg. *t.* in Rhenish Pruss., nrly. opp. Cologne, p. 52,070.

**Mülheim-am-Ruhr,** mftg. and tr. *t.* Rhenish Pruss., nr. Düsseldorf, p. 127,027.

**Mull,** *isl.* off W. Scotl., included in co. Argyll, one of the largest of the Hebrides; area 357 sq. m., p. 4,820, chf. t. Tobermory. The Sound of Mull (12 m. wide) separates the isl. from Morven.

**Mulingar,** mkt. *t.* (and co. *t.*) Westmeath, I.F.S., on R. Brosna; p. 4,510.

**Multan,** or **Mooltan,** *t.* on R. Chenab, Punjab, India; carpet and silk manuf., mil. cantonmt.; p. 86,251.

**Mumbles Head,** point of cst. of Glamorgan, Wales, W. of Swansea B. [Düsseldorf; p. 64,031.

**München Gladbach,** mftg. *t.* Rhenish Pruss., nr.

**Muncie,** *t.* on White R., Delaware co., Indiana, U.S.A.; iron, steel, glass, and paper; p. 47,500.

**Munden,** *t.* on R. Weser, Hanover, nr. Göttingen; ruined castle; p. 8,020.

**Munich,** or **München,** cap. *c.* Bavaria, on R. Iser; many splendid bldgs., famous art galleries, royal palace, archiepiscopal cathedl., university, etc.; flourishg. commerce and manuf., specially noted for beer-brewing, p. 630,711.

**Munkacs,** old corporate *t.* nr. the Latorcza, co. Bereg, Hungary; cathedral and beautiful castle; p. 16,760.

**Munster,** *prov.* I.F.S., embracg. co.'s Waterford, Cork, Kerry, Limerick, Clare, and Tipperary; area 9,475 sq. m. (*see* co.'s separately). Also name of a t. in Alsace-Lorraine; calico manuf.; p. 6,920.

**Munsterberg,** *t.* on R. Ohlan, prov. Silesia, Pruss.; brick and tile making; p. 8,620.

**Mur,** or **Muhr,** *R.* Austria, trib. (250 m.) of R. Drave; rises in Salsburg, and flows through Styria and part of W. Hungary.

**Murchison Falls,** on Shiré R., Kenya Colony, E. Africa, nr. Albert Nyanza L. Murchison (Mt.) peak of Rocky Mts., Brit. Columbia, alt. 13,500 ft. Murchison R., W. Australia, flows (800 m.) S.W. to Gantheame Bay; on its bank Mt. Murchison, alt. 1,000 ft.

**Murcia,** old *kingdom* and *prov.* S.E. Spain; now the provs. of Albacete and Murcia; area of mod. prov. Murcia, 4,453 sq. m., bordering on Mediterranean, rich in metals, espec. argentiferous lead, p. 631,906; cap. M., c. on R. Segura; silk and other industries; fine Renaissance cathedl.; p. 123,936.

**Murfreesboro,** *c.* Rutherford co., Tennessee, U.S.A.; scene of Stone R. battle, Civil War, 1862–1863, Confederate retreat; p. 8,250.

**Murg,** *R.* of Baden and Würtemberg, trib. (40 m.) of R. Rhine.

**Murgab,** or **Murghab,** *R.* of Afghanistan, flows (250 m.) into Khiva and past Merv until lost in desert swamps.

**Muritzsee,** *L.* Mecklenburg-Schwerin, Germy., 60 m. N.W. Berlin, 18 m. long.

**Murom,** *t.* on R. Oka, Vladimir govt.; manuf.; p. 17,950.

**Murphysboro,** Industl. *c.* on Bigmuddy R., Jackson co., Illinois, U.S.A., p. 8,000.

**Murray R.,** the prin. *R.* of Australia, separates N.S.W. and Victoria, and flows (1,120 m.) to L. Alexandrina and Encounter B., nr. the Coorong, S. Australia; also name of large dist. N.E. Victoria, between Australian Alps and Gippsland and the Murray R.

**Murree,** *sanatorium* in Rawalpindi hill dist. of the Punjab, India, 7,453 ft. above sea-level.

**Murrumbidgee,** *R.* of N.S.W., flows (1,350 m.) to the Murray R., after recg. the waters of the Lachlan R.; Murrumbidgee is the name given to the extensive pastl. dist. of N.S.W. betwn. the Rs. Murray and Murrumbidgee.

**Murrurundi,** *t.* N.S.W., on the Liverpool mtn. range, 192 m. N.W. of Sydney, p. (dist.) 4,350.

**Murshidabad,** *t.* on the Bhagirathi (old sacred chan. of R. Ganges), Bengal, India; palaces, mosques, tombs, gardens, decaying industry in gold and silver embroidy., ivory carvg., and silk wvg., p. 40,000.

**Murtoza,** *t.* and fishg. centre on lagoon nr. Aveiro, Portugal, p. 10,520.

**Murwillumbah,** *t.* nr. the Queensland border and the S. Pacific cst., N.S.W.

**Musa Jebel,** *mtn.* Arabia Petraea (alt. 7,375 ft.) identified with Sinai, or Moses Mount of Scripture, by some.

**Musardu,** *t.* in French W. Africa, old cap. of the Mandingo nation, p. 8,500.

**Muscat,** or **Muskat,** an independent state in S.E. Arabia; area, 82,000 sq. m., p. 500,000, chiefly Arabs, with a sprinkling of negroes in the coastal strip. M., the cap., has a p. (with Muttrah) of 20,000. The climate is very hot.

**Muscatine,** *c.* of Muscatine co., Iowa, U.S.A., on R. Mississippi; meat packing and timber industries, p. 16,850.

**Muscle Shoals,** *rapids* in the R. Tennessee, nr. Florence, Alabama, U.S.A.

**Muscovy,** name applied alternatively to Russia.

**Muscogee,** *t.* in the Creek Nation, Indian Terr., U.S.A., p. 32,250.

**Muskegon,** *c.* on M. L., M. co., Michigan, U.S.A.; timber works and tr., p. 41,750.

**Muskingum,** *R.* of Ohio, U.S.A., trib. (240 m.) of R. Ohio.

**Musselburgh,** *t.* on R. Esk, nr. Edinburgh, Scotl., of which it may be reckoned a seaside suburb; golf links; p. *16,996.*

**Mussel Shell R.,** Montana, U.S.A., trib. (300 m.) of Missouri.

**Mussomeli,** mftg., *t.* nr. Caltanisetta, Sicily, p. 11,750.

**Mussoori,** or **Masuri,** *t.* and *sanatorium,* Dehra Dun hill dist. United Provs., India, 6,600 ft. above sea-level, adjoining Landaur, the Lower Himalayan convalescent depôt for Brit. troops, and nr. the Chakrata cantonmt., p. 12,000.

**Mustapha,** a *sub.* of Algiers c.

**Muttra,** or **Mathura,** *t.* United Provs., India, on the Jumna R., a holy place of the Krishna cult, with carved Hindu temples, bathing stairs, &c., p. 60,000. [p. 3,500.

**Muzaffargarh,** *t.* Punjab, India, on the R. Chenab.

**Muzaffarnagar,** *t.* United Provs., India, on the N.W. Ry., p. 22,000. [p. 45,100.

**Muzaffarpur,** *t.* Bengal, India, on Little Gandak R.,

**Muzar,** *t.* nr. Balkh, Bokhara, p. 25,000.

**Muz Tagh,** *mtn. pass* over Karakorum range, E. Turkestan, alt. 18,980 ft.

**Mwapwa,** or **Mpwapwa,** *t.* in Usagara, Kenya Col., E. Africa, on tr. route from Bagamoyo to interior.

**Mweelrea,** *min.* co. Mayo, Irel., alt. 2,688 ft.

**Mweru, Lake.** (*See* Moero.)

**Myaungmya,** *dist.* Irawadi div., Lower Burma; area 3,005 sq. m., p. 330,000; chief t. Patanawa; Myaungmya *t.* has p. 2,500.

**Mycenæ,** celebrated ruined *c.* of Morea, Greece, nr. Argos. The chief objects discovered in excavations on the site are in a museum at Athens.

**Myconus,** or **Mykonos,** *isl.* of the N. Cyclades, in the Ægean Sea, Greece, p. 4,050.

**Mylau,** or **Muhlau,** *t.* nr. Plauen, Saxony, on R. Goltzsch, p. 7,650.

**Mynyddislwyn,** *urb. dist.,* Mon., Eng., p. *16,201.*

**Mynydd-mawr,** *mtn.* nr. Carnarvon, N. Wales, alt. 2,293 ft.

**Myslowitz,** mftg. *t.* on R. Przemsa, nr. Cracow, Pruss., Silesia, p. 11,730.

**Mysol,** or **Misol,** *isl.* (50 m. long) N. Ceram, Malay Arch., Dutch E. Indies.

**Mysore,** nat. *st.* S. India, enclosed by Brit. terr.; area 29,475 sq. m., p. over 5,806,190. Coffee planting, gold mining; Brit. mil. cantonment and hdqrs. of Admin. at Bangalore (*q.v.*). Cap. Mysore, c. nr. Seringapatam, p. 83,932.

**Mytho,** fortfd. *t.* in French Cochin China on R. Mekong, p. 7,010.

**Mytholmroyd,** *urb. dist.,* on R. Calder, nr. Halifax, W.R. Yorks, Eng., p. *4,467.*

**Mytilene** (classic Lesbos). (*See* **Mitylene.**)

**Mzombe,** *R.* Kenya Col., E. Africa, trib. (110 m.) of R. Ruaha.

**Mzymta,** *R.* of the Caucasus, U.S.S.R., flowing (80 m.) past Romanovskoe and Liesnoe to the Black Sea.

## N

**Naab,** *R.* Bavaria (90 m.), crosses R. Danube nr. Ratisbon. [p. 5,950.

**Naaldwyk,** mftg. *vil.* nr. Rotterdam, S. Holland.

**Naarden,** *t.* nr. Amsterdam, N. Holland, destroyed by Spaniards 1572, p. 3,370. [p. 3,810.

**Naas,** *t.* in co. Kildare, I.F.S., former cap. Leinster.

**Nabal,** *t.* nr. Hammamet, Tunis, tr. centre, p. 8,300.

**Nabha,** state, Punjab, India; area 928 sq. m., p. 263,209.

**Nablus,** or **Nabloos,** *c.* Palestine, nr. Jerusalem, the anc. Shechem or Sychar, and later Neapolis, former cap. Samaria, soap manuf., p. 20,000; Jacob's Well and Mt. Gerizim adjacent.

**Nabua,** *t.* Luzon, Philippine Isls., mkt. for agr. prod., p. 17,940.

**Nachod,** *t.* in Bohemia, Czecho-Slovakia, on R. Mettau, at entce. to Lewin Nachod Pass nr. the Pruss. frontier, old castle, Pruss. victory 1866, cotton-spinning, dyeing, etc., p. 10,710.

**Nadiad,** *t.* Bombay, India, gd. trade, p. 32,000.

**Nadol,** *t.* Rajputana, India, ruined temples.

**Nadudvar,** mftg. *t.* nr. Debreczin, Hungary, p. 8,350.

**Nadworna,** *t.* Galicia, Ukraine, nr. Stanislalow, p. 7,020. [mediæval t. hall, p. 8,350.

**Næstved,** mkt. *t.* co. Præsto, Zealand, Denmark, mediæval t. hall, p. 8,350.

**Nafa,** or **Napa,** *spt.* in Liu-chiu isls., Japan, p. 36,020, gd. trade.

**Nafels,** *vil.* on R. Linth, cant. Glarus, Switzld., nr. Zurich; here in 1388 the Austrians were repelled by gallant Glarus natives.

**Nafferton,** *par.* nr. Driffield, E.R. Yorks, Eng., on the Wolds, p. 1,570.

**Naga Hills, The,** *dist.* in Assam, India, area 5,710 sq. m., sparse p. (100,000); inhabited by a semi-wild race.

**Nagambie,** *t.* co. Moira, Victoria, p. (dist.) 2,300.
**Nagasaki,** flourishg. spt. *c.* on Kiu-siu Isl., great tr. and industry, p. 176,554.
**Nagina,** *t.* Bijnor dist., United Provs., India, sugar tr., gun manuf., p. 25,000.
**Nagoya,** *t.* in Owari prov., Honshiu, Japan, thriving cap., great tr., chief ceramic industry centre, also cotton and silk factories, p. 429,990.
**Nagpur.** (*See* Chota Nagpur.)
**Nagy Abony,** mftg. *t.* nr. Pesth, Hungary; p. 13,750.
**Nagy Bánya,** mining *t.* (gold, silver, lead) nr. Szatmár, Rumania; beautiful pk.; p. 13,200.
**Nagybecskerek,** industl. *t.* on R. Bega, nr. Temesvar, Hungary; p. 29,100.
**Nagyenyed,** *t.* in Alsó-Fehér co., Transylvania, Rumania; on R. Maros; wood carvg., educational centre; famous for wine in Midd. Ages; p. 8,020.
**Nagykároly,** *t.* (industl. and educntl.) nr. Debreczin, Rumania; castle of Counts Károlyi; p. 16,950.
**Nagykikinda,** *t.* in Torontál co., Hungary; flour and fruit tr.; p. 27,100. [gary, p. 26,220.
**Nagykörös,** industrl. *t.* in co. Pest-pilis-Sólt, Hun-
**Nagyszeben,** or **Hermannstadt,** industrl. *t.* in Szeben co., Hungary; hdqrs. of Army corps; p. 33,220.
**Nagyvárad.** (*See* Grosswardein.)
**Nagyzomkut,** *t.* co. Pozsony, Rumania; malt and match factories, sugar refining; p. 14,860.
**Nahe,** *R.* Germany, flows 69 m. to R. Rhine nr. Bingen, Hesse.
**Naihati,** or **Nyehattee,** *t.* in the Parganas, Bengal, India; gd. tr.; p. 22,870. [1,910.
**Nailsea,** *par.* nr. Taunton, Somerset, Eng.; p.
**Nailsworth,** *urb. dist., t.* nr. Stonehouse, Glouc., Eng.; p. *3,129.*
**Nain,** *settlemt.* Moravian Brethn., E. cst. Labrador; also Galilean *t.* (the mod. Nein) scene of the miracle of raising the widow's son.
**Nairn,** mar. *co.* Scott., on Moray F. between Elgin and Inverness; area 200 sq. m.; p. *8,294*; cap. N. burgh (one of the Inverness parly. grp.), p. *5,282.*
**Nairobi,** *cap.* of Kenya Col., E. Africa, 327 m. from Mombasa, also centre of the Uganda Ry., and for big game shooting; p. 24,300.
**Najibabad,** *t.* United Provs., India; tr. in timber, sugar, etc., metal manuf., p. 21,120.
**Nakhichevan,** industrl. *t.* Transcaucasia, p. 7,200; also *t.* on R. Don, founded by Armenian emigrants; flourishing tr., p. 25,030.
**Nakodar,** tr. *t.* in Punjab, India; nr. Jalandhar; p. 9,020. [sugar refg., p. 9,040.
**Nakskov,** spt. *co.* Maribo, isl. Laaland, Denmark;
**Namagan,** or **Namangah,** industrl. *t.* on the Sir Daria Fergana, Turkestan, Asiat. Russia, p. 39,000.
**Namaland,** or **Namaqualand,** parched S. African *regn.* betwn. Walfisch B. and the Orange R., reachg. from the Atlantic cst. to Kalahari Desert; area 100,000 sq. m. Included in the prov. of C. of Good Hope.
**Namdinh,** impt. tr. *t.* in French Tongking, p. 52,400.
**Namoi,** *R.* (270 m.) in N.S.W., trib. of R. Darling.
**Namur,** *prov.* Belgium, bordg. on France; collieries, woodland; area 1,414 sq. m., p. 352,052; cap. N., fort. c. at confl. Meuse and Sambre R.'s, p. 32,274.
**Nanaimo,** *t.* on Vancouver Isl., Brit. Columbia, colly. dist., p. *6,648.* [Hungary, p. 15,100.
**Nanas,** or **Hajdu Nanas,** industrl. *t.* nr. Debreczin,
**Nanchang,** *c.* on Kan-Kiang R., Kiangsi, China, gt. tr., p. (est.) 130,000.
**Nancy,** old cap. Lorraine, and pres. chf. *t.* of French dep. Meurthe-et-Moselle, gt. industrl. activ., the inhabitants including descendants of many Alsatians who left Alsace in 1870, p. 113,226.
**Nandair,** *t.* in Hyderabad, India, tr. centre, p. 15,500.
**Nankin,** or **Nanking,** gt. Chinese *c.* on Yang-tse-Kiang, cap. Kiang-Su prov., and a famous sea of learning and industrl. activ., p. 902,441, contains the Ming tombs, or mausoleums of founders of the Ming dynasty.
**Nan Ling,** or **Sing,** mtn. *chn.* betwn. Yang-tse-Kiang basin and that of the Si Kiang, China.
**Nanning,** treaty *pt.* on the Yu-Kiang, Kwangsi prov.; China, chf. mkt. on S. frontier, p. 300,000.
**Nanterre,** *t.* nr. Paris, Seine dep., France, noted for cakes and aluminium manuf., p. 15,050.
**Nantes,** *t.* in Brittany, cap. Loire-Inférieure dep.; France, on R. Loire, bisct. and fish preserve manuf., wood pulp, bell foundries, machine works, stained glass, nursery gdns., p. 183,704.
**Nanticoke,** *t.* on Susquehanna R., Luzerne co., Penn., U.S.A., in anthracite coal country, p. 26,300.
**Nantucket,** *isl. t.* and *pt. of entry,* N. co., Mass., U.S.A.; summer res., p. 3,750.
**Nantwich,** *urb. dist.,* mkt. *t.* on R. Weaver, Chesh., Eng., brine baths, ironwks., fox-hunting centre, p. *7,132.* [Monmouthsh., Eng., p. *13,190.*
**Nantyglo** and **Blaina,** *urb. dist.,* nr. Abertillery, Mon-
**Napa,** or **Napha,** *spt.* in Liu-Kiu isls.; also t. on N.R., California, U.S.A., soda springs, p. 6,450.
**Napier,** *t.* on Hawkes Bay, N. Zeald., fine esplanade, p. 17,187.
**Naples,** most pop. *c.* in Italy, on B. of N., at ft. of Vesuvius, opp. site of anc. Pompeii, sanctuary of Madonna di Pompeii, grotto of Pozzuoli, Castel del Ovo, grand cathedl., votive ch. of San Francesco di Paola, monasty. of San Martino, many museums and pub. instns., impt shippg. and manuf., subject to earthquakes (isl. of Ischia devastated 1883) and volcanic eruptns., p. 697,917 (of prov. 1,360,324).
**Napo,** *R.* of Ecuador (800 m.), trib. of R. Amazon.
**Napoleon,** *vil.* on Maumee R., Henry co., Ohio, U.S.A.; p. 4,600.
**Nara,** *t.* Honshiu, Japan, nr. Kioto, shrines and temples, colossal image of Buddha, p. 47,515, old cap. of Japan, when it had a p. of 250,000.
**Naraingani,** tr. *t.* Bengal, India, p. 23,930.
**Narandera,** *t.* on Murrumbidgee R., N.S.W., p. 3,010.
**Narbada,** or **Nerbudda,** *R.* betwn. the Deccan and Hindustan, flowing (800 m.) from Rewa to the Arabian Sea. [Wales, p. *1,046.*
**Narberth,** *urb. dist., t.* nr. Tenby, Pembrokesh.,
**Narbonne,** *t.* dep. Aude, France, famous for honey; an impt. c. of the West Goths, captured by the Saracens in 719, and by the Franks in 759, p. 29,210.
**Nardo,** industrl. *t.* nr. Gallipoli, prov. Lecce, Italy, p. 14,250, cotton manuf. [Adriatic.
**Narenta,** *R.* of Herzegovina, flows (140 m.) to the
**Narev,** *R.* of Poland and W. Russ., flows (200 m.) to R. Bug, nr. Warsaw.
**Nariad,** *t.* Bombay, India, nr. Athmadabad; tr. centre, p. 30,000. [dral, p. 13,620.
**Narni,** *t.* in Perugia prov. Umbria, Italy; cathe-
**Naro,** *t.* near Girgenti, Sicily, Italy; industrl., p. 11,760.
**Narracan,** *t.* Victoria, nr. Melbourne, p. (dist.) 6,920.
**Narragansett Bay,** inlet of the Atlantic, off coast of Rhode Isl., U.S.A.; N. pier, on R. Isl., is a popular summer resort in Washington co., R. Isl.
**Narva,** fl. *t.* on R. Narova, Esthonia, founded in 1223 by the Danes; cathedl., textile factories, p. 30,000.
**Narvacan,** *t.* Luzon, Philippine Isls., in fertile mtn. surrd. valley, good tr. and cotton manuf., p. 16,750.
**Naseby,** *vil.* 12 m. N. of Northampton, Eng.; at Naseby Field was fought the decisive battle of the Civil War in 1645, Cromwell and Fairfax defeating the Royalists.
**Nashua,** *c.* on the N. R., New Hampshire, U.S.A., cotton, paper and iron works, p. 31,750.
**Nashville,** *c.* on the Cumberland R., Tennessee, U.S.A.; cap. of the State; fine capitol and other pub. bldgs., gt. timber tr. and impt. manuf., universities and colleges, p. 157,000.
**Nasik,** *t.* Bombay, India, on the Godaveri R., a holy place of the Hindus, p. 25,780.
**Nasirabad,** *t.* on the Brahmaputra R., Bengal, India, p. 14,560; suffered severely by earthquake, 1897; also *t.* Bombay, India, p. 11,220; also *t.* and cantonment, Rajputana, India, p. 23,100.
**Naso,** *t.* nr. Messina, Sicily, industr., p. 10,760.
**Nassau,** *t.* on R. Lahn, nr. Wiesbaden, Pruss.; ruined castles; p. 1,860. Also name of a former Duchy of Germy., on the Rhine, now incorporated in Hesse-Nassau; also *c.* on New Providence Isl., in the Bahamas; health rest.; p. 15,000. The Nassau or Poggy Isls. (two) lie W. of Sumatra.
**Natal,** Brit. prov. in Union of S. Africa, betwn. the Indn. Oc. and the Drakenberg mtns., N.E. of prov. of C. of Good Hope; area (includg. Zulu-

land) 35,284 sq. m.; mtnous. terraces, with a fertile semi-tropical cst. belt; p. about 1,500,000, only 120,000 of whom are Europeans. Cap. Pietermaritzburg; chf. port, Durban. Exports wool, coffee, ivory, sugar, hides, ostrich feathers, etc. Also name of a t. in Brazil, cap. Rio Grande do Norte; rubber and other exports; p. 30,600; also t. on cst. of Sumatra.

**Natanz,** *prov.* Persia, in hill country betwn. Kashan and Isfahan; famous for pears and other fruit. Cap. N., a large Highland vil. with old mosque; p. 3,400.

**Natchez,** *c.* Adams co., Mississippi, U.S.A., on R. M.; in rich cotton-growing dist.; p. 13,500.

**Nathdwara,** *t.* in Udaipur dist., Rajputana, India; tr. centre; p. 2,000 .

**Natick,** *t.* in Middlesex co., U.S.A.; boots, shoes, and rubber factories; p. 13,750.

**Natural Bridge,** limestone *arch* (215 ft. high) crossg. sm. R. in Rockbridge co., Virginia, U.S.A., nr. Lexington.

**Naucratis,** anc. *c.* 10 m. W. of the Rosetta br. of R. Nile, nr. the mod. Egyptn. vil. of Nebireh, midway betwn. Cairo and Alexandria; excavated by Flinders Petrie and Gardiner. [p. 9,060.

**Nauen,** *t.* nr. Potsdam, Pruss.; Brandenburg prov.;

**Naugatuck,** industrl. *t.* in New Haven co., Connecticut, U.S.A., on the N. R.; p. 14,250.

**Nauheim,** or **Bad Nauheim,** *wat. pl.* Germy., on the Taunus Mtns., Hesse-Darmstadt; warm saline springs, overhung by the Johannesberg woods; fine Kurhaus; res. p. 5,000 (20,000 visitors annually).

**Naumburg,** *mftg. t.* on R. Saale, Prussn. Saxony; cathedl., annual Hussite feast; near is the wat. pl. of Kosen; p. 25,120.

**Nauplia,** or **Napoli di Romania,** fort. *t.* in the Morea, Greece, on B. of Nauplia; p. 4,950.

**Navan,** mkt. *t.* on R. Boyne, co. Meath, I.F.S.; p. 3,860.

**Navarino,** or **Neocastro,** fort. *spt.* Greece, on W. cst. Morea. Turkish-Egyptn. fleet destroyed in the harbour by allied Eng., French, and Russns. in 1827.

**Navarra,** *prov.* and old kingdom N. Spain, bounded by the Pyrenees; area 4,055 sq. m., p. 316,144. Wine-growing, timber, mnrls., and agr. Cap. Pamplona. [5,150.

**Navasota,** *t.* in E. Texas, U.S.A., on the N. R.; p.

**Nawanagar,** nat. *st.* in Kathiawar, Gujarat div., Bombay, India; area 3,791 sq. m.; p. 345,050. Cap. N., silk and gold embroidery; p. abt. 50,000.

**Naxos,** or **Naxis,** *isl.* and *t.* of Greece, largest of the Cyclades, area 164 sq. m., famous for wine, p. 15,000.

**Nazareth,** *t.* nr. Acre, Palestine, now called en-Nâsira, centre of missionary enterprise, p. 9,000 (6,500 Christians); also sml. industrl. t. nr. Ghent, Belgium, p. 4,890. [Lopez.

**Nazareth, B.** on Gabun *cst.*, W. Africa, N. of Cape

**Naze, The,** *C.* on Skager Rack, S. Norway; also headland nr. Harwich, cst. of Essex, Eng.

**Neagh, Lough,** *L.* in Ulster prov., N. Ireld., largest in Brit. Isles (area 153 sq. m.), drained by R. Bann.

**Neath,** *mun. bor., t.* on R. N., Glamorgansh., Wales, nr. Swansea, copper, tin, and chemical wks., p.

**Nebraska,** a central *st.* of the U.S.A., area 76,808 sq. m., mainly prairie, p. 1,429,000; cap. Lincoln; ch. *c.* Omaha, on R. Missouri (*q.v.*); Nebraska City is also on R. Missouri, in the farmg. regn. of Otoe co., p. 7,300.

**Neches,** *R.* of Texas, U.S.A., flows (350 m.) to Sabine Lake.

**Neckar,** *R.* rising betwn. the Swabian Alb, nr. Schwenningen, and the Blk. Forest, Germy., and flowing 240 m. through Würtemberg and Baden to the Rhine at Mannheim. [p. 1,840.

**Needham Market,** *t.* on R. Gipping, Suffolk, Eng.,

**Needham,** mftg. *t.* nr. Boston, Mass., U.S.A., 11,100.

**Needles,** group of *rocks* jutting out at W. extrem. Isle of Wight, Eng.

**Neemuch,** or **Nimach,** *t.* in Gwalior st., Centl. India, on Rajputana border, Brit. military cantonmt., p. 25,250. [port, p. 97,274.

**Nee-e-gata,** *c.* on W. cst. Honshiu, Japan, open

**Neenah,** *c.* on Fox R., Winnebago co., Wisconsin, U.S.A., timber yds., flour and paper mills, summer rest. at foot of Winnebago Lake, p. 9,350.

**Negapatam,** *t.* at mth. of Vettar R., Tanjore dist., Madras, India, joined with the municipaly. of Nagore, ry. terminus, good shipping tr. in rice, etc., p. 60,168.

**Negaunee,** *t.* nr. Green Bay C., Marquette co., Michigan, U.S.A., in hæmatite iron dist., p. 6,500.

**Negros,** one of the Philippine Isls. S. of Mindanao; length 120 m., width (mean) 25 m.; p. 210,000.

**Neilston,** *t.* nr. Glasgow, Renfrewsh., Scotl., p. *15,306.*

**Neisse,** *R.* of Germany (115 m.), trib. of R. Oder, sometimes called the Glatz Neisse. On its bank is the t. of Neisse; fine bldgs. and a sanatorium; p. 26,010.

**Neiva,** or **Nitza,** *R.* of Russia, E. of the Urals, trib. (300 m.) of R. Tura.

**Nejd,** and **Hasa,** Emirate, Central Arabian principality, mainly desert, and inhabited by Wahabites; est. p. 300,000.

**Nellore,** *t.* of Madras, India, p. 33,500.

**Nelson,** *mun. bor.*, mftg. *t.* nr. Burnley, Lancs., Eng., p. *38,306*; cotton is the staple. Also chf. t. of silvermining dist., West Kootenay, Brit. Columbia, p. *5,931.* Also name of R. of Keewatin, Canada, carrying the water of L. Winnipeg to Hudson B.; length (with its great trib. the Saskatchewan) 1,450 m. Also provin. dist. of S. Isl., New Zealand; area 10,875 sq. m., p. 47,628.

**Nelsonville,** *t.* on Hocking R., Athens co., Ohio, U.S.A.; colliery region; p. 5,200.

**Nemirov,** mftg. *t.* Podolia, Ukraine, nr. **Kamenetz,** p. 8,300.

**Nemours,** *t.* nr. Fontainebleau, Seine-et-Marne prov., France, p. 4,570. Fine old ch. and castle, glass factories. [Eng.

**Nen,** *R.* (70 m.), flows to the Wash, Lincolnsh.,

**Nenagh,** mkt. *t.* co. Tipperary, I.F.S., p. 5,220.

**Neosho,** *R.* Kansas, U.S.A., trib. (450 m.) of Arkansas R.

**Nepal,** or **Nepaul,** indpt. *kingdom* S. Himalayas, N. of Brit. India and S. of Tibet; area 54,000 sq. m.; exports rice, tobacco, timber, ghee, *etc.*; p. (about) 5,000,000; cap. Khatmandu.

**Nephim,** *mtn.* in co. Mayo, I.F.S., nr. Crossmolina, alt. 2,646 ft.

**Nerbudda.** (*See* **Narbada.**)

**Nerchinsk,** *t.* on R. Nertcha, Transbaikalia, p. 6,350.

**Ness, Loch,** on Caledonian Canal, Inverness, Scotl., 22¼ m. long.

**Neston and Parkgate,** *urb. dist., t.* Cheshire, Eng., on the estuary of R. Dee, p. *5,674.*

**Nesvizh,** *t.* nr. Minsk, U.S.S.R.; industrl.; p. 11,450.

**Netherlands,** or the **Low Countries,** designation formerly applied to Belgium and Holland, and now officially retained by the latter. *Kingdom* of W. Europe; area 12,580 sq. m., p. 6,841,150. Polit. cap. The Hague; commcl. cap. Amsterdam. Country low-lying, intersected by dykes, fertile and productive; agr., butter and cheesemaking, mkt. gardening, distilling, and various manufs.

**Nethou,** *mtn.* in Spain, Pyrenees, Maladetta group, alt. 11,170 ft.

**Netley,** *vil.* Hants, Eng.; Royal Military Hospital and Army Medical Schl.; ruined abbey.

**Netze,** *R.* of Pruss., trib. (140 m.) of R. **Warta,** rises in Poland.

**Neubau,** W. *sub.* of Vienna city, Austria.

**Neu Brandenburg,** *t.* on Tollen See, Mecklenburg-Strelitz, Germy.; grand-ducal seat of Belvedere, monuments to Bismarck and Fritz Reuter, p. 10,950.

**Neufchâteau,** *t.* nr. R. Meuse, dep. Vosges, France, p. 5,070.

**Neufchâtel,** or **Neuchâtel,** one of the Swiss cantons, area 311 sq. m. (86 m. forest, 36½ m. lake of Neuchatel); agr., vineyds., asphalte mines; also watch-mkg. industries; p. 131,349. Cap. N., t. on N.W. shore of lake; has watchmkg. schl., p. 23,152.

**Neuhaus,** *t.* nr. Tabor, Bohemia; industl., p. 9,760.

**Neuhausen,** *sub.* of Munich, Bavaria; residl., p. 11,120.

**Neuilly-sur-Seine,** *sub.* W. of Paris, France, betwn. the Seine and the fortifications; fine bridge and castle, p. 51,590.

**Neu Mecklenburg,** Brit. *isl.* in Bismarck Arch., area 4,600 sq. m.; formerly German, now called New Ireland. [p. 14,940.

**Neumunster,** *t.* nr. Hamburg, Pruss.; cloth, mftg.,

**Neu-Pommern,** largest *isl.* Bismarck Arch., area 9,662 sq. m.; formerly German, now known as New Britain.

**Neuquen,** *terr.* in the Argentine Repub., area 40,530 sq. m.; agr. and stock-raisg., p. 40,250.

**Neu-Ruppin,** *t.* on Lake Ruppin, nr. Berlin, Pruss.; educatl. and industr., p. 18,740.

**Neusalz,** *t.* on R. Oder, Silesia, Pruss.; enamellg. and papier-mâché works, p. 13,650.

**Neusandec,** or **Neu-Sandetz,** industr. *t.* in W. Galicia; ry. wk. shops, petroleum dist., p. 16,950, nearly all Polish. Altsandec, adjoining., has a large annual fair, and cattle tr.

**Neusatz,** *t.* on R. Danube, opp. Peterwardein, S. Hungary; a royal free city, taken by the Austrians in 1849, and nearly destroyed; literary and commcl. centre, p. 26,730.

**Neuse,** *R.*, N. Carolina, U.S.A.; flows (300 m.) to Pamlico Sound.

**Neustadt,** *t.* nr. Vienna, Lower Austria; manuf.; p. 26,830; also several sm. tns. of Germany.

**Neustettin,** *t.* nr. Coslin, Pomerania, Pruss.; manuf.; p. 9,280.

**Neu Strelitz,** *cap.* Mecklenburg-Strelitz, Germy., nr. Altstrelitz, the old cap.; p. 11,461; has grand-ducal residence. [and mchy. manuf.; p. 12,200.

**Neutitschein,** *t.* in Moravia, Czecho-Slov.; agr. imp.

**Neutra,** *R.* Hungary, trib. (100 m.) of R. Waag; also *t.* on R. Neutra, same name, cap. co. N., p. 14,360; cathedl. [Industrl., p. 8,270.

**Neu Ulm,** *t.* on R. Danube, Bavaria, opp. Ulm;

**Neuwied,** *t.* in Rhine prov. Pruss., nr. Coblenz; cap. of the mediatised countships of Wied; noted for its schools and establishments of the Moravian Brethren; p. 12,120.

**Neva,** *R.*, Russ., govt. Leningrad (40 m.), flows past the cap. from L. Lagoda to G. of Finland.

**Nevada,** Pacific *st.* of U.S.A., betwn. Utah and Oregon and Idaho, and bounded S. and W. by California, area 109,821 sq. m.; arid, but rich in minerals, partic. gold and silver, though the productn. of both is greatly diminishg.; p. 78,000, cap. Carson c. Also N., c. of Missouri, U.S.A.; cap. Vernon co.; zinc mining and smelting; p. 7,500.

**Nevers,** *c.* on R. Loire, cap. Nièvre dep., France; the Roman Novlodunum; porcelain and faïence industry; cathdl.; p. 25,610.

**Nevil's Cross,** nr. Durham, Eng.; here the English defeated the Scots in 1346.

**Nevis,** *loch,* arm of sea off est. of Inverness-sh., Scot.; 14 m. long; also Brit. isl., Leeward grp., W. Indies, area 50 sq. m., sugar export, p. 13,000, cap. St. Christopher.

**New Albany,** *c.* on Ohio R., Floyd co., Indiana, U.S.A., opp. Louisville, Kentucky; glass, iron, and steel manuf.; p. 26,100. [23,860.

**New Amstel,** mftg. *t.* nr. Amsterdam, Holland, p.

**New Amsterdam,** *t.* in Brit. Guiana, on Berbice R.

**Newark,** *mun. bor.*, mkt. *t.* on R. Trent, Notts, Eng.; brewg., ironwks., etc., p. *18,055*; also c. Essex co., New Jersey, U.S.A., many flourishg. manufs., p. 445,000, also c. on Licking R., L. c., Ohio, U.S.A.; ry. carr. wks. and varied manuf.; p. 30,750. [p. *7,455.*

**Newbattle,** *par.* on S. Esk R., nr. Dalkeith, Scotl.;

**New Bedford,** *c.* and *pt.* on est. of Acushnet, Buzzard's B., Mass., U.S.A., nr. Boston, formly. whale fishy. centre, p. 111,500.

**New Berne,** *pt. of entry* on R. Neuse, N. Carolina, U.S.A.; tr. in timber, tobacco, cotton, etc., p. 11,750.

**Newberry,** *vil.* N. co., S. Carolina, U.S.A., p. 7,400.

**Newbiggin-by-the-Sea,** *urb. distr.*, est. *wat. pl.* nr. Morpeth, Northumberland, Eng., p. *6,904.*

**Newbold and Dunston,** mfng. *t.* nr. Chesterfield, Derbys., Eng., p. 6,360. [Eng., p. 4,850.

**Newbottle,** *t.* adjng. Houghton-le-Spring, Durham,

**Newbridge,** *t* on R. Loddon, co. Gladstone, Victoria, p. (dist.) 3,000; also t. on R. Liffey, co. Kildare, I.F.S., p. 3,350.

**New Brighton,** *t.* and *wat. pl.* nr. Birkenhead, Ches.; Eng., p. 5,860; also a bor. of New York c., U.S.A. on Staten Isl.; warehouses and factories; also bor. on Beaver R., Beaver co., Penn., U.S.A., in colly. dist.; p. 10,000.

**New Britain,** *c.* Hartford co., Connecticut, U.S.A.; iron and brass manuf.; p. 69,000. (*See also* Neu-Pommern.)

**New Brunswick,** prov. Dominion of Canada; area 27,911 sq. m., largely forest-clad, extremes of cold and heat, traversed by mountns., with many lakes, fishg., hunting, agr., manuf., p. 415,000; cap. Fredericton (*q.v.*) Also c. New Jersey, U.S.A., on Raritan R.; india-rubber and leather factories, p. 34,750.

**Newburg,** *c.* on R. Hudson, Orange co., New York, U.S.A.; clothg. and mchy. manuf., p. 30,366.

**Newburgh,** *t.* on R. Tay, Fifesh., Scotl., nr. Perth, p. *2,019.*

**Newburn,** *urb. dist.*, on R. Tyne, nr. Newcastle, Eng., p. *19,539.*

**Newbury,** *mun. bor.*, mkt. *t.* on R. Kennet, Berks, Eng.; impt. wool mkt.; p. *13,336*; also vil. on Connecticut R., Orange co., Vermont, U.S.A., p. 3,200.

**Newburyport,** *c.* and *port* on R. Merrimac, Essex co., Mass., U.S.A.; boot and shoe factories, commerce and fisheries, p. 15,000.

**New Caledonia,** French *isl.* of Australasia, S. Pacific Oc.; area 7,650 sq. m., cap. Noumea; p. (of isl.) 50,600; chf. French penal settlement.

**New Castile,** former *prov.* Spain, now divided between Madrid, Ciudad Real, Cuenca, Guadalajara, and Toledo.

**Newcastle,** *t.* nr. mth of Great Fish R., C. of Good Hope, S. Africa; also t. N. of Drakenberg dist., Natal, p. *1,721*; also t. on R. Avon, nr. Perth, W. Australia; also port in Durham co., Ontario, Can., nr. Toronto; also c. in Lawrence co., Penn., U.S.A., on Shenango R., colly. dist., p. 49,000; also c. at mth. of R. Hunter, N.S.W., coal regn., p. (with subs.) 62,900; also mkt. *t.* in co. Limerick, I.F.S., p. 2,160.

**Newcastle,** or **Miramichi,** *spt.* New Brunswick, cap. of N. co., on M. R., gd. tr., p. 5,750.

**Newcastle Emlyn,** *urb. dist.*, on R. Teifi, Cardiganshire, Wales, p. *762.*

**Newcastleton,** *par.* in Roxburgh co., Scotl., on Liddel Water, p. 1,120.

**Newcastle-under-Lyme,** *mun. bor.*, Staffordsh., Eng., on Lyme Brook; breweries, paper mkg., etc.; p. *23,246.*

**Newcastle-upon-Tyne,** *co. bor.*, *c.* and *spt.* Northumberld., Eng., connected by bridges with Gateshead, Durham; great shipbuildg. and colliery port; cathedral, many fine pub. bldgs., flourishing chemical and many other manufs.; *283,145.*

**Newchang,** or **New Chwang,** treaty *pt.* at head of G. of Pechili, Manchuria, China; exports beans, silk, etc.; p. 82,100.

**Newchurch-in-Rossendale,** mftg. *t.* in Lancash., Eng., nr. Bacup, p. 6,870.

**New Cumberland,** *t.* W. Virginia, U.S.A., on the R. Ohio, nr. Pittsburg, p. 5,000.

**New Cumnock,** *vil.* on R. Nith, Ayrsh., Scotl., p. *6,419.* [p. (est.) 20,000.

**New Dongola,** or **Maraka,** tr. *t.* in Nubia, on R. Nile,

**New England,** pastl. *dist.* in N.E. of N.S.W., traversed by New Eng. mtn. range, area 13,100 sq. m.; the New Eng. States of the U.S.A. are Maine, New Hampshire, Vermont, Mass., Connecticut, and Rhode Isl.

**Newent,** mkt. *t.* in Gloucestersh., Eng., p. 2,200.

**New Forest,** woodland *regn.* (area 93,000 acres) in S.W. Hants, Eng. Lyndhurst is the forest cap., and Brockenhurst and Beaulieu (with ruined abbey) are villages within the demesne.

**Newfoundland,** Brit. *isl.* col. N. America, E. of the G. of St. Lawrence, area 42,734 sq. m.; the oldest Brit. col., p. (including that part of Labrador over which Newfoundland has jurisdiction), 267,330; cod and lobster fishery and pulp-making are the chief industries, but agr. and mining are being extensively developed; the climate is severe; cap. St. John's (*q.v.*).

**New Glasgow,** *spt.* Nova Scotia, nr. Picton, p. 8,959.

**New Granada,** former name of the United S. of Colombia, S. America (*q.v.*).

**New Guinea,** or **Papua,** largest *isl.* in world (except Australia), lies N. of Australia and S. of the Equator, area about 330,000 sq. m., p. (est.) 500,000.

**Newham,** *t.* in co. s Bourke and Dalhousie, Victoria, p. (dist.) 2,091.

**New Hampshire,** a *st.* of the New Eng. grp., U.S.A., touching the Canadian border, area 9,031 sq. m.; agr. and fruit-growing extensively pursued, but the bulk of the inhabts. are concerned in various manuf. and commerce; p. 459,500, cap. Concord, ch. spt. Portsmouth, princ. mftg. centre Manchester (*q.v.*).

**New Hartford,** *t.* Connecticut, U.S.A., on the Farmington R., Hartford co., p. 5,050.

**New Haven,** *c.* and *pt.* of Connecticut, U.S.A., on New Haven Harbr., inlet of Long Isl. Sound, seat of Yale University, and of many flourishing manufs., p. 162,600.

**Newhaven,** *urb. dist., spt.* at mth. of R. Ouse, Sussex, Eng., the passenger pt. for Dieppe, p. *6,790*; also fishing t. on F. of Forth, Edinburgh, Scotl., p. 4,760.

**New Hebrides,** French isl. *grp.* in S. Pacific, N. of New Caledonia, total area 5,500 sq. m., p. about 60,000.

**New Holland,** *ferry* and *ry. stn.* on R. Humber, Lincolnsh., Eng., opp. Hull.

**New Hunstanton,** *urb. dist.*, Norfolk, Eng., p. *3,131.*

**New Iberia,** *t.* in Iberia co., Louisiana, U.S.A.; sugar, cotton and rice growg., timber,tr., p. 8,100.

**Newington,** dist. of London, Eng., S. of Southwark.

**New Ireland.** (*See* Neu Mecklenburg.)

**New Jersey,** Atlantic *st.* U.S.A., adjoing. New York, area 7,514 sq. m.; manuf. and agr., p. 3,956,000, cap. Trenton, ch. cities Newark and Jersey City (*q.v.*).

**New Lambton,** colly, *dist.* N.S.W., sub. to New-castle, co. Northumberland, p. 2,160.

**New Lebanon,** *t.* New York, U.S.A., nr. Albany, in Columbia co.; contains Lebanon Springs, p. 4,200.

**New London,** *c.* on R. Thames, Connecticut, U.S.A.; fine harbr., varsity boat races on r., silk and woollen factories, p. 25,688.

**Newlyn,** picturesque cst. *vil.*, Mounts Bay, Cornwall, Eng., p. 3,170. [p. 3,870.

**New Malden,** mkt. *t.* nr. Kingston, Surrey, Eng.,

**Newmarket,** *t.* and racing centre, Cambridgesh., Eng., famous Heath, p. *9,753*; also t. in York co., Ontario, Can., p. 3,000.

**New Mexico,** *state* of U.S.A., N. of the Mexican Repub., and S. of Colorado st., area 122,580 sq. m., traversed by the Rocky Mtns., p. 404,000; chiefly of Mexican descent; mineral, horticutl., and agr. industries flourish, and stock-raising also; cap. Santa Fé.

**New Mill,** *urb. dist.*, W.R., Yorks, Eng., p. *4,538.*

**New Mills,** *urb. dist.*, industrl. *t.* Derbysh., Eng., p. *8,551.* [Kilmarnock, Ayrsh., Scotl., p. 4,820.

**Newmilns,** mftg. (muslin and lace curtains) *t.* nr.

**Newnham,** *urb. dist.*, *t.* on R. Severn, Gloucestersh., Eng., p. *1,035.*

**New Norfolk,** *t.* Tasmania, nr. Hobart, fruit-growing, p. (dist.) 5,320.

**New Orleans,** *c.* and *pt.* on R. Mississippi, cap. of Louisiana, U.S.A., the great cotton mart. of America and a busy comml. and mftg. centre, p. 465,000.

**New Philadelphia,** *c.* on Tuscarawas R., Ohio, U.S.A., impt. ry. and canal centre, p. 12,500.

**New Plymouth,** *spt.* on W. cst. N. isl., New Zealand, cap. Taranaki dist., p. 15,938.

**Newport,** *c.* Campbell co., Kentucky, U.S.A., on Ohio R., a resid. sub. of Cincinnati, with impt. local industr., p. 29,755; also c. Rhode Isl., U.S.A. on Narragansett R., fashionable seaside rest., perm. p. 27,350.

**Newport,** Isle of Wight, *mun. bor.* and *cap.* of isl. on Medina R. (includ. in co. Hants.), Eng., p. *11,313.*

**Newport,** Mon., *co. bor.*, *t.* on R. Usk, co. M., Eng., shipbldg. and manuf.; also consid. shipping tr., p. *89,198.* [11m. S.W. Stafford, p. *3,439.*

**Newport,** *urb. dist.*, mkt. *t.* Shropshire; Eng.,

**Newport News,** *c.* and *spt.* on Chesapeake B., Virginia, U.S.A., shipbldg., various manuf., large tr., p. 34,250.

**Newport-on-Tay,** burgh *co.* Fife, Scotl., opp. Dundee, p. *3,275.* [p. *3,957.*

**Newport Pagnell,** *urb. dist.*, mkt. *t.* Bucks, Eng.,

**New Providence,** *isl.* of the Bahama grp., W. Indies, 17 m. long, cap. Nassau (*q.v.*).

**Newquay,** *urb. dist., wat. pl.* on cst. of Cornwall, Eng., 14 N. of Truro, p. *5,958.*

**New Quay,** *urb. dist.* cst. *t.* nr. Aberaeron, Cardigansh., Wales, p. *1,112.*

**New Richmond,** *t.* in Ohio, U.S.A., on O. R., 20 m. from Cincinnati, p. 4,000.

**New River,** artificial *aqueduct*, 36 m. long, Herts. to Islington, London, Eng.

**New Rochelle,** *c.* Westchester co., New York, U.S.A., on Long Isl. Sound, residtl., p. 55,750.

**New Romney,** *mun. bor.*, *t.* nr. Hythe, Kent, Eng.; one of the Cinque Ports, p. *1,786.*

**New Ross,** mkt. *t.* on R. Barrow, co. Wexford, I.F.S., p. 5,920.

**Newry,** *t.* at hd. of Carlingford Lough, co. Down, N. Ireld., p. 11,970.

**New Siberia,** *arch.* off the Arctic cst. of Siberia; area 10,000 sq. m., climate very severe.

**New South Wales,** oldest *st.* of Australian Commonwealth, betwn. the Pacific cst. and S. Australia, having Queensland on the N. and Victoria on the S., area 309,332 sq. m., p. 2,248,000; fertile cst. dists., pastoral and agr., much minl. wealth in the table-lands and mountnous expanses, cap. Sydney (*q.v.*).

**Newstead,** *t.* in Victoria, 80 m. N.W. of Melbourne; Newstead Priory, Notts, Eng., nr. Mansfield, once the home of Lord Byron, the poet.

**Newton,** mftg. *c.* on Charles R., Middlesex co., Mass., U.S.A., p. 67,250; also c. in agr. dist. Harvey co., Kansas, U.S.A., p. 11,100; also c. in Jasper co., Iowa, U.S.A., p. 12,000; also t. in New Jersey, U.S.A., cap. Sussex co., p. 5,500.

**Newton Abbot,** *urb. dist.*, mkt. *t.* on R. Teign, Devon, Eng., p. *15,003.*

**Newton Heath,** industrl. *dist.* N.E. Manchester, Lancash., Eng., p. 18,776.

**Newton-in-Makerfield,** or **Newton-le-Willows,** *urb. dist.*, mftg. *t.* 15 m. E. of Liverpool, Lancs., Eng., p. *20,150.*

**Newtonmore,** *par.* Inverness-sh., Scotl., on R. Spey. [Scotl., p. 2,070.

**Newton-Stewart,** *burgh* on R. Cree, Wigtownsh.,

**Newtown,** *urb. dist.*, mkt. *t.* on R. Severn, Montgomerysh., Wales, p. *5,152*; also S.W. sub. Sydney, N.S.W.; also t. nr. Hobart, Tasmania.

**Newtownards,** mkt. and industrial *t.* co. Down, N. Ireld. nr. Belfast, p. 9,350.

**Newtown Stewart,** mkt. *t.* on R. Mourne, co. Tyrone, I.F.S., p. 1,020.

**New Ulm,** *c.* in Brown co., Minnesota, U.S.A.; founded 1854, destroyed by Indians 1862, since rebuilt, p. 7,350. [6,830.

**Newtown-upon-Ayr,** *t.* subn. to Ayr, Scotl., p.

**New Westminster,** *t.* on Fraser R., Brit. Columbia; former cap. of col., p. *17,524.*

**New Windsor.** (*See* Windsor.)

**New Whatcomb,** *c.* on Bellingham B., Puget Sound, Washington, U.S.A.; sawmills, timber tr., p. 8,250.

**New York,** one of the original States, U.S.A., touching Canada on the N., and reaching the Atlantic on the S., with Niagara and L. Erie on the W., and Connecticut, Mass., and Vermont on the E.; includg. Long Isl. and Staten Isl., the "Empire State," as it is sometimes styled, New York has a total land area of 47,654 sq. m., and a p. of 11,783,000. Albany is the State cap. (*q.v.*).

**New York C.,** largest *c.* in N.Y. State and the Western Hemisphere; commercl. metrop. of the U.S.A.; originally founded by Dutch Settlers as New Amsterdam at the S. extremity of Manhattan Isl. (*q.v.*), it has grown to embrace a total offic. area of 305 sq. m., with a p. (incl.g. Greater New York) of 7,060,000; connected by bridge over the East R. with Brooklyn; that city was included in the consolidatn. of 1898 of New York, while the gt. communities in New Jersey State of Jersey City, Hoboken, Newark, etc., practically belong to the gigantic commercial aggregatn. of the American business cap.

**New Zealand,** Brit. Colonial *isl. grp.* in the S. Pacific E. of S.-E. Australia and Tasmania, just over 1,200 m. from Sydney, N.S.W.; it consists of the two main isls. N. and S. (collective area 103,581 sq. m.), Stewart Isl. (621 sq. m.), the Aucklands, and some sm. islets to the S. with the Kermadecs on the N., giving in all an area of 104,471 sq. m.; the isls. are mountainous (with active volcanoes), and contain numerous L.'s, thermal springs, and geysers; the scenery being as diverse as beautiful, and the climate generally healthy, p. 1,354,000 (exclusive of 55,000 Maories); cap. Wellington, than which t. Auckland, Christchurch and Dunedin (all of which see) have larger p.; chf. exports, wool, grain, flour, meat (refrigerated and preserved), leather, etc.

**Neyland,** *urb. dist.*, Pembroke, Wales, p. *2,161.*

**Nezin, Nezhin,** or **Nejin,** industrl. *t.* on R. Oster, in Ukraine; formerly of consid. commercl. importce., p. 47,000.

**Ngami,** reedy *swamp* in Brit. S. Centl. Africa, formerly a L., 50 m. long, 3,700 ft. above sea; discovd. (1849) by Dr. Livingstone.

**Nhill,** *t.* Victoria, Lowan co., in farmg. dist., p. 3,450.

**Niagara,** *R.* forming part of bndy. between Can. and U.S.A.; flows 35 m. from L. Erie to L. Ontario; has rapids and the famous falls (167 ft.). Niagara Falls is the name of a town on the Ontario bank of N. R. opp. the cataract; two wonderful bridges, p. *18,963*; also of c. on America side of the R., extendg. along the summit of cliff for 3 miles, p. 78,000.

**Nias,** *isl.* (Dutch) W. of Sumatra, 95 m. long.

**Nicaragua,** Centl. American repub. S. of Honduras; reaching from Pacific to Caribbean S. on the Atlantic; area 49,200 sq. m., p. 750,000; produce, coffee, bananas, india-rubber, sugar, timber; cattle-rearing is pursued extensively, and there is some mineral wealth. Managua is the cap. [Leon (the largest c.) the old cap.] L. Nicaragua (in the S. part of the repub.) is 92 m. long by 42 m. wide at the broadest points, and drains by the San Juan R. to the Caribbean S. The great scheme of utilising the waterway of the L. and R. in the formatn. of a canal uniting the two oceans first received constructive attention in 1889.

**Nicastro,** mftg. *t.* in Catanzaro prov., Italy, W. of the Apennines, p. 15,360.

**Nice,** spt. *c.* and Riviera, health rest on the Mediterranean, France, at the foot of the Alps; beautiful climate and surroundings, joins the ancient t. of Cimiez. Ceded to France in 1860 by Sardinia; fruit and flower exports, perfume manuf., p. 155,839.

**Nicobar Isls.,** Brit. *grp.* in Bay of Bengal, betwn. the Andamans and Sumatra; total area 635 sq. m., p. 9,260.

**Nicosia,** *t.* Sicily, prov. Catania; mftg., p. 16,220; also name of cap. of Cyprus (formerly called Lefkosia, and more anciently Ledra); fortified, mosques, hand-weavg. in silk and cotton; p. 18,461.

**Nicotera,** *spt.* nr. Reggio, Calabria, Italy; gd. tr., p. 7,870. [Pacific cst., p. 11,250.

**Nicoya,** *t.* on penin., of N., N. Bay, Costa Rica.

**Niotheroy,** *t.*, cap. of Rio de Janiero, Brazil, 5 m. E. of the city of Rio de Janeiro, p. 86,728.

**Niederwald,** *hill* opp. Bingen-on-the-Rhine, Pruss., a spur of the Taunus; nat. monumt. commemoratg. Germn. triumph over France, 1870–1871, and the formatn. of the G. Empire.

**Nieder Wesel,** or **Neizel,** fort. *t.* below Düsseldorf, on R. Rhine, Pruss., p. 22,630.

**Niemen,** or **Memel,** *R.* of E. Pruss. and U.S.S.R., rising in old R. govt. of Minsk and flowg. 500 m. to the Kurisches Haff, 50 m. N.E. Königsberg.

**Niemes,** *t.* nr. Buntzlau, Bohemia, on R. Polzen; cloth, linen, bentwood furniture, and vinegar manuf., p. 5,890. [Industrl., p. 8,350.

**Nienburg,** *t.* on R. Weser, nr. Hanover, Pruss.;

**Nieuwveld,** mtn. *range* nr. Roggeveld, C. of Good Hope, S. Africa; highest pt. 7,300 ft.

**Nièvre,** centl. *dep.* France; traversed by Morvan Mtns.; area 2,659 sq. m., agr., grape growing, minerals; p. 270,148; cap. Nevers (*q.v.*).

**Nigdeh,** *t.* in Asia Minor, Konia vilayet; many beautiful bldgs.; p. 20,000.

**Niger,** gt. *R.* West Africa; rises nr. the sea in the outer mtn. zone of W. Africa, as the R. Tembi and sweeps round by Timbuktu to a delta in the G. of Guinea, on a circuitous course of 2,600 m., receivg. its gt. trib. the R. Benue, about 250 m. from its mouth.

**Nigeria,** Brit. *Protectorate* in W. Africa, occupying the lower basin of R. Niger, with the regn. adjng. up to Lake Chad; divided administratively into N. and S. Nigeria; total area 332,000 sq. m., p. 16,250,000, including 2,800 Europeans. Lagos is the seat of gvt., but the most important *t.* is Kano, the gt. emporium for the Central Sudan, with a daily mkt. attendance of 30,000.

**Niigata.** (*See* **Nee-e-gata.**)

**Nijar,** *t.* in Almeria prov., Spain, in fertile fruit, nuts, and grain growg. dist.; manuf. fine porcelain; p. 13,250. [Industrl., p. 7,770.

**Nijkerk,** *t.* nr. Arnhem, Gelderland, Holland;

**Nijni-Novgorod,** old prov., U.S.S.R., intersected by R.s Volga and Oka; area 19,797 sq. m. Soil chiefly black earth; agr., shipping, minerals, manuf., p. abt. 2 millns. Cap. N. N., *t.* at confl. of R.'s V. and O., gt. commercl. centre; p. 100,000 (more than double at the famous annual fair).

**Nijnitaghilsk,** *t.* in the Ural range, U.S.S.R.; thriving industl.; p. 52,000.

**Nikolaevsk,** *t.* on R. Amur, old Primorsk govt., U.S.S.R.; p. 6,500.

**Nikolaiev,** fort. *t.* nr. Kherson, at hd. of est. R. Bugg, Ukraine; chf. port of the former Russian Black Sea fleet; admiralty yards and mchy. works; p. 11,000.

**Nikolsburg,** or **Nikulow,** *t.* at foot of Polau mtns., S. Moravia; grape growing and cloth manuf.; p. 8,250. [Ukraine; p. 11,000.

**Nikopol,** industrl. *t.* on R. Dnieper, Ekaterinoslav, Ukraine; chf. port of the former Russian Black Sea fleet; admiralty yards and mchy. works; p. 11,000.

**Nilambur,** *t.* in Madras Pres., India; impt. tr.; p. 12,500.

**Nile,** the longest *R.* in Africa (*see* **Bahr-el-Abiad**—White Nile—and **Bahr-el-Azrek**—Blue Nile) flows through a longer stretch of basin (over 2,450 m. in a direct line) than any other R. in the world, and along all its windings measures over 4,000 m., falling short only of the extent claimed for the Mississippi.

**Niles,** *c.* and *ry.* centre Trumble co., Ohio, U.S.A., on the Mahoning R.; p. 16,600; also *c.* Berrien co., Michigan, U.S.A., on St. Joseph R.; industrl. p. 11,750.

**Nilgiri,** sml. nat. *st.* Orissa, India, nr. cst. of B. of Bengal; p. 50,500.

**Nilgiri Hills,** Neelgherries, or Blue Mountains; range in Madras, S. India (alt. 6,500 ft.) giving name to sm. dist. of the Presidency; area 957 sq. m., p. 120,000. Coffee, tea, and cinchona grown; cap. Utakamund. [Industrl., p. 5,900.

**Nimburg,** *t.* on R. Elbe, Bohemia, nr. Prague,

**Nimeguen,** fortfd. *t.* on R. Waal, nr. Arnhem, Holland, mftg. ale, Pruss. blue, pottery, cigars; woods and beautiful scenery, p. 66,899.

**Nimes,** or **Nismes,** *t.* in Gard dep., France, Roman antiquities, educatl. instns., silk manuf., wine trade, p. 82,774.

**Nineveh,** celebrated *c.* of Assyria, stood on the E. bank of the upper R. Tigris opp. the mod. Mosul.

**Ning Po,** treaty *pt.* in Chekiang prov., China, 100 m. from Shanghai, prin. expts., cotton and tea, p. 2,172,320.

**Ninove,** *t.* on R. Dender, nr. Ghent, Belgium, industrl., p. 7,250. [20 sq. m.

**Nio,** Greek *isl.* nr. Naxos, in the Cyclades, area

**Niobrara,** *R.* trib. of R. Missouri, flows 450 m. from Wyoming to Nebraska, U.S.A.

**Niort,** *t.* dep. Deux-Sèvres, Frances, noted for its onions and glove manuf., p. 21,150.

**Niphon,** or **Nipon,** native name of Japan, applied often (but wrongly) to Honshiu, the princ. is. of the Mikado's Empire.

**Nipigon,** *L.* in Thunder Bay dist., Ontario, Can. (70 m. long, 50 m. wide, 1,000 isls.), discharges by N. R. (30 m. long) to Lake Superior.

**Nipissing,** *L.* Ontario, Can., midway betwn. Ottawa R. and L. Huron, 50 m. long, 35 m. wide. [13,570.

**Niscemi,** *t.* nr. Caltanisetta, Sicily, industrl., p.

**Nisch,** or **Nish,** *t.* on R. Nishava, Serbia, Jugo-Slavia, p. 24,949.

**Nishapur,** *prov.* N. Khorassan, Persia, grows grain and cotton, and contains famous turquoise mines, p. 140,000; cap. N., *c.* with gd. fruit tr., p. 15,000; mosque, with tomb of Omar Khayyám.

**Nisser-Vand,** *L.*, Noway (30 m. long) drained to Skager Rack.

**Nith,** *R.* of S.W. Scotl. (71 m.), flows to Solway F., S. of Dumfries; Nithsdale is a beautiful valley along R. bank.

**Niutchwang,** *t.* Manchuria. (*See* **Newchang.**)

**Nivelles,** *t.* in Brabant prov., Belgium, rlwy. workshops, veg. pchmt. manuf., p. 12,200.

**Nivernais,** old *prov.* of France, now forming Nièvre prov. and part of Cher.

**Nixdorf,** industrl. *t.* nr. Leitmeritz, Bohemia, p. 7,250.

**Nizampatam,** *t.* and *spt.* Kistna dist., Madras, India, p. 5,000.

**Nizam's Dominions.** (*See* **Haiderabad.**)

**Nizhni Novgorod.** (*See* **Nijni-Novgorod.**)

**Nizza Monferato,** industrl. *t.* nr. **Alessandria,** Italy, p. 7,260.

**Noale,** *t.* nr. Padua, Italy; industrl.; p. 5,220.

**Noblesville,** *t.* Hamilton co., Indiana, U.S.A., p. 4,820.

**Nocera Inferiore,** *t.* nr. Naples, prov. Salerno, Italy, the anc. Nuceria Alfaterna, p. 17,050; Nocera Umbria, cathedral *c.* Perugia prov., Italy, anc. Nuceria Camellaria, p. 7,260.

**Noci,** industrl. *t.* prov. Bari, Italy, p. 11,520.

**Nogent-le-Rotrou,** *t.* on R. Huisne, Eure-et-Loire dep., **France;** castle; p. 8,980. Nogent-sur-Marne, *vil.* suburban to Paris, 3 m. E. of the fortifications, p. 10,220. Nogent-sur-Seine, *t.* nr. Troyes, dep. Aube, France, p. 4,330.

**Noia,** or **Noja,** industrl. *t.* in prov. Bari, Italy; p. 8,260.

**Nola,** *t.* nr. Naples, prov. Caserta, Italy; was an anc. c. of Campania, noted for its vases, taken by the Romans 313 B.C.; p. 14,570.

**Nombre-de-Dios,** *t.* nr. Durango, Mexico, U.S.A.; good tr.; p. 6,424.

**Norcia,** *t.* prov. Perugia, Umbria, Italy; old walls, cathedral; famous for pork and terra-cotta; p. 5,808.

**Nord,** N. dep. France, on Belgian frontier and N. Sea; area 2,229 *sq.* m., p. 1,901,560; agr. flourishing, mining and textile manufs.; cap. Lille (*q.v.*).

**Nord Cap,** or **North Cape,** most N. point Europe, on isl. Mareró, Norway.

**Norden,** W. *urb. dist.*, Lancs, Eng.; p. *4,348*; also *t.* Hanover, Pruss., nr. Emden and the N. Sea; gin distilling, yeast factory; p. 7,560. The port of Norden is Norddeich, 4 m. N.W.

**Norderney,** one of the Frisian Isls., Hanover, pop. German seaside resort, p. 4,500; 25,000 summer visitors annually. [manuf., cathedral; p. 28,760.

**Nordhausen,** *t.* in Hartz Mtns., Saxony; chemical

**Nordheim,** *t.* nr. Göttingen, Hanover; industrl.; p. 7,220. [land, Norway, opp. North Cape.

**Nordkyn,** most N. *point* of the European main-

**Nordland,** or Norriand, territorial *dist.* of Norway, comprising the Lofoden Isls. (*q.v.*).

**Nordlingen,** *t.* nr. Nuremberg, Bavaria, on R. Eger; former imperial c.; carpet factories; p. 8,510.

**Nore, The,** *anchorage* Thames estuary, Eng.; also R. Irel., trib. (70 m.) of R. Barrow.

**Norfolk,** cst. *co.* E. England; mostly flat and marshy, with shallow lake expanses known as the Broads; area 2,119 sq. m., p. *504,816*. Industries chfly. agr.; with extensive fisheries from Yarmouth. Cap. Norwich (*q.v.*).

**Norfolk,** *c.* on Elizabeth R., N. co., Virginia, U.S.A.; shppg., genl. manuf., coffee-roastg.; p. 131,000; also c. on Elkhorn R., Madison co., Nebraska, U.S.A., in farmg. country; p. 10,950.

**Norfolk Isl.,** fertile *isl.* in Pacific, 800 m. E. of N.S.W.; area 13½ sq. m.; formerly a penal settlement; pines, oranges, etc.; p. 1,050.

**Noric Alps,** *mtns. rgn.* in Styria, Salzburg, S. Austria and Carinthia, betwn. valleys of Drave and Danube.

**Normal,** *vil.* nr. Bloomington, M'Lean co., Illinois, U.S.A.; p. 6,900. [manuf.; p. 11,500.

**Normanby,** *t.* nr. Middlesbrough, N.R. Yorks;

**Normandy,** old French *prov.* on Eng. Channel, mainly agr.; now divided into deps. Manche, Calvados, Eure, Seine-Inférieure, and part of Orne. Rouen was cap. The Roman Lugdunensis; later a powerful Dukedom, conquered Eng., 1066.

**Normanton,** *urb. dist.*, colliery and ry. *t.* W.R. Yorks, Eng.; p. *15,684*; also t. on R. Norman, Queensland; p. (dist.) 3,465.

**Norrbotten,** govt. Sweden, area 40,731 sq. m., p. 182,949; cap. Pitea.

**Norristown,** *bor.* on Schuylkill R., Montgomery co., Penn., U.S.A.; textile, hosiery, carpets, etc.; p. 36,100.

**Norrkjöping,** *t.* on R. Motala, Östergötland prov., Sweden; cotton spinning, cloth wvng., shipbdg.; p. 58,101.

**Norrland.** (*See* **Nordland.**) [p. 5,840.

**Nort,** *t.* nr. **Nantes,** dep. Loire-Inférieure, France;

**North Adams,** *c.* on the Hoosac R., Berks co., Mass., U.S.A.; textiles, boots and shoes; p. 21,500.

**Northallerton,** *urb. dist.*, mkt. *t.* in agr. dist. N.R. Yorks, Eng.; p. *4,787*.

**Northam,** *urb. dist.*, nr. Bideford, Devon, Eng., p. *5,561*; also t. on R. Avon, nr. Perth, W. Australia; p. (dist.) 4,350.

**Northampton,** S. Midland *co.* Eng.; area 985 sq. m., chfly. agr.; mnfg. and manuf. (especially boots); p. *309,428*. Cap N., *co. bor.*, t. on R. Nen, metrop. of Brit. boot-mkg. ind.; p. *92,314*.

**Northampton,** *c.* on the Connecticut R., Hampsh. co., Mass., U.S.A.; collegiate and mftg.; p. 24,500. [7,000.

**North Andover,** *t.* nr. Boston, Mass., U.S.A.; p.

**North Attleboro',** *t.* in Bristol co., Mass., U.S.A.; jewellery manuf.; p. 10,200.

**North Australia,** *dist.* or *terr.* N. of S. Australia, washed by Timor S., Arafura S., and G. of Carpentaria; p. 3,600. [Scotl.; p. *4,033*.

**North Berwick,** *t.* on F. of Forth, Haddingtonsh.,

**North Bierley,** mftg. and ironwks. *t.* nr. Bradford, W.R. Yorks., Engl., p. (sub. dist., includg. Wyke) 22,750.

**North Brabant,** *prov.* in S. Holland. (*See* **Brabant.**)

**North Braddock,** *t.* Pa., U.S.A., p. 16,900.

**Northbridge,** industrl. *t.* nr. Worcester, Mass., U.S.A., p. 9,500.

**North Bromsgrove,** *urb. dist.*, Worcester, Eng., p.

**North Cape.** (*See* **Nord Cap.**) [*10,982*.

**North Carolina,** S. Atlantic *st.* of the U.S.A., E. of Tennessee and S. of Virginia, area 48,740 sq. m., agr., cotton growg. and mftg., tobacco cult. and manuf., p. about 3,017,000, nearly one-third coloured. Cap. Raleigh, chf. port, Wilmington.

**Northcote,** *t.* nr. Melbourne, Victoria, fruit-growg. and pastoral dist., p. 30,513.

**North Dakota,** N.W. *st.* of U.S.A., mainly rolling prairie, agr. and minl., area 70,183 sq. m., p. 641,000; cap. Bismarck.

**North Darley,** *urb. dist.*, Derby, Eng., p. *4,093*.

**North East Passage,** N. *cst.* Europe and Asia, betwn. Pacific and Atlantic. [Pruss., p. 8,350.

**Northeim,** industrl. *t.* on R. Ruhme, Hanover.

**Northfleet,** *urb. dist.*, shipbldg. *t.* on R. Thames, Engl., adjng. Gravesend, p. *16,429*.

**North Fork of Platte R.** (800 m.), Colorado, Wyoming, and Nebraska, U.S.A.

**North Holland,** *prov.* of the Netherlands, on Zuyder Zee, and N.S., area 1,069 sq. m., p. 1,200,723. Cap. Haarlem (*q.v.*).

**North Manchester,** *t.* Indiana, U.S.A., on Eel R., Wabash co., p. 5,000. [4,920.

**Northowram,** *t.* nr. Halifax, W.R. Yorks, mftg., p.

**North Plainfield,** *bor.* Somerset co., New Jersey, U.S.A., p. 10,000.

**North Platte,** *c.* Nebraska, U.S.A., on Platte R. Lincoln co., p. 12,250.

**North Providence,** *t.* Rhode Isl., U.S.A., p. 7,697; also isl. of the Bahamas. (*See* **Nassau.**)

**North Sea,** arm of the Atlantic, E. of Gt. Brit., W. of Norway, Sweden, and N. Germ., and N. of Holland, Belgium, and France, length 600 m., width 400 m.

**North Shields,** mkt. *t.* Northumberld., Eng., a Tyne port and part of the borough of Tynemouth (*q.v.*).

**North Somerset,** *isl.* Arctic America, N. of Boothia, also suburb of Sydney, N.S.W., p. 40,000, and E. of Prince of Wales Isl. [p. *6,127*.

**North Sydney,** *spt.* Cape Breton Isl., Nova Scotia,

**North Tarrytown,** *vil.* New York, U.S.A., p. 7,500.

**North Tonawanda,** *c.* Niagara co., New York, U.S.A., mftg., p. 19,300.

**North Uist,** *isl.* of the Outer Hebrides, W. of Skye, land S. of Harris, 18 m. long, p. *2,332*.

**Northumberland,** N. maritime *co.* Eng., on border of Scotl., area 2,015 sq. m., pastoral, mng. and manuf. with shipbldg. on Tyneside, p. *756,723*; cap. Newcastle-on-Tyne (*q.v.*).

**Northumberland Isls.,** off E. cst. Australia.

**Northumberland Straits,** separates Prince Edward Isl. from Nova Scotia and New Brunswick.

**North Vernon,** *c.* Indiana, U.S.A., Jennings co., p. 5,000.

**North Walsham,** *urb. dist.*, mkt. *t.* nr. Aylsham, Norfolk, Eng., p. *4,137*.

**North West Passage,** betwn. Atlantic and Pacific, on N. cst. of America.

**North-West Frontier Province of India,** area 13,400 sq. m., p. over 2,250,000; cap. Peshawur (*q.v.*).

**North-Western Provinces.** (*See* **United Provinces of Agra and Oudh.**)

**North-West Territories of Canada,** the tracts of Brit. N. America, N.W. of the older part of the Canadian Dominion. The territories as now constituted are divided into three districts—viz. Franklin, Mackenzie, and Keewatin. Area 1,207,926 sq. m., p. 18,481 (includg. 27,000 Indians).

**Northwich,** *urb. dist.*, mkt. *t.* nr. Warrington, Cheshire, Eng., salt mine dist., p. *13,723*.

**North Woolwich,** *t.* on R. Thames, Essex, Eng., manuf., p. 7,500.

**Norton,** *urb. dist.*, E.R. Yorks, Eng., p. *3,934*.

**Norton-on-the-Moors,** *par.* nr. Burslem, Staffs, Eng., p. 16,120. [200 m. long.

**Norton Sound,** inlet W. cst. Alaska, Behring S.,

**Norwalk,** *t.* on Long Isl. Sound, Fairfield co., Connecticut, U.S.A., good harbr., flourishg. manuf., p. 27,743; also bor. Huron co., Ohio, U.S.A., *mftg. centre of farming dist., p. 7,800.*

**Norway,** *country* of N. Europe, W. sectn. of Scandinavian penin., area 124,964 sq. m., p. 2,391,780, mtnous. with cst. broken by many fiords; cap. Oslo (*q.v.*).

**Norwich,** *co. bor., c.* on R. Wensum, Norfolk, Eng.; cathedral, old castle, manuf., p. *126,207*; also vil. on Chenango R., New York, U.S.A., in dairying regn., p. 8,400; also *c.* E. London co., Connecticut, U.S.A., paper and textile factories, p. 23,100.

**Norwood,** S. *subn.* div. Lambeth, Surrey, Eng., mainly residtl. for London workers and 'busmen; also vil. Hamilton co., Ohio, U.S.A., subn. to Connecticut, p. 34,250; also S.E. *subn.* Adelaide, S. Australia. [mftg., p. 35,700

**Nosari,** *t.* in Baroda, Bombay, India, nr. Surat.

**Nossi Bé,** French *isl.* col. off N.W. cst. Madagascar, area 130 sq. m., volcanic; coffee, sesame, sugar, tobacco, p. 10,500; cap. Hellville.

**Noto,** *c.* nr. Syracuse, Sicily, cathedral, wine, mftg., p. 24,020.

**Nottingham,** midld. *co.*, Eng., area 824 sq. m., mainly pastoral and woodld., p. *712,681*; cap. Nottingham, *co. bor.*, on R. Trent, centre of Eng. lace industry, R.C. cathedl., fine bldgs., castle, museum, gt. mkt. sq., p. *268,801*.

**Nouméa,** or **Port de France,** cap. New Caledonia *isl.*, p. 10,053. [R. Meuse, foundries, p. 9,150.

**Nouzon,** *t.* nr. Mézières, Ardennes dep., France, on

**Novara,** Alpine *prov.*, N. Italy, in Piedmont, area 2,548 sq. m., p. 768,660, cap. N., mftg. t. nr. Milan, p. 58,858.

**Nova Scotia,** maritime *prov.*, Canada, area 21,428 sq. m., mainly fertile uplands and rich valleys, but with mtns. along the cst., nr. B. of Fundy; much mineral wealth and very val. fisheries, p. 547,000; cap. Halifax.

**Nova Zembla,** two large uninhabited *isls.* in Arctic Ocean, included in Archangel govt., U.S.S.R., total area 35,321 sq. m.

**Novelda,** *t.* on R. Vinalopó, Alicante prov., Spain; wine-growing dist., saline and sulphurous springs, p. 10,770.

**Novgorod,** old *govt.* U.S.S.R., adjng. Leningrad; area 47,236 sq. m., agr. and mftg., p. 1,502,000; cap. Veliki Novgorod, *c.* on R. Volkov, nr. Lake Ilmen, old cathedl., p. 28,200.

**Novi,** *t.* nr. Medina, Italy, mftg., p. 7,120.

**Novibazar,** or **Yeni-Bazar,** *t.* on R. Raskha, Serbia, Jugo-Slavia, p. 13,500.

**Novigrad,** *spt.* nr. Fiume, Dalmatia, p. 9,100.

**Novi Ligure,** *t.* nr. Genoa, prov. Alessandria, Italy, noted for silk manuf., p. 14,820.

**Novo Alexandrovsk,** *t.* old govt. Poland, nr. Dünaburg, p. 7,450.

**Novograd-Volhynsk,** *t.* on Sluch R., Volhynia, Ukraine, iron and soap works, busy fairs, p. 18,920.

**Novogrodek,** *t.* nr. Grodno, old govt. Poland, mftg., p. 13,760.

**Novoli,** *t.* in prov. Lecce, Italy, p. 5,930.

**Novomirgorod,** *t.* (forfd.), old Ukraine, p. 5,010.

**Novomoskovsk,** *t.* (mftg.) on R. Samara, Ukraine, p. 20,870.

**Novo Redondo,** *spt.* Portug. W. Africa, p. 6,250.

**Novo Rossiysk,** *spt.* on N.E. cst. Black S., Caucasia, gt. grain export, p. 18,688.

**Novouzensk,** *t.* on Uzen R., U.S.S.R. fortified, impt. fairs, p. 15,650.

**Novozybkoff,** *t.* surrounded by marshes and forest, Ukraine; tallow, hemp, preserved meat; p. 17,760.

**Nowo-Radomsk,** or **Radomsko,** *t.* nr. Piotrków, Poland; bent-wood furniture, textiles, tanneries, etc., p. 14,820.

**Nowra,** *t.* in co. Vincent, N.S.W., p. (dist.) 4,520.

**Noya,** *spt.* Corunna prov., Spain; a very old t. with lace and linen industries; p. 9,240.

**Noyon,** *t.* dep. Oise, France; birthpl. of Calvin, fine cathedl.; p. 6,430.

**Nubia,** the anc. Ethiopia, an African country S. of Egypt, now included in Egyptian Sudan; chf. c. Khartum (*q.v.*).

**Nubie,** *R.* and *prov.* Chili, bordering on the Argentine; area 3,498 sq. m., p. 170,425; cap. Chillan.

**Nueces,** *R.* S.W. Texas, U.S.A., flows (400 m.) to Corpus Christi B., G. of Mexico. [p. 13,000.

**Nuevitas,** *spt.* N. cst. prov. Puerto Principe, Cuba,

**Nuevo Leon,** *st.* Mexico; area 25,032 sq. m.; agr. and stock-rsg.; p. 873,207; cap. Monterey.

**Nukha,** fort. *t.* Transcaucasia; noted for silk industry; p. 31,000. [(dist.) 5,768.

**Numurkah,** *t.* Victoria, nr. N.S.W. border, p.

**Nun,** chf. mth. of R. Niger; also R. (130 m.) on S. frontier of Morocco, with *t.* thereon, nr. C. Nun, gd. tr.; p. 5,250; also R. Manchuria, China, trib. (500 m.) of the Sungari.

**Nuneaton,** *mun. bor.*, mkt. *t.* Warwickah., Eng.; ribbon manuf., glazed bricks, sanitary pipes; p. *46,305*.

**Nuoro,** *t.* nr. Cagliari, Sardinia; industl.; p. 7,120.

**Nuremberg,** old *c.* in Middle Franconia, Bavaria, on the R. Pegnitz; manuf. wooden toys, clocks, beer, pencils, etc.; gt. hop tr.; castle and many interestg. bldgs.; made a free imp. c. in 1219, annexed to Bavaria, 1816; p. 352,675.

**Nurtingen,** *t.* on R. Neckar, Würtemberg; p. 6,220.

**Nusco,** *t.* in Avellino prov., Italy; manuf.; p. 5,140.

**Nussdorf,** *sub.* of Vienna, Austria, p. 6,550.

**Nutfield,** *par.* Surrey, Eng., nr. Reigate, p. 1,880.

**Nuwara, Eliya,** *sanatorium,* of Ceylon, 6,240 ft. above sea-level with Pedrotallagalla mntn. (2,056 ft.. higher) behind it, res. p. 5,000.

**Nyack,** *vil.* on R. Hudson, Rockland co., New York, U.S.A., p. 5,500.

**Nyanza.** (*See* **Albert Nyanza, Albert Edward Nyanza,** and **Victoria Nyanza.**)

**Nyasa,** or **Nyassa,** *L.* of Centl. Africa, 1,500 ft. above sea-level, area 11,000 sq. m.

**Nyasaland Protectorate,** British Centl. Africa, on Lake Nyassa; area 39,573 sq. m.; p. 1,200,000.

**Nyborg,** fort. *t.* on isl. of Fünen, Denmark, p. 5,750. [Debreczin, p. 41,112.

**Nyireghyhaza,** mftg., *t.* in Hungary, 29 m. N. of Debreczin, p. 41,112.

**Nykerk,** *t.* in Gelderland, Holland; industl.; p. 7,730.

**Nykjöbing,** *spt.* Denmark, co., Maribo, on isl. of Falster; exports butter and bacon; p. 7,960.

**Nyköping,** *spt.* Sweden, at hd. of inlet on coast, 98 m. S.W. of Stockholm; engineerg. and shipbldg., timber tr.; p. 11,710.

**Nyland,** *prov.* Finland, on G. of F.; area 4,705 sq. m.; p. 427,751; cap. Helsingfors.

**Nyon,** or **Nion,** *t.* on L. of Geneva, cant. Vaud, Switzld., p. 3,930.

**Nystad,** *spt.* in govt. Abo-Björneborg, Finland, on G. of Bothnia, p. 3,940.

**Nystrom, Mt.,** Fremont co., Wyoming, U.S.A.

**Nzoia,** *R.* Equatorial Africa, flowg. (120 m.) to L. Victoria Nyanza.

## O

**Oadby,** *urb. dist.*, Leicester, Eng., p. *4,724*.

**Oahu,** one of the Sandwich Isls., S.E. of Kauai; area 598 sq. m., p. 84,000, cap. Honolulu; also L. (fed by glaciers) in Mt. Cook dist., New Zealand (S. Isl.), 12 m. long by 2½ m. wide.

**Oajaca,** or **Oaxaca de Jaurez,** *st.* on Pacific coast, Mexico, area 35,689 sq. m., agr. and mining, p. 1,059,789; cap. O., *c.* on Rio Verde, salt, 4,800 ft., centre of cochineal trade, p. 38,011.

**Oakbank,** *t.* nr. Adelaide, S. Australia, p. (dist.) 4,500; also par. nr. Mid-Calder, Edinburgh, Scotl., oil works.

**Oakengates,** *urb. dist.*, nr. Shrewsbury, Shropsh., Eng., p. *11,189*.

**Oakham,** *urb. dist.*, mkt. *t.* co. Rutland, Eng., p. *3,191*.

**Oakhampton.** (*See* **Okehampton.**)

**Oakland,** *c.* on San Francisco B., California, U.S.A., of which it is a favourite residentl. sub., p. 284,000.

**Oakleigh,** *township,* co. Bourke, nr. Melbourne, Victoria, p. (dist.) 6,076.

**Oak Park,** *t.* Illinois, U.S.A. (now included in Chicago *c.*), p. 66,250.

**Oakworth,** *urb. dist.*, mftg. *t.* nr. Keighley, W.R. Yorks, Eng., p. *3,984*. [nr. Dunedin p. 7,520.

**Oamuru,** *spt.* on E. coast, S. Isl., New Zealand,

**Oaxaca.** (*See* **Oajaca.**)

**Oban,** *spt.* and *burgh* on Firth of Lorne, Argyllsh., Scotl.; fav. wat. pl. and summer resort of Highland tourists; p. 6,580.

**Obeid,** or **El Obeid,** *t.* in Kordofan, 215 m. S.W. Khartum; impt. tr. centre.

**Oberalp,** Alpine *pass* (alt. 6,710 ft.) connecting Andermath with the Vorder Rhein Valley, Switzld.

**Ober-Ammergau,** *vil.* nr. Munich, Up. Bavaria; famous for its decennial Passion Play, and for ivory and wooden toys. [p. 5,450.

**Ober-Ehnheim,** *t.* nr. Strassburg, Alsace, France.

**Oberhausen,** iron-mftg. *t.* nr. Cologne, Rhenish Pruss., p. 98,677.

**Oberlahnstein,** *t.* in Hesse-Nassau, Germany, at junction of Rs. Lahn and Rhine; old castle, anc. walls; wine tr. and mining; p. 8,570.

**Oberland, or Bernese Oberland,** picturesque mtnous. region in cant. Bern, Switzld.; great tourist resort.

**Oberleutensdorf,** *t.* Bohemia; colliery dist., textile and other manufs.; p. 13,740.

**Oberpfalz, or Upper Palatinate,** Bavarian *circle* adjng. Bohemia; area 6,686 sq. m., p. 1,582,669, cap. Ratisbon.

**Oberstein,** *t.* on R. Nahl, Oldenburg, Pruss.; famous for cutting precious stones; p. 19,020.

**Oberwesel,** *t.* nr. Coblenz, Rhenish Pruss.; formerly free imperial t. with towered walls, and ruined castle of Schönburg, opp. romantic rocks of the "Seven Sisters," p. 2,700.

**Obi, Ob, or Obe,** *R.* of W. Siberia, flows from the Altai Mtns. to the G. of Obi, length (with its trib. the R. Irtish) 2,600 m.; the G. of O. is an inlet of the Arctic O. (length 600 m.) N. of Siberia.

**Obock, or Obok,** French *spt.* on Tadjura B., in the Red S., with a col. (extending 40 m. inland) opp. the extreme S.W. of Arabia.

**Ocaña,** anc. *t.* on the O. plateau nr. Aranjuez, Toledo prov., Spain, centre of pottery industry in wine-growing dist., ruined castle, p. 6,160; also t. in Magdalena st., Colombia, industl., p. 22,000.

**Oceania, or Oceanica,** name given to the islds. of the Pacific; divided usually into Australia, Malaysia, Polynesia, Melanesia, and Micronesia.

**Ochakoff,** fort. *t.* in Odessa dist., Ukraine, on a cape of the Black S.; gt. grain tr., p. 12,800.

**Ochill Hills,** Scottish *range* reaching from the Firth of Tay to nr. Stirling; highest pk., Ben Cleugh.

**Ochrida,** *t.* on L. of O., Albania, nr. Monastir, p. 11,560. The L. of O. (anc. Lacus Lychnitis) is about 18 m. long. [R. Altamaha.

**Ocmulgee,** *R.* Georgia, U.S.A., trib. (280 m.) of

**Oconee,** *R.* Georgia, U.S.A., joins the Ocmulgee 90 m. W. of Savannah (after flowing 250 m.) to form the Altamaha.

**Oconto,** *t.* on Green Bay, and the O. R., O. co., Wisconsin, U.S.A.; manuf., p. 5,050.

**Ocosingo,** *t.* nr. Palenque, Chiapas st., S.E. Mexico; anc. ruins, p. 11,720. [industl., p. 10,048.

**Ocumare,** *t.* in Bolivar st., Venezuela, nr. Caracas; industl., p. 10,048.

**Odawara,** cst. *t.* nr. Tokio, Japan; p. 16,570; gt. trade. [10,750; flourishg. trade.

**Odemish,** *t.* in Asia Minor, N.E. of Aidin; p.

**Odenkirchen,** mftg. *t.* in Rhenish Pruss., nr. Düsseldorf, p. 16,640.

**Odense,** *spt.* on isl. of Fünen, Denmark; anc. c. said to have been founded by Odin; thrivg. ind. and tr., p. 49,469.

**Odenwald,** wooded mtn. *regn.* of Hesse, Germy., highest pt., hill of Katzenbuckel, 2,057 ft.

**Oder,** *R.*, Germy., flowing (560 m.) from Moravia through Silesia, Brandenburg, and Pomerania, past Breslau, Frankfort, and Stettin, to the Baltic; the Roman Viadus.

**Odessa,** *spt.* Kherson, Ukraine, on Black S.; gt. grain export; founded 1794; bombarded by English and French 1854; p. 631,040.

**Oedenburg,** or **Sopronу,** ryl. free *c.*, Hungary; cap. Oedenburg co.; flourishing tr.; p. 34,120.

**Oederan,** *t.* nr. Zwickau, Saxony; woollen manuf.; p. 6,870.

**Oels,** *t.* on R. Oels, nr. Breslau, Prussn. Silesia; castle; p. 11,040. [carpet manuf.; p. 14,670.

**Oelsnitz,** *t.* on Weisse Elster, nr. Plauen, Saxony; **Oelwein,** *c.* and *ry.* centre, Fayette co., Iowa, U.S.A., p. 7,800. [woollens; p. 36,033.

**Oerebro,** mftg. *t.* at end of Hjelmar L., Sweden.

**Oesel,** *isl.* in the Baltic, Esthonia, 45 m. by 25 m.; p. 56,000; chf. t. Arensburg.

**Oestergötland,** govt. of S.E. Sweden; area 4,267 sq. m.; p. 305,743.

**Offenbach,** *t.* on R. Maine, nr. Frankfort, Hesse, Germy.; fancy leather gds. manuf.; p. 75,380.

**Offenburg,** *t.* on R. Kinzig, nr. Carlsruhe, Baden; cotton and other manufs.; p. 16,246.

**Ogden,** *c.* of Weber co., Utah, U.S.A., nr. the Great Salt L.; impt. t. and *ry.* centre; p. 41,000.

**Ogdensburg,** *c.* and *pt.* on R. St. Lawrence, New York, U.S.A., opp. Prescott; good trade; p. 17,100.

**Ogeechee,** *R.* Georgia, U.S.A., flows (200 m.) to the Atlantic, S. of Savannah.

**Oggersheim,** *t.* in the Palatinate, Rhenish Bavaria; manuf.; p. 5,270.

**Oglio,** *R.* Italy; traverses L. Isee, and flows (135 m.) to the Po.

**Ogmore and Garw,** *urb. dist.*, industrl. *t.* nr. Bridgend, Glamorganshire, Wales, p. *26,979*.

**Ogowe,** *R.* of French W. Africa (700 m. long) enters Atlantic at C. Lopez.

**Ohio,** *R.* of America, trib. of R. Mississippi; formed in Penn., U.S.A., by the junctn. of the Monongahela and Alleghany Rs. at Pittsburg, thence navigable for 975 m. to Cairo in Kentucky, 1,200 m. from the mth. of the M. R.

**Ohio,** centrl. *state* of U.S.A., N. of the O. R. and S. of L. Erie and Michigan; area 40,740 sq. m.; gt. farming and mftg. regn.; p. 7,040,000; cap. Columbus; largest cities Cleveland and Cincinnati.

**Ohlau,** *t.* on R. Oder, Silesia, Pruss., nr. Breslau; in tobacco growg. and mftg. dist.; p. 10,770.

**Ohomura,** *t.* on Kiu-Siu isl., Japan; active tr., p. 23,000.

**Oich, Loch,** *L.* in the Great Glen, Inverness-sh., Scot., 6 m. long, 1 m. wide.

**Oil City,** Venango co., Penn., U.S.A., on the Alleghany R.; petrol ind., p. 22,100.

**Oise,** *dep.* N. France, traversed by R. Oise (187 m., trib. of R. Seine), area 2,272 sq. m.; agr., gdng. and manuf., p. 387,760, cap. Beauvais (*q.v.*).

**Oka,** *R.* U.S.S.R., trib. (929 m.) of R. Volga at Nizhni Novgorod; also *R.* of Siberia, in the old Irkutsk govt. Irkutsk, trib. (500 m.) of R. Angora.

**Okasaki,** *t.* nr. G. of Ovari, Japan; industrl., p. 39,996.

**Okayama,** *t.* in Hizen prov., Honshiu, Japan; gt. tr., and thrivg. manuf., p. 96,446.

**Okehampton,** *mun. bor.*, mkt. *t.* nr. Tavistock, Devon, Eng., p. *3,352*.

**Okhotsk,** cst. *t.* in E. Siberia (p. 8,250), on Sea of O., a gt. gulf (1,000 m. by 500 m.) of the North Pacific, enclosed by the Siberian mainld., Kamchatka, the Kuriles Isls., Yesso, and Saghalien Isl.

**Oki,** *grp.* of Japanese isls., N. of prov. Isumo, princpl. Dôgo, total area 130 sq. m., p. 65,000; cuttle fishing.

**Oklahoma,** *state* of the U.S.A., including the Indian Terr. in 1890, area 69,414 sq. m.; prairie, plains, and mtns., p. 2,562,000, inclusive of 119,255 Red Indians in the reservations. Chf. ts., Guthrie (the cap.) and Oklahoma City (p. 91,253), both of which have a gd. cotton tr.

**Okmulgee,** *t.*, Okla., U.S.A., p. 17,000.

**Okolona,** *t.* in Mississippi, U.S.A., Chickasaw co., p. 4,500.

**Oland,** or **Oeland,** *isl.* on Calmar Sound, E. cst., Sweden, area 533 sq. m., p. 31,200. Chf. t. Borgholme, a sea-side resort (*q.v.*).

**Oldbury,** *urb. dist.*, mkt. and industrl. *t.* in Worcestersh., Eng., nr. Birmingham, p. *35,918*.

**Old Castile,** former prov. of Spain, N. portion of anct. kingdom of Castile, now divided into Santander, Soria, Segovia, Logrono, Avila, Valladolid, Palencia, and Burgos provs., all of which see.

**Oldenburg,** *state*, former grand-duchy, Germany, total area, 2,482 sq. m.; agr., brewing, manuf., shipping, p. 517,770; cap. O., c. on R. Hunte, impt. horse fair, grand-ducal palace, p. 29,200.

**Old Fletton,** *urb. dist.*, Hunts, Eng., p. *7,480*.

**Old Forge,** *bor.* in Lackawanna co., Penn., U.S.A.; anthracite coal regn., p. 12,750.

**Oldham,** *co. bor.*, cotton mftg. *t.* on R. Medlock, nr. Manchester, Lancs., Eng., p. *140,309*.

**Old Man of Coniston,** *mtn.* N. Lancs, Eng., alt. 2,633 ft.

**Old Meldrum,** *vil.* in Aberdeensh., Scotl., p. 1,110.

**Old Town,** *c.* on Penobscot R., Maine, U.S.A.; industrl., p. 7,300. [regn., p. 21,850.

**Olean,** *t.* on Alleghany R., New York, U.S.A.; oil

**Oleggio,** *t.* in prov. Novara, Italy; industrl., p. 9,600.

**Olenek,** *R.* Siberia, flows W. of the Lena, 800 m., to Arctic Ocean. [m., p. 19,500.

**Oleron,** French *isl.* on B. of Biscay, area 59 sq.

**Olhas,** cst. *t.* in Faro dist., Portugal; fisheries, p. 10,350.

**Olifant R.**, S. Africa, rises nr. Heidelberg in the Transvaal, joins the Limpopo in Portuguese terr., and flows to the Atlantic. [p. 9,020.
**Olinda**, *c.* in Pernambuco prov., Brazil; industrl.,
**Oliva**, *t.* prov. Valencia, Spain, nr. Alicante; wine growg. dist., ducal palace, p. 8,070.
**Olivenza**, fort. *t.* nr. the Portuguese frontier, Spain; barracks, porcelain works, p. 8,860.
**Olives, Mount of**, or **Jebel et Tur**, *hill* nr. Jerusalem, highest summit 2,672 ft.; Gethsemane is at the foot overlooking the Kedron valley.
**Olmütz**, *c.* of Moravia, on an isl. in the March; formerly one of the chf. fortresses of Austria, cathedl., university, brewing, etc., p. 23,100.
**Olney**, *t.* in N. Bucks, Eng., 11 m. S.E. Northampton, p. 2,690.
**Olonetz**, old *govt.* U.S.S.R. of Finland; area 57,437 sq. m.; forest, steppe, and L., agr. and stock-rsg., p. 446,000; cap. Petrovavodsk; Olonets *t.* is situated in the O. Govt. 11 m. N.E. of Leningrad.
**Oloron**, mftg. *t.* on Gave d'Oloron, dep. Basses-Pyrénées, France, p. 10,050.
**Ols.** (*See* Oels.)
**Olsnitz.** (*See* Oelsnitz.)
**Olvera**, *t.* nr. Cadiz, Spain; thriving tr., p. 8,984.
**Olympia**, a *plain* of Peloponnesus, Morea, Greece, on R. Ells, where were held the Olympian games; also name of a modern c. of Washington, U.S.A.; timber trade, p. 12,000.
**Olympus** (mod. Elymbo), *mtn.* Thessaly, Macedonia, W. of the G. of Salonica, alt. 9,753 ft.
**Olyphant**, *bor.* on Lackawanna R., Penn., U.S.A., p. 10,750. [(330 m.) of R. Irtish.
**Om**, *R.* Siberia in the old govt. of Tomsk, trib.
**Omagh**, *t.* on R. Strule, Tyrone, N. Irelд., p. 4,230.
**Omaha**, *c.* on Missouri R., Nebraska, U.S.A., gt. tr. and mftg. centre, p. 216,500.
**Oman**, *ind. state* on S.E. cst. Arabia, under Brit. and French supervisn., area 82,000 sq. m., p. 500,000, agr. and fruit-growing. Cap. Muscat (*q.v.*). The G. of Oman, an arm of the Arabian S., forms entrance to Persian G.
**Ombay**, Australasian *isl.*, 50 m. by 30 m., N. of Timor.
**Ombrone**, *R.* of Tuscany, Italy, flows to the Mediterranean (85 m.) nr. Grosseto, the anc. Umbro.
**Omdurman**, *c.* in the Anglo-Egyptian Sudan, on R. Nile, opp. Khartum, built by the Mahdi; here Kitchener defeated the Dervishes, 1898; p. 50,429.
**Ometepe**, *isl.* in Lake Nicaragua, Cent. America, with volcano, alt. 5,747 ft.
**Omsk**, fort. *t.* W. Siberia, on the Irtish R., seat of the former Russn. governor-genlshp. of the Steppes, great tr., cathedral, p. 52,000.
**Onate**, *t.* Guipuzcoa, Spain, nr. Bilbao, industrl., p. 6,700.
**Onega**, *L.* of U.S.S.R., 85 m. from L. Ladoga, area 3,765 sq. m., also R. of the govts. of Olonets and Archangel, flowg. 400 m. to the G. of Onega, a southern arm of the White S.
**Oneglia**, *spt.* on G. of Genoa, nr. Nice, Italy, olive oil tr., p. 7,970. [New Zealand, p. 3,250.
**Onehunga**, *spt.* on Manukoa Harb., nr. Auckland,
**Oneida**, *L.* nr. Syracuse, New York, U.S.A. (20 m. by 6 m.), discharges by R. Oneida (16 m. long) to R. Seneca; Oneida t. Madison co., N. York, is on bank of R. O., 6 m. from O. L., p. 10,550.
**Oneonta**, *vil.* on Susquehanna R., Otsego co., New York, U.S.A., ry. wagonwks., p. 12,600.
**Onon**, *R.* Siberia and Mongolia, trib. (380 m.) of R. Ingoda.
**Onondaga**, *L.* nr. Syracuse, New York, U.S.A., 5 m. long by 1 m. wide. [8,860.
**Onstwedde**, mftg. *t.* prov. Gröningen, Holland, p.
**Ontario**, *L.*, smlst. of the great lakes of the St. Lawrence basin, separating the Canadian prov. of O. from New York, U.S.A., area 6,500 sq. m. The prov. of O. (formerly called Canada W., or Upper Canada) has a total area of 407,262 sq. m., great mineral wealth with much fertile land, producg. immense grain crops, p. *3,426,488*. Chief towns Toronto (the prov. cap.), Ottawa (the cap. of the Dominion), Hamilton, and London (all of which see). [Spain, p. 12,750.
**Onteniente**, industrl. *t.* on R. Clariano, Valencia,
**Oosterhout**, mftg. *t.* nr. Breda, N. Brabant, Holland, p. 11,426. [6,160.
**Opelika**, mftg. *t.* Lee co., Alabama, U.S.A., p.
**Openshaw**, mftg. *t.* Lancash., Eng., S. E. of Manchester, p. 18,500.
**Ophir**, *mtn.* Sumatra, nr. the Equator, alt. 9,603 ft.; also mtn. Malay Penin., 45 m. E.N.E. of Malacca, alt. 5,693 ft.; also mtng. t. nr. Dunedin, New Zealand; also gold-field dist. N.S.W., nr. Bathurst.
**Oporto**, *spt.* of Portugal on R. Douro, second c. in the ctry. for commercl. imptc. and pop. (203,981), gt. wine tr., many manuf., flourishg. fisheries, contains the royal pal. of Torre de Marca, and many fine bldgs. and large institutns.
**Oppeln**, *t.* on R. Oder, Polish Silesia, former cap. of principality, remains of palace, seat of administn. Upper Silesia, p. 37,100.
**Oran**, *port* and *dep.* of Algeria, on G. of Oran, gt. tr. in wool, wines, oil, and grain, p. 1,305,051 (more than a quarter each French and Spaniards).
**Orange**, anc. *t.* Vaucluse dep., France, p. 10,200; also *t.* in fruit-growg., and mining dist., N.S.W., p. 7,050; also c. Essex co., New Jersey, U.S.A. (residl. sub. of New York c.), p. 35,700; also *t.*, Conn., U.S.A., p. 19,614.
**Orange** (or **Gariep**) *R.*, chief R. of S. Africa, flows (1,200 m.) from Basutoland to the Atlantic.
**Orange Free State**, province of the Union of S. Africa, area 50,392 sq. m., exports wool, hides, diamonds, etc., p. 628,360 (189,000 being whites). [p. 3,750.
**Orangeville**, *t.* in Wellington co., Ontario, Canada,
**Oranienburg**, *t.* on R. Havel, nr. Potsdam, Prussa., industrl., p. 5,460. [cathedl., p. 4,230.
**Orbetello**, fortfd. *t.* Grosseto prov., Tuscany, Italy,
**Ord of Caithness**, *hill* and *hdland*, nr. Helensdale, Scotl., alt. 1,200 ft.
**Ordu**, *t.* on nth. cst. Asia Minor, nr. Kerasund, gd. tr., p. 6,230.
**Orebro**, or **Oerebro**, *prov.* Sweden, area 3,526 sq. m.; p. 218,397; cap. O. (*See* Oerebro.)
**Oregon**, Pacific, *st.* U.S.A., between Washington and California, area 95,607 sq. m., mountainous and timber and minl.-producing, fishery and fish canning, mftg., p. 927,000; cap. Salem; Oregon c. is a small mftg. centre on the Williamette R., at the falls, in Clackmanas co., within Oregon st., p. 5,770.
**Orel**, old *govt.* U.S.S.R., E. of Smolensk, area 18,040 sq. m., agr. and stock-kpg., p. 2,260,000; cap. Orel, on R. Oka, p. 72,000; the R. Orel flows 130 m. to the Dnieper, in the Poltava govt.
**Orenburg**, old *prov.*, U.S.S.R. in the S. Urals, area 73,816 sq. m., rich in minerals, p. 1,760,000; cap. Orenburg (famous for its horse fairs and its shawls knitted from goat wool), p. 96,000.
**Orense**, inland *prov.* N.W. Spain, area 2,694 sq. m., timber and fruit growg., agr., p. 408,693; cap. O., c. on R. Mino, p. 16,200.
**Orfa**, or **Urfa**, fort. *t.* of Turkey in Asia, nr. Diarbekr; p. 4,000.
**Orford**, fishery *t.* on R. Ore, Suffolk, Eng., nr. Ipswich; p. 1,350. Orford Ness is a cst. promonty., 2½ m. to the S.E.
**Oria**, or **Uritana**, *t.* nr. Brindisi, prov. Lecce, Italy; gd. tr.; p. 9,200.
**Oriente**, former *terr.* of E. Ecuador, N. of R. Maranon, inhabited mainly by roving Indians.
**Orihuela**, *t.* in Alicante prov., on the R. Segura; agr. dist., with silk and other manuf.; p. 28,000.
**Orinoco**, *R.* Venezuela; rises in Parima mtns. and flows circuitously 1,480 m. to the Atlantic opp. Trinidad. Its trib., the Cassiquiare, connects it with the Rio Negro and the Amazon.
**Orissa**, div. of the new provinces of Behar and Orissa (*q.v.*), India, formerly a Hindu kingdom, fell later under Mogul and Mahratta rule, and then under British domination in 1803.
**Oristano**, *t.* on R. Tirso, Cagliaria, Sardinia; cathedl.; p. 7,350.
**Orizaba**, *t.* in Vera Cruz prov., Mexico; p. 41,000; good tr. Near is the slumbering volcano, same name, alt. 17,380 ft.
**Orkhon**, *R.* Mongolia, trib. (310 m.) of R. Selenga.
**Orkney**, *co.* of Scotl., formed of an insular grp. in the N. Sea, 68 isls. in all, 29 being inhabited; total area, abt. 360 sq. m.; p. *22,075*. Largest isl. Pomona or Mainland, Kirkwall (*q.v.*) cap.
**Orlando**, industrl. *c.* Florida, U.S.A., in Orange co.; p. 29,000.
**Orléannais**, old *prov.* France, corresponding mainly to pres. deps. of Loire-et-Cher, Eure-et-Loire, and Loiret.

**Orleans,** *c.* on R. Loire, Loiret dep., France; and cap. Orléannais; gt. trade in wine, brandy, wool, blankets, etc.; hdqrs. army corps; grand cathedl.; university; p. 69,048.

**Orleans, Isle of,** in St. Lawrence R., nr. Quebec, Canada; area 70 sq. m. [p. 14,600.

**Ormesby,** *indust. t.* nr. Middlesbrough., Eng.;

**Orme's Head, Great and Little,** promontories on est. Carnarvon, N. Wales, 35 m. W. of Liverpool.

**Ormskirk,** *urb. dist.*, silk and cotton mftg. *t.* Lancash., Eng.; p. *17,121.*

**Ormuz,** *isl.* and strait at entrce. to Persian Gulf; ruined mediæval c. on isl.

**Orne,** *dep.* Normandy, France; area 2,372 sq. m.; agr., dairying, stock-keeping, fruit-growing; p. 274,814. Cap. Alençon (*q v.*).

**Orontes,** *R.* of N. Syria; flows 200 m. past Antioch to the Mediterranean.

**Oroshaza,** mkt. *t.* Hungary, in Szegedin; in agr. and pig-keepg. dist.; p. 29,780.

**Orotava,** *t.* in Teneriffe, Canary Isls.; gd. tr.; p. 8,670.

**Orrell,** *urb. dist.*, Lancs., Eng., p. *6,951.*

**Orsha,** *t.* on R. Dnieper, old Moghilev govt. U.S.S.R.; mkt. for grain and timber; p. 15,620.

**Orsk,** *t.* on R. Ural, U.S.S.R., in prairie and stock-raising dist.; tanneries and tallow factories; p. 16,770.

**Orsova,** mkt. *t.* on R. Danube, Hungary, nr. the Iron-Gates Pass, p. 5,700.

**Orta,** *L.* of Italy, W. of Lago Maggiore, area 7 sq. m.; also t. in Foggia prov.; on shore of L. Orta, p. 7,122.

**Orthez,** *t.* on the Gave du Pau, dep. Basses-Pyrénées, France; manuf.; p. 7,040.

**Ortiz,** *t.* in Guarico st., Venezuela; good tr.; p. 9,050. [in the Tyrol, alt. 12,811 ft.

**Ortler Spitz,** *mtn.* 10 m. S. of Glarus; the loftiest

**Ortona,** mftg. *t.* on the Adriatic, prov. Chieti, Italy; cap. of anc. Frentani, p. 15,780.

**Oruro,** dep. Bolivia, E. of Peru; area 20,657 sq. m.; p. 140,890 (three-fourths Indians); cap. O., t., p. 40,000.

**Orvieto,** *t.* in Umbria, Italy, prov. Perugia, on R. Paglia; cathedral, Etruscan antiquities; p. (communal) 18,790.

**Orwell,** *R.* Suffolk, Eng., estuary of R. Gipping, runs from Ipswich to Harwich.

**Osaka,** large spt. *c.* and commercial centre, Honshiu Isl., Japan; great tr. and impt. silk, tea, and other industries; Shinto and Buddhist temples; p. *2,453,573.*

**Osborne,** Isle of Wight, former marine English royal res., now Convales. Home for Army and Navy Officers nr. Cowes. [7,960.

**Oscarshamn,** *spt.* on Calmar Sound, Sweden, p.

**Osceola Mills,** *bor.* Clearfield co., Penn., U.S.A., p. 3,824. [and machine factories; p. 11,720.

**Oschatz,** *t.* on R. Dollnitz, Leipsic, Saxony; sugar

**Oschersleben,** *t.* nr. Magdeburg, Saxony; lignite mines, various manuf.; p. 15,340.

**Osero,** coast *t.* on Adriatic, Cherso Isl., Jugo-Slavia; p. 2,890. [tr.; p. 41,000.

**Osh,** *t.* Fergana govt., E. Turkestan; large china

**Oshima,** group of 3 sm. Japanese Isls., S. of Kiu-Shiu.

**Oshkosh,** *c.* on Fox R., Wisconsin, U.S.A.; extensive manuf.; p. 40,800. [p. 7,500.

**Oshmuneyn,** *vil.* in Egypt W. of R. Nile, tr. centre,

**Oshtaskov,** *t.* on L. Seliger, U.S.S.R., tannery and boot-makg. centre, p. 11,750.

**Oskaloosa,** *c.* of Mahaska co., Iowa, U.S.A., in agr., and colly. regn., p. 9,427.

**Oslo.** (*See* Christiania.)

**Osnabrück,** *t.* Prussia, cath., many manuf., p. 85,017.

**Ossa,** *mtn.* Thessaly, N. of Vale of Temple and Olympus, alt. 6,194 ft. [Eng., p. *14,838.*

**Ossett,** *mun. bor.* nr. Wakefield, W.R. Yorksh.,

**Ossining,** *t.* Westchester co., New York, U.S.A., on Hudson R. (formerly Sing-Sing), has famous prison, p. 15,700.

**Ostend,** *spt.* and pop. *wat. pl.* Belgium, pas. route betwn. Britain and cont. of Europe, p. 48,073.

**Osterode,** *t.* at foot of Hartz mtns., nr. Göttingen, Hanover, metal and textile indust., p. 7,350; also t. on L. Drewenz, E. Pruss., old Teutonic castle, paper factories, agr. and timber tr., p. 15,860.

**Ostersund,** *t.* in Jämtland, Sweden, on Storr L., industrl., p. 13,405.

**Ostia,** anc. *port* on R. Tiber f. c. of Rome, Italy, marshy situata., archæological remains.

**Ostiglia,** *t.* nr. Mantua, on R. Po, Italy, industrl., p. 8,400.

**Ostrava,** *t.* on R. Ostrawitza, Czecho-Slovakia, colly. and ironwks. dist., p. 41,929; also t., opposite the latter, in Silesia, in coalfield, p. 22,020. [p. 16,870.

**Ostrog,** *t.* in Ukraine, on R. Goryn, leather-tanning,

**Ostrogojhsk,** *t.* on the Pikhaya Sosna, old Veronesh govt., U.S.S.R., tallow and cattle tr., tanneries, etc., p. 22,750. [wks., p. 13,350.

**Ostrov,** *t.* in Poland, govt. Lomza, agr. machy.

**Ostrowo,** *t.* nr. Posen, Prussia, manuf., p. 10,730.

**Ostuni,** *t.* nr. Brindisi, prov. Lecce, Italy, manuf. and tr., p. 20,860.

**Osuna,** *t.* in Seville prov., Spain, commercl., p. 20,100. [Lancs., Eng.; p. *14,221.*

**Oswaldtwistle,** *urb. dist.*, mftg. *t.* nr. Blackburn,

**Oswego,** industl. *c.* New York, U.S.A., on L. Ontario; foundries and factories; p. 22,500; also t. on Neosho R., Kansas, U.S.A., p. 4,020.

**Oswestry,** *mun. bor.*, mkt. *t.* Shropsh., Eng.; ry. centre, castle; p. *9,754.*

**Otago,** prov. *dist.* New Zealand, South I.; area 25,312 sq. m., p. 199,027; mtnous., afforested, rich in gold; cap. Dunedin (*q.v.*).

**Otaheite, or Tahiti,** largest of the Society Isls., French possn. in Eastern Archipelago; area 412 sq. m.; cap. Papeete.

**Otchakov,** *t.* on R. Dnieper, Ukraine; industrl.; p. 7,840.

**Otley,** *urb. dist.*, *t.* on R. Wharfe, W.R. Yorks, Eng.; mchy., paper, and printing works, tanneries, etc.; p. *11,020.*

**Otranto,** fishg. *t.* S. Italy, on Strait O. (entrance to the Adriatic between Albania and Italy), p. 3,120. Once a flourishing c., cathedral and fine mosaic pavement. Lecce prov. was formerly known as Terra di Otranto. [1½ m. wide.

**Otsego,** *L.* in O. co., New York, U.S.A., 9 m. long,

**Otsu,** *t.* in Omi prov., Yeso isl., Japan; busy tr.; p. 43,550. [residl. and industrl.; p. 21,126.

**Ottaiano,** *t.* nr. Naples, at foot of Mt. Vesuvius;

**Ottawa,** *R.* of Canada (trib. of St. Lawrence, 730 m. long); also c. of Carleton co., Ontario, cap. of the Dominion; splendid govt. bldgs., great timber and other industries and tr.; p. *124,988*; also c. at mouth of Fox R., Illinois, U.S.A.; manuf.; p. 15,500; also c. on Osago R., Kansas, U.S.A.; ry. works; p. 9,600.

**Otterburn,** *vil.* on R. Rede, Northumberld., Eng.; here in 1388 was fought the famous battle of Chevy Chase.

**Ottery St. Mary,** *urb. dist.*, mkt. *t.* on R. Otter, Devon, Eng., nr. Exeter, p. *3,713.*

**Ottoman Empire.** (*See* Turkey.)

**Ottumwa,** *c.* on Des Moines R., Iowa, U.S.A.; in midst of gt. coalfield; p. 28,500.

**Otway,** *C.*, S.W. extremity of Victoria.

**Ouachita,** or **Washita,** *R.*, Arkansas, U.S.A., trib. (550 m.) of Red R. [centre; p. 8,200.

**Ouargla,** or **Wargla,** *t.* in Algerian Sahara; tr.

**Oudenarde,** *t.* Belgium; textile factories, beautiful town hall; battle here, the Allies defeated the French in 1708.

**Oudh.** (*See* United Provinces of Agra and Oudh.)

**Oudtshoorn,** *vil.* C. of Good Hope, S. Africa, on Olifants R., p. 11,000 (*5,605* whites).

**Ougree,** *t.* on R. Meuse, nr. Liège, Belgium, industrl. (in colly. dist.); p. 15,650.

**Oullins,** *t.* nr. Lyons, dep. Rhone, France; manuf., p. 9,370.

**Oulton Broad,** *L.* nr. Lowestoft, Suffolk, Eng.

**Oundle,** *urb. dist.*, mkt. *t.* on R. Nen, Northants, Eng., p. *2,001.*

**Ouro Preto,** *t.* former cap. of Minas Geraes prov., Brazil, nr. gold-mines, p. 62,000.

**Ourthe,** *R.* Belgium, trib. (90 m.) of R. Meuse.

**Ouse,** or **Great Ouse,** *R.*, Eng., flows (156 m.) to the Wash; also R. of Sussex, flows (30 m.) to Eng. Channel at Newhaven; also R. of Yorks, formed by R.'s Swale and Ure, flows past York and Goole to Humber estuary (130 m.).

**Ovamboland,** *dist.* Gt. Namaqualand, S. Africa.

**Ovar,** *t.* on lagoon Aveiro, Portugal, 21 m. S. of Oporto; grows onions and other vegetables; fishery; p. 13,460. [Eng.; p. 8,200.

**Ovenden,** industrl. *t.* nr. Halifax, W.R. Yorks.

**Over,** *t.* nr. Middlewich, Ches., Eng.; manuf.; p. 6,450.

**Over Darwen.** (*See* Darwen.)

**Overton,** *t.* nr. R. Dee, Flintsh., N. Wales; p. 1,220.

**Overyssel,** Dutch *prov.* borderg. on Zuyder Zee; area 1,291 sq. m.; p. 437,320; cap. Zwolle.

**Oviedo,** maritime *prov.* N. Spain; area 4,205 sq. m., p. 717,723; agr., fruit, sardine and other fisheries; cap. O., t. on R. Nalon; gt. mkt.; p. 55,460. Gothic cathedl. [7,750.

**Owatonna,** *t.* in Spelle co., Minnesota, U.S.A., p.

**Owensborough,** *c.* on Ohio R. (cap. Davies co.). Kentucky, U.S.A.; tobacco factories, p. 23,250.

**Owen Sound,** *port* on Georgian B., Grey co., Ontario, Can.; good tr. and manuf.; p. 12,100.

**Owen Stanley,** *mtn.* Brit. New Guinea, alt. 13,205 *ft.*

**Owosso,** *c.* on Shiawassee R., Michigan, U.S.A.; timber tr.; p. 14,700. [(350 m.) to Snake B.

**Owyhee,** *R.* Nevada and Oregon, U.S.A., flows

**Oxenhope,** *urb. dist.*, industrl. *t.* nr. Keighley, W.R. Yorks, Eng., p. *2,276.*

**Oxford,** *co.* (S. Midland) Eng.; area 756 sq. m., p. *209,599*; mainly agr.; cap. O., *co. bor.*, *c.* between R.'s Cherwell and Thames. Famous seat of learning; university and many fine colleges; p. *80,540*; also sml. t.'s in New Jersey U.S.A., and Ashley co., New Zealand.

**Oxus,** *R.* Asia. (*See* Amu Daria.)

**Oya,** *t.* in W. Africa, cap. Yoruba ctry.; gt. tr. centre.

**Oyster Bay,** fav. cst. *resort*, Long Isl., 30 m. E. New York, U.S.A. [Wales, p. 6,100.

**Oystermouth,** *par.* nr. Swansea, Glamorganshr.,

**Ozor Roo,** mftg. *t.* nr. Warsaw, Poland, p. 11,520.

## P

**Paar,** *R.* Bavaria, trib. (70 m.) of R. Danube.

**Paardeburg,** on Modder R., Orange Free State, S. Africa; here Cronje and his Boer command surrendered to Lord Roberts, 27th Feb., 1900.

**Paarl,** *t.* and summer *rest.* C. of Good Hope, S. Africa, 38 m. E. of Capetown, p. *7,783.*

**Pabianize,** or **Pabianice,** mftg. *t.* in Petrikau govt., Poland; in forest hunting dist.; p. 29,000.

**Pacajes,** *t.* La Paz dep., Bolivia, manuf., p. 11,550.

**Pacaco,** *t.* nr. Trapani, Italy; industrl., p. 7,620.

**Pachino,** *t.* nr. Cape Passaro, Syracuse, Sicily; grape growg., basket-mkg., and fishg., p. 11,070.

**Pachuca,** *t.* in Hidalgo st., Mexico, nr. productive silver mines, p. 57,000.

**Pacific Ocean,** largest of the world's water *divisns.*, stretching betwn. America, Asia, and Australia, and communicating in the N. by Behring Strait (36 m. wide only) with the Arctic and reachg. S. to the Antarctic circle, 9,000 m.; greatest width 10,000 m. at the Equator. The mean depth of the Pacific proper within the limits mentioned, as estimated by Murray, is 2,475 fathoms. The greatest known depth is at a point between Hawaii and the Philippines, where a sounding of 5,269 fathoms, or about 6 miles, has been taken by a U.S.A. telegraph surveying ship.

**Padang,** free *spt. t.* Sumatra, cap. of Dutch govt. of W. cst. of the isl., p. 17,500.

**Paddington,** *met. bor.* of W. London, Eng.; residl. and industrl., p. *144,950.*

**Paderborn,** *t.* nr. Dortmund, Westphalia; printing and brewg. industr., cattle, corn and wool tr., minl. springs, cathedl.; p. 26,770.

**Padermo,** *t.* nr. Monza, Milan, Italy; industrl., p. 6,450.

**Padiham,** *urb. dist.*, textile mftg. *t.* nr. Burnley, Lancs. Eng., p. *11,632.*

**Padron,** *t.* on R. Ulla, Corunna prov., Spain; grain, grapes, and fruit-growing dist., textile manuf., ruined cathedl., p. 7,450.

**Padstow,** *urb. dist.*, spt. *t.* on R. Camel, nr. Bodmin, Cornwall, Eng., p. *1,929.*

**Padua,** fort. *t.* nr. Venice, in Padua prov., Italy; university and many fine bldgs., flourishg. industries, p. 105,134; (of prov.) 550,648.

**Paducah,** *c.* on the Ohio R., McCracken co., Kentucky, U.S.A.; tobacco factories and large tr.; p. 24,735.

**Padula,** *t.* nr. Salerno, Italy; industrl., p. 9,350.

**Paesana,** *t.* on R. Po, nr. Valuzzo, Italy; manuf., p. 8,350.

**Pagani,** *t.* nr. Salerno, Campania, Italy; cotton mills, macaroni factories; p. 13,570.

**Paganica,** industrl. *t.* nr. Aquila, Italy; p. 6,370.

**Pago,** *ist.* Dalmatia, off Croatian cst. in the Adriatic; 37 m. long; p. 6,720.

**Pahang,** one of the Federated States of the Malay Penin., under Brit. influence; p. 118,708; cap. P. t., p. 7,600. [Engl.; p. *13,405.*

**Paignton,** *urb. dist.*, cst. *t.* on Tor B., Devon,

**Painesville,** *vil.* on Grand R., Lake co., Ohio; industrl.; p. 13,300.

**Paisley,** *port* and mftg. *t.* on White Cart R., Renfrewsh., Scotl.; anc. abbey; p. *120,268.*

**Pakhoi,** treaty *pt.* in Kwangtung prov., China; dry fish export; p. 20,000.

**Pakpattan,** *t.* nr. R. Sutlej; Montgomery dist., Punjab, India; gd. tr.; p. 7,350.

**Paks,** *t.* on R. Danube, nr. Buda, Hungary; manuf.; p. 12,250.

**Palæocrystic S.,** ice-region extending for 1,200 m. round the N. Pole. [6,910.

**Palafurgel,** *t.* in Gerona prov., Spain; manuf.; p.

**Palais, Le,** *t.* on Belle Isl. off Brittany cst., France; p. 4,840.

**Palaja,** *t.* nr. Pisa, Italy; manuf. and trade; p. 10,850.

**Palakollu,** *t.* Godavari dist., Madras, India; gd. tr.; p. 8,250.

**Palamkotta,** *t.* in Tinnevelly dist., Madras, India, on Tambraparni *R.* opp. Tinnevelly t.; official hdqrs., gd. tr.; p. 20,020.

**Palanka,** 3 Danubian *vils.* of Hungary (Neu, Alt, and Deutsch P.) 12 m. S.W. of Bacs; industrl.; p. 9,500 collectively.

**Palanpur,** nat. *st.* Gujarat div., Bombay, India; area 3,177 sq. m., has suffered severely from plague and famine; p. 224,000. P. t., the resid. of the Diwan (of Afghan descent), is a rlwy. t. with 18,000 inhabs.

**Palar,** *R.* S. India flowing (230 m.) from Mysore to the sea.

**Palatinate.** (*See* Bavaria.)

**Palawan,** *isl.* of the Philippine grp., lying towards Borneo, area 4,576 sq. m., p. 51,000.

**Palazzo,** *t.* nr. Melfi, Potenza prov., Italy; industrl., p. 8,010.

**Palazzolo,** *t.* nr. Noto, Syracuse prov., Sicily, on site of anc. Acræ; many antiquities, p. 12 250.

**Palembang,** *t.* on Musi R., Sumatra; cap. P. residcy., p. 55,000. The Dutch res. of P. corresponds to the old kingdoms of P. and Jambi.

**Palencia,** inld. *prov.* Spain; partly fertile plain, partly wooded and mtnous., area 3,256 sq. m., p. 196,566; cap. P., on R. Carrion, old local industries, barracks, p. 18,220.

**Palenque,** *vil.* in Chiapas *st.*, Mexico, nr. extensive and magnif. palace and temple ruins.

**Palermo,** *spt. c.* and cap. of former kingdom Sicily, on N. coast of isl; many beautiful squares, pub. bldgs., and promenades, extensive tr., fisheries and manuf. (silk, etc.), cathedral, Norman-Saracenic, p. 345,891; (prov.) 804,581.

**Palestine, Philistia,** or **The Holy Land,** the anc. country of the Jews, south. portn. of Syria betwn. the Mediterranean and the Lebanon and Anti-Lebanon S. and N., and the Dead Sea and the Desert of Syria and Arabia W. and E.; area under Brit. mandate 9,000 sq. m., p. *1,035,154*; chf. c. Jerusalem *(q.v.).*

**Palestine,** mftg. *t.* in Texas, U.S.A., cap. Anderson co.; agr. and forest regn., p. 11,450.

**Palestrina,** *t.* nr. Rome, Italy; the anc. Præneste, cathedral, p. 6,640. [trade centre, p. 45,000.

**Palghat,** *t.* Malabar dist., Madras, India; busy

**Palitana,** *cap.* P. st., Kathiawar, India; a city of Jain temples inhabited by priests and their servants.

**Palk's Bay** and **Strait,** *gulf* and *chanl.* betwn. Ceylon and S. India, arm of the Indian O.

**Palma,** fort. *t.* on the Spanish isl. of **Majorca,** largest of Balearic grp.; fine pub. bldgs., gt. tr. in wine, silk, etc., also impt. manuf., p. 68,120; also *t.* nr. Nota, Caserta prov., Italy, p. 8,020; also t. nr. Girgenti, Sicily, industrl., p. 13,750; also t. in Huelva prov., S. Spain, p. 5,500.

**Palma, San Miguel de,** one of the Canary Isles, area 333 sq. m.; traversed by mtn. range, p. 43,000; cap. Santa Cruz de la Palma.

**Palmas, Cape,** *prom.* on coast Liberia, West Africa.

**Palmas, Las,** *c.* on N. cst. Grand Canary, Canary Isles; cathedral, good shipping and local tr.; p. 70,233. [6,950.

**Palmella,** *t.* nr. Lisbon, Portugal; industrl.; p.

**Palm Beach,** *t.* in Florida, American winter resort, p. 20,000.

**Palmerston,** *township* nr. Dunedin, New Zealand, p. (dist.) 1,850; also t. (North P.) nr. Wellington, New Zealand, p. 16,885; also spt. on Port Darwin, N. Australia, p. 1,250; also t. co. Perth, Ontario, Canada, p. 1,760.

**Palmi,** *t.* in Reggio prov., Calabria, Italy; olive oil, tunny fish, etc.; p. 16,750.

**Palmyra** (anc. **Tadmor**), *c.* (ruined) in Syrian desert, 120 m. N.E. of Damascus, extensive remains; also vil. Wayne co., New York, U.S.A., p. 4,000; also t. Marion co., Missouri, U.S.A., p. 5,000; also lagoon islet of Polynesia (Brit.) N.W. of Christmas Isld.

**Palni Hills,** range between E. and W. Ghats, S. Deccan, India; highest peak 7,050 ft.

**Palo,** *c.* nr. Bari, Italy; industrl.; p. 11,760.

**Palo Alto,** *t.* in Santa Clara co., California, U.S.A., p. 13,700. Here was fought first battle of war between Mexico and U.S.A. in 1846.

**Palos,** *spt.* on Rio Tinto, Huelva prov., S. Spain, p. 1,650; Columbus voyaged hence in 1492.

**Palouse,** *R.* of Idaho and Washington, U.S.A., trib. (220 m.) of Snake R.

**Palteh, or Tambro,** remarkable ring-shaped lake of Tibet (nearly 30 m. long), 50 m. S.W. of Lhassa.

**Palwal,** trading *t.* Punjab, India, p. 12,570.

**Pambula,** *t.* in Auckland co., N.S.W., nr. the Pacific coast, p. 2,350. [manuf.; p. 10,160.

**Pamiers,** *t.* on R. Ariège, nr. Foix, France; iron

**Pamirs, great** *plateau* from which the prin. mtn. chains of Asia diverge, alt. 13,600 *ft.* Often called "the roof of the world," it lies on the borders of the U.S.S.R., Chinese, and Brit. Indian territories, N.E. of Afghanistan, W. of East Turkestan, and S. of a great portion of Asiatic Russia.

**Pamlico Sound,** arm of the Atlantic, on E. coast of N. Carolina, 75 m. by 25 m.

**Pampa,** *terr.* in centre of Argentina; area 56,320 sq. m., p. (est.) 179,570; stock-rearing; cap. Santa Rosa.

**Pampas,** great open grassy *plains* in S. Amer., stretching from the Andes to the Atlantic, and from Tierra del Fuego to El Gran Chaco; Pampas del Sacramento is the specific name of the plains of Peru traversed by the Ucayale R.

**Pampeluna, or Pamplona,** *c.* on the R. Arga, N. Spain, nr. the French frontier; was cap. of the anc. kingdom of Navarre. Fortified, cathedral; p. 29,315. Thriving textile industries.

**Pamplona,** *t.* in Santander st., Colombia; p. 10,720.

**Pana,** *c.* Christian co., Illinois, U.S.A., p. 5,750.

**Panama,** *formerly a dep. of Colombia,* S. America, but since 1903 a republic. Has an area of abt. 32,380 sq. m. and a p. (excluding the Canal zone) 442,000. P. *cap. c.* is at the upper end of the Panama G., and 3 m. from the Pacific terminus of the Panama railway and canal works and dock; gd. export tr. in hides, pearl-shells, etc.; p. 62,000. The length of the canal works across the Isthmus of P. from P. to Aspinwall or Colon is 46 m. The isthmus (formerly called the I. of Darien) connects N. and S. America, and is the narrowest land neck between the Atlantic and Pacific.

**Panaro,** *R.* of Italy, trib. (75 m.) of R. Po.

**Panay,** *isl.* of the Philippine grp., S.E. of Mindoro; area 4,448 sq. m., contains Iloilo, total p. over 1,000,000.

**Pancsova,** *t.* fort., on R. Temes, Rumania, nr. Belgrade; manuf., p. 18,860. Here the Austrians defeated the Turks in 1739, and the Austrians the Hungarians in 1849.

**Pandharpur,** *t.* Bombay, India, on R. Bhima; Temple of Vishnu, the most frequented place of pilgrimage in the Deccan, p. 22,000.

**Panhandle,** popular name for projecting dists. N. of W. Virginia, N.W. Texas, and Idaho, U.S.A.

**Panipat,** *t.* Karnal dist., Punjab, India, nr. old bank of R. Jumna; *tr.* and military centre, p. 29,100.

**Panteg, or Panteague,** *urb. dist.,* in iron and colly. dist., Monmouthsh., Eng., nr. Pontypool, p. *11,500.*

**Pantellaria,** volcanic *isl.* in Mediterranean; belongs to prov. Trapani, Sicily; area 58 sq. m., p. 8,750; chf. t. P., on N.W. cst., p. 3,500.

**Pantin,** *t.* of S. Denis, dep. Seine, just outside the fortifns. of Paris, France; industrl. dist., p. 33,370. [and wine-growg. dist., p. 13,760.

**Panton,** *t.* in prov. Lugo, Spain, mntnous., agr.,

**Paola,** cst. *c.* nr. Cosenza, Italy; oil and wine tr., p. 9,450; also mftg. c., Miami co., Kansas, U.S.A.; p. 3,800.

**Pao-ting, one of the chief** *cs.* of Pe-chi-li prov., China, on the R. Yung-ting; gt. tr., p. 120,000.

**Pápa,** mftg. *t.* in Veszprém co., Hungary, nr. Pressburg, p. 16,770.

*t.* Durango st., Mexico; impt. tr., p. 7,750.

**Papeete,** French *t.* on cst. of Otaheite (or Tahiti) isl., in the Society grp., p. 3,700.

**Papenburg,** *t.* nr. R. Ems, Hanover, Pruss.; good canal tr. and shipbldg. industry, p. 8,300.

**Paps of Jura,** grp. of three *mtns.* on Jura Isl., Scotl., highest pk. 2,566 ft.

**Papua.** (*See* **New Guinea.**)

**Para,** *estuary* of Rs. Amazon and Tocantins, N.E. Brazil, 200 m. long, and 40 m. wide at entree. to Atlantic.

**Para, or Grão Para,** *prov.* Brazil, traversed by the Lower Amazon R., and borderg. on Guiana, and the Atlantic, area 443,798 sq. m., p. 992,290; also a spt. on the Para, cap. of prov., centre of river tr. of the Amazon system; exports rubber, balsam, hides, etc., p. 225,000.

**Paraguay,** *R.* S. America, flows 1,600 m. from Brazil to the Parana, nr. Corrientes, forming pt. of E. bdy. of Bolivia, and W. bdy. of Paraguay.

**Paraguay,** *repub.* S. America, lying mainly betwn. the Paraguay and Parana R.'s and bounded by the Argentine, Bolivia, and Brazil, area 174,204 sq. m., p. 836,200 (incldg. 45,000 Indians of the Chaco). Climate tropical, vegetatn. luxuriant; industries: fruit-growing, cattle-rearing prepn. of Paraguayan tea (maté), tobacco-planting, timber-cutting, etc. Cap. Asuncion.

**Parahiba,** *R.* Brazil (200 m.), flows to Atlantic in State of P., area 28,846 sq. m., p. 785,344. Cap. P., t. nr. mth. of R. P., p. 26,000; also R. rising in São Paulo st., Brazil, and flowing 658 m. betwn. Rio de Janeiro and Minas Geraes to the Atlantic N.E. of Rio de J.

**Paramaribo,** *spt.* on R. Surinam, Dutch Guiana, active tr. and industries, p. 45,000.

**Paraná,** *R.* S. America (2,000 m.), flows from Brazil through Paraguay and Argentina to join the Uruguay and form the est. of La Plata. Also prov. Brazil, betwn. R. P. and the Atlantic, area 93,269 sq. m., p. 674, 113. Cap. Curitiba; also t. on R. P. in Argentine, Entre Rois st., p. 37,250, active tr.

**Paranagua,** *spt.* Paraná prov., Brazil, exports Paraguay tea, etc., p. 9,010.

**Paranahyba,** *R.* Brazil, prov. Goyaz, flows 500 m. W. to join the Curamba; both affluents of the Paraná; also another R. of Brazil, flowing (830 m.) to the Atlantic, at the port of San Luis de Paranahyba, in prov. Piauhy, p. of t. 14,750.

**Parapara,** *t.* in Guarico st., Venezuela, nr. Ortiz, p. 9,770.

**Parati,** *spt.* Rio Janeiro prov., Brazil; gd. tr., p. 13,200.

**Parchim,** *t.* on R. Elbe, Mecklenburg-Schwerin, Germy., minl. spring; birthpl. of Field-Marshal Moltke, p. 10,840. [old château, p. 25,171.

**Pardubitz,** *t.* on R. Elbe, Bohemia, nr. Königgrätz,

**Parenzo,** cst. *t.* nr. Rovigno, Istria, Italy, fishg. and shipbldg., mulberry plantatns., p. 10,270.

**Paria Kimedi,** *t.* Gangam dist., Madras, India, res. of raja, college, gd. tr., p. 22,000.

**Parima, Sierra,** *mtn. range,* S. Venezuela, highest pt., abt. 10,000 ft.

**Paris,** *c.*, cap. of French Repub. on R. Seine, enclosed within fortifens. 22 m. long and includg. an area of 30 sq. m. Contains some of the finest bldgs. in the world, and has many splendid boulevards, open spaces, and monuments, while for art, literary and scientific collections its renown is universal. Its industries, wealth and commerce are enormous; p. 2,906,472. In 1871 captured by the German army, after a 4½ months' siege, since which period the fortifens. have been rendered the most extensive in existence.

**Paris,** *c.* in cotton and grain dist., Lamar co., Texas, U.S.A., p. 15,750; also c. in agr. regn., Edgar co., Illinois, U.S.A., p. 8,850; also c. cap. Bourbon co., Kentucky, U.S.A., p. 6,200; also *t.* on Grand R., Brant co., Ontario, Can., p. 4,010.

**Parkersburg,** *c.* on Ohio R., Wood co., W. Virginia, U.S.A., manuf. centre in oil and nat. gas regn. ironworks, p. 30,600.

**Parkgate.** (*See* **Weston and Parkgate.**)

**Park Gate,** industr. sub. of Rotherham, W.R. Yorks, Eng. [industl.

**Parkhead,** E. sub. Glasgow, Scotl., residl. and

**Park Range,** *chn.* of the Rocky mtns., Colorado, U.S.A., mt. Lincoln, alt. 14,297 ft.

**Parma,** *prov.* Emilia, Italy, area 1,258 sq. m., p. 340,050, cap. Parma, t. between the Apennines and the R. Po, flourishing. tr., felt hat and other factories, university, cathedl., and other fine bdgs., p. 54,584.

**Parnassus,** *mtn.* ridge in Greece, 83 m. N.W. of Athens, nr. the ancient Delphi, the modern Liakhura, highest summit, Licoreia, alt. 8,068 ft.

**Paros,** *isl.* in Grecian Arch., 5 m. W. of Naxos, area 63 sq. m., p. 9,920, cap. Para.

**Parramatta,** *t.* on P. R., Cumberland co., N.S.W., noted for orchds. and orangeries, oldest t. in Australia, p. 12,630. [tr., p. 16,760.

**Parras,** *t.* nr. Mapimi, Durango st., Mexico, gd.

**Parret,** *R.* Dorset and Somerset, Eng., flows (35 m.) to Bristol Channel, nr. Bridgwater.

**Parry Cape,** on Arctic cst., N. America, Parry Isls., grp. in Arctic Oc., N. of Melville Sound, includg. Melville Isl., Bathurst Isl., Prince Patrick Isl., etc., Parry Sound, t. on Georgian B., Ontario, Can., p. 2,400.

**Parsons,** *t.* nr. Fort Scott, in Labette co., Kansas, U.S.A., mftg. centre in rich farmg. dist., p. 14,700.

**Parsonstown,** King's co., I.F.S. (*See* Birr.)

**Partabgarh,** or **Pertabgarh,** *nat. st.* in Rajputana, Agency, India, area 959 sq. m., p. 51,000, cap. P., *t.* on rwy., p. 1,350. [Palermo, p. 15,120.

**Partanna,** industrl. *t.* in Trapani prov., Sicily, nr.

**Parthenay,** *t.* nr. Niort, Deux-Sèvres, France, on promonty. overlookg. the Thouet, anct. ramparts and interestg. old bdgs, woollen indust., p. 7,120.

**Partick,** mftg. *sub.* of Glasgow, Scotl., has flourishg. Clydeside ship-bldg. yards.

**Partinico,** mftg. and tr. *t.* nr. Palermo, Sicily, p. 23,020. [Eng.; p. 1,630.

**Parton,** *spt.* adjng. Whitehaven, Cumberland,

**Parvatipur,** *t.* Madras, India; gd. tr.; p. 10,270.

**Parys Mtn.,** *hill* in N.E. Anglesey, Wales; copper mines.

**Pasadena,** *c.* Los Angeles co., California, U.S.A., in fruit-growg. regn., base of San Gabriel Mtns.; p. 76,100.

**Pascani,** *t.* in Suciava dist., Moldavia, Rumania; industrl.; p. 8,620.

**Pasco,** or **Cerro de Pasco,** *t.* in famous silver-ming. dist., Junin dep., Peru; situated 14,280 ft. above sea-level; p. 16,350.

**Pas-de-Calais,** French name of Strait of Dover; also maritime dept., N. France; area 2,606 sq. m.; agr. and coal-field dists.; p. 989,967; cap. Arras.

**Pasewalk,** old mftg. *t.* nr. Stettin, Pomerania, Pruss.; p. 10,950.

**Pasig,** *t.* on P. R. Luzon, Philippine Isls.; commercl. centre of the lake regn.; p. 24,000.

**Pasman,** *isl.* nr. Zara, in the Adriatic, belonging to Dalmatia, Jugo-Slavia (15 m. long 3½ m. wide); wine, oil, etc.; p. 10,680.

**Passage, West,** *spt.* on Cork Harbr., Ireld.; p. 2,630.

**Passaic,** *c.* on P. R., P. co., New Jersey, U.S.A.; thrivg. manufs.; p. 62,750. Passaic R. flows 100 m. to Newark B.

**Passamaquoddy Bay,** *arm* of the Atlantic (15 m. long), betwn. New Brunswick and Maine, U.S.A.

**Passarowitz,** mftg. *t.* nr. R. Danube, Serbia, nr. Belgrade; p. 12,570. [tr.; p. 35,000.

**Passaruan,** *t.* in Dutch residcy. of P., Java; impt.

**Passau,** *t.* on R. Danube, Lower Bavaria; cathedl.; fortified; p. 19,210.

**Pasto,** *t.* in Cauca st., Colombia, on flank of Pasto volcano; p. 42,000.

**Patagonia,** *southmost. portn.* of America; includg. all of Argentina S. of the Rio Negro, and all of Chili S. of Chiloe prov. Area (exclud. Tierra de Fuego) 235,000 sq. m., abt. one-fifth of which is Chilian terr. The p. is sparse, and includes abt. 20,000 wandering Indians of tall stature. Along the csts. are flourishg. civilised settlements. The Andes ranges, stretching 1,000 m. from S. to N. of Patagonia, divide the Chilian str. on the W. from the Argentine portn. on the E.

**Patan,** *t.* in Gujarat, Baroda st., India; p. 35,000; impt. tr.; also t. in Nepal, nr. Khatmandu; p. 32,000.

**Patapsco,** *R.*, Maryland, U.S.A., flows 80 m. to Chesapeake B., nr. Baltimore. [Eng.; p. 7,800.

**Pateley Bridge,** mkt. *t.* on R. Nidd, W.R. Yorks.

**Paterno,** *c.* Catania, Sicily, at ft. of Mt. Etna; p. 19,100; on site of anc. Hybla; gd. tr.

**Paterson,** *c.* New Jersey, U.S.A., on Passaic R., 17 m. N.W. New York; great mftg. centre, called "the Lyons of America," because of its extensive silk industry; p. 138,750; also name of t. in Durham co., N.S.W.; p. 2,850.

**Patiala,** native *st.* within the Punjab, India, S. of the Sutlej R. (sometimes called Puttiala); area 5,412 sq. m.; p. 1,499,537. Cap. P., t. on rlwy. from Bhatinda to Rajpura; p. 46,974.

**Patkai,** *mtn. range* Indo-Chinese penins., betwn. Assam and Burma; Chaukan (or Lugayak) alt. 9,020 ft.

**Patmos,** *isl.* 20 m. S. of Samos, W. cst. Asia Minor, one of the Sporades, monastery to St. John the Divine.

**Patna,** *c.* on R. Ganges, Bengal, India, a great industrl. and commcl. centre with a p. of 120,109; the c. stretches for 9 m. along the R., and the mil. cantonmt. of Dinapur joins it on the W.

**Patna,** feudatory *st.* in Chhattisgarh div., Central Provs., India, area 2,399 sq. m., p. 278,000; this st. was formerly under Brit. administratn., and the ruling chf. is a rajput of high lineage.

**Patras,** fortd. *spt.* on G. of P., W. cst. Greece, 70 m. from Corinth citadel and castle, gt. tr. in currants, raisins, figs, olives, wine, skins, etc., p. 52,133. [p. 12,250.

**Patricroft,** industrl. *t.* nr. Manchester, Lancs, Eng.,

**Patti,** *c.* Messina prov., Sicily, cathedl., silk and olive-oil manuf., tunny fishg., p. 10,620.

**Paturage,** *t.* nr. Mons, Belgium, industrl., p. 12,510.

**Pau,** *t.* and health *res.* on Gave de Pau, Basses-Pyrénées dep., France, p. 31,320; the R. Gave de Pau flows 105 m. to join R. Adour, nr. Bayonne. [Eng., p. *5,813.*

**Paul,** *urb. dist., t.* on Mount's Bay, Cornwall,

**Paulton,** *par.* nr. Bath, Somerset, Eng., p. 2,440.

**Pavia,** *prov.* Lombardy, Italy, area 1,287 sq. m., p. 514,506; cap. P., c. on the Ticino, nr. Milan, "the city of a hundred towers," fine cathedl., basilica, and Visconti palace, also university and Carthusian monastery, military engineerg. wks., and many manufs., p. 40,729.

**Pavlograd,** *t.* in Ukraine, on R. Voltchya, manuf. and tr., p. 16,750.

**Pavlovo,** industrl. *t.* on Oka R., old govt. Nijni-Novgorod, Russ., cutlery works, p. 14,860.

**Pavlovskiy Posad,** *t.* on Klyazma R., old Russ., woollen manuf., p. 13,020.

**Pawtucket,** *c.* on P. R., Providence co., Rhode Isl., U.S.A., cotton manuf., foundries, etc., p. 78,500.

**Paxo,** or **Paxos,** one of the Ionian *Isls.*, nr. Corfu, Greece, olive oil, p. 5,920.

**Paysandu,** mftg. *c.* on Rio Uruguay, Uruguay, bombarded by the Brazilians 1865, p. 20,000.

**Peabody,** leather mftg. *t.* Essex c., Mass., U.S.A., p. 21,200; formerly called South Danvers.

**Peabody Bay,** *arm* of Smith Sound, N.W. cst., Greenland.

**Peace** *R.*, rises in Rocky Mtns., Brit. Columbia, and flows (1,000 m.) to L. Athabasca.

**Peak of Derbyshire,** mtnous. *dist.* mid.-Eng., extendg. from Chesterfield to Buxton, and Ashbourne to Glossop, highest pt. Kinderscout, alt. 2,080 ft.

**Pearl,** *R.*, Mississippi, U.S.A., flows (400 m.) to G. of Mexico, name also given to Canton R., S. China. [Colombia.

**Pearl Isls.,** sml. *grp.* in B. of Panama, belong. to

**Pecciola,** *t.* nr. Pisa, Tuscany, Italy, industrl., p. 7,520.

**Pe-chi-li,** *prov.* N. China, adjng. Mongolia and the G. of Pe-chi-li, area 115,800 sq. m., p. 30,172,000; the G. of P. is an arm of the Yellow S., and the Strait of P. connects the two.

**Peckham,** a S.E. *sub.* of London, Eng.

**Pecos,** *R.*, of New Mexico and Texas, U.S.A. (764 m.), trib. of Rio Grande.

**Pecs,** *mftg. t.* in Baranya prov., Hungary, famous for coal, wine, porcelain, and organ manuf., p. 48,750.

**Peddapur,** *t.* Madras, India; gd. tr., p. 12,750.

**Peddie,** *t.* in C. of Good Hope, S. Africa, in P. div., nr. the E. cst., p. 4,250.

**Pedee,** or **Great Pedee,** *R.*, N. and S. Carolina, U.S.A., flows to Winyah B., nr. Georgetown; navigable 150 m.

**Pedrotallaga,** *mtn.* in S. of Ceylon, alt. 8,235 ft.

**Peebles,** *co.* S. of Scotl. betwn. Lanark and Midlothian, Selkirk and Dumfries; area 354 sq. m., mainly agr., but mtnous., p. *15,050*; cap. Peebles, health rest. on R. Tweed, p. *6,402.*

**Peekskill**, *t.* Westchester co., New York, U.S.A., on Hudson R.; annual camp. grd. of the National Guard, p. 17,250.

**Peel**, fishing *t.* on W. cst. Isle of Man, p. 2,455; Peel R., N.S.W., trib. (with the Namoi, 600 m. long) of R. Darling; also R. Canada (300 m.) joins the Mackenzie R. at the delta.

**Pegau**, industrl. *t.* on White Elster R., nr. Leipsic, Saxony, p. 5,010.

**Pegnitz**, *headstream* of the R. Regnitz, Bavaria, flows 60 m. to Fürth; also name of a sml. industrl. t. nr. source of R. P., p. 1,860.

**Pegu**, *div.* of Lower Burma, includg. Rangoon and neighbg. dists.; area 13,083 sq. m., gt. rice crops, p. about 2,000,000; cap. P., t. on P. R., p. 13,500.

**Pei-ho**, *R.* in prov. Pe-chi-li, China (300 m.), unites with R. Yun-ho at Tientsi and flows to G. of Pe-chi-li. [7,950.

**Pellau**, *t.* nr. Breslau, Prussn. Silesia; *mftr.*, p.

**Peine**, *t.* Hanover, Prussn. Brunswick; breweries, cattle mkt., p. 18,770.

**Peipus**, *L.* between U.S.S.R. and Esthonia (length 80 m. by 32 m.) discharges by R. Narova to G. of Finland.

**Pekin**, *c.* in Tazewell co., Illinois, U.S.A.; gt. grain mkt. in agr. and coalfield regn., p. 16,500.

**Peking**, or **Pekin**, *c.* cap. of the Chinese republic lying in the plain betwn. the Pei-ho and Hun-ho R.'s, and 36 m. S.E. of the Great Wall; an immense c. 25 m. in circumfce., divided betwn. Chinese and Tartar communities, and having a p. of 924,334; prin. bldgs. the Imperial Palace in the "Purple Forbidden c.," Bell Tower and Drum Tower in the Tartar c., and "Temple of Heaven," in the Chinese c.; suffered severely in Boxer rising, and captd. by allied Brit. and American forces, Aug. 14, 1900.

**Pelago**, *t.* (industrl.) nr. Florence, Tuscany, Italy, p. 11,640.

**Pelew Isls.**, Pacific grp. W. of the Carolines, formerly German. (*See* Micronesia.)

**Peling**, *isl.* off E. cst. Celebes (60 m. by 20 m.); also isl. off W. cst. Corea, in the Yellow Sea; also range of hills S. of the Hoang-ho Valley, N.W. China.

**Pelion**, or **Zagora**, celebrated *mtn.* S. of Mt. Ossa, Thessaly, Greece, alt. 5,310 ft. [3,320.

**Pella**, industrl. *t.* Marion co., Iowa, U.S.A., p.

**Pelorus Sound**, extends 25 m. inld. from Cook Strait, on N. cst. South Isl., N.Z.

**Pelvoux**, *mtn.* France, betwn. Isère and Hautes-Alpes, alt. 13,442 ft.

**Pemba**, *isl.*, Kenya Col., E. Africa, 34 m. N. of Zanzibar, area 600 sq. m., p. 83,000; cloves and copra; also t. on L. Moeru, Equatorial Africa, p. 8,480; also t. in Dutch New Guinea.

**Pemberton**, *t.* adjoing. Wigan, S.W. Lancs, Eng.; thriving manuf., p. 36,020.

**Pembroke**, maritime *co.* S. Wales, adjng. Cardigan and Carmarthen, area 617 sq. m., hilly, mainly agr., with fisheries and mftg. industries, p. *87,179*; cap. Pembroke, dockyd. t. on creek of Milford Haven, p. *12,008*. P. is also name of a t. (mftg.) in Ontario, Canada, on the Allumette L., p. 5,750; and of two t.'s in the U.S.A., viz. P. in Washington, co. Maine, nr. Eastport, and P. on the R. Merrimac, New Hampshire.

**Pen**, *t.* nr. Alibagh, Bombay, India; gd. tr.; p. 9,000.

**Penang**, or **Prince of Wales Isl.**, Brit. possn. Straits Settlements off W. cst. Malay Pen.; area 107 sq. m., p. (includg. Wellesley prov., opp., and the Dindings isl.) 250,000; cap. Georgetown.

**Pen Argyl**, *bor.* Penn., U.S.A., industrl. centre on border Northampton co., p. 4,350.

**Penarth**, *urb. dist.*, spt. *t.* at mth. of Taff R., Glamorganshs., Wales, p. *17,710*. [alt. 1,831 ft.

**Pendle Hill**, nr. Clitheroe, N.E. Lancash., Eng.,

**Pendleton**, industrl. *t.* adjoing. Manchester, Lancash., Eng., p. included in Salford.

**Penedo**, *t.* on *R.* San Francisco, Alagoas prov., Brazil; gt. tr.; p. 12,250.

**Penge**, *urb. dist.*, S.E. *sub.* of London, Eng.; Crystal Palace Park partly in the hamlet; residential; p. *27,762*. [p. *5,193*.

**Penicuik**, *t.* on N. Esk R., nr. Edinburgh, Scotl.,

**Penig**, *t.* on R. Mulde, nr. Leipsic, Saxony; manuf.; p. 7,125. [Yorks, Eng., p. *3,264*.

**Penistone**, *urb. dist.*, mkt. *t.* on R. Don, W.R.

**Penj-deh**, or **Penhjdeh**, U.S.S.R. *t.* in Centrl. Asia, nr. the Afghan border, on R. Murghab. N. of Herat; captd. in 1885 by Komaroff.

**Penkridge**, industrl. *t.* on R. Penk, Staffordsh., Eng., 6 m. S. Stafford; p. 3,460.

**Penmaenmawr**, *urb. dist.*, *t.* and cst. *wat. pl.* nr. Conway, Carnarvonshire, Wales, p. *4,021*.

**Penner**, or **Pennair**, *R.* of Mysore and Madras, India, flows 355 m. to sea nr. Nellore; also another R. flowing S. of this (245 m.) to Cuddalore on the Coromandel cst.

**Pennsylvania**, one of N. Atlantic *states*, U.S.A., includes the terr. colonised by William Penn in 1682; total area 44,832 sq. m.; mtnous., and rich in coal, iron and petrol; very extensive manuf.; p. 10,078,000; cap. Harrisburg; princ. cities, Philadelphia and Pittsburg (all of which see).

**Penobscot**, *R.* Maine, U.S.A., flows 275 m. into P. Bay, an arm of the Atlantic.

**Penrhyn**, extensive slate-quarrying *dist.* nr. Bethesda, Carnarvonsh., Wales.

**Penrith**, *urb. dist.*, mkt. *t.* Cumberland, Eng., nr. Carlisle; ruined castle; p. *9,065*.

**Penryn**, *mun. bor.*, mkt. *t.* Truro div., Cornwall, Eng., on Falmouth Harbr., granite quarries, p. *3,414*.

**Pensacola**, *spt.* on P. Bay, Florida, U.S.A., exports, timber, fruit, cotton, p. 31,600.

**Pentland Firth**, *strait* betwn. Orkney and the Caithness cst., Scotl.; P. Hills, range running S.W. through the counties of Lanark, Edinburgh and Peebles, Scotl., highest pk. abt. 1,900 ft.; P. Skerries, grp. of small isles in P. Firth, 2 with lighthouses.

**Penza**, *govt.* U.S.S.R., S. of Nijni-Novgorod, area 14,997 sq. m., mainly agr., dairying, and stock-raisg., p. 1,610,000; cap. P., t., on R. P., gt. tr. in grain, p. 67,020.

**Penzance**, *spt.* and *mun. bor.*, Cornwall, Eng., at hd. of Mount's Bay, pilchard fishg., exports, copper, tin, and china clay, p. *11,342*.

**Penzing**, industrl. *vil.* nr. Vienna, Austria, subn. to the cap., p. 14,250.

**Peoria**, *c.* on Illinois R., Peoria co., Ill., U.S.A., a great grain mkt. of the Mississippi valley, p. 107,750.

**Pepin Lake** (28 m. long, 3 m. wide), an extensn. of the R. Mississippi in Wisconsin and Minnesota, U.S.A.

**Pepperell**, *c.* in Middlesex co., Mass., U.S.A., p. 4,300.

**Perak**, one of the Federated Malay States under Brit. administratn., area 10,000 sq. m., chf. product tin, p. 494,057.

**Perekop, Isthmus of**, connects Crimea with S. Russ. proper, and separates Sea of Azov from Black Sea; P., t. in Taurida, on the isth., p. 5,000.

**Pergamos**, anc. name Bergama, or Bergamo; c. in Asia Minor on R. Caicus, 50 m. N. of Smyrna, impt. architectural antiquities.

**Pergola**, *t.* nr. Urbina, in the Marches, Italy, on R. Cesano, industrl., p. 10,300. [p. 17,750.

**Periakulam**, *t.* nr. Madura, Madras, India, gd. tr.,

**Périgueux**, *t.* on R. Isle, Dordogne, France, the anc. Vesuna, cathedl., gd. tr., noted for its "Périgord pies" of partridges and truffles, and for fine young pigs, p. 31,150. [Aden.)

**Perim**, Brit. *isl.* in Strait of Babelmandeb. (*See*

**Perm**, *govt.* of U.S.S.R., in the Ural Mtns.; area 128,211 sq. m., great mineral wealth, impt. agr. and stock-keeping (including bees) industries; p. 3,252,000, chiefly peasantry and rural dwellers. Cap. P., t. on R. Kama; manuf.; p. 51,030.

**Pernambuco**, maritime *prov.*, Brazil, S. of Parahyba and Ceará; area 49,560 sq. m., p. 1,975,441; great sugar and cotton export. Cap. P. (or Recife), on the Atlantic coast, p. (with the isls. comprised in the commune) 505,000.

**Pernau** (**Pärnu**), fortfd. *spt.* nr. Riga, in Esthonia; good foreign trade; p. 22,000.

**Perovsk** (formerly **Ak-metchet**), fortfd. *t.* Kokand, U.S.S.R., on the Sir Daria *R.*; cattle tr.; p. 6,300.

**Perpignan**, fortfd. *t.* dep. Pyrénées-Orientales, France; cathedl., anc. res. of the kings of Majorca; flourishg. trade and industries; p. 53,742.

**Perry Barr**, *urb. dist.*, Staffs., Eng., p. 2,701.

**Perryville**, *t.* in Boyle co., Kentucky, U.S.A.; battle, American Civil War, 1862.

**Pershore**, mkt. *t.* on R. Avon, Worcestersh., Eng., p. 4,120.

**Persia, *kingdom*** S. Central Asia, between Turkestan and Baluchistan and Afghanistan W. and E., and Transcaucasia, the Caspian, and W. Turkestan N. to the Persian G. and G. of Oman S. Area 628,000 sq. m., partly lofty tablelands and mtn. chains, with arid desert, and partly fertile and beautiful plains; p. 9,500 000 (3,000,000 nomadic). Cap. Teheran; prod., wheat, fruit, sugar; manufs., shawls, silks, carpets, embroidery, arms, etc. The Persian G. is an arm of the Indian Oc., between P. and Arabia, 550 m. long.

**Perth, E., Midland** *co.* Scotland, N. of Stirling; area 2,528 sq. m., hilly, mftg., and agr.; p. *120,722*. Cap. P., c. on R. Tay; dyeing, floorcloth, glass, wincey, and linen factories; p. *28,613*. Also c. on Swan R., cap. W. Australia; flourishg. trade and industries; p. (with subs.) 155,129. Also t. in Lanark co., Ontario, Canada, p. 4,500.

**Perth Amboy,** *c.* and *port* on Raritan Bay, New Jersey, U.S.A.; terra-cotta works and many flourishg. industries; p. 43,700.

**Peru,** *repub.* N.W. of S. America, between S. Pacific, Brazil and Bolivia, and Ecuador and Chili; area 722,461 sq. m., p. 4,995,000, half aboriginal. Traversed by the Cordilleras of the Andes; produces guano, nitrates, sugar, salt, cotton, alpaca, etc. Cap. Lima; chief port, Callao (*q.v.*). Also name of a c. on Wabash R., Miami co., Indiana, U.S.A., mftg. centre in agr. region, p. 12,750. Also mftg. c. in colliery dist. Lasalle co., Illinois, U.S.A., p. 9,250.

**Perugia,** *prov.* Central Italy, traversed by the Apennines; area 3,770 sq. m., p. 714,682. Contains the beautiful L. of Perugia, 30 m. round (the anc. Thrasymene). Cap. of prov. P., c. on hills above R. Tiber; university, cathedral, frescoed "hall of the moneychangers." Seat of the Umbrian school of painters of the Renaissance; p. 70,227.

**Pesaro,** fortfd. *t.* in the Marches, Italy, on the Adriatic coast; the anc. Pisaurum, famous for its figs; p. 28,483.

**Pesaro and Urbino,** *prov.* Italy, in the Marches; area 1,118 sq. m., p. 270,676; cap. P.

**Pescadores,** *isl. grp.* 30 m. W. of Formosa, in the typhoon track, comprisg. 48 islets, total area 45½ sq. m., p. 52,000; also grp. of Peruvian cst. N.W. of Callao; also sml. grp. of the Marshall Isls. in the Pacific; "Pescadores" signifies in Spanish "Fishers' Islds."

**Pescara,** *R.* of Centl. Italy, flows 90 m. to the Adriatic, nr. Pescara t., prov. Chieti, p. 6,930.

**Pescia,** *c.* in prov. Lucca, Italy, nr. Florence; cathedl., p. 15,120.

**Peshâwar,** *dist.* (area 2,444 sq. m., p. 800,000) and *div.* (area 8,206 sq. m., p. 1,750,000) of the Punjab, India; cap. of dist., div., and of the N.W. Frontier Prov., P., c. on R. Bara, at the entce. of the Khaibar Pass; gt. tr. depot for Afghanistan and Centl. Asia, p. 93,884.

**Pesth,** *c.* of Hungary, on l. bank of R. Danube, opp. Buda, and connected therewith by suspensn. br., the two c.'s forming the Hungarian cap. of Buda-pesth. (*See* **Budapest.**) [8,300.

**Petaluma,** *c.* Sonoma co., California, U.S.A., p.

**Petchili,** China. (*See* **Pe-chi-li.**)

**Petchora,** *R.* U.S.S.R., flows 1,400 m. from the Ural Mtns. to the Arctic Oc.

**Peten,** *L.* Centl. America, nr. Yucatan frontier of Guatemala, 45 m. by 3 m.; also isl. in *L.*

**Peterborough, Soke of,** Northants, Eng., on R. Nene; cathedl., brickworks, and factories, p. *51,845*; p. of mun. bor. *43,558*; also mftg. t. on Otanabee R., Ontario, Can., at the falls, p. 19,250; also vil. nr. Concord, New Hampshire, U.S.A.

**Peter Botte Mtn.,** remkble. *rock* Mauritius, alt. 2,600 ft.; also mtn. on cst. of Queensland, alt. 3,811 ft.

**Peterhead, fishg.** *port* E. Aberdeensh., Scotl.; granite output, herring trawling, one of the Elgin burghs, p. *15,285*.

**Peterhof,** *t.* on G. of Finland, 16 m. from Leningrad, U.S.S.R.; beautiful impl. palace, p. 12,020.

**Petermann Peak,** *mtn.* in E. Greenland, on Kaiser Franz Josef Fiord, alt. 11,418 ft.

**Petersburg,** *c.* on the Appomattox R., Virginia, U.S.A.; tobacco manuf. and meat-canning, p. 31,002, a former name of Leningrad.

**Petersfield,** *urb. dist.*, mkt. *t.* nr. Portsmouth, Hants, Eng., p. *4,386*.

**Petersham,** *sub.* Sydney, N.S.W., also vil. in Surrey. [industrl., p. 9,450.

**Peterswaldau,** *t.* nr. Breslau, Prussn. Silesia; **Petit-Quevilly, Le,** *t.* adjoing. Rouen, dep. Seine, Inférieure, France; cotton-spinning, guttapercha, and chemical wks., p. 22,120.

**Petlad,** *t.* in Baroda st., India; gd. tr., p. 15,260.

**Petra,** ruined *c.* Arabia Petræa, on Wâdi Mûsâ brook, in the valley betwn. the Dead S. and the G. of Akabah, interesting excavatns.

**Petralia,** *t.* nr. Cefalu, prov. Palermo, Sicily, industrl., p. 10,640.

**Petrograd,** former *govt.*, U.S.S.R., at the head of G. of Finland; area 20,760 sq. m., hilly on Finland border; p. (exclusive of the cap.) nearly 1,000,000. The c. of Petrograd (now Leningrad) at the mouth of the R. Neva, the metropolis and seat of govt., covers an area of 42½ sq. m., and was noted for possessing many imposing bldgs., palaces, and open squares, besides a university and cathedral. The Nevski Prospekt, the principal street, is one of the finest in the world; p. *2,639,100*. This city is now called Leningrad, but was up to the beginning of the Great War known as St. Petersburg. [Siberia, p. 42,000

**Petropavlovsk,** industrl. *t.* on R. Ischim, U.S.S.R., **Petropavlovski,** *spt.* on E. cst. Kamtchatka, occupied jointly by the English and French in 1855.

**Petropolis,** *t.* nr. Rio Janeiro, Brazil, beautiful health resort, 2,300 ft. above sea-level, p. 21,200.

**Petrovacz,** industrl. *vil.* nr. Bacs, Hungary, p. 8,670.

**Petrovoszelo,** mftg. *t.* Hungary, p. 9,870.

**Petrovsk,** *spt.* on the Caspian, Daghestan prov., Transcaucasia, hot sulphur baths, naphtha springs, p. 11,640; also t. in Saratov govt., U.S.S.R., on R. Medvyeditza, manuf., p. 19,894. [wks., p. 14,530.

**Petrozavodsk,** *t.* on L. Onega, U.S.S.R., ordnance

**Petsh, or Ipek,** *t.* nr. Scutari, Albania, and seat of the Serbian patriarch, p. 10,150.

**Petuna, or Bodune,** *t.* Karin prov. Manchuria, nr. the Sungari R., p. (est.) 30,000. [3,050.

**Petworth,** mkt. *t.* nr. Chichester, Sussex, Eng., p.

**Petzka,** mftg. *t.* nr. Szegedin, Hungary, p. 17,460.

**Peveragno,** industrl. *t.* nr. Coni, Piedmont, Italy, p. 8,350. [p. 1,960.

**Pewsey,** mkt. *t.* nr. Marlborough, E. Wilts, Eng., **Pforzheim,** industrl. *t.* on edge of Black Forest, Baden, Germany, jewellery manuf., p. 73,839.

**Pharsalus,** *c.* in dist. Pharsalia, Thessaly, anc. Greece, the mod. Fersala, scene of Cæsar's triumphs over Pompey, 48 B.C.

**Philadelphia,** *c.* on Delaware R., Penn., U.S.A., covering an area of 129½ sq. m., gt. commercl., industrl., and educatnl. centre, divided by the Schuylkill R., flourishg. university and city instns., and many thriving manufs., p. 1,963,000.

**Philippeville,** spt. *c.* Algeria, on B. of Stora, nr. Constantine, in vineyd. dist., with cork forests, fine harbr., p. 33,808.

**Philippine Isls.,** *archipel.* between the Pacific and China Sea, total area 115,026 sq. m.; comprises Luzon, Camarines, Mindoro, Panay, Leyte, Samar, Mindanao, Cebu, Negros, Bohol, Palawan, and smlr. islands; p. 10,350,640; cap. Manila, prod. tobacco, sugar, coffee, rice, cocoa, hemp, etc.; ceded by Spain to U.S.A. in 1898.

**Philippopolis,** *c.* on Maritza R., Bulgaria; gt. commercl. centre; exports rice, cocoons, attar of roses, wine, corn, etc.; Greek cathedl.; p. 63,418.

**Phillack,** *urb. dist.*, *t.* on St. Ives B., Cornwall, Eng.; p. *3,232*. [India; p. 8,200.

**Phillaur,** *t.* nr. Thalandar, on R. Sutlej, Punjab, **Phillipsburg,** *c.* on R. Delaware, Warren co., New Jersey, U.S.A.; ironwks.; p. 19,500.

**Phœnix,** *c.* on Salt R., Maricopa co., Arizona, U.S.A., industrl.; p. 48,125.

**Phœnix Isls.,** sm. *grp.* between the Equator and Samoa, Polynesia; formerly productive of guano, now uninhabited.

**Phœnixville,** *bor.* on Schuylkill R., Penn., U.S.A., iron-bridge bldg. wks.; 12,200.

**Phthiotis and Phocis,** *monarchy* (or prov.), Greece, betwn. the G. of Corinth and Thessaly; area 2,349 sq. m.; p. 119,215.

**Piacenza,** *prov.* Emilia, Italy; area 965 sq. m., p. 267,007; cap. P., fortfd. *t.* and military stn. on R. Po; arsenal, manuf.; cathedl., noted ch. of San Sisto, Palazzo Communale; p. 40,362.

**Piana de' Greci**, *t.* nr. Palermo, Sicily ; industrl.; p. 9,920.

**Piano di Sorrento**, *t.* on B. of Naples, Italy; gd. cst. tr.; p. 9,470.

**Piasini**, *L.* (75 m. by 30 m.) and R. (250 m.), Yeniseisk govt., Siberia, flows to Arctic Oc.

**Piatra**, *t.* on R. Bistritza, Rumania; many churches; timber and wine tr.; p. 17,820.

**Piauhi**, or **Piauhy**, maritime *prov.*, Brazil; area 116,494 sq. m.; p. 548,250; cap. Therezina; also R. of P. prov. (flows 300 m.), trib. R. Caninde.

**Piave**, *R.* Italy (125 m.), flows to Adriatic 52 m. E.N.E. of Venice. [15 m. wide.

**Piavozero**, *L.* W. of Archangel, Russ.; 50 m. long.

**Piazza**, *c.* nr. Caltanisetta, Sicily, Italy; good tr.; p. 23,100.

**Picardy**, old *prov.* France; now div. into deps. Yonne, Oise, Aisne, Pas-de-Calais, and Somme.

**Pichincha**, *prov.* Ecuador; area 6,215 sq. m., p. 205,000; also volcano, W. of Andes range, nr. Quito, cap. P. prov.; alt. 15,924 ft.

**Pickering**, *urb. dist.*, mkt. *t.* N.R. Yorks, Eng. p. *3,668*; also sub. dist. prov. Ontario, Can.

**Pic-Nethou**, *pk.* of the Pyrenees; also called Maladetta (*q.v.*).

**Pico**, *isl.* of the Azores; area 254 sq. m. ; wine tr.; p. 22,500; also volcano on same, alt. 7,600 ft.

**Picton**, *spt.* Marlborough prov., New Zeald.; p. 4,120; also port on B. of Quinté, nr. Kingston, Ontario, Can.; p. *3,565*; also t. in co. Camden, N.S.W.

**Piedimonte**, *t.* nr. Taormina, Catania, Sicily; p. 5,960; Piedimonte d'Alife, t. nr. Caserta, S. Italy; p. 7,970.

**Piedmont**, *dep.* N. Italy, embracg. provs. Turin, Cuneo, Navara, and Alessandria; area 11,330 sq. m., p. 3,508,626; mainly agr. Cap. Turin, c. (*q.v.*).

**Piedra Blanca**, *t.* prov. Catamarca, Argentina; gd. tr.; p. 11,500.

**Pietermaritzburg**, cap. c. of Natal, S. Africa; handsome govt. bldgs.; p. *20,929*.

**Pietra Galla**, *t.*, Potenza prov., Italy; industrl., p. 7,150.

**Pietraperzia**, mftg. *t.* nr. Caltanisetta, Sicily, p. 12,670.

**Pietrasanta**, *t.* nr. Lucca, Italy; gd. local tr., p. (communl.), 15,540.

**Pilcomayo**, or **Araguai**, *R.* rising in S. Bolivia, and flowg. through the Gran Chaco, separating W. Paraguay from the Argentine; trib. (1,400 m.) of the Paraguay, which it joins opp. Asuncion.

**Pilkington**, mftg. *t.* S.E. Lancash., Eng., p. 16,250.

**Pillau**, fortfd. *spt.* betwn. Frisches Haff and Baltic, E. Pruss.; outport of Königsburg ; shipbldg., amber workg., p. 3,400.

**Pilsen**, *c.* at junctn. of Rs. Radbusa and Mies, Bohemia, beer-brewg., bell-fdg., p. 47,000.

**Pimlico**, *dist.* of Westminster, London, Eng.

**Pinar del Rio**, *c.* of W. Cuba, centre of Veulta Abajo, tobacco industry, p. 16,750.

**Pind Dadan Khan**, *t.* Jhelum dist., Punjab, India; brassware, embroidered scarves, pottery, *etc.*, p. 15,120. [Greece, highest pk., 8,050.

**Pindus**, *mtn. chn.* betwn. Thessaly and Albania, N.

**Pine Bluff**, *c.* Jefferson co., Arkansas, U.S.A.; in cotton regn., p. 20,775. [R. Dwina.

**Pinegar**, *R.* of Archangel, U.S.S.R., trib. (50 m.) of

**Pinerolo**, mftg. *t.* in Turin prov., Italy, p. 18,560.

**Pines, Isle of**, French possn. in the Pacific, nr. New Caledonia, area 293 sq. m.; convict settlement; also Spanish isl. of the W. Indian Arch., nr. Cuba, area 1,214 sq. m.

**Pinsk**, *t.* in Minsk govt., U.S.S.R., on the marshes of the Pina R.; grt. water tr., p. 35,000.

**Piove di Sacco**, *t.* nr. Venice, in Padua, Italy; manuf., p. 9,260.

**Piperno**, *t.* nr. Prosinone, S. Italy, on the Amaseno R., the Volscian Privernum, p. 6,150.

**Piqua**, *c.* on the Miami R., Ohio, U.S.A.; agr. imp. manuf., p. 16,100.

**Piquetberg**, *t.* in P. div., W. prov., C. of Good Hope, S. Africa, p. (dist.) 11,300. [p. 133,482.

**Piraeus**, *t.* and *port* nr. Athens, Greece; great tr.,

**Pirano**, *spt.* Istria, Italy, nr. Trieste; vine and olive culture, manuf., p. 14,360. [p. 10,760.

**Piremedi**, fortfd. *t.* in Janina vilayet, Albania.

**Pirmasens**, mftg. *t.* nr. Zweibrücken, Rhenish Bavaria, p. 17,120.

**Pirna**, industrl. *t.* on R. Elbe, Saxony, p. 21,620

**Pirot**, *t.* (with mediæval fortress) on R. Nishnana, p. 11,200.

**Pisa**, *prov.* Italy, area 1,180 sq. m., p. 351,841; cap. P., c. on R. Arno, famous leang. tower, cathedl., university, mineral baths, royal stud farm, cotton manuf., p. 67,285. [14,370.

**Pisek**, or **Piseca**, mftg. *t.* nr. Tabor, Bohemia, p.

**Pishni**, mtn. *valley* Afghanistan, alt. 5,000 ft., area 3,500 sq. m. [nr. Martigny, 230 ft.

**Pissevache**, famous *waterfall*, cant. Valais, Switzld.,

**Pisticci**, *t.* nr. Matera, Basilicata, Italy; industrl., p. 9,270.

**Pistoja**, *t.* nr. the Ombrone, Florence, Italy; walled, with citadel, thriving industries, p. 37,120.

**Puerga**, *R.* Spain, trib. (140 m.) of R. Douro.

**Pitcairn Isl.**, most S. of the Low Archipelago, E. Pacific, area 3 sq. m.; under admin. of N.S.W., p. 126, mostly descendts. of the mutineers of the "Bounty."

**Pitea**, *R.* N. Sweden, flows 180 m. to G. of Bothnia.

**Pitesci**, or **Pitesi**, *t.* on R. Arges, Wallachia, Rumania; flourg. tr., p. 16,750.

**Pithiviers**, *t.* nr. Orleans, dep. Loiret, France; saffron growg. dist., noted for pies and cakes, p. 6,720.

**Pitlochry**, picturesque Highland *vil.* nr. Pass of Killiecrankie, Perthsh., Scotl. [Scotl., p. *2,087*.

**Pitsligo, New**, *t.* nr. Fraserburgh, N. Aberdeensh.,

**Pittsburg**, gt. ironworks *c.* of Alleghany co., Penn., U.S.A., at confl. of Alleghany and Monangahela R.'s; university, p. 678,000; also a *c.* of Crawford co., Kansas, U.S.A.; zinc-smeltg., p. 18,150.

**Pittsfield**, *c.* on the Housatonic R., Berks co., Mass., U.S.A.; cotton and boot factories, p. 50,500.

**Pittston**, *c.* on Susquehanna R., Luzerne co., Penn., U.S.A.; anthracite coal regn., p. 18,200.

**Piura**, N. *dep.*, Peru, area 16,825 sq. m., p. 215,000; cap. P., t. nr. the cst., p. 15,100.

**Placentia**, *t.* on W. cst. Avalon Penins., Newfoundland, p. 8,120.

**Placentia Bay**, *inlet* of the Atlantic, S. cst. Newfoundland, 65 m. long.

**Plainfield**, *c.* Union co., New Jersey, U.S.A., 24 m. from New York; residtl., p. 35,000.

**Plaistow**, *dist.* E. London, Eng., in bor. West Ham.

**Plasencia**, *t.* on R. Jerte, Caceres prov., Spain; tr. in agr. produce, p. 9,260.

**Plassey**, *battlefield* on Bhagirathi R., Bengal, India.

**Plata, La.** (*See* Argentina.)

**Plate R.**, on Rio de la Plata; estuary of the Paraná and Uruguay R.'s flowing to the Atlantic betwn. Argentina and Uruguay, 170 m.; width at head 25 m., at mouth, 138 m. [(300 m.) of R. Miss.

**Platte R.**, or **Little Platte R.**, Iowa, U.S.A., *trib.*

**Platte** (or **Nebraska**) **R.**, *affit.* (1,250 m.) of the Missouri, from Colorada, Wyoming, and Nebraska, U.S.A. [S.W. of Pesth.

**Platten See**, *L.* (area 266 sq. m.) Hungary, 55 m.

**Plattsburg**, mftg. *t.* on L. Chaplain, Clinton co., New York, U.S.A., p. 13,500.

**Plattsmouth**, *c.* Cass co., Nebraska, U.S.A., at confl. of Platte and Missouri R.'s; grain and cattle tr., p. 3,750.

**Plauen**, *t.* on Weisse Elster R., nr. Zwickau, Saxony; piano works, cotton factories, *etc.*, p. 104,918. [Isl.; New Zealand.

**Plenty Bay**, *arm* of the Atlantic, N.E. cst. North

**Plevna**, fortfd. *t.* on Touchinitza R., Bulgaria; many mosques; besieged and captured by the Russns., 1877; large tr. wine and cattle, p. 27,779.

**Plinlimmon**, *mtn.* Montgomery and Cardigan, Wales, alt. 2,469 ft.

**Plock**, *c.* on R. Vistula, Poland; grain and wood export, p. 28,600. [11,300; gd. tr.

**Ploëmeur**, cst. *t.* Morbihan dep., France, p.

**Ploesci**, *t.* in Prahova dist., Rumania; tr. centre in petrol dist.; p. 57,376. [tains royal arsenal.

**Plumstead**, *dist* of Woolwich, Kent, Eng.; con-

**Plymouth**, *co. bor.*, spt. and dockyd. *t.* Devon, Eng., on Plymouth Sound. Comprises the "three towns" of P., Devonport, and Stonehouse; p. *208,166*. Shipbldg. and engineerg. works, and many manufs. Breakwater 1 m. long and extensive fortifcns.

**Plymouth**, *spt.* on P. Harbr., P. co., Mass., U.S.A., nr. Boston; manuf. and tr.; p. 13,040. Pilgrim Fathers landed here 1620; also bor. Luzerne co., Penn., U.S.A., on Susquehanna R., in anthracite coal regn., p. 16,550; also t. on Yellow R., Indiana, U.S.A., p. 5,350; also *smt.* pt. N. Carolina, U.S.A.

**Plympton**, mkt. *t.* Devon, Eng., 4 m. E. Plymouth, nr. R. Plym, p. 1,450.

**Pnom Penh**, *t.* nr. Udong, Cambodia, on R. Mekong; gr. tr.; p. 37,870.

**Po**, *R.* Italy, flows from Monte Viso, through Piedmont and Lombardy (340 m.) to the Adriatic.
**Pocahontas**, *co.* in West Virginia; also mftg. *t.* in Tazewell co., Virginia, p. 5,500; also sub. of Petersburg, Chesterfield co., Virginia. [*2,640.*
**Pocklington**, *urb. dist.*, mkt. *t.* E.R. Yorks, Eng., p.
**Pocatello**, *t.* Idaho, U.S.A., p. 14,961.
**Podgoritsa**, *t.* nr. Scitaru, Montenegro, fortfd., p. 5,910. [Galicia, p. 14,720.
**Podgorze**, mftg. *t.* on R. Vistula, opp. Cracow,
**Podolia**, *govt.* Ukraine, N. of Bessarabia, and borderg. on Austria; area 16,224 sq. m., p. 3,251,000. Industries, agr., stock-raising, gdng. bee-keepg., etc.; chf. t. Kamenetz-Podolsk, or Kamieniec.
**Pointe-à-Pitre**, *t.* on isl. of Guadaloupe, French W. Indies, p. 27,679. [the anc. Pinciacum; p. 8,140.
**Poissy**, *t.* nr. Versailles, dep. Seine-et-Oise, France;
**Poitiers**, or **Poictiers**, *t.* Vienne dep., France; once a Huguenot stronghold; fine cathedral, university; near here the Black Prince defeated the French in 1356, and captured King John; p. 42,100.
**Pokrovsk**, industrl. *t.* old Samara govt., U.S.S.R., p. 20,570.
**Pola**, Italy, fortfd. *pt.* on Istria pen., G. of Venice; chf. naval stn. and arsenal; the Roman Pietas Julia; cathedl., many Roman antiquities; impt. commcl. harbr. and centre; p. 48,750.
**Poland**, indpt. *co.* E. Centl. Europe, partitioned 1772 and 1795, and incorporated by Austria, Pruss., and Russ.; area 149,042 sq. m., p. *32,000,000*; cap. Warsaw (*q.v.*).
**Polignano**, *t.* nr. Bari, Italy, on the Adriatic, p. 8,670.
**Polistena**, *t.* in Calabria, Italy, nr. Reggio; industrl., p. 9,220. [p. 8,960.
**Pollensa**, *t.* in Majorca, Balearic Isls., nr. Palma,
**Pollokshaws**, *burgh* of Renfrewsh., Scotl., subn. to Glasgow; industrl. and residentl., p. 12,570.
**Pollokshields**, S.W. *sub.* Glasgow, Scotl., residentl.
**Polotsk**, or **Polok**, industrl. *t.* on R. Düna, old Vitebska govt., U.S.S.R., p. 21,870.
**Poltava**, old govt. Ukraine, area 19,265 sq. m.; agr.; p. over 3,500,000 mainly peasantry; cap. P., industrl. t. on the Vorskal R.; formerly had great wool fairs, now declined; p. 56,100.
**Polynesia** *subdivn.* Oceania, comprising the isls. and groups of the Pacific within 30 degrees N. and S. of the Equator, and betwn. 135 degrees E. and W. long.; all of which are dealt with under separate entries. [industrl.; p. 8,240.
**Pomarance**, *t.* nr. Volterra, Pisa prov., Italy;
**Pomerania**, *prov.* N. Germany, area 11,654 sq. m., p. 1,787,193; divided into govts. of Stettin, Stralsund, and Köslun (all of which see).
**Pomigliano, d'Arco**, industrl. *t.* nr. Naples, Italy; p. 10,620.
**Pomona**, or **Mainland**, one of the Orkneys (*q.v.*).; also c. Los Angeles co., California, U.S.A.; fruit-culture; p. 20,900.
**Pompeii**, ruined *c.* of Italy, stood 13 m. S.E. of Naples, nearly at foot of Vesuvius; destroyed A.D. 79, site discovered in 1748; many most interesting excavations.
**Ponanii**, *t.* Madras, India; gd. cst. tr.; p. 13,550.
**Ponape**, vol. *isl.*, Caroline grp. Pacific Oc.; 12 m. long; Germn. [medicinal springs; p. 41,561.
**Ponce**, *t.* on S. cst. Porto Rico, nr. San Juan;
**Pondicherry**, *c.* on the Coromandel cst.; cap. French E. India; 100 m. S. of Madras; cotton, rice, etc., exports; area of dist. 115 sq. m., surrounded by Brit. terr., S. Arcot; p. 170,846; p. of c. 46,849.
**Pondoland**, *terr.* C. of Good Hope, S. Africa, S.W. of Natal. [and tr.; p. 20,164.
**Ponevish**, *t.* govt. Kovno, Lithuania; manuf.
**Ponta Delgada**, *t.* on Sao Miguel, Azores; largest *t.* in the Isles; Portuguese, p. 16,179.
**Pont-à-Mousson**, *t.* on R. Moselle, nr. Nancy, France; lacquer-ware manuf.; p. 13,120.
**Pontarlier**, fortfd. *t.* Doubs dep., France; absinthe distilleries; p. 8,620.
**Pontassieve**, mftg. *t.* nr. Florence, Italy; p. 12,250.
**Pontchatrain**, L. N. of New Orleans, Louisiana, U.S.A.; 40 m. by 25. [of a principality; p.10,220.
**Pontecorvo**, *t.* prov. Caserta, S. Italy; former seat
**Pontedera**, mftg. *t.* on R. Arno, nr. Pisa, Italy; p. 12,750.
**Pontefract**, *mun. bor.*, *t.* industrl., nr. Wakefield, W.R. Yorks, Eng.; ruined castle; p. *19,053.*
**Pontevedra**, *prov.* Spain, on Atlantic cst.; area, 1,695 sq. m.; agr., live-stock, fisheries; p. 515,984. Cap. Pr., *t.* nr. R. Lerez; p. 22,700.
**Pontiac**, *c.* on the Clinton R., Oakland co., Michigan, U.S.A.; sptg. resort (fishg. and shooting on the lakes); p. 68,000; also sml. c. on Vermillion R., Livingstone co., Illinois; p. 8,400.
**Pontianak**, *t.* on W. cst. Borneo; thriving Dutch settlement; p. 5,810.
**Ponticelli**, *vil.* nr. Naples, Italy; p. 7,010.
**Pontine Marshes**, swampy tract extending 25 m. along the Italian cst. S. of the Compagna di Roma.
**Pontivy**, formerly Napoleonville, *t.* on R. Blavet, dep. Morbihan, France; military centre, anc. castle of dukes of Rohan; p. 10,200.
**Pontoise**, *t.* nr. Paris, dep. Seine-et-Oise, France; old Celtic t. with good modern trade; p. 8,040.
**Pontremoli**, *t.* in Magra Valley, Tuscany Italy; cathedral, citadel, mineral springs, marble quarries; p. 11,600.
**Pontypool**, *urb. dist.*, mkt. *t.* nr. Newport, Monmouth, Eng.; good cattle trade; p. *6,788.*
**Pontypridd**, *urb. dist.*, mkt. *t.* on R. Taff, Glamorganshs., Wales; manuf., remarkable bridge; p. *42,737.*
**Ponza**, chf. *isl.* of the sm. Ponza group off coast Campania, S. Italy; was a state prison under the Roman emperors; p. (of the group, including Palmarolla and Zannone) 3,860. Anciently called the Pontine Isls.
**Poole**, *mun. bor.*, *spt.* and mkt. *t.* E. Dorset, Eng.; oyster fisheries, good harbour; p. *57,258.*
**Poona**, *dist.* Deccan div., Bombay, India; area 5,369 sq. m.; agr., cotton, silk, and blanket manufs.; p. (nearly) 1,000,000. Cap. Poona, or Puna, c. on the Muta R., hdqrs. of Bombay army; thriving industrs.; p. 176,671.
**Popayan**, cap. of Cauca st., Colombia, p. 31,000.
**Poperinghe**, *t.* in W. Flanders prov., Belgium, in hop-growing dist., p. 11,650.
**Poplar**, *met. bor.*, E. London, Eng., Thames-side industrl. dist., p. *155,083.*
**Popocatepetl**, active *volcano*, nr. Puebla, Mexico, alt. 17,784 ft. [industrl.; p. 7,565.
**Popoli**, *t.* nr. Sulmona, prov. Aquila, Italy;
**Porco**, *mtn. group* in Andes of Bolivia, alt. of highest peak, 16,000 ft.
**Pordenone**, *t.* in Udine prov., Venetia, Italy; cathedral, silk and cotton industries; p. 8,020.
**Port Adelaide**, *spt.* S. Australia, nr. Adelaide c., on G. St. Vincent, p. 7,100.
**Portadown**, *t.* on R. Bann, Armagh, N. Irel.; linen manuf.; agr. prod. mkts; p. 11,720.
**Portage**, *c.* on Wisconsin R., Columbia co., Wisconsin, U.S.A.; farming and timber region; p. 6,400.
**Portage la Prairie**, *port* Macdonald co., Manitoba, Canada; grain expt.; p. 6,000.
**Portalegre**, *dist.* Portugal, agr., olives, wines, area 2,405 sq. m., p. 142,000. Cap. P. c., 103 m. N.E. Lisbon, cork and woollen manufs., p. 11,780.
**Portarlington**, mkt. *t.* on R. Barrow, Queen's and King's co., I.F.S.; p. 2,450.
**Port Arthur** (Chinese **Lu-shun-Kou**), fortress S. of the Liaotung peninsula, Manchuria, formerly a Chinese naval arsenal, captured by the Japanese 1894, leased to Russ. later, but again surrendered to the Japs, after a stubborn siege, Jan. 1st, 1905. A most import. strategic point commandg. the Gulf of Pe-chi-li and the Yellow S.; t. Ont., Can., p. 15,300; also *t.* Texas, U.S.A., p. 53,750.
**Port Augusta**, *t.* on Spencer G., S. Australia, fine harbour and t. hall, p. 1,670; also spt. W. Australia, on Cape Leewin.
**Port-au-Prince**, or Port Republican, cap. and chf. t. of the Haytian Republic, on B. of Conaives, gt. tr., suffered sevl. times from earthquake and fire, p. 120,000.
**Port Chester**, mftg. *vil.* Westchester co., New York, U.S.A., on Long Isl. Sound, p. 23,250.
**Port Darwin**, or **Palmerston**, chf. *t.* and *harbr.* N. Australia, p. 3,250. [(French), p. 10,250.
**Port de France**, or **Noumea**, *cap.* New Caledonia,
**Port Denison**, *harbr.* and *bay* on P. cst., Queensland.
**Port Dundas**, N. *sub.* Glasgow, Scotl., junct. of Forth and Clyde and Monkland canals.
**Port Elizabeth**, *spt.* on Algoa B., C. of Good Hope, S. Africa, exports skins, wool, ostrich feathers, p. *35,486.* [fisheries.
**Port Erin**, cst. *vil.* nr. Castletown, Isle of Man,
**Port Glasgow**, shipbldg. centre on R. Clyde, 20 m. below Glasgow, Scotl., p. *19,619.*
**Porthcawl**, *urb. dist.*, Glam., Wales, p. *6,447.*

**Port Hope,** *chf. t.* Durham co., Ontario, Can., on N. shore L. O., industrl., p. (dist.) 6,250.
**Port Huron,** *c.* and *pt.* on St. Clair R., Michigan, U.S.A., p. 32,000, gt. grain and timber tr.
**Portici,** *t.* on B. of Naples, Italy, industrl. and residtl.; p. 13,420. [p. *3,908.*
**Portishead,** *urb. dist.*, *t.* nr. Bristol, Somerset, Eng.,
**Port Jackson,** splendid *harb.* (18 m. long) on cst. co. Cumberland, N.S.W., Sydney c. (*q.v.*), on S. shore.
**Port Jervis,** *vil.* on Delaware R., Orange co., New York, U.S.A., railway wks. and manufs., p. 10,300.
**Portland,** *c.* Oregon, U.S.A., on R. Willamette; gt. wheat and flour export, p. 306,100; also c. Cumberland co., Maine, U.S.A.; flourishg. spt., fine harb., p. 71,000; also t. Middlesex co., Connecticut, U.S.A.; stone quarries, p. 4,200; also t. N. of and subn. to St. John, New Brunswick, Can.
**Portland Canal,** *fiord* on N.W. cst. of America, formg. bdy. between Alaska and Brit. Columbia; lower portion known as Portland Inlet.
**Portland, Isl of,** *peninsula*, *urb. dist.*, and *t.* (with dockyd. and convict prison) 4 m. S. of Weymouth, Dorset, Eng.; Bill of Portland at extremity; p. *12,018.*
**Port Louis,** spt. *dep.* Morbihan, France, nr. Lorient, p. 3,500; also cap. of isl. of Mauritius, Indian Oc., chf. commercl. pl. in col., p. 39,300.
**Port Macquarie,** *t.* (and *inlet*) on cst. of N.S.W., at Hastings R., p. (dist.) 4,124.
**Portmadoc,** *urb. dist.*, *spt.* on Tremadoc B., Carnarvonsh., Wales; copper and slate export, p. *3,986.*
**Port Mahon,** *spt.* cap. isl. Minorca, Spain; quarantine stn., exports live stock, corn, etc., p. 19,120.
**Port Moody,** *terminus* Canadian Pacific Ry., Brit. Columbia, Vancouver. [on S.E. cst., p. 1,100.
**Port Moresby,** *t.* and *stn.* of govt. Brit. New Guinea,
**Port Natal.** (*See* Durban.) [New Zealand.
**Port Nicholson,** *harbr.* at S. extrem. N. isl.,
**Porto Alegre,** cap. *c.* Rio Grande do Sul st., Brazil; exports lard, preserved meats, etc., p. 305,000.
**Portobello,** *wat. pl.* on F. of Forth, Edinburgh, Scotl.; one of the Leith Burghs, p. 9,590.
**Porto Empedocle,** *t.* and *spt* Girgenti prov., Sicily; sulphur exports, p. 7,890. [gd. tr., p. 10,088.
**Porto Feliz,** *t.* São Paulo prov., Brazil, on R. Tite;
**Port of Spain,** *cap.* isl. Trinidad, W. Indies, p. 61,500.
**Portogenaro,** *t.* nr. Udine, prov. Venice, Italy; industrl., p. 9,920.
**Porto Maurizio,** *prov.* Liguria, Italy; area 455 sq. m.; p. 149,629; cap. P. M., t. on G. of Genoa, bathing rest., p. 8,039.
**Porto Novo,** *spt.* S. Arcot dist., Madras, India, on Coromandel cst.; here Sir Eyre Coote defeated Hyder Ali, 1781, p. 8,200; also French t. Slave Cst., Dahomey, W. Africa, nr. Bight of Benin, p. 20,000.
**Porto Praya,** *t.* Santiago, Cape Verde Isls.; gd. tr., p. 12,750.
**Porto Rico,** W. Indian *isl.* of the Greater Antilles, ceded by Spain to the U.S.A. in 1898; area 3,435 sq. m.; produce coffee, sugar, cocoa, tobacco, etc., p. 1,545,000, mainly natives of mixed Spanish and aboriginal descent; cap. San Juan de Porto Rico.
**Port Philip,** *bay* on S. cst. Victoria (40 m. long, 40 m. wide); Melbourne stands on R. Yarra Yarra at its mth. in P. P. Bay.
**Port Republican.** (*See* Port-au-Prince and Hayti.)
**Port Royal,** fortfd. *t.* Jamaica, nr. Kingston, dockyard and barracks, p. 16,200. [p. 1,970.
**Portrush,** *spt.* nr. Coleraine, co. Antrim, N. Irelд.,
**Port Said,** *spt.* Egypt, N. end Suez Canal, p. (inc. Ismailia) 91,090.
**Portsea Island,** fortfd. *isl.* on cst. of Hants, Eng., between Portsmouth and Langston Harbours. (*See* Portsmouth.) [*9,527.*
**Portslade,** *urb. dist.*, nr. Brighton, Sussex, Eng., p.
**Portsmouth,** *co. bor.* and naval *port*, Hants, Eng., on Portsea Isl. opp. Isle of Wight, p. *249,288*; has largest naval estab. in the world; Portsmouth is the garrison t.; Portsea has the naval dockyards, Landport is residentl. from the industrl. pop., and Southsea is a pop. mod. watg. pl. within the bor. area; across the harbour is Gosport (*q.v.*).
**Portsmouth,** *c.* on the Ohio R., Scioto co., Ohio, U.S.A., iron and boot manuf., p. 43,500; also spt. at mth. of Elizabeth R., Virginia, U.S.A., rly. wks. and many manuf., p. 44,750.
**Portsoy,** *spt.* nr. Banff, Scotl., p. *1,651.*
**Port Sunlight,** Cheshire, Garden Village of Lever Brothers, Limited, founded 1888 by the late Lord Leverhulme, and visited annually by over a hundred thousand people. It is famous for the diversity of its domestic architecture, which may be broadly described as "Old English," and the richness of its endowment in public buildings and social institutions. Notable among these are Christ Church, a fine example of late Gothic, and the Lady Lever Art Gallery, which houses collections of paintings, porcelain and furniture unrivalled in their spheres. The village monuments include an impressive War Memorial by Sir Wm. Goscombe John, R.A., and a fine memorial to Lord Leverhulme by William Reid Dick, R.A. The village tenants are employed by Lever Brothers in the Port Sunlight factories, which comprise the largest soap works in the world.
**Portugal,** republic of the Iberian penin., S.W. Europe, area (including Madeira and the Azores) 35,490 sq. m., mtnous. with wide fertile valleys; prod. grapes, cereals, oranges, olives, mulberries; agr., mftg., and fisheries, p. 5,957,985; cap. Lisbon (*q.v.*). [p. 3,420.
**Portugalette,** *t.* nr. Bilbao, Biscay prov., Spain,
**Portuguesa,** *st.* N.W. Venezuela, area 6,815 sq. m., p. 52,549; cap. Guanare; also R. Venezuela, trib. (200 m.) of R. Apure.
**Port Vendres,** *spt.* nr. Perpignan, dep. Pyrénées-Orientales, France, p. 3,570. [p. 4,670.
**Posadas,** *t.* on R. Guadalquivir, nr. Cordova, Spain,
**Poscharevatz,** *t.* in Serbia. (*See* Passarowitz.)
**Posen,** *prov.* of Poland, area 11,134 sq. m., p. 1,900,000, stock-raising., mining, and mftg.; also dist. or govt. in same, and c. (cap. of prov. and govt.) on R. Wartha, cathedral, and many manuf., p. 156,691.
**Pössneck,** old *t.* in Saxe-Meiningen, Germy., nr. Jena, porcelain and flannel manuf., p. 14,700.
**Potchefstroom,** *t.* Transvaal, S. Africa, on the Vaal R., p. *9,908.*
**Potenza,** *prov.* S. Italy, area 3,855 sq. m., p. 489,574; cap. P.; fortfd. *t.* nr. Salerno, cathedl., wine, brick-mkg., p. 16,500. [Italy, p. 7,920.
**Potenza Picena,** *t.* on the Adriatic, Macerata prov.,
**Potomac,** *R.* of U.S.A., dividg. Virginia from Maryland, flowg. (400 m.) past Washington to Chesapeake Bay.
**Potosi,** *dep.*, Bolivia, adjoing. Chili and the Argentine; area 45,031 sq. m., famous for silver mines, p. 530,748. Cap. P., on slope of Cerro Gordo de Potosi, 13,350 ft. above sea-level, flourishing tr., p. 35,000.
**Potsdam,** *t.* Pruss., 16 m. S.W. Berlin, in centre of picturesque lake dist. of Havel. Cap. Potsdam govt., beautiful parks and gardens and many palaces, includg. former Impl. res., p. 58,397.
**Potteries, The,** dist. N. Staffs, Eng., centre of earthenware industrs., comprisg. t.'s Burslem, Hanley, Fenton, Tunstall, Stoke, and Longton, all of which see.
**Pottsville,** *c.* of Schuylkhill co., Penn., U.S.A., manuf. centre in anthracite coal regn., p. 24,500.
**Poughkeepsie,** *c.* in Dutchess co., New York, U.S.A., on Hudson R., clothing and iron factories, nr. is Vassar Coll. for women, p. 40,700.
**Poulton-le-Fylde,** *urb. dist.*, Lancs, Eng., p. *3,366.*
**Poulton-le-Sands,** *t.* on Morecambe R., Lancs, Eng., p. 5,860.
**Pozoblanco,** *t.* nr. Pedroche, Cordoba prov., Spain, cattle fairs, rich lead mines in dist., p. 12,220.
**Pozsony,** *t.* Hungary, 35 m. E. of Vienna; dynamite and fine brush manuf., p. 71,000.
**Pozzuoli,** *t.* nr. Naples, Italy; minl. baths, ordnance works, p. 17,230. Notable Roman ruins.
**Prague,** *c.* of Bohemia, picturesque anc. cap. on R. Moldau, universy. founded in 1348, extensive manuf. and tr., fine cathedl.; p. 676,476.
**Prahran,** *c.*, Victoria, adjoing. Melbourne.
**Prato,** *t.* nr. Florence, Italy; mediæval castle and fortifns., woollen manuf., p. 28,760.
**Pregel,** *R.*, E. Pruss., flows (125 m.) to Frisches Haff, nr. Königsberg.
**Pressall,** *urb. dist.*, Lancs, Eng., p. *2,043.*
**Prenzlau,** *t.* on Lower Uoker Lake, nr. Stettin, Pruss., industrl., p. 21,320.
**Prerau,** *t.* on R. Becawa, nr. Olmütz, Moravia, Czecho-Slovakia; manuf.; p. 18,620. Formerly hdqrs. of the Moravian Brethren.
**Prescot,** *urb. dis.*, mftg. *t.* S.W. Lancs., Eng., nr. Liverpool; watchmkg.; p. *9,896.*

**Prescott,** *port* on R. St. Lawrence, Ontario, Can.; p. 3,750.
**Pressely Mtns.,** N.E. Pembrokesh., Wales; alt. 1,754 ft. [p. 4,750.
**Presque Isle,** *t.* Maine, U.S.A., in Arostook co.;
**Pressburg,** (now called Bratislava), *t.* indust., Czecho-Slovakia, p. 93,189.
**Prestatyn,** *urb. dist.*, Flint, Wales, p. *4,511.*
**Presteigne,** *urb. dist.*, mkt. *t.* on R. Lugge, Radnorsh., Wales; p. *1,102.*
**Preston,** *urb. dist.*, cotton mftg. *t.* and *port* on R. Ribble, Lancs, Eng.; p. *118,839.*
**Prestonpans,** cst. *t.* nr. Edinburgh, Haddingtonsh., Scotl.; here in 1745 "Bonnie Prince Charlie" defeated British; p. *5,986.*
**Prestwich,** *urb. dist.*, industrl. *t.* nr. Manchester; S.E. Lancash., Eng.; p. *23,876.*
**Pretoria,** *cap.* Transvaal, South Africa; fine parly. bdgs., wide boulevards; impt. tr. centre; p. *47,285.*
**Prevesa,** fort. *t.* on G. of Arta, Albania, gd. shipg. tr.; p. 11,750. [seal fishg. centre.
**Pribylov Isls.,** *sml.* Alaskan grp. in Behring Sea;
**Priluki,** *t.* in old Poltava govt., U.S.S.R., industrl. and commcl.; p. 21,020.
**Primorsk,** U.S.S.R.; extends from Corea N. to the Arctic Oc.; area 730,000 sq. m., p. 115,000. Cap. Nikolaefsk.
**Prince Albert,** *div.* and *t.* C. of Good Hope, S. Africa; N. of Gt. Zwarte Berge; p. 3,720.
**Prince Albert Land,** *dist.* Brit. N. America, bordg. on Arctic Ocean.
**Prince Edward Isl.,** *prov.* Can.; area 2,184 sq. m.; p. 88,536; dairying, fishing, and manuf.; much forest land. Cap. Charlottetown.
**Prince Rupert,** *c.* of British Columbia and Pacific port of the Grand Trunk Pacific Railway, p. 4,000.
**Prince of Wales Isl.** (*See* Penang.)
**Princes Risborough,** mkt. *t.* nr. Aylesbury, Bucks, Eng.; p. 2,670.
**Princess Charlotte Bay,** *inlet* N.E. cst., N.S.W.
**Princeton,** *c.* Gibson co., Indiana, U.S.A.; industrl.; p. 7,550; also bor. Mersey co., New Jersey, U.S.A.; seat of university; p. 7,000; also *t.* Bureau co., Illinois, U.S.A.; industrl.; p. 4,825.
**Prince William Sound,** *bay* on S. cst., Alaska.
**Prinzen,** Portuguese *isl.* in Gulf of Guinea; p. 3,500. Cap. San Antonio.
**Pripets,** *R.* U.S.S.R., trib. (350 m.) of R. Dnieper.
**Prishtina,** or **Pristina,** *dept.* and *t.* in Serbia, Jugo-Slavia, on R. Slitnitza; many mosques; sugar and coffee tr.; p. 18,174.
**Prizren,** *dept.* and *t.* in Serbia, Jugo-Slavia. Town occ. by Bulgars, Dec. 1915, re-occ. by Fr., Oct. 1918; manuf. and commercl.; p. 21,244.
**Privas,** *t.* nr. Valence, dep. Ardèche, France; p. 8,560; silk indus.
**Prizzi,** *t.* nr. Palermo, Sicily, Italy; manuf., p. 12,250.
**Prjevalsk,** dist. *t.* in former Russian Turkestan, nr. L. Issyk-Kul; p. 10,770; good local tr.
**Procida,** *isl.* at N.W. extrem. Bay of Naples, Italy, 2 m. long; the anc. Prochyn, p. 14,350.
**Prome,** *dist.* in Pegu div. Lower Burma, area 2,914 sq. m., p. 366,000; chf. t. P. on Irrawaddy R., p. 31,000. [manuf. p. 17,770.
**Proskurov,** *t.* on R. Bug, Podolia, Ukraine;
**Prosna,** *R.*, trib.(120 m.) of R. Warthe, formg. part of bdy. betwn. Pruss. and Poland.
**Prospect,** *t.* in S. Australia, subn. to Adelaide.
**Prossnitz,** manuf. *t.* in plain of Hanna, Moravia, Czecho-Slov., match-making, brewing, malt and sugar industries, geese-breeding, p. 28,010.
**Provence,** old maritime *prov.* S.E. France; now deps. Var, Basses-Alpes, Bouches-du-Rhône, and part of Vaucluse.
**Providence,** *c.* at head of Narragansett B., Rhode Isl., U.S.A.; impt. manuf. and educatl. institns., seat of Brown University, gt. distrib. centre for New England, p. 254,500.
**Provins,** *t.* nr. Melun, dept. Seine-et-Marne, France, anc. ramparts, fine old ch., p. 7,870.
**Provo,** *c.* at base of Wasatch Mtns., Utah, U.S.A., nr. shore of Utah Lake; p. 15,000.
**Prudhoe,** *urb. dist.*, Northumbld., Eng., p. *9,260.*
**Prussia,** *state*, Germany, former kingdom of Germ. Empire, bordering on the Baltic, Denmark, and N. Sea, area 181,689 sq. m.; largely high moorland, with much forest land and considerable expanses of bog, great mineral wealth, flourishg. agr. and many and extensive manufs., p. 36,684,717, cap. Berlin (*q.v.*).
**Pruth,** *R.* flowing (360 m.) betwn. Rumania and Bessarabia from the Carpathian Mtns. to the Black S.
**Przemysl,** fort. *t.* in Galicia, Poland; mchy. and other manuf., timber and corn tr., p. 54,078.
**Przibram,** industrl. *t.* nr. Beraun, Bohemia; lead and silver mining dist., p. 13,700.
**Psiol,** *R.* U.S.S.R., flows (300 m.) to the Dnieper at Krementchug.
**Pskov,** *govt.* U.S.S.R., S. of Leningrad, area 17,069 sq. m.; agr. and dairy fmg., p. 1,250,000, largely peasant proprietary; cap. P., t. on Velikaya R.; flax tr., p. 35,000.
**Pudsey,** *mun. bor.*, mftg. *t.* nr. Bradford, W.R., Yorks, Eng., p. *14,762.*
**Pudukattai,** or **Pudukota,** nat. *st.* S. India, sub. to Madras, area 1,101 sq. m., p. 385,000; cap. P., t., p. 17,720.
**Puebla,** *st.* Mexico, area 12,992 sq. m., p. 1,118,439; agr., coffee and sugar growing; cap. P., one of the oldest and most impt. c.'s of Mexico, alt. 7,137 ft.; great tr., p. 101,000; also *t.* Majorca Isl., Spain, p. 5,200.
**Pueblo,** *c.* on Arkansas R., Colorado, U.S.A.; great smelting centre; p. 50,100.
**Pueblo Nuevo del Mar,** *spt.* on the Mediterranean, Valencia, prov. Spain; summer rest.; p. 13,970.
**Puentearas,** *t.* prov. Pontevedra, Spain, 12 m. S.E of Vigo, in vine-growing dist.; porcelain manuf.; ruined castle of Sobroso; p. 13,500.
**Puente Genil,** *t.* on R. Genil, Cordoba prov., Spain; olive groves; p. 12,230.
**Puerto Cobello,** *spt.* Venezuela, on the Caribbean S., nr. Valencia; large exports; p. 21,000.
**Puerto de Santa Maria,** *spt.* on R. Guadalete, Cadiz, Spain; wine tr., glass manuf.; p. 21,620.
**Puerto Principe,** interior *t.* prov. Camaguey, Cuba; founded by Velasquez, Columbus's lieutenant, in 1515; p. 20,010.
**Puerto Real,** *spt.* Spain, on B. of Cadiz, N. of San Fernando; summer rest.; wine and oil tr.; p. 10,190.
**Puket,** or **Pongka,** *cap.* isl. Junkseylon, and chf. Siamese pt. on Malay Pen., W. cst.; tin mines, p. 20,050.
**Pulaski,** *t.* nr. Columbia, Giles co., Tennessee, p. 3,420.
**Pulteney Town,** Caithness, Scotl., part of the *burgh* of Wick, p. 5,350.
**Pultusk,** *t.* Poland, govt. Warsaw; copper wks., textile factories; p. 18,750.
**Puna,** bleak and uninhabited *plateau* of Peru and Bolivia, alt. 12,000 to 18,000 ft.
**Punjab, The,** *prov.* India, occupies the N.W. angle of the northern plain of India; total area 99,222 sq. m., p. about 19,578,573. The divisns. are Delhi, Jullundur, Lahore, Rawalpindi, Derajat, and Peshawar.
**Puno,** *dep.* Peru; area 41,198 sq. m., p. 537,345; cap. P., t. bordg. on L. Titicaca; alt. 12,870 ft., p. 6,100.
**Puntas Arena,** *t.* in Magallanes, Chili; gd. tr.; p. 27,500; also a spt. in Costa Rica. [p. 9,200.
**Punxsutawney,** *bor.* Penn., U.S.A., Jefferson co.,
**Purbeck, Isle of,** *pen.* in S.E. Dorset, 12 m. by 7 m.
**Purmerend,** *t.* nr. Amsterdam, North Holland, p. 5,700.
**Purulia,** *t.* Bengal, India, tr. centre, p. 13,760.
**Purus,** *R.* of Peru, trib. (1,400 m.) of R. Amazon.
**Pushkar,** *t.* and pl. of Pilgrimage, Rajputana, India; Brahman temple, p. 11,000.
**Puteaux,** *vil.* and residtl. dist., on R. Seine, nr. Paris, France, p. 16,130. [15,370.
**Putignano,** *t.* in prov. Bari, Italy, industrl., p.
**Putivi,** *t.* on R. Sem, U.S.S.R., manuf., p. 13,450.
**Putnam,** *t.* in Windham co., Connecticut, U.S.A., thrivg. manufs., p. 7,250.
**Putney,** *dist.* in bor. of Wandsworth, Surrey, Eng., a S.W. residtl. and industrl. Thames-side qr. of London.
**Putrid Sea,** or **Gulf of Siwash,** inlet of Sea of Azov.
**Putten,** industrl. *t.* nr. Harderwick, Gelderland, Holland, p. 5,750. [of R. Amazon.
**Putumayo,** or **Ica,** *R.* of Ecuador, trib. (700 m.)
**Puy-de-Dôme,** *pk.* of the Auvergne Mtns., France, alt. 4,806 ft.; also dept. France, watered by R. Allier, area 3,090 sq. m., p. 490,560; agr., vineyds. Cap. Clermont-Ferrand.
**Puy, Le,** *cap.* Haute-Loire dep., France; lace-makg.
**Pwllheli,** *mun. bor., spt.* and *wat. pl.* Carnarvon, N. Wales, p. *3,599.*
**Pyramid L., Western Nevada, U.S.A.,** nr. Carson City; 35 m. long.

**Pyramid Peak, a** *summit* of the Elk Mtns., Colorado; U.S.A., alt. 13,885 ft.

**Pyrenees, The,** range of *mtns.* in S.W. Europe, dividing France from the Iberian Penin., 270 m. long, highest peak Pic Nethou, or Maladetta (*q.v.*); also name of mtn. range nr. Melbourne, Victoria.

**Pyrénées, Basses,** *dep.* S.W. France, area 2,978 sq. m., mainly agr. and live-stock rearg., p. 402,981. Cap. Pau (*q.v.*).

**Pyrénées, Hautes,** *dep.* S. France, area 1,750 sq. m., agr., vines, nuts, live-stock, marble quarries; p. 185,760. Cap. Tarbes (*q.v.*).

**Pyrénées-Orientales,** *dep.* S. France, washed by Mediterranean, area 1,599 sq. m., p. 217,503; wheat, wine, silk-worm culture, stock-rearing. Cap. Perpignan (*q.v.*).

**Pyrgos,** *t.* in Greece, prov. Ellis and Achaia, nr. Patras; has suffered from earthquakes; p. 12,950.

**Pyrmont,** *t.* nr. Hanover, Waldeck, Germy.; mineral springs; p. 1,920; also sub. Sydney, N.S.W.; stone quarries.

## Q

**Quackenbrück,** *t.* Osnabrück dist., Hanover, nr. Essen, p. 4,270.

**Quaggy,** *R.* Kent, Eng., flows (10 m.) to join R. Ravensbourne (trib. Thames) at Lewisham.

**Quang-Si,** or **Kwang-Si,** *prov.* S. China, borderg. on Tongking, area 77,200 sq. m., p. 5,425,000; cap. Khing-Yuan; also c. Kiang-Si prov., China, nr. Yun-nan, p. 31,000.

**Quang-Tong,** or **Qwang-Tung,** maritime *prov.* in S. of China, includg. Hainan Isl., and containg. the cap. Canton, p. 23,700,000. [gr. tr., p. 34,580.

**Quano,** *t.* nr. Kioto, on E. cst. Honshiu Isl., Japan;

**Quantock Hills,** *range* S. of Bridgwater Bay, Somersetsh., Eng., highest pt., 1,262 ft.

**Qu'Appelle,** *R.* Assiniboia, Can., trib. (300 m.) of R. Assiniboine.

**Quaregnon,** *t.* in Hainault prov., Belgium, in Mons colly. dist., ironwks. and tobacco factories, p. 16,920.

**Quarnero, G. of,** Adriatic Sea, between Croatian cst. and Istria. [adjoing. Dudley, p. *8,100.*

**Quarry Bank,** *urb. dist.*, mftg. *t.* in Staffs, Eng., adjoing. Dudley, p. *8,100.*

**Quarto,** *R.*, prov. Cordova (280 m.), Argentina; also industrl. t. nr. Cagliari, Sardinia, Italy, p. 7,220.

**Quarto, G. of.,** *arm* of the G. of Cagliari, Sardinia.

**Quathlamba, Kathlamba,** or **Drakenberg, Mtns.,** *range* betwn. Basutoland and Natal, S. Africa, alt. 8,000 to 10,000 ft.

**Quatre Bras,** nr. Waterloo, S. Brabant, Belgium, battle betwn. Wellington and Ney, June 16, 1815.

**Queanbeyan,** *t.* on Murrumbidgee R., Murray co., N.S.W., p. 5,000.

**Quebec,** *prov.* Canada, Brit. N. America, N. of New Brunswick and the U.S.A., area 690,865 sq. m., p. *2,869,793*; agr., dairyg., mftg., fishg.; cap. Q. c., on R. St. Lawrence, fine harb., handsome govt. bldgs., p. *142,647*. Largest c. Montreal (*q.v.*), commcl. cap. Canada.

**Quedlinburg,** *t.* at foot of Hartz Mtns., Prussn. Saxony; famous for nurseries and seed farms; abbey ch.; p. 25,570.

**Queenborough,** *mun. bor.*, *t.* on R. Swale, Isle of Sheppey, Kent, Eng.; steamer port for cross-Channel passengers and mails to Flushing; p. *2,941*.

**Queen Charlotte's Isls.,** group N. of Vancouver Isl.; off coast of Brit. Columbia; Graham Isl. and Moresby Isl. are the chief; p. 2,000 (including 700 native Indians). Valuable halibut fishing industry.

**Queen Charlotte Sound,** *strait* separating Vancouver Isl. from the Brit. mainland, a continuation of Johnstone Strait.

**Queensbury,** *urb. dist.* industrl. *t.* nr. Halifax, W.R., Yorks, Eng., p. *5,763*. [toria, res. p. 2,490

**Queenscliff,** *wat. pl.* at entrance to Port Philip, Vic-

**Queen's County,** Leinster, I.F.S.; area 664 sq. m.; inland pasture and tillage, with mtn. and bog; p. 54,400. Cap. Maryborough.

**Queensferry,** *burgh* at S. end Forth Br., Linlithgowshire, Scotl., p. *1,798*.

**Queensland,** Brit. *col.* N.E. Australia and st. of the Australian Commonwealth; area 670,500 sq. m., p. 842,000. Great grassy plains and coast highlands; stock-farming and mining (gold, silver, and copper). Cap. Brisbane (*q.v.*).

**Queenstown,** *spt.* co. Cork, I.F.S.; fine harbour and docks; p. 9,020. Also t. in Cape Province, S. Africa, in the Great Kei R. valley; prosperous agr. region; p. *6,605*. Also sm. t. on L. Wakitipu, New Zealand.

**Quei-Chow,** or **Koei-Chao,** *prov.* S.W. China, p. 9,265,000; cap. Quei Yang.

**Quelimane,** or **São Martinho de Quelimane,** *t.* in Zambezia dist., Portuguese E. Africa; tr. in rubber, almonds, copra, coffee, etc.; p. 4,000.

**Quelpart,** or **Chai-ju,** *isl.* in the Yellow Sea, 60 m. S. of Corea (40 m. by 17 m.); used as a penal settlement; agr. and pearl-fishing (monopolised by the Japs.); p. 100,000. Cap. Chu-song.

**Querétaro,** *st.* Mexico, area 4,493 sq. m.; cereals, fruit, and minerals; p. 247,195. Cap. Querétaro c. alt. 6,364 ft., 134 m. N.W. of the c. of Mexico; fine govt. bldgs. and cathedral. Here Emperor Maximilian was executed; p. 36,500.

**Querimba Isls.,** off Portuguese E. Africa.

**Quesnoy, Le,** fortfd. *t.* nr. Valenciennes, dep. Nord, France. p. 4,350. [France, industrl.; p. 5,260.

**Quesnoy-sur-Deule,** *t.* nr. Lille, dep. Nord, France, industrl.; p. 5,260.

**Quetta,** *dist.* and *t.* Brit. Baluchistan, at end of Bolan Pass, on road to Kandahar. Military cantonment occupies valley 20 m. by 5 m.; and the place is the N.W. terminus of the railway to Afghanistan.

**Quezaltenango,** *c.* of Guatemala, on slope of Cerro Quemado volcano; centre of trade for western part of the Republic; p. 30,500.

**Quiberon,** *t.* on Q. Bay, nr. Lorient, Morbihan dep.; France; p. 3,420. [thrivg. tr.; p. 9,250.

**Quibor,** *t.* Venezuela, 40 m. S.S.W. Barquesimeto;

**Quicamao,** *t.* nr. Camos, prov. Rio de Janeiro, Brazil; industrl.; p. 10,670.

**Quickmere,** *mftg. t.* in W.R. Yorks, Eng., on Lancs border, 3½ m. E. of Oldham, p. 4,290.

**Quilandi,** *t.* in Malabar dist., Madras, India; active tr., p. 11,000.

**Quilimane.** (*See* **Quelimane.**)

**Quillota,** commercl. *t.* nr. Santiago, prov. Valparaiso, Chile, p. 13,750.

**Quiloa,** or **Kilwah,** *t.* on isl. off E. cst. Africa, belonging to Zanzibar, p. 3,550..

**Quilon,** *t.* on Malabar cst., Travancore st., Madras, India; gd. tr., p. 16,700; formly. Brit. mil. cantonment, now hdqrs. Travancore army.

**Quimper,** *t.* (fortfd.) dep. Finistère, France, nr. Brest; pilchard fishy., p. 16,200.

**Quimperlé,** *t.* dep. Finistère, France, 34 m. E.N.E. Quimper; industrl., p. 7,230.

**Quincy,** *c.* on Mississippi R., Adams co., Illinois, U.S.A.; manuf. and large R. trade, p. 40,000; also c. Norfolk co., Mass., U.S.A.; boot and shoe making, marble quarries, p. 74,500.

**Quinhon,** *t.* in Annam, Indo-China; gd. tr., p. 8,500.

**Quintin,** *t.* nr. St. Brieuc, dep. Côtes-du-Nord, France, p. 4,730.

**Quinto,** *R.* Argentina, flows 250 m. S.E. from the Sierra de San Luis Mtns., and becomes lost in a morass.

**Quinzano,** *t.* nr. Brescia, Italy; gd. local tr., p. 5,520.

**Quiringua,** ruined anc. *t.* on R. Montagua, nr. Isabal, Guatemala; pyramid, etc.

**Quistello,** *t.* on R. Secchia, prov. Mantua, Italy; here the Imperialists defeated French and Sardinians, 1734, p. 11,720.

**Quito,** cap. c. Ecuador, in the Andes, 15 m. S. of the Equator; alt. 9,402 ft.; rubber and hide export, carpet, leather, and other manuf., p. 100,500.

**Quitta,** or **Prince's Town** (British), New Guinea, Gold Coast, W. Africa, p. 5,700.

**Quorndon,** or **Quorn,** *urb. dist.*, *t.* in hunting dist. nr. Leicester, Eng., p. *2,603*.

**Quorra,** *R.* of Africa; one of the names given to the R. Niger (*q.v.*) below Timbuctoo.

**Qvarken, Oestra,** and **Vestra,** *straits* in the Gulf of Bothnia off the Swedish coast.

## R

**Raab,** free *c.* of Hungary, at junctn. of R. Raab with an arm of R. Danube; cathedl., impt. tr., p. 25,110; also R. of Styria and Hungary, flows (180 m.) to Danube at R. c.

**Raalte,** *t.* nr. Zwolle, Overyssel, Holland; industrl., p. 5,970. [long, 3½ m. wide.

**Raasay,** *isl.* E. of Skye, Inverness-sh., Scotl., 13 m.

**Rabat,** or **New Salle,** one of the caps. and *spt.* Morocco, at mth. of Bu Regreg; open to foreign tr.; leather and carpet manuf., p. 29,550.

**Rabba,** *t.* and *tr. centre* Gando, on R. Niger, Africa; p. (est.) 40,000.

**Racalmuto,** *t.* in Girgent prov., Sicily; industrl., p. 14,270.

**Racine,** *c.* of R. co., on L. Michigan, Wisconsin, U.S.A.; carriage and wagon works, p. 68,500.

**Radautz,** *t.* in Bukovina, Rumania, nr. Sereth, govt. stud farm, p. 15,560.

**Radcliffe,** *urb. dist.*, *t.* nr. Manchester, Lancs, Eng.; paper mkg., dye works, foundries, p. *24,674*.

**Radeberg,** *t.* on Grosse Röder, nr. Dresden, Saxony; glass works, p. 15,720. [9,900.

**Radevormwald,** industrl. *t.* nr. Barmen, Prussia, p.

**Radhanpur,** nat. *st.* Bombay, India; area 150 sq. m., p. 100,600; cap. R., p. 15,108.

**Radiatsh,** *t.* in old govt. Poltava, U.S.S.R.; industrl., p. 10,820.

**Radnor,** inld. *co.* N. Wales; area 471 sq. m., agr., p. *21,314*; cap. New Radnor, anc. bor. 60 m. N. W. of Bristol; largest t. Knighton (*q.v.*).

**Radom,** *govt.* Poland, adjng. Galicia; area 4,765 sq. m., agr., mining and live-stock raising, p. 850,000; cap. R., t. 57 m. from Warsaw, p. 61,627

**Radomsk,** *t.* nr. Kalisz, Poland; industrl., p. 11,470.

**Radomsyl,** *t.* Ukraine; tanneries and flour mills, p. 11,550. [collieries, p. *3,622*.

**Radstock,** *urb. dist.*, *t.* nr. Bristol, Somerset, Eng.;

**Raffadali,** industrl. *t.*, Girgenti prov., Sicily, p. 9,520.

**Ragatz,** *wat. pl.* on R. Tamnia, cant. St. Gall, Switzld.; hot springs, res. p. 3,000; visited by 50,000 persons annually; anc. Abbey of Pfaffers, 2,697 ft. above sea.

**Ragusa,** *c.* Syracuse, Italy, divided into R. Superiore (p. 23,740) and R. Inferiore (p. 8,790), cheese factories; also a c. on the E. cst. of the Adriatic, Dalmatia, oil, silk, and leather industries, p. (with garrison) 14,510.

**Ragusavecchia,** *mkt. pl.* in govt. dist. Ragusa, Dalmatia, 6 m. E. of last-mentioned c.; site of anc. Epidaurum, p. 11,270.

**Rahad,** *R.* Abyssinia and Nubia, trib. (260 m.) of Blue Nile.

**Rahmaniah,** *t.* nr. Rosetta, Egypt, on R. Nile, tr. centre, p. 11,620.

**Rahon,** *t.* on R. Sutlej, Jalandhar dist., Punjab, India, p. 11,100.

**Rahway,** *c.* on R. Ro, Union co., New Jersey, U.S.A., residtl. for New York business men, p. 16,500.

**Raiatea,** one of the Society Isls., largest of the Leeward grp., 130 m. N.W. Tahiti.

**Raichur,** *t.* in Haidarabad, India, impt. commcl. centre, p. 22,750.

**Raidrug,** industrl. *t.*, Madras, India, p. 9,000.

**Raikot,** *t.* in Ludhiana dist., Punjab, India, p. 9,900.

**Rainford,** *urb. dist.*, industrl. *t.* nr. St. Helens, Lancash., Eng., p. *3,494*. [U.S.A., alt. 14,444 ft.

**Rainier,** *mtn.* of the Cascade range, Washington,

**Rainton, E.** and **W.,** colliery *dists.*, nr. Durham, Eng., joint p. 6,450.

**Rainy L.,** on border of Canada and Minnesota, U.S.A., 55 m. long, drained by Rainy R. (100 m. long) to the Lake of the Woods.

**Raismes,** *t.* nr. Valenciennes, dep. Nord, France, lace industry, p. 5,200.

**Rajamahendri,** *t.*, Madras, Brit. India, one of the deltas of the Godaveri R.; good tr., railway bridge of twenty-one spans across river, p. 33,100.

**Rajapalaiyam,** *t.*, Madras, India, p. 12,600.

**Rajapur,** *t.* on R. Jumna, United Provs., India, p. 8,020; also t. in Ratnagiri dist., Bombay, India, p. 8,206.

**Rajkot, petty** nat. *st.* Kathiawar, Gujarat div., Bombay, India, area 283 sq. m., p. 52,000; cap. R., t. hdqrs. of the political agt. for Kathiawar.

**Rajshahi,** *div.* (co-extensive with N. Bengal) Brit. India, area 17,351 sq. m., p. 7,500,000, comprisg. dists. Rajshahi, Darjiling, Dinajpur, Jalpaiguri, Bogra, Rangpur, and Patna. Also dist. Rajshahi, on N. bank of R. Ganges, area 2,230 sq. m., p. nearly 1,502,000; sericulture, hemp-growing; hdqrs. Rampur Boalia.

**Rajpipla,** nat. *st.* betwn. the R's Tapti and Nerbudda, in Gujarat div., Bombay, India, area 1,514 sq. m., p. 205,000; cap. Nandod, on R. Karjan, p. 11,120; the old forfd. cap. of Rajpipla is now dismantled.

**Rajpur,** *t.* in Parganas dist., Bengal, India, p. 11,470.

**Rajputana,** collectn. of nat. India *states* (twenty), under the charge of a politl. agent to the Viceroy and the Brit. dist. of Anjmere Merwara; total area 128,987 sq. m., p. 9,857,012; the agent resides at Mt. Abu; Rajputana was part of the Mogul empire, before its subjugation by the Mahrattas.

**Rakka,** fort. *t.* on Lower Niger, W. Africa, p. 11,500; also t. on Euphrates R., Asiatic Turkey, vilayetHaleb, p. 8,250. [paper manuf.: p. 7,200.

**Rakonitz,** *t.* nr. Kladno, Bohemia; pottery and

**Raleigh,** *c.* Wake co., N. Carolina, U.S.A.; educatl. centre; p. 38,500. [parallel with Radack chn.

**Ralick,** chain of *isls.* in Marshall grp., Pacific Oc.,

**Rambervilliers,** *t.* nr. Nancy, dep. Vosges, France, p. 5,410.

**Rambouillet,** *t.* nr. Versailles, dep. Seine-et-Oise, France; picturesque anc. château, formerly royal; p. 5,370.

**Rameswaram,** *isl.* (11 m. long, p. 17,960), Madura dist. S. India, sep. from mainld. by Pambam chan.; also t. on same, p. 6,300, contg. a great Davidian temple, one of the Hindu holy places of pilgrimage.

**Ramgunga,** *R.* India, trib. (300 m.) of R. Ganges, which it joins nr. Cawnpore.

**Ramillies,** *vil.* N. Brabant, Belgium, 29 m. S.E. Brussels; Marlborough's gt. victory, 1706.

**Ramnad,** *t.* Madras, India, on pen. projectg. towards Rameswaram isl., p. 14,000.

**Ramnagar,** *t.* on R. Ganges, adjng. Benares, United Provs., India, p. 12,250.

**Ramnicu Sarat,** *t.* in dist. same name, Rumania; scene of several battles; p. 13,750.

**Rampur,** nat. *state* Rohilkhand, India, area 899 sq. m., p. 453,607; cap. R., t. on R. Kosila; pottery and damask manuf., p. 73,200.

**Rampur Boalia,** *t.* on R. Ganges; admin. hdqrs. of Rajshahi dist., Bengal, India; silk industries; govt. college; suffered from earthquake, 1897; p. 21,870.

**Ramri,** *isl.* in Arakan, off cst. Lower Burma, 50 m. long; also t. on same, p. 3,620.

**Ramsbottom,** *urb. dist.*, *t.* n. Heywood div., Lancash., Eng., on R. Irwell; calico printg., etc.; p. *14,926*. [2,860.

**Ramsbury,** *par.* on R. Kennet, Wilts., Eng., p.

**Ramsey,** *urb. dist.*, mkt. *t.* Hunts., Eng., p. *5,180*; also spt. on N.E. cst. Isle of Man, p. 4,250.

**Ramsgate,** *mun. bor.*, *wat. pl.* on E. cst. Isle of Thanet, Kent, Eng., res. p. *33,597*.

**Ramtek,** *t.* in Nagpur dist., Centrl. Provs., India, p. 8,200.

**Rancagua,** *c.* Colchagua prov., Chile, p. 16,500.

**Ranchi,** *t.* in Lohardaga dist., Chota Nagpur div., Bengal, India, p. 21,750. [Witwatersrand.)

**Rand,** gold-mining *dist.* Transvaal, S. Africa. (*See*

**Randazzo,** *t.* nr. Mt. Etna, Catania, Sicily, 2,474 ft. above sea level; old ducal palace; p. 8,600.

**Randers,** *t.* nr. Aarhus, Jutland, Denmark; mediæval monastery, exports dairy prod.; p. 26,495.

**Randwick,** *sub.* of Sydney, N.S.W.

**Ranea,** *R.* Sweden, flows (130 m.) to G. of Bothnia.

**Ranenburg,** *t.* in Ryazan govt., Russ.; gardening and trade; p. 18,750.

**Ranger,** *t.* Texas, U.S.A., p. 5,200.

**Rangoon,** *dist.* Lower Burma, Pegu div.; area, 4,236 sq. m., p. 450,000. Also c. on Hlaing R., cap. of Lower Burma; great tr. and many impt. manuf.; two cathedrals, many mosques, temples, and pagodas; p. 339,527.

**Rangpur,** *dist.* Rajshahi div., Bengal, India, area 3,486 sq. m.; rice and jute crops; cap. R., c. on R. Ghaghat, damaged seriously by earthquake in 1897, p. 15,600.

**Ranibennur,** *t.* Dharwar dist., Bombay, India, p. 11,000.

**Raniganj,** *t.* on Damodar R., Bardwan div., Bengal, p. 11,020. [dist., Orissa, India.

**Rani-nur,** famous *rock-cave*, Khandgiri Hill, Puri

**Rannock, Loch,** Perths., Scotl. 9 m. long, 1 m. wide, drained to R. Tay.

**Rapallo,** winter *resort* on G. of R., Genoa, Liguria, Italy; mediæval castle; lace-making, olive-growing. Here, on Nov. 12, 1920, the Treaty of Rapallo was signed; p. 11,850.

**Rappahannock,** *R.* Virginia, U.S.A., flows 200 m. to Chesapeake B., S. of the mouth of the Potomac.

**Rappoltsweiler,** *t.* nr. Schlelistadt, Alsace-Lorraine, France; walled; known as "the pipers' town"; p. 6,250.

**Rarotonga,** one of the Cook Isls., Pacific, 53 m. round, largest of the group.
**Raritan,** *t.* on R. R., flows (75 m.) in New Jersey, U.S.A., to Perth Amboy on R. Bay, S. of Staten Isl.; p. 4,775.
**Ras-al-Had,** *C.* E. extrem. Arabia. [p. 10,300.
**Ras-el-Khyma,** fortfd. *t.* on Persian G., Arabia.
**Rasgrad,** *t.* nr. Rustchuk, Bulgaria, on R. Ak-Lom; battles between Russians and Turks, 1810 and 1877; p. 13,750.
**Ras Mohammed,** southernmost point, Sinai Penin.
**Raspopina,** *t.* U.S.S.R., nr. Tsaritsyn, on R. Don; corn and cattle trade; p. 16,750.
**Rassein,** *L.* in the Dobrudja, Rumania, 25 m. long.
**Rastatt,** *t.* nr. Carlsruhe, Baden, Germany, formerly fortfd.; tobacco factories, etc.; p. 15,270. [p. 12,720.
**Rastenburg,** *t.* nr. Königsberg, E. Prussia; manuf.;
**Rastrick,** industrl. *township* on R. Calder, nr. Halifax, W.R. Yorks, Eng., p. 8,750.
**Rath,** *t.* in Hamirpur dist., United Provs., India, p. 15,270.
**Rathenow,** mftg. *t.* on R. Havel, Pruss., p. 23,980.
**Rathkeale,** mkt. *t.* nr. Limerick, I.F.S., p. 2,520.
**Rathlin,** or **Rahery,** *isl.* off Fair Head, N. of co. Antrim, N. Ireld., 5 m. by 1 m.
**Rathmines,** S. *sub.* of Dublin c., I.F.S.
**Ratibor,** mftg. *t.* on R. Oder, Silesia, Poland, nr. Austrian frontier, p. 27,000.
**Ratisbon (Regensburg),** busy industrl. *t.* on R. Danube, Upper Palatinate, Bavaria; Castro Reginum of the Romans, glass staining, etc., p. 52,510.
**Rat Isls.,** *grp.* in the Aleutian Archipelago.
**Rat Portage,** *pt.* on Rainy R., Ontario, Can.; sturgeon fishg., p. 6,500.
**Raudnitz,** *t.* on R. Elbe, northn. Bohemia; interestg. château of Prince Lobkowitz, with fine art and lit. collectns., p. 8,320.
**Raunds,** *urb. dist.*, Northants, Eng., p. *3,683.*
**Ravana-Hrada,** sacred *L.* at source of R. Sutlej.
**Ravenna,** *prov.*, Emilia, Italy, area 715 sq. m., p. 256,600; Cap. R., c. on marshy plain nr. the Adriatic, 45 m. E. of Bologna, cathedl., archiepiscopal pal., and many fine bldgs., silk-worm culture, wine growg., lace manuf., p. 74,161.
**Ravensburg,** *t.* nr. Constance, Wurtemburg; flourshg. manuf., p. 14,126.
**Ravensthorpe,** industrl. *t.* nr. Dewsbury, W.R. Yorks, Eng., p. 5,850. [the Chenab.
**Ravi,** *R.* of the Punjab, India, trib. (450 m.) of
**Rawalpindi,** *div.* (area 20,738 sq. m., p. 3,750,000) of N. Punjab, India, between Lahore and Peshawar. Also dist. of same, W. of R. Jehlam, area 4,844 sq. m.; mainly agr., p. 750,000. Also c. (with mil. cantonmt.), cap. of above, on R. Leh; fortfd., active tr. with Kashmir; p. 97,483. [Yorks, Eng., p. *4,574.*
**Rawdon,** *urb. dist.*, industrl. *t.* nr. Leeds, W.R.
**Rawitsch,** or **Rawicz,** *t.* nr. Posen, Pruss.; industrl.; p. 15,000.
**Rawmarsh,** *urb. dist.*, mftg. *t.* nr. Rotherham, W.R., Yorks, Eng., p. *18,570.*
**Rawtenstall,** *mun. bor.* nr. Blackburn, Lancs, Eng.; p. *28,575.* [N.S.W.; p. 1,250.
**Raymond Terrace,** *t.* on Hunter R., co. Gloucester,
**Ré,** or **Rhe,** *isl.* off W. cst. Charente-Inférieure prov., France, opp. Rochelle; 18 m. by 4 m.; salt manuf.; p. 14,120. Chf. pl. St. Martin.
**Rea,** *R.* Shropsh., Eng., flows (20 m.) to R. Teme, at Rochford.
**Reading,** *co. bor.* on R. Kennet, Berks, Eng.; biscuit and other manuf.; seed-growg. and mkt. gardng.; p. *97,153*; also c. in Berks. co., Penn., U.S.A., on Schuylkill R.; ironworks; p. 111,500; also t. in Middlesex co., Mass., nr. Boston, U.S.A.; p. 10,000.
**Recanati,** *t.* nr. Loreto, Macerata, Italy; industrl.; p. 20,685.
**Recife,** *spt.* Brazil. (*See* **Pernambuco.**)
**Recklinghausen,** *t.* nr. Dortmund, Westphalia, Pruss.; collieries, quarries, and manuf.; p. 42,648.
**Redbank,** *t.* Monmouth co., New Jersey, U.S.A., on Shrewsbury R.; p. 11,850.
**Redcar,** *urb. dist.*, *t.* and *cst. wat. pl.*, N.R. Yorks, Eng.; p. *20,159.*
**Reddish,** mftg. *t.* nr. Stockport, Lancs, Eng.; p. 9,000.
**Redditch,** *urb. dist.*, *t.* co. Worcester, Eng.; needle and fish-hook manuf.; p. *19,280.*
**Rede,** *R.* Northumberland co., Eng., trib. (21 m.) of R. Tyne.
**Redfern,** S.S.W. *sub.* Sydney, N.S.W.
**Redhill,** *t.* and res. dist., Surrey hills, adjoing. Reigate.
**Redonda,** *isl.* in Leeward grp., betwn. Montserrat and Nevis.
**Redondela,** *t.* on the Vigo estuary, Pontevedra prov., Spain; old feudal castles; p. 11,500.
**Red River,** U.S.A., *trib.* Mississippi (1,600 m.), flows from New Mexico through the Staked Plain.
**Red River of the North,** flows 650 m., separating Dakota and Minnesota, U.S.A., to Assiniboine, Manitoba, Can. [mine dist., p. *9,904.*
**Redruth,** *urb. dist.*, mkt. *t.* Cornwall, Eng.; tin-
**Red Sea,** or **Arabian Gulf,** arm of the sea separating Abyssinia, Nubia, and Egypt from Arabia, and continuing through the Suez Canal to the Mediterranean. Communicates with the Indian Ocean by the Straits of Bab-el-Mandeb. Length 1,400 m., greatest width 230 m.
**Red Wing,** *c.* Minnesota, U.S.A., on the Mississippi R. in Goodhue co., at head of L. Pepin; flour mills, grain tr., p. 9,750.
**Ree, Lough,** *L.* betwn. Roscommon, Longford, and Westmeath, I.F.S., an extensn. of R. Shannon, 17 m. long. [p. 11,300.
**Regalbuto,** industrl. *t.* in Catania prov., Sicily,
**Regello,** *t.* in Val d'Arno, nr. Florence, Italy, p. 11,700.
**Regen,** *R.* Bavaria, trib. (68 m.) of R. Danube, at Ratisbon.
**Regensburg,** alternative name for Ratisbon (*q.v.*).
**Reggio di Calabria,** *t.* on Strait of Messina, at S.W. extrem. Italy; silk and essential oil manuf.; suffered from earthquake 1783 and 1894; p. 43,098.
**Reggio nell' Emilia,** *c.* nr. Bologna, Italy, cap. Emilia prov.; silk-worm culture, cheese-mkg.; fine Ch. of the Madonna della Ghiara; p. 75,349.
**Regina,** *cap.* of Saskatchewan, 357 m. W. of Winnipeg; distributing centre; p. *60,655.*
**Reichenbach,** *t.* nr. Zwickau, Saxony, Germy.; many manufs., p. 26,420; also industrl. t. in Prussn. Silesia, nr. Liegnitz, p. 9,120.
**Reichenberg,** *t.* in Bohemia, nr. the Prussn. and Saxon frontiers; impt. tr. and mftg. centre; p. 37,000. [salt springs, p. 3,950.
**Reichenhall,** *wat. pl.* nr. Salzburg, S. Bohemia;
**Reigate,** *mun. bor.* Surrey; mkt. and residtl. *t.* nr. Surrey Hills, p. *30,830.*
**Reikiavik,** *t.* cap. Iceland, on S.W. cst., p. 17,976.
**Reims,** or **Rheims,** *t.* on R. Vesle, dep. Marne, France; famous Gothic cathedl.; champagne centre, cloth factories, woollen industries and tr., dye-works, p. 76,645.
**Remscheid,** *t.* nr. Düsseldorf, Rhenish Pruss.; cutlery manuf., p. 72,508.
**Renaix,** *t.* nr. Ghent, Belgium; dye and bleaching wks., p. 21,760.
**Rendsburg,** *t.* on R. Eider, Holstein, Pruss.; fortifictns. demolished by the Danes in 1852, p. 14,010.
**Renfrew,** maritime *co.* W. Scotl., S. of R. Clyde; area 245 sq. m., agr., mftg., and commcl., p. *288,575*; co. t. Renfrew, a burgh of the Kilmarnock grp. nr. R. Clyde, p. *40,816*; chf. industrl. centres Paisley and Greenock (*q.v.*).
**Rennes,** *c.* nr. Nantes, France; cap. Ille-et-Vilaine dep., France; in dairying and agr. dist., p. 82,241.
**Reno,** *t.* Nevada, U.S.A., p. 19,100.
**Renovo,** *bor.* on Susquehanna R., Clinton co., Penn., U.S.A., p. 3,750.
**Rennselaer,** *t.*, N.Y., U.S.A., p. 11,250. [5,490.
**Renton,** *t.* on R. Leven, Dumbartonsh., Scot., p.
**Reoti,** *t.* nr. Bansdish, Ballia dist., United Provs., India, p. 10,200.
**Republican Fork,** or **Pawnee R.,** *trib.* (550 m.) of R. Kansas, Colorado, Nebraska, and Kansas, U.S.A. [Canada.
**Repulse Bay,** on S. side of Melville Penin., N.
**Requeña,** *t.* in Valencia prov., Spain, on R. Magro; sulphur springs of Fuentepodida nr., p. 14,960.
**Resht,** or **Rasht,** *t.* nr. the Caspian, Persia; cap. Ghilad prov.; silkworm culture, p. 35,000.
**Resnia,** *t.* nr. Naples, Italy; industrl. and residtl., p. 16,470. [Hudson Strait.
**Resolution Is.** (Brit.), N. of Labrador, at entce.
**Restigouche,** *R.* Canada (200 m.), pt. and boundy. btwn. Quebec and New Brunswick, falls into B. of Chaleur at Dalhousie.
**Retford, E.,** *t.* on R. Idle, Notts., Eng.; good mkt. p. *14,228.*

**Retimo,** *spt.* Crete, N. cst., 27 m. E.S.E. Canea, p. 8,350.

**Réunion** (formerly Bourbon), French *isl.* Indian Oc., betwn. Mauritius and Madagascar; area 1,000 m., sugar growg., p. 173,190; cap. St. Denis.

**Reus,** *mftg. t.* Tarragona prov., Spain, nr. the Mediterranean, in fertile agr. regn., p. 27,560.

**Reuss,** *R.* Switzerld., cant. Uri, flows 30 m. to L. Lucerne; also two former principalities Germy., now one state, area 441 sq. m., p. 212,001.

**Reutlingen,** *t.* nr. Stuttgart, Würtemberg, Germy.; industrl., p. 22,760.

**Reval (Tallinn),** fort. *spt.*, and state *dockyd.*, on G. of Finland, C. of Esthonia, p. 130,000.

**Revel,** *t.* nr. Toulouse, dep. Haute-Garonne, France, p. 6,470.

**Revere,** *t.* in Suffolk co., Mass., U.S.A., subn. to Boston, p. 36,300; also t. on R. Po, nr. Mantua, Lombardy, Italy, p. 4,400.

**Revilla Gigedo,** *isl.* grp. N. Pacific, belong. to Mexico, comprisg. Socorro (or San Tomas) and three scattered volcanic islets, total area 320 sq. m., uninhabited.

**Rewa,** nat. *st.* Bagelkhand agency, Centl. India, area 13,000 sq. m., p. 1,401,672; cap. R., t. 131 m. S. of Allahabad, p. 24,760.

**Rewadanda,** *t.* and *spt.* Kolaba dist., Bombay, India, p. 7,440.

**Rewa Kantha,** collectn. of 61 nat. *sts.*, Gujarat div., Bombay, India, area 4,980 sq. m., p. 480,000, prin. st., Rajpipla (*q.v.*).

**Rewari,** *t.* Gurgaon dist., Punjab, Brit. India, impt. tr. centre, turban and brass-ware manuf., p. 29,010.

**Rheidt,** *mftg. t.* nr. Cologne, Rhenish Pruss., cotton, silk and iron industries, p. 24,370.

**Rheine,** *t.* on R. Ems, Westphalia, Germy., jute, tobacco and cotton factories, p. 11,020.

**Rhein-Hessen,** W. *prov.* Hesse-Darmstadt, Germany; area 531 sq. m., p. 370,650.

**Rhenish Prussia,** or the **Rhine Province,** w.-most *prov.* Pruss., on both banks of R. Rhine, S. of Holland, area 9,470 sq. m., p. 6,488,344, wine-growg. and *mftg.*

**Rhine,** *R.*, rises in Switzld., canton Grisons, passes through Lake of Constance, skirts Baden, traverses Hesse, Rhenish Pruss., and the Netherlands (800 m.), flowing to N. Sea by two arms, Oude Rijn, and the Waal (the latter discharg. finally by the Meuse); famous for its beauty, especially betwn. Bonn and Bingen, ch. falls at Schaffhausen; once a natural barrier betwn. E. and W. Europe, the Rhine is now spanned by thirty railway bridges, and its navigatn. was declared free in 1868.

**Rhode Island,** a New England *st.* of U.S.A., washed by the Atlantic, and surrounded by Mass. and Connecticut, area 1,067 sq. m., divided by Narragansett B., with many isls., largest being that from which the st. takes its name, p. 737,000; cap. Providence (*q.v.*).

**Rhodes,** *isl.* off S.W. cst. Asia Minor, in the Ægean S., area 563 sq. m., p. 31,000; cap. R., spt. with gd. tr., p. 10,270, mainly Greek Christians.

**Rhodesia,** region lying N. of the Transvaal and S. of Tanganyika Terr., under the administration of the British S. African Co.; North Rhodesia forms portn. of Brit. Centl. Africa, and South Rhodesia comprises the section of Brit. S. Af. stretching betwn. the Zambesi and the Limpopo, and from Bechuanaland to Portuguese E. Af., thus includg. the former nat. terrs. Mashonaland and Matabeleland. Total area 440,000 sq. m., and pop. 1,731,500; cap. Salisbury (*q.v.*); gt. minl. wealth and agr. resources.

**Rhön Gebirge,** *mtn.* grp. Thuringia, Germany, highest pk., 3,100 ft.

**Rhondda,** *R.* Glamorgansh., Wales, trib. of R. Taff; also adjact. mnfg. dist., p. *141,344.*

**Rhône,** *R.* Switzld. and France, risg. in the Rhône glacier of the St. Gothard mtn. grp., and flowing 640 m. through the L. of Geneva and E. France to the G. of Lyons in the Mediterranean. Also name of dep., S.E. France, and watered by R. Rhône and its confluent R. Saône, which unite at Lyons, the cap. (*q.v.*); area, 1,104 sq. m.; agr., wine-growg., and many manufs.; p. (increasg.) 840,000.

**Rhyl,** *urb. dist., wat. pl.* N. Wales, betwn. Bangor and Chester, at entrance Vale of Clwyd; fine sands, bracing air, beautiful sceny.; p. *13,489.*

**Rhymney,** *urb. dist., t.* on R. R., Monmouthsh., Eng., nr. Merthyr Tydvil, in mining dist., p. *10,505.* [flows to Irish S. below Preston.

**Ribble,** *R.* Yorks. and Lancs., Eng. (75 m. long),

**Ribeira,** *t.* in Corunna, prov. Spain, on pen. of Arosa estuary; agr., cattle-rearg., fishery; p. 11,370. [8,950.

**Riccia,** *t.* in Campobasso prov., Italy; industrl.; p.

**Richelieu,** or **Chambly,** *R.*, Quebec, Can., flows (80 m.) from L. Champlain to the R. St. Lawrence at L. St. Peter.

**Richmond,** *t. mun. bor.*, on R. Thames, Surrey, Eng., industrl. and residtl., beautiful park and riverside scenery, p. *37,791*; also *mun. bor.* on R. Swale, N.W. Yorks, Eng., p. *4,769*; also c. on R. Thames (nr. the falls), Virginia, U.S.A., cap. of the State, gt. tobacco mftg. centre and mart, p. 184,000; also c. on branch of R. Whitewater, Wayne co., Indiana, U.S.A., manuf., p. 33,000; also c. of Madison co., Kentucky, U.S.A., in tobacco-growg. and horse-rearg. regn., p. 6,500; also t. in Victoria, subn. to Melbourne; also t. on N. cst. Jamaica; also R. of N.S.W., flows 120 m. to Pacific below Moreton B.

**Ricksmansworth,** *urb. dist.*, mkt. *t.* on R.'s Colne and Chess, Herts, Eng., p. *10,810.*

**Riddings,** mkt. *t.* nr. Alfreton, Derbysh., Eng., p. 6,230.

**Rideau Canal,** from Ottawa R., Can., to Kingston on L. Ontario, 132 m.

**Riesa,** *t.* on R. Elbe, nr. Meissen, Saxony, gd. shipping tr. and manuf., p. 15,350.

**Riesen Gebirge,** *mtn. range* betwn. Prussn. Silesia and Bohemia, highest pk., Schnee Koppe, 5,275 ft.

**Riesi,** *t.* nr. Tarranova, Caltanisetta, Sicily, industrl., p. 11,730.

**Rieti,** industrl. *t.* in Perugia prov., Italy, an ancient Sabine *t.* in famous fertile dist., p. 18,930.

**Riga,** *spt.* Latvia, at hd. of G. of R., grt. industrl. activity and shipbldg. tr., p. *271,000*, mchny. mftg., and ry. carriage bldg., very impt. and flourishg. [5,905 ft.

**Righi,** imposg. *mtn.* nr. L. Lucerne, Switzld., alt.

**Rimini,** *t. in* Forli prov., Emilia, Italy, on the Adriatic cst., minl. springs, sea-bathg., thrivg. industries, p. 22,750.

**Rimnik,** *t.* on the R. R., nr. Bucharest, Rumania, industrl., p. 8,670; also t. on R. Aluta, 100 m. N.W. Bucharest, Rumania, gd. local tr., p. 7,470. [Hants., Eng., p. 7,160.

**Ringwood,** mkt. *t.* on R. Avon, nr. Christchurch,

**Riobamba,** *t.* on San Juan R., Chimborazo prov., Ecuador, woollen mftg., Inca palace ruins nr., p. 21,000.

**Rio Branco,** *R.* of Brazil (700 m.), trib. Rio Negro.

**Rio Cuarto,** *t.* Cordoba prov., Argentina, p. 15,370.

**Rio das Mortes,** *R.* of Brazil (500 m.), trib. of the Araguay.

**Rio de Janeiro,** maritime *prov.* Brazil, area 26,634 sq. m., p. (excludg. capital c. and municipality) 1,735,000. Coffee plantations. Cap. Rio de J., on B. same name, largest c. in Brazil, p. (with dist. subs.) 1,157,873. Many fine bldgs., flourishg. tr. and industries; immense coffee export.

**Rio de la Plata.** (*See* Plate R.)

**Rio de Oro,** Spanish *col.* N.W. cst. Africa; sandy penins., Sahara cst., 23 m. long and 1½ to 2 m. wide; probably the Ciranis of Herodotus.

**Rio de San Juan,** *R.* (350 m.) of Utah, New Mexico and Colorado, U.S.A.

**Rio Dulce,** *R.* Santiago st., Argentina, 400 m.

**Rio Grande,** *R.* Senegambia, Africa, flows (400 m.) to the Atlantic. [(*q.v.*), Brazil.

**Rio Grande,** *R.*, headstream of the R. Paraná

**Rio Grande del Norte,** *R.* flows from Colorado through New Mexico, and divides Texas from Mexico State; falling after a course of 1,800 m. into G. of Mexico.

**Rio Grande de Santiago,** *R.* of Mexico (princ. in Jalisco), 500 m. long, flows to Pacific.

**Rio Grande do Norte,** *prov.* Brazil, area 22,189 sq. m., p. 552,071. Cap. Natal.

**Rio Grande do Sul,** *prov.* S. Brazil; area 91,310 sq. m.; p. 2,138,831; cap. Porto Alegré; also name of t. in prov. in R. G. do Sul, at S. end Lago de los Patos; p. 40,500.

**Rioja, La,** *prov.* Argentina, adjng. Chili; area 37,839 sq. m.; gold and silver mines; p. 79,754; cap. La Rioja; p. 8,245.

**Riom,** *t.* nr. Clermont, dep. Puy-de-Dôme, France; former cap. Auvergne; p. 11,120.

**Rio Negro, *R.* S. America;** rises in Colombia, and flows (1,350 m. through Northn. Brazil to the Amazon; also R. of the Argentine, rising in the Andes, and flowg. through the terr. of Rio Negro to the Atlantic (650 m.); also name of terr. Argentina, S. of Pampa; area 75,924 sq. m., p. 53,750; cap. Viedmont; cattle-rearing regn.

**Rionero,** *t.* nr. Melfi, Potenza prov., S. Italy; *industrl.*; p. 12,790.

**Rio Salada,** *R.* Argentina; rises in the Andes, and flows 1,000 m. S.E. to R. Paraná at Buenos Ayres.

**Rio Tinto,** *R.* in Huelva prov., Spain; flows 60 m. to the Mediterranean.

**Rio Tinto, Las Minas de,** *t.* nr. Huelva, Spain; lead and copper mines; p. 2,120.

**Ripatransone,** *t.* nr. Fermo, Italy; industrl.; p. 10,260.

**Ripley,** *urb. dist.*, mkt. *t.* nr. Derby, Eng.; manuf.; p. *13,415*; also *t.* on Ohio R., Brown co., Ohio, U.S.A.; p. 4,000.

**Ripon,** *mun. bor.*, *c.* N.R. Yorks, Eng., on R. Ure; fine cathedl.; p. *8,576*; also *t.* on Green L. Fond-du-Lac co., Wisconsin, U.S.A.; p. 3,990.

**Riposto,** *t.* nr. Taormina, E. cst. Sicily; wine export; p. 9,260.

**Ripponden,** industrl. *vil.* nr. Halifax, W.R. Yorks. Eng.; p. 5,498. [Eng.; mining; p. *16,605*.

**Risca,** *urb. dist.*, *t.* on *R.* Ebbw, Monmouthsh.,

**Rishton,** *urb. dist.* nr. Blackburn, Lancs, Eng.; p. *6,631*. [Eng.; p. *333*.

**Rishworth,** *urb. dist.*, nr. Halifax, W.R. Yorks.

**Riva,** *t.* Trentino, Italy, battle zone in Great War, Nov.–Dec. 1915, p. 7,920.

**Rivadeo,** *spt.* on E. cst. Galicia, B. of Biscay, Spain; p. 9,142.

**Rivas de sil,** *spt.* Nicaragua, Centl. America; gd. cst. tr.; p. 16,320. [abbey.

**Rivaulx,** *t.* on R. Rye, N.R. Yorks, Eng.; ruined

**Rive de Gier,** *t.* on R. Gier, dep. Loire, nr. Lyons, France; mining centre; p. 16,500.

**Riveira,** *spt.* nr. Corunna, Spain; p. 9,848.

**Riversdale,** *dist.* W. prov. C. of Good Hope, S. Af.; area, 2,462 sq. m.; p. 15,200; also vil. in same; p. 2,000. [U.S.A., p. 6,018.

**Riverside,** *t.* Cal., U.S.A., p. 30,000; also *t.* N.J.,

**Riviera,** the belt of coast between the mtns. of the shore of the G. of Genoa, N. Italy, from Spezia to Nice; picturesque scenery, sheltered, mild climate; great health resort of the wealthy.

**Rivoli Veronese,** *vil.* on R. Adige, Verona, Venetia, Italy; Napoleon's victory over the Austrians, Jan. 14th, 1797. [Armenia; gd. tr., p. 31,000.

**Rizah, or Rizeh,** *t.* nr. Trebizond, on Black S.,

**Roanne,** *t.* nr. St. Etienne, dep. Loire, France; anc. t. of the Segusiani, and later the Roman Rodumna, textile industries, p. 35,240.

**Roanoke Isl.,** off cst. N. Carolina, U.S.A., 13 m. long; Roanoke, R. of Virginia and N. Carolina (230 m.), flows into Albemarle Sound; Roanoke t. on R. R., in ironwks. dist., S.W. part of Virginia, p. 71,000.

**Robin Hood's Bay,** picturesque *inlet*, with fishg. vil., on cst. N.R. Yorks, Eng., nr. Whitby.

**Rochdale,** *co. bor.*, textile mftg. *t.* on R. Roch, nr. Manchester, Lancs, Eng.; great co-operative centre, p. *90,278*. [Eng., p. 1,760.

**Rochefort,** *t.* on R. Roche, nr. Chelmsford, Essex.

**Rochefort,** fortfd. *pt.* on R. Charente, dep. C.-Inférieure, France; with arsenal and st. cst. tr., p. (with riverside sub. of Tonnay-Charente), 36,550.

**Rochelle, La,** fortfd. *spt.* on Bay of Biscay, cap. Charente-Inférieure dep., France; shipbldg., chemical wks., fisheries, p. 36,720.

**Rochester,** *mun. bor.*, *c.* on R. Medway, Kent, Eng., adjoing. Chatham; cathedl., castle, p. *31,196*; also c. Monroe co., New York, U.S.A.; gt. mftg. centre on Genesee R., with large shippg. tr., p. 331,500; also c. on Salmon Falls and Cocheco R.'s New Hampshire, U.S.A.; boot factories, p. 10,250; also c. on Zumbro R., Olmstead co., Minnesota, U.S.A.; in grain-growg. dist., p. 21,300.

**Roche-sur-Yon, La,** *t.* on R. Yon, Vendée dep., France; castle, p. 11,740, called formerly Bourbon Napoleonville.

**Rockaway,** summer *res.* on sandbar of Long Isl., now incorporated with Queen's, one of the five boroughs of New York City, U.S.A.

**Rockford,** *c.* on Rock R., Winnebago co., Illinois, U.S.A.; machinery and furniture manuf., p. 87,750.

**Rockhampton,** *c.* on Fitzroy R., Livingstone co., Queensland; pt. in agr. and mining dist., p. 20,800. [U.S.A.; industrl., p. 11,500.

**Rock Hill,** *c.* in New York co., S. Carolina.

**Rock Island,** *c.* on R. Mississippi, R. Isl. co., Illinois, U.S.A.; flour mills, glass manuf., timber yds., p. 38,200.

**Rockland,** *c.* and spt. Maine, U.S.A., on Penobscot B., Knoc co.; *shipbldg.*, granite quarrying, p. 9,100; also t. Plymouth co., Mass., U.S.A., industrl., p. 7,520.

**Rock River,** Wisconsin, U.S.A., trib. (375 m.) of the Mississippi.

**Rockville,** *c.* on Hockanum R., Polland co., Connecticut, U.S.A.; silk and woollen mftg., p. 7,350.

**Rocky Mountains,** extensive *chn.* in N. America, extending along the W. portions of Canada and the U.S.A. from Alaska to Mexico. The highest accurately measured pt. in the United States system is Mt. Blanca (14,462 ft.); Mt. Brown, often represented to reach an altitude of between 15 and 16 thousand ft., has been proved by careful survey to fall below 10,000 ft. Mt. St. Elias, in Alaska, nr. the boundary of Brit. N. America, is computed to be 18,023 ft. high, and was long held to be the highest peak in N. America, but is now known to be surpassed by the adjacent Mt. Logan, and by Mt. Orizaba, in Mexico.

**Rodez, or Rhodez,** *t.* on R. Aveyron, cap. A. dep., France, the anc. Segodunum; cathedral., gd. tr., p. 17,420.

**Rodosto,** *t.* on S. of Marmora, Thrace, Balkan Pen., agr. and silkwm. rearing, p. 35,770.

**Roermond,** *t.* on R. Maas, Limburg, Holland, minster, cloth mftg., p. 9,570.

**Rohilkhand,** *div.* United Provs., India, area 19,908 sq. m., p. 5,500,000.

**Rokelle,** *R.* Senegambia and Sierra Leone, W. Africa (flows 250 m. to the Sierra Leone estuary).

**Roma,** *t.* Queensland, in agr. dist. nr. Mt. Horrible, p. 2,010. [tr., p. 14,700.

**Roman,** *t.* on R. Moldava, Rumania; cathedl., gd.

**Romans,** *t.* on R. Isere, dep. Drôme, France, formerly seat of anc. abbey, p. 14,220.

**Rome,** *c.* on R. Tiber, in the Campagna, cap. Italy; one of the most famous c.'s in the world; centre of the Roman Catholic Ch., and former cap. of the greatest st. in the anc. world. Situated on the original "seven hills" of the old Roman metropolis, and in the valleys betwn. along the R., contains the celebrated cathedl. ch. of St. Peter, the Vatican, many churches and palaces, the castle of St. Angelo, and numerous monuments; besides a university and several notable insctns. devoted to art and learning. Was created cap. of mod. United Italy in 1871. Flourishg. industries and trade; p. *1,003,881*.

**Rome,** *c.* Oneida co., New York, U.S.A., on the Mohawk R.; dairying centre; p. 33,000; also c. on R. Coosa, Floyd co., Georgia, U.S.A., in cotton regn.; p. 22,600.

**Romford,** *urb. dist.*, mkt. *t.* and residtl. dist. nr. London, co. Essex, Eng.; p. *35,918*.

**Romilly-sur-Seine,** *t.* nr. Troyes, dep. Aube, France; textile factories; p. 9,570.

**Romney, New,** *bor.* and Cinque Port, S. Kent, Eng.; in the rich agr. dist. Romney Marsh; old harbour silted up by shingle, and now a mile from sea; p. 1,340. Littlestone-on-Sea, adjacent, is a rising wat. pl.

**Romsdal,** *dist.* Norway, in Trondhjem prov.; area 5,679 sq. m.; p. 131,000. Cap. Molde.

**Romsey,** *mun. bor.*, co. Hants, Eng.; New Forest div., on R. Test; old Norman abbey ch.; tanyards; p. *4,863*.

**Ronaldshay, N.** and **S.** *isls.* of the Orkneys (*q.v.*).

**Roncesvalles,** *vil.* and *mtn. pass* in the Pyrenees, Spain, 20 m. N.E. of Pamplona, Navarro, Charles the Great defeated here by the Basques (or Moors) in 778.

**Ronda,** *t.* on the *R.* Guadalaviar, Malaga, Spain; chocolate and flour manuf.; p. 20,760. An anc. Moorish t. 42 m. N. of Gibraltar.

**Ronsdorf,** *t.* in Rhenish Pruss., nr. Barmen; ironwks.; p. 14,950.

**Roorkee,** *t.* United Provs., India; hdqrs. of the Bengal sappers and miners; p. 15,330.

**Roosendaal,** industrl. *t.* nr. Breda, N. Brabant, Holland; p. 10,120.

**Roosevelt,** *t.*, N.J., U.S.A., p. 11,047.

**Roraima,** *mtn.* Brit. Guiana, alt. 9,000 ft.

**Rorke's Drift,** *mission stn.* Zululand, Brit. S. Africa; heroic stand by a small band of Brit. soldiers, 1879.

**Rosario,** *t.* in Argentina, on R. Paraná; great grain export; p. 475,000.

**Rosburgh,** *co.* Scotland, p. 44,989.

**Roscommon,** inland *co.* I.F.S., Connaught prov., area 949 sq. m.; p. 93,700. Cap. R., *t.* 96 m. from Dublin; p. 2,170.

**Roscrea,** mkt. *t.* on Little Brosna R., Tipperary and King's County, I.F.S., p. 2,800.

**Rosenheim,** *t.* on R. Inn, nr. Munich, Bavaria; famous for sulphur springs, a favourite wat. pl., with impt. brine works; p. 16,350.

**Rosetta,** *t.* on W. branch of R. Nile, 43 m. N.E. Alexandria, Egypt; archæological discoveries; p. 17,200.

**Roskilde,** or **Roeskilde,** mkt. *t.* Denmark, 20 m. W. of Copenhagen; fine cathedral, containing tombs of kings and queens of D., also royal palace; p. 8,790.

**Ross,** *urb. dist.*, mkt. *t.* on R. Wye, Herefordsh., Eng., p. *4,738*.

**Ross and Cromarty,** coast and Highland *co.* Scotl.; total area 3,202 sq. m., p. *62,302*; chf. t. Dingwall (*q.v.*).

**Rossano,** *c.* nr. G. of Taranto, prov. Cosenza, Italy; old *t.* under the Byzantium Empire; good modern trade; alabaster and marble quarries; p. 19,760. [Columbia, p. 7,160.

**Rossland,** *c.* in Kootenay mining dist., Brit.

**Rosslau,** *t.* on R. Elbe, Anhalt, Germany; has two castles; chemical and other industries; p. 11,354.

**Rostock,** flourishing *spt.* on R. Warnow (nr. the Baltic) nr. Stralsund, Mecklenburg-Schwerin, Germany; university; exports grain, flax, cattle, etc.; p. 67,593.

**Rostov,** *t.* on R. Don, Yekaterinoslav govt., U.S.S.R.; a great grain mart and commercial and industrl. centre; p. about 165,000.

**Rostov Velikiy,** *t.* nr. *L.* Rostov (or Nero), U.S.S.R.; formerly had a famous fair, now declined; boot and shoe manufs., kitchen gardening; p. 15,940.

**Rothbury,** *urb. dist.*, Northumbld., Eng., p. *1,255*.

**Rother,** *R.* Sussex and Kent (31 m.), flows to Eng. Channel; also R., Hants and Sussex (24 m.), trib. of R. Arun; also R., Derbysh. and Yorks, Eng., flows to R. Don (21 m.) at Rotherham.

**Rotherham,** *co. bor.* on R. Rother, nr. Sheffield, W.R. Yorks, Eng.; iron and chemical wks.; p. *69,689*.

**Rotherhithe,** a S.E. Thames-side *dist.* of London, Eng. [side tourist resort; p. *9,346*.

**Rothesay,** *burgh* in isl. and co. Bute, Scotl.; Clyde-

**Rothwell,** *urb. dist.*, Northants, Eng., p. *4,516*.

**Rothwell,** *urb. dist.*, W.R. Yorks, Eng., p. *15,639*.

**Rotterdam,** *spt.* and wealthy commcl. *c.*, cap. of S. Holland; gt. shipping tr. and many manuf., on R. Mass; p. 510,538.

**Rotti,** *isl.* (50 m. by 20 m.) off Timor, Malay Arch., Dutch possn., p. 80,000.

**Roubaix,** thriving and industrl. *t.* nr. Lille, dep. Nord, France; on the Roubaix canal 1 m. from the Belgian frontier; woollen manuf., grape and tomato forcing, gt. tr., many educatl. instns. and fine bldgs.; p. 113,265.

**Rouen,** *c.* on R. Seine, dep. Seine-Inférieure, France; extensive cotton and woollen factories, magnif. cathedl. and churches; p. 123,712.

**Roulers,** *t.* on R. Lys, nr. Courtrai, W. Flanders, Belgium; cotton manuf.; p. 21,470.

**Roumelia,** former *prov.* of Turkey, betwn. Serbia and E. Roumelia on the N., and the Sea of Marmora and the Ægean S., Albania and the Black Sea W. to E.

**Roumelia, East,** formerly (by treaty of Berlin 1878) a self-governing *prov.* of Turkey, but now a principality of Bulgaria S. of the Balkans; cap. Philippopolis (*q.v.*).

**Roveredo,** or **Roveredo,** one of the principal silk mftg. c.'s of the S. Tyrol, Italy, on the R. Adige, p. 10,750.

**Rovigno,** *t.* in prov. Istria, Italy, the Adriatic cst. centre of sardine fishg. industry; p. 10,920.

**Rovigo,** *prov.* of Venetia, Italy, area 684 sq. m., p. 269,380; R., cap. of above, p. 12,666.

**Rovno,** *t.* in Ukraine; an impt. tr. centre in 16th century, but wrecked by the Cossacks before its annexation to Russ.; good prest. tr. in provisions, milling industry; p. 26,000.

**Rowley Regis,** *urb. dist.*, industrl. *t.* adjng. Dudley, Staffs, Eng. p. *41,238*.

**Roxburgh,** inland *co.* S. Scotland, stretching over gt. part of the border-line with Eng.; area 670 sq. m.; p. *45,787*; cap. Jedburgh (*q.v.*); also name of par. co. R., nr. Kelso.

**Roxby-cum-Risby,** *urb. dist.*, Lincs, Eng., p. *548*.

**Royal Leamington Spa,** *mun. bor.* and *wat. pl.*, Warwick, Eng., p. *29,662*.

**Royan,** *t.* (industrl.) in Charente-Inférieure dep. France, on coast 37 m. S. of Rochelle; fishery and tr.; p. 8,400.

**Royston,** *urb. dist.*, W.R. Yorks, Eng., p. *7,156*.

**Royston,** *urb. dist.*, mkt. *t.* Herts, Eng., p. *3,831*.

**Royton,** *urb. dist.*, *t.* nr. Oldham, Lancs, Eng., p. *16,687*. [textile and paper manuf., p. 8,570.

**Rozsahegy,** mkt. *t.* nr. the Vag, Lipto, Hungary;

**Ruabon,** *par.* in colly. dist. Denbighsh., N. Wales, on Shropsh. border; terra-cotta and tile works; p. 3,670.

**Rubicon,** *R.* of Centl. Italy, flows to the Adriatic; identified by different authorities with the Urbine and Urso.

**Ruby Mines,** *dist.* in Mandalay div. Upper Burma. Hilly regn. of the Shan plateau, rich in precious stones; hdqrs. t. Mogôk, in centre of the mining industry. [12,120

**Rudauli,** *t.* in Bara Banki dist., Oudh, India, p.

**Rudesheim,** *t.* on the Rhine, Rhenish Pruss., nr. Wiesbaden; famous for wine; p. 5,120. On the Mederwald hill above the t. is the natl. monument, "Germania,' commemorative of the war of 1870-1871.

**Rudolf,** *L.* in E. Equatorial Africa; area 3,500 sq. m., discovered 1889, by Teleki; it lies in Brit. terr., N.E. of the Victoria Nyanza.

**Rudolstadt,** *t.* on R. Saale, Germy., cap. of Schwarzburg-Rudolstadt; porcelain manuf.; p. 12,172, nr. the palace of Heidecksburg.

**Rueil,** or **Ruel,** *t.* nr. Paris, Seine-et-Oise dep., France, 4 m. outside the fortifications, of the cap., p. 10,320.

**Rufiji,** *R.* of Brit. E. Afr., flows (450 m.) to the Indian Oc.

**Rugby,** *urb. dist.*, mkt. *t.* on R. Avon, Warwicksh. Eng., famous school; p. *23,824*.

**Rugeley,** *urb. dist.*, mkt. *t.* Staffs, Eng., on R. Trent, p. *5,263*.

**Rugen,** *isl.* in Baltic, off cst. of Pomerania, Pruss., area 373 sq. m., p. 48,500. Picturesque scenery, pop. bathing resorts, chf. t. s Bargen and Potbus (*q.v.*).

**Ruhrort,** *t.* in Rhenish Prussia, nr. Düsseldorf, at the confluence of R. Ruhr with the Rhine, shipping port of the Westphalian coal-field, p. 13,750. [p. *16,038*.

**Ruislip and Northwood,** *urb. dist.*, Middlesex, Eng.,

**Rukwa,** *L.* in Brit. E. Afr., continuatn. of the rift valley of Lake Nyassa, 30 m. by 12 m., formerly covered a much larger space.

**Rum,** *isl.* of the Inner Hebrides, co. Argyll, Scotl., 8½ m. by 8 m.

**Rumania,** indpt. *kingdom* (since 1878) consisting of the old principalities of Wallachia and Moldavia, also the delta of the Danube and the Dobrudja. Now includes also additional territory of Transylvania, Bukovina, Crisana, Mamamuresh, Banat, and Bessarabia. Not being a Balkan State, took no part in the war of 1912, but after its resumption in 1913 intervened and exacted from Bulgaria as the price of peace some 2,000 sq. miles of territory. Area 122,282 sq. m., p. *18,025,237*, cap. Bucharest (*q.v.*).

**Rumburg,** *t.* on the Saxon frontier of Bohemia, textile and other industries, p. 10,518.

**Runcorn,** *urb. dist.*, mkt. *t.* on R. Mersey, Cheshire, Eng., connected by the Ship Canal with Manchester, transporter bridge to Widnes, p. *18,158*.

**Runnymede,** *meadow* on R. Thames, nr. Staines, Surrey, Eng.; celebrated as the spot on which King John was forced by the Barons to sign Magna Charta in 1215. [slni to James B.

**Rupert,** *R.* Canada, flows 300 m. from L. Mistas-

**Rupert's Land,** old name of part of the N.W. Territories, Canada, whose streams fall to Hudson B. and James B. [p. 12,000.

**Rurki,** *t.* in Saharanpur dist., United Provs., India,

**Rusera,** *t.* on Little Gandak R., Darbhangah dist., Bengal, India, p. 11,950.

**Rushden,** *urb. dist.*, adjng. Higham Ferrers, Northants, Eng., industrl., p. *14,247*.

**Rusholme,** *t.* on E. of Manchester, S.E. Lancs, Eng., industrl. and residentl., p. 12,220.

**Rushville,** *t.* Rush co., Indiana, U.S.A., p. 5,750.

**Ruskington,** *urb. dist.*, Lincs, Eng., p. 1,102.

**Russell,** *spt.* on B. of Islands, New Zealand, p. (dist.) 4,760.

**Russia,** formerly a vast *empire*, embracing more than half the continent of Europe and one-third of Asia; estimated area 8,660,000 sq. m., p. 163,000,000. It extended from Poland in the W. to Behring Strait, E., a distce. of 5,700 m., and from the Arctic to Southern Siberia N. and S., abt. 2,660 m. The State cap. was Petrograd (*q.v.*), and the empire had six great divisns.: Russia proper and Poland, the Finland Grand Duchy, Caucasia, the Transcaspian territory, Central Asia, and Siberia. The U.S.S.R. now comprises several independent but not yet fully organised States, as a result of the Revolution of 1917. A great producer of wheat and has great mineral wealth.

**Rustchuk,** *t.* on R. Danube, Bulgaria, opp. Giurgevo, in Rumania; arsenal, barracks, and many manufs., p. 41,574.

**Rute,** *t.* nr. Lucena, Cordova prov., Spain; industrl., p. 10,150.

**Rutherglen,** *bor.* on R. Clyde, Lanarksh., S.E. of Glasgow; industrl., chemical and dye works, rope and cotton-weavg. factories, p. *34,223*.

**Ruthin,** *urb. dist.*, *t.* on R. Clwyd, Denbighsh., N.W., p. *2,912*. [industrl., p. 8,200.

**Rutigliano,** *t.* nr. Conversano, prov. Bari, Italy;

**Rutland,** midland *co.* Eng., smallest in country; area 147½ sq. m., p. *17,397*; agr., cap. Oakham (*q.v.*); also name of c. in the Otter Creek valley, Rutland co., Vermont, U.S.A.; marble quarries, machine and furniture manuf., p. 17,500.

**Ruvigado,** *t.* in Cundinamarca st., Colombia, p. 11,120.

**Ruvo,** *t.* in prov. Bari, Apulia, Italy; cathedl., olive oil presses, p. 17,950. [8 m. by 2 m.

**Ryan, Loch,** arm of sea on cst. Wigtownsh., Scot.,

**Ryazan.** (*See* Riasan.)

**Ryazhsk,** *t.* in old Riasan (or Ryazan) govt., U.S.S.R., grain tr. centre, and gt. ry. junctn., p. 15,700.

**Rybinsk,** dist. *t.* U.S.S.R., on R. Volga; corn-tradg. centre, p. 29,000 (increased in summer by abt. 100,000 workers from the country dists.); has numerous breweries and manufs.

**Rydal Water,** picturesque *L.* nr. Ambleside, Westmorland, Eng.; vil. adjacent contains Rydal Mount, where the poet Wordsworth resided.

**Ryde,** *mun. bor.* on N.E. cst. Isl. of Wight; yachting centre and wat. pl., p. *10,519*; also t. on Paramatta R., co. Cumberland, N.S.W., p. 1,850.

**Rye,** *mun. bor.*, cinque *port* and *bor.* on R. Rother, Sussex, Eng., nr. Hastings; p. *3,947*.

**Ryezhitza,** old *t.* in former Vitebsk govt., U.S.S.R.; anc. castle, p. 12,760.

**Rylsk,** mftg. *t.* in old govt. Kursk, U.S.S.R.; 15th-century cathedl., p. 13,350.

**Ryton,** *urb. dist.*, *t.* on R. Tyne, Durham, Eng., 6 m. W. Newcastle; ironwks., p. *14,204*.

**Rzeszów,** industrl. *t.* on R. Wislok, Galicia, Poland; military depot, impt. horse fairs, cloth and linen factories, old princely château, p. 15,370, mostly Polish. [commcl., p. 29,100.

**Rzhev,** *t.* on R. Volga, U.S.S.R.; industrl. and

## S

**Saadabad,** *t.* in Laristan, Persia, nr. Kuh Furkum Mtn., p. 8,600.

**Saale,** *R.*, Thuringia and Prussn. Saxony, trib. (225 m.) of R. Elbe; also R., Lower Franconia, Bavaria, flows (69 m.) to R. Main at Gmünden; also R. of Salzburg and Bavaria, affit. (70 m.) of R. Salzach.

**Saalfeld,** *t.* on R. Saale, Saxe-Meiningen, Germy., sewing machine factories, p. 10,960.

**Saane,** *R.*, Switzerld., rises on border cant. Valais, and flows (65 m.) to R. Aar, nr. Bern.

**Saanen,** *t.* in the upper valley of R. Saane, cant. Bern, Switzerld., p. 4,200.

**Saar,** *R.* Alsace-Lorraine and Rhenish Pruss., rises in the Vosges, and flows (153 m.) to R. Moselle, nr. Treves.

**Saarbrück,** or **Saarbrücken,** *t.* Rhenish Pruss., on R. Saar, opp. the sister t. of Sanct Johann, mftg. centre in rich coal-field, p., 31,000.

**Saarburg,** walled *t.* Alsace-Lorraine, France, on R. Saar, between Strasburg and Nancy, glove and watch spring factories, p. 4,020.

**Saargemünd,** *t.* nr. Saarbrück, Germany, porcelain works and plush factories, p. 15,610.

**Saarlouis,** fortfd. *t.* Rhenish Pruss., on R. Saar, industrl., p. 8,250.

**Saatz,** or **Saaz,** *t.* on R. Eger, nr. Carlsbad, Bohemia, in hop growg. dist., p. 19,300.

**Sabadell,** *t.* on R. Llobregat, Barcelona, Spain, linen and cloth mills, p. 25,720. [p. 20,670.

**Sabanilla,** or **Savanilla,** *spt.* on N.E. cst. Colombia,

**Sabanjah,** or **Savanjah,** *t.* nr. Ismid, Asia Minor, on L. same name, p. 4,930.

**Sabine,** *R.*, Texas and Louisiana, flows (500 m.) through S.L. (an expansn. of the R. 18 m. long) to Gulf of Mexico.

**Sabine Mtns.,** a *branch* of the Apennines, E. of Rome, highest pk. 4,200 ft.

**Sable Isl.** (45 m. long), off S.E. cst. Nova Scotia.

**Sables d'Olonne, Les,** *wat. pl.* and fishg. *port* on B. of Biscay, dep. Vendée, France, p. 12,570.

**Saco,** *c.* on S.R., York co., Maine, U.S.A.; cotton manuf.; p. 7,275. Near is Old Orchard Beach, a pop. wat. pl. Saco R. flows (160 m.) from the White Mtns. in New Hampshire to Saco B. on the cst. of Maine.

**Sacramento,** *c.* California, U.S.A., cap. of st. and of S. co., on the R. S.; thriving manufs.; fine Capitol and R.C. cathedl.; p. 98,000. The R. Sacramento (500 m.) rises in Goose L., on the Oregon frontier, and on the slopes of Mt. Shasta, and flows S. to San Francisco B.

**Saddleback,** *mtn.* nr. Keswick, Cumberland, Eng., alt. 2,847 ft.

**Saddleworth,** *urb. dist.*, nr. Huddersfield, W.R. Yorks, Eng., p. *12,577*; also dist. in Adelaide, S. Australia, p. 4,300.

**Sadhaura,** *t.* Ambala dist., Punjab, India, p. 11,250.

**Sadowa,** *vil.* N.E. Bohemia, Czecho-Slovakia, nr. Königgrätz; decisive battle, July 3, 1866.

**Saffi,** or **Asfi,** *spt.* W. cst. Morocco; poor harb., gt. grain and wool tr.; p. 16,000.

**Saffron Walden,** *mun. bor.* Essex, Eng., 24 m. N.N.W. Chelmsford, p. *5,930*.

**Saga,** tr. *t.* Kiu-Siu Isl., Japan, p. 38,547.

**Sagaing,** *div.* Upper Burma (area 30,039 sq. m.), including the dists. of Upper and Lower Chindwin, Shwebo, and Sagaing (area 1,862 sq. m., p. 292,000); cap. S., t. opposite Ava, on the Irawadi R., with many pagodas, p. 10,200.

**Sagan,** or **Zegan,** *t.* nr. Liegnitz, Prussn. Silesia, on R. Boder; formerly a Wallenstein possn.; p. 14,088.

**Sagastyr,** *isl.* at mth. of R. Lena, Russn. Siberia; sometime seat of an internatl. Polar stn.

**Saghalin,** or **Sakhalin,** *isl.* off E. cst. Asia, in S. Okhotsk, sep. by G. of Tartary from mainld., and included in Primorsk govt.; 670 m. long, area 24,560 sq. m.; used mainly as a constation; p. abt. 105,765, many of them Japanese, the isl. (sep. from Yezo by Strait of La Perouse) having been ceded to Russ. by Japs in 1875.

**Saginaw,** *c.* on S. R., S. co., Michigan, U.S.A.; mftg. centre in agr. and timber region; p. 82,500.

**Sagua la Grande,** *t.* Cuba, centrally situated on R. same name nr. N. cst. of isl., p. 14,750.

**Saguenay,** *R.* Quebec, Can.; length from L. St. John to R. St. Lawrence abt. 100 m.; of gt. depth, with beautiful scenery.

**Sahara,** the gt. N. African *desert* betwn. the Sudan and the Barbary States, and extending from the Atlantic to the Nile, includg. Tripoli and Fezzan; area 3,500,000 sq. m.; the E. portion is known as the Libyan desert, that part E. of the R. Nile being often called the Nubian Desert; there are numerous oases, with *t.*'s and tr. centres, and the p. (est. 2,500,000) is nomadic; the French Sahara extends 1,500,000 sq. m. from Algeria to L. Chad and Say on the Niger.

**Sahibganj,** civil *stn.* adjg. Gaya t., Gaya dist., Bengal, India, p. 75,000.

**Saida,** cst. *t.* nr. Beyrout, Syria, on Mediterranean (the anc. Sidon), p. 16,000.

**Saigon,** *c.*, on R. Saigon, French Cochin-China, 35 m. from the China S.; a large commrcl. centre, with cathedral, citadel, arsenal, and naval yd., and a p. of 50,000.

**Saima,** *L.* in Finland, N. of Viborg; area 150 sq. m., outlet into L. Ladoga.

**St. Abb's Head,** rocky *promontory* (alt. 310 ft.) on cst. Berwicksh., Scotl.

**St. Agnes,** *spt.* nr. Truro, Cornwall, Eng., p. 6,260; also one of the Scilly Isles, in S.W. of the grp., with lighthouse.

**St. Albans,** *c.* **and industrl.** *mun. bor.* **Herts, Eng.;** cathedl., p. *28,625*; also t. in dairy farmg. dist.

**Franklin co., Vermont, U.S.A., p. 8,100.**

**St. Amand,** *t.* **on R. Cher, dep. Cher, France;** industrl., p. 8,950; St. Amand-les-Eaux, *t.* on R. Scarpe, Nord dep., France; ruined abbey hot. minl. springs, p. 12,570.

**St. Andrews,** *burgh* **and** *wat. pl.* **on St. Andrew's Bay, Fife, Scotl.;** university; p. *9,987*; also spt. on Passamaquoddy B., New Brunswick; p. 3,140; also vil. nr. Montreal, Quebec, Can.; p. 2,900.

**St. Anne,** *R.* **Can., flows (120 m.) to R. St. Lawrence, 50 m. above Quebec.**

**St. Anne's-on-the-Sea,** *urb. dist., wat. pl.* **nr. Blackpool, Lancs, Eng.;** p. 15,041.

**St. Asaph,** *bor.* **North Wales, in co.'s Flint and Denbigh; cathedral.;** p. 1,810.

**St. Augustine,** *c.* **St. John's co., Florida, U.S.A.; oldest t. in the States, fav. winter resort;** p. 12,750.

**St. Austell,** *urb. dist.*, mkt. *t.* **nr. Truro, Cornwall, Eng.;** in china clay and tin and copper mining dist.; p. *8,295*.

**St. Bartholomew,** *isl.* **in West Indies (French); area 35 sq. m.;** p. 3,020; chf. t. Gustavia. One of the Lesser Antilles and a dependency of Guadeloupe.

**St. Bees,** cst. *t.* **Cumberland, Eng., nr. Whitehaven;** p. 1,260. Bees Head (promonty.) is 2½ m. N.W.

**St. Bénoit,** *t.* **on isl. Réunion, Indian Oc.;** p. 20,000; also vil. on R. Loire, dep. Loiret, France, nr. Orleans, with Benedictine monasty.

**St. Bernard,** *mtn. pass* **in the Alps, betwn. Valais and Piedmont, with famous hospice, alt. 8,150 ft.** (*See also* **Bernard, Great St., and Little St.**)

**St. Bride's Bay, at W. extrem., Pembrokesh., Wales.**

**St. Brieuc,** *t.* **nr. Bay of St. B., Côtes-du-Nord dep., France;** ironworks, textiles, and cst. tr.; p. 24,480.

**St. Catharines,** *t.* **on Welland Canal, Ontario, Can.;** cycle and motor-car wks., and canning factories; p. *24,703*.

**St. Chamond,** *t.* **nr. St. Etienne, dep. Loire, France;** lace-making; p. 6,480.

**St. Charles,** *c.* **St. Charles co., Missouri, U.S.A., nr. St. Louis;** tobacco factories, flour mills, etc.; p. 10,500.

**St. Christopher, or St. Kitts, Brit.** *isl.* **of the Leeward grp., West Indies, area 68 sq. m.;** p. 26,283. Cap. Basse-Terre.

**St. Clair, industrl.** *t.* **nr. Pottsville, Schuylkill co., Penn. U.S.A.;** p. 7,350; St. Clair R. (44 m.) separates Ontario, Can., from Michigan, U.S.A., and drains L. Huron to L. St. Clair (28 m. long, 12 to 15 m. wide).

**St. Claude,** *t.* **at confl. of R.'s Tacon and Bienne, Jura dep., France;** fancy shell, horn, and ivory manuf.; cathdl.; p. 11,050.

**St. Cloud,** *t.* **on the Seine, 6 m. S.W. Paris, France;** with fine park and palatial château; p. 5,940; also c. on R. Mississippi, Minnesota, U.S.A.; timber-yards and sawmills; p. 21,500.

**St. Croix,** *R.* **Minnesota and Wisconsin, U.S.A., trib. (200 m.) of the Mississippi; also vil. on French frontier of Switzerland, in cant. Vaud;** p. 5,500.

**St. Cunegonde, mftg.** *c.* **on Lachine canal, Hochelaga co., Quebec, Can.,** p. 12,100.

**St. Cyr,** *vil.* **in Versailles park, nr. Paris, France; with military academy,** p. 3,316.

**St. Denis,** *t.* **and north** *sub.* **Paris, France; industrl. and residtl.; also spt., cap. of isl. Réunion, Indian Oc.,** p. 21,538.

**St. Die,** *t.* **on R. Meurthe, Vosges dep., France;** cathedl., gd. tr., p. 20,270.

**St. Dizier,** *t.* **on R. Marne, Vassy, Haute-Marne dep., France, iron tr.,** p. 16,120.

**St. Elias,** *mtn.* **nr. Miatra, in the Morea, Greece, alt. 7,829 ft.; also mtn. N.W. Canada and Alaska, alt. 18,023 ft.**

**St. Etienne,** *t.*, **cap. dep. Loire, France, nr. Lyons; active ribbon-weavg., boot-lace, silk, velvet, and iron mftg. centre, in coalfield dist.,** p. 167,967.

**St. Eustatius,** *isl.* **in Dutch W. Indies, nr. St. Christopher, area 9 sq. m.,** p. 1,250; cap. Orange (or St. Eustatius).

**St. Francis,** *R.* **Missouri, U.S.A., trib. (450 m.) of R. Mississippi; forms boundary of Arkansas; also R. Quebec, Can., flows to the St. Lawrence in Lake St. Peter.**

**St. Gall, cant. Switzld., area 779 sq. m., pastoral forest, and vineyds.** p. 295,534; cap. St. Gall, on R. Steinach, nr. L. of Constance; active industrl. centre, embroidery, Benedictine abbey, p. 70,437.

**St. George, or Georgetown,** *cap.* **Grenada, W. Indies,** p. 5,250; also spt., co. Charlotte, New Brunswick, p. 3,700; also isl of the Bermudas, 3½ m. long, cap. St. George's, p. 3,200. St. George B., W. cst. Newfoundland, 54 m. long; St. George's Channel, pt. of the Irish Sea, separating Wales from Ireland, 100 m. long by 60 m. to 75 m. wide; St. George's Isl. (19 m. long) in G. of Mexico; St. George's Sound, strait in G. of Mexico, separating St. G. s Isl. from Florida.

**St. German-en-Laye,** *t.* **on R. Seine, France, 8 m. W.N.W. from Paris; former royal château,** p. 15,630. [p. 2,360.

**St. Germans, mkt.** *t.* **Cornwall, Eng., nr. Plymouth.**

**St. Giles, industrl. London** *dist.*, **in borough of Finsbury.**

**St. Gothard, mtn.** *grp.* **of Lepontine Alps, Switzld.;** tunnel (9½ m. long) connecting Swiss and Italn. valleys, pass (alt. 6,867 ft.) betwn, Ticino vall. and L. of Lucerne.

**St. Gowan's Head,** *promonty.* **Pembrokesh., Wales.**

**St. Helena, Brit.** *isl.* **in S. Atlantic, 760 m. from Ascension, the nearest land, area 47 sq. m., p. 3,747. Jamestown is the only port. Napoleon imprisoned here in 1815–21, and Boer captives in 1900.** *Isl.* **off cst. S. Carolina, U.S.A., nr. Charleston; noted for cotton.**

**St. Helen's,** *co. bor.*, **mftg.** *t* **(glass, alkali, coal-mining, ironwks.), Lancash., Eng.; connected by canal with R. Mersey;** p. *106,793*. **Also** *urb. dist.*, **nr. Ryde, I. of Wight, p.** *5,478*.

**St. Helen's Mount,** *pk.* **in the Cascade range, Washington, U.S.A., alt. 12,000 ft.** [pl.; p. 30,200.

**St. Helier,** *spt.* **Jersey, Channel Isls.; fort. t. and wat.**

**St. Henri,** *c.* **Hochelaga co., Quebec, Canada, incorporated with Montreal; cotton and other manufs.**

**St. Hippolyte,** *t.* **nr. Le Vigan, dep. Garde, France,** p. 4,320. [Canada; manuf.; p. *13,451*.

**St. Hyacinthe,** *c.* **and** *spt.* **on R. Yamaska, Quebec,**

**St. Ives,** *mun. bor.* **mkt.** *t.* **on St. I. Bay, Cornwall, Eng.,** p. *6,687*; also *mun. bor.*, **mkt.** *t.* **on R. Ouse, Huntingdon, Eng.,** p. *2,664*.

**St. Jean,** *t.* **Quebec, Canada, St. Jean dist.,** p. 4,646.

**St. Jean Baptiste,** *t.* **Hochelaga dist., Canada; industrl.,** p. 6,300.

**St. Jean d'Angély,** *t.* **nr. Saintes, Charente-Inférieure dep., France; former Calvinistic stronghold;** p. 7,870.

**St. Johann, Rhenish Pruss.** (*See* **Saarbrück.**)

**St. John,** *isl.* **E.N.E. St. Thomas, W. Indies, area 42 sq. m.,** p. 1,100; **St. John R., New Brunswick, flows 450 m. to B. of Fundy; at its mth. is the spt. c. of St. J., cap. of prov.; large corn and other tr.;** p. 61,500; **St. John is also name of large Canadian lake on Saguenay R., N. of Quebec.**

**St. John's, fortfd. spt.** *c.*, **cap. Newfoundland on E. cst.; first Eng. settlement in America; gt. tr. in fish, cod, oil, etc., nearly burnt down 1892, fine Gothic cathedl.;** p. 34,045. **Also t. in Quebec, Canada, on R. Richelieu; grain and timber export;** p. 4,520. **Also c. cap. Antigua, W. Indies,** p. 9,350. **Also R. of Florida, U.S.A., flows (350 m.) to the Atlantic.**

**St. John's Wood, residentl. dist. N.W. London, Eng., artistic quarter, contains Lord's Cricket Ground.**

**St. Johnsbury,** *t.* **on R. Passumpsic, Vermont, U.S.A.; manuf.;** p. 8,600.

**St. Joseph,** *c.* **Buchanan co., Missouri, U.S.A., on M. R.; meat-packing;** p. 81,250. **Also t. Berrien co., Michigan, U.S.A., at mth. of St. J. R. (250 m. long); industrl.;** p. 8,500.

**St. Joseph's Bay, arm of G. of Mexico, on cst. of Florida, U.S.A.**

**St. Junien,** *t.* **nr. Limoges, on R. Vienne, France; fine churches; shrine of St. Junien, the hermit; glove-making, leather dressing, porcelain works;** p. 13,220.

**St. Just,** *urb. dist.*, *t.* **Cornwall, Eng., nr. Penzance;** p. *4,356*.

**St. Kilda, rocky** *isl.* **(most W. of group) of the Hebrides, Scotl.; 3 m. long, p. 80; all removed to mainland of Scotland by Govt. 1930; also wat. pl. Victoria, nr. Melbourne.**

**St. Kitts.** (*See* **St. Christopher.**)

**St. Lawrence, great** R. of N. America; length from the source of its headstream, the St. Louis (which rises nr. the source of the Mississippi, and flows into L. Superior), to Cape Gaspé in the Gulf of St. Lawrence, 2,100 m. Forms the outlet of the great lakes (Superior, Michigan, Huron, Erie, and Ontario), and the boundary between the st. of New York, U.S.A., and Ontario, Canada. Navigable for large vessels to Montreal, and for smaller ships past Buffalo to the head of L. Superior. Contains the Thousand Islands and isls. of Jesus, Montreal, Orleans, etc. Width below Quebec, 7 m. to 90 at the mouth. The Gulf of St. L. (impt. fisheries) is an arm of the Atlantic, partly enclosed by Newfoundland and Nova Scotia. Cape St. L. projects into the G. at N. of Cape Breton Is. St. Lawrence is also the name of an isl. of Alaska (100 m. long) in Behring Sea.

**St. Leonards-on-Sea,** *wat. pl.* Sussex, Eng., W. of Hastings, p. 30,000.

**St. Lo,** *t.* on R. Vire, dep. Manche, France; cloth manuf.; fine cathedral; p. 12,150.

**St. Louis,** headstream of the St. Lawrence, Minnesota, U.S.A., flows 220 to L. Superior. Also c. on the R. Mississippi, Missouri, U.S.A.; has very varied and extensive manufs., a vast ry. system, and two universities; p. 827,000. Bridge 2,225 ft. long, crosses R. to East St. Louis.

**St. Louis,** or **Andar,** *t.* at mouth of R. Senegal, E. Africa, cap. French possessions in Senegambia; p. 19,180.

**St. Lucia,** *isl.* of the Windward group, Brit. W. Indies; area 233 sq. m., p. 51,505; cap. Castries; exports sugar and cacao.

**St. Lucia Bay,** *inlet* of the Indian Ocean at mouth of Umvolozi R., Zululand, Brit. S. Africa, S. of St. Lucia Lake, a lagoon on the coast, 60 m. long.

**St. Malo,** fortfd. *spt.* France, dep. Ille-et-Vilaine; castle and church (formerly a cathedral); shipbldg. and trade with Eng., also fishing; p. 13,270.

**St. Martin,** *isl.* of the Lesser Antilles, West Indies, belonging to France. Total p. 7,500.

**St. Mary,** *t.* in Ohio, U.S.A., nr. Grand Reservoir, Auglaize co., p. 5,679.

**St. Mary Church,** *t.* on R. Daw, Glamorgansh., Wales, p. 6,870.

**St. Marylebone,** *met. bor.* of N.W. London, Eng.; industrl. and residtl.; p. *97,620*.

**St. Mary's** *t.* nr. London, co. Perth, Ontario, Canada, p. 5,100. [the Loch of the Lowes) 4½ m.

**St. Mary's Loch,** co. Selkirk, Scotl.; length (includg.

**St. Maurice,** *t.* on R. Marne, France; subn. to Paris (E.S.E.); p. 7,500; also vil. in cant. Valais, Switzld. nr. Lausanne; once a leading Burgundian t., 6th-century abbey, p. 1,730; also R. of Quebec, Can., trib. (400 m.) of R. St. Lawrence.

**St. Michael,** princ. *isl.* of the Azores; area 300 sq. m.; hot sulphur springs, oranges, etc., Portuguese possn. (also called Sao Miguel), p. 125,500; cap. Ponta Delgada (*q.v.*)

**St. Michael's Mount,** castled *rock* off S. cst. Cornwall, Eng.; the anc. Ictis, alt. 230 ft.

**St. Mihiel,** *t.* on R. Meuse, nr. Nancy, France; industrl., p. 8,930.

**St. Moritz,** picturesque *vil.* and health *resort* in the Upper Engadine, Switzld., alt. 6,090 ft.

**St. Nazaire,** *t.* at mth. of R. Loire, nr. Nantes, France; docks and shipping; exports wine, sardines, silk, etc.; p. 40,000.

**St. Neots,** *urb. dist.*, mkt. *t.* Huntingdonsh., Eng., on R. Ouse, p. *4,314*.

**St. Nicholas,** one of the Cape Verde Isls., p. 6,250; also mftg. t. nr. Antwerp, E. Flanders, Belgium, cap. of the anc. Waesland, p. 32,500; also t. nr. Nancy, on R. Meurthe, France, p. 6,270.

**St. Ninians,** *t.* on R. Forth, co. Stirling, Scotl.; p. *14,757*.

**St. Omer,** fort. *t.* on R. Aa, Pas-de-Calais, France; lace and other manuf., cathedl., p. 21,270.

**St. Ouen-sur-Seine,** *t.* subn. (N.) to Paris, France; gun-making, soap-boiling, rubber factories, p. 50,848.

**St. Pancras,** *met. bor.* of N. London, Eng.; industrl. and residtl., p. *198,113*.

**St. Paul,** "twin city" with Minneapolis (*q.v.*), Minnesota, U.S.A.; gt. commercl. and industrl. centre; sep. p. of St. Paul, p. 275,000; also sml. French isl. in Indian Oc., S. of New Amsterdam, 1½ m. long; also sml. isl. N.N.E. of Cape Breton, at entce. of G. of St. Lawrence; also spt. in isle of Réunion, p. 19,456; also R. of Liberia, flows 300 m. to the Atlantic nr. Monrovia.

**St. Paul de Loanda,** cap. Portuguese W. Afr., in Angola, p. 15,120.

**St. Paul's Bay,** *inlet* on N. cst Malta; traditional scene of the shipwreck of St. Paul.

**St. Peter,** *L.* in Canada, expansion of St. Lawrence R. above Three Rivers, 20 m. long, 9 m. wide.

**St. Peter Port,** chf. *t.* Guernsey, Channel Isls.; wat. pl. on E. cst., p. 17,200.

**St. Pierre,** princ. *t.* of French W. Indies on Martinique isl., destroyed by eruption of Mt. Pelée, May 8, 1902, 40,000 people of t. and neighbourhood being killed; also isl. Indian Oc., dependent of Mauritius.

**St. Pierre and Miquelon,** two *isls.* of France in the Atlantic, 10 m. from the Newfoundland cst.; united area 93 sq. m.; p. 3,419; chf. t. St. P.; fishery industry. [and other manuf.; p. 34,200.

**St. Pierre-les-Calais,** *t.* subn. to Calais, France; lace

**St. Pölten** *t.* nr. Vienna, Lower Austria; cotton spinning and hardware manuf.; p. 16,350.

**St. Quentin,** *t.* dep. Aisne, France, on R. Somme; lace, tulle, and other factories, ironworks; p. 54,270.

**St. Remy,** *t.* nr. Arles, Bouches-du-Rhône dep., France; Roman antiquities; p. 6,300; also t. nr. Clermont, Puy-de-Dôme dep., France; p. 5,970.

**St. Servan,** *spt.* Ille-et-Viliane dep., France, on R. Rance, opp. St. Malo, p. 13,500.

**St. Thomas,** Portuguese *isl.* in G. of Guinea, nr. the Equator; area 358 sq. m.; coffee export; p. 58,907; also isl. of the Virgin grp. W. Indies, belonging to U.S.A., 36 m. E. of Puerto Rico; soil poor, surface hilly; area 33 sq. m., p. 11,700; also c. on Kettle Creek, Elgin co., Ontario, Can.; rly. workshops and manuf.; p. *15,359*.

**St. Trond,** *t.* nr. Tongres, Limbourg, Belgium; industrl.; p. 12,120.

**St. Valerie-sur-Somme,** *t.* at entce. of R. Somme to Eng. Channel, France; here William the Conqueror embarked for Eng. in 1066; p. 3,720.

**St. Vincent,** Brit. *isl.* W. Indies, one of the Windward grp. W. of Barbados; area 150 sq. m.; sugar and arrowroot culture; devastated by hurricane in 1898 and by eruption of the volcano Souffrière in 1902; p. 44,447; cap. Kingston; also one of the smlr. C. Verde isls., p. 1,750; also sml. isl. in G. of Mexico nr. mth. of Appalachicola R., Florida, U.S.A.

**St. Vincent,** *G.* of, arm of sea indenting cst. of S. Australia, 85 m. long. [67 sq. m., p. 7,020.

**Ste. Marie,** French *isl.* E. of Madagascar; area

**Saintes,** *t.* on R. Charente, dep. Charente-Inférieure, France, Roman antiquities, suffered in the Huguenot wars, thriving industries, p. 18,470.

**Sakai,** prosperous industrl. *t.* and *port* nr. Osaki, Honshiu, Japan, p. 60,500.

**Sakata,** *t.* in Ugo prov., Honshiu, Japan, p. 19,500.

**Sakhalin.** (*See* Saghalin.)

**Sakmara,** *R.* U.S.S.R., rises in Ural Mtns., trib. (350 m.) of R. Ural. [Novo Tcherkask.

**Sal,** *R.* U.S.S.R., flows 250 m. W. to R. Don at

**Sala,** *t.* co. Vestmanland, Sweden, nr. the Salberg silver mine, worked for 400 years, p. 6,750.

**Salabina,** *t.* in Santiago prov., Argentina, p. 9,020.

**Salado,** *R.* in Argentina, trib. (1,000 m.) of the Paraná; also R. of Arizona, headstream of the R. Gila; also sml. R. of Cadiz prov., Spain, flows to the Atlantic nr. Tarifa; Salado B. is an indentation of the Chilian cst. of Copiapo.

**Salagha,** *t.* on Gold Coast, Upper Guinea, W. Afr., impt. tr., p. (about) 10,000.

**Salamanca,** *prov.* W. Spain, in Leon, on R. Douro, area 4,829 sq. m., agr., p. 333,452; cap. Salamanca, t. on the Tormes R., contains the oldest Spanish university, many convents, an Irish colony, two cathedls., old Roman bridge, p. 28,931; also t. in Guanajuato st., Mexico, gd. tr., p. 18,270; also isl. Colombia, off mth. of the Magdalena R.

**Salamis,** *isl.* off Greece, in the Saronic G., opp. the harbr. of Athens, length 10 m., the modn. Kolouri.

**Salamon,** or **Solomon Isls.,** chain of large isls. in Pacific, S.E. of the Bismarck Arch.; total area 16,949 sq. m., p. (abt.) 150,000; northern part of the group (area 4,200 sq. m., p. 45,000) formerly belonged to Germany, but is now, with the rest of the islds., under British protection.

**Salang,** *isl.* off the cst. of Malacca, in the Indian Oc., belonging to Siam, p. 12,200.

**Salayer Isls.,** Dutch *grp.* S. of the Celebes, E. Indies, area of largest, 180 sq. m., total p. 65,000.

**Salcombe,** *urb. dist.*, *t.* nr. Kingsbridge, Devon, p. *2,383.*

**——a Bay,** *inlet* (17 m. long) on W. cst. Cape Col., Brit. S. Afr., 80 m. N. Cape Town.

**Sale,** *urb. dist.*, industrl. *t.* on R. Mersey, Cheshire, Eng., 5 m. S. of Manchester, p. *28,063.*

**Saleh,** *spt.* at mth. of R. Buragreb, Fez, Morocco, formerly a pirate hdqrs., p. 10,500.

**Salem,** *c.* on Massachusetts B., Essex co., Mass., U.S.A., 15 m. from Boston, impt. mftg. centre, p. 43,500; also c. Columbiano co., Ohio, U.S.A., steel industries, p. 10,650; also c. at mth. of Fenwick Creek, Salem co., New Jersey, U.S.A., in fruit-growing dist., p. 8,100; also c. on Willamette R., Marion co., Oregon, U.S.A., university, p. 27,250.

**Salembria,** *R.* Thessaly, Greece, flows (110 m.) to G. of Salonica. [anct. Hallicyæ; p. 12,200.

**Salemi,** *t.* nr. Palermo, prov. Trapani, Italy; the

**Salerno,** spt. *c.* of Campania, Italy, on N. shore of G. of Salerno; cotton-spinning, printing, leather works, good wine-growing dist.; p. 48,247.

**Salford,** *co. bor.* on R. Irwell, Lancs, Eng., adjng. Manchester, p. *223,442.*

**Salghir,** *R.* of the Crimea, flows (110 m.) into the Putrid S., on the E. cst.

**Sallany,** *t.* on the R. Kura, Caucasus, U.S.S.R.; fishery. Near are ruins of Hershasib, anc. cap. of the Shahs of Shirvan, destroyed by the Mongols, 1285; p. 10,750 (chiefly Tartar).

**Salina,** one of the Lipari Isls. in the Mediterranean, 6 m. long; also c. on the Smoky Hill R., Kansas, U.S.A., in farm regn., p. 20,600.

**Salins,** *t.* nr. Besançon, dep. Jura, France; salt springs; p. 6,570.

**Salisbury,** *mun. bor.*, *c.* on the Upper Avon, Wilts., Eng.; splendid cathedl; p. *26,456.* Salisbury Plain, an undulating upland N. of the city, contains the prehistoric monumental remains of Stonehenge; near is Old Sarum, from which the episcopal see was transferred in 1220.

**Salisbury,** *c.* of N. Carolina, U.S.A., cap. Rowan co., p. 17,250; also c. cap. Rhodesia, S. Africa, white p. *7,943*; also township, nr. Adelaide, S. Australia.

**Salmon,** *R.* Idaho, U.S.A., trib. (450 m.) of Snake River.

**Salon,** *t.* on the Canal de Craponne, Bouches-du-Rhône, France; soap and oil works; p. 13,400.

**Salonica,** *prov.*, area 19,375 sq. m., p. 398,240; also c. cap. of prov. (the anc. Thessalonica), spt. at head of G. of Salonica, centre of import. tr for Macedonia and much of Albania. Exports grain, cocoons, hides, wool, tobacco, etc.; p. 170,195.

**Salsette,** *isl.* Thana dist. N. of Bombay, India, area 241 sq. m., p. 111,000; connected by bridge and causeway with Bombay; cave antiquities and temples.

**Salta,** N. *prov.* of Argentina, area 48,302 sq. m.; agr., p. 166,250; cap. Salta, c. on Rio Salta; p. 35,000.

**Saltaire,** mftg. *t.* on R. Aire, nr. Bradford, W.R. Yorks, Eng., founded by Sir Titus Salt in 1853.

**Saltash,** *mun. bor.*, mkt. *t.* on R. Tamar, Cornwall, Eng., nr. Devonport; p. *3,603.*

**Saltburn-by-the-Sea,** *urb. dist.*, *cst. wat. pl.* nr. Redcar, N.R. Yorks, Eng., p. *3,911.*

**Saltcoats,** *spt.* nr. Ardrossan, Ayrsh., Scotl., p. 8,600.

**Saltillo,** *c.* cap. Coahuila st., Mexico, gd. tr., p. 65,——.

**Salt Lake, Great,** Utah, U.S.A., area 1,900 sq. m., alt. 4,250 ft. above sea-level, in "Great Basin" W. of the Rocky Mtns., receives the Jordan R., no outlet.

**Salt Lake City,** on R. Jordan, Utah, U.S.A., nr. Gt. Salt Lake, headqrs. of Mormonism, temple and university, p. 142,500.

**Saltley,** *t.* in Worcestersh., Eng., nr. Birmingham; ry. carriage wks. and various manufs., p. 10,150.

**Salto,** *t.* on Rio Uruguay, Uruguay, nr. Paysandu, large tr., p. 19,000. [p. 16,630.

**Saluzzo,** *t.* nr. Cuneo, N. Italy, cathedl. and castle.

**Salvador,** *repub.* on Pacific cst., Centl. America, adjng. Honduras and Guatemala, area. 13,183 sq. m., agr. and minls., p. 1,436,500; cap. San Salvador, p. 90,000.

**Salween,** *R.* Burma (800 m.), wild and picturesque scenery, with many rapids, falls into G. of Martaban; also dist. in Tenasserim div., Lower Burma (called also the Salwin Hill Tracts), area 2,666 sq. m., p. 22,000.

**Salzach,** or **Salza,** *R.* Austria, trib. (130 m.) of R. Inn.

**Salzburg,** *province,* Austria, adjng. Bavaria and the Tyrol, area 2,762 sq. m. on northn. slope of Eastern Alps; contains many lakes and thermal springs, and has much minl. wealth, p. 214,200. Cap. S., on the Salzach R., picturesque tourist rest., p. 36,749.

**Salzkammergut,** *dist.* S.W. angle of Upper Austria, betwn. Lake of Traun and Styria, has valuable salt-mines.

**Salzwedel,** *t.* on R. Jeetze, Saxony, halfway betwn. Bremen and Berlin, linen and damask weavg., p. 12,350.

**Samakov,** *t.* nr. Sofia, Bulgaria, industrl., p. 10,130.

**Samar,** *isl.*, of the Philippine grp., S. of Luzon, 147 m. long, 50 m. wide, p. of prov. (includg. sml. attached isls.), 185,000

**Samara,** fertile agr. region, U.S.S.R., lying along the left bank of the Lower Volga, area 58,320 sq. m., p. (abt.) 3,000,000; cap. S., t. on R. Volga, and at head of Centl. Asian and Siberian rys., thriving commcl. centre, with gr. grain tr. and milling industry, p. 101,000.

**Samarang,** fort. *t.* Java, on W. cst., cap. of residency and one of the chf. Dutch ports in the Isl., gr. sugar and coffee exports, p. 72,000.

**Samaria,** ancient *c.* of Palestine, cap. of Kingdom of Israel, now vil. of Sebustieh. [U.S.S.R.)

**Samarkand,** or **Samarcand.** (*See* **Uzbek Soviet,**

**Sambalpur,** *dist.* Centl. Provs., India; area 4,948 sq. m., rice crops, p. 840,000; cap. S., t. on R. Mahanadi, p. (with mil. cantonment) 15,650; ruined fort, old temples. [India, p. 22,000.

**Sambhal,** *t.* Moradabad dist., United Provs.,

**Sambor,** *t.* Galicia, Poland, on R. Dniester; brine wells, brewing, damask, silk manuf., p. 18,750.

**Sambre,** *R.* Belgium and N.E. France (110 m.), trib. R. Meuse at Namur.

**Sambuca,** *t.* nr. Girgenti, Sicily; industl., p. 10,150.

**Samoa,** or **Navigator Isls.,** *archipelago* in Pacific Oc. betwn. New Hebrides and Tahiti; the two larger isls. of the grp. Savaii (area 660 sq. m., p. 14,000) and Upolu (340 sq. m., p. 17,120) were ceded to Germy. in 1900, and Tutuila (54 sq. m., p. 3,000) and Manua, with Ofu and Olesanga (20 sq. m., p. 2,000) to the United States; former German islands under British mandate.

**Samos,** or **Susam-Adassi,** *isl.* (Greece) off W. cst. Asia Minor in the Ægean S.; area 180 sq. m., p. 43,000, fine wine; cap. Vathy.

**Samothrace,** a rugged *isl.* in the Ægean, alt. 5,248 ft., the "Thracian Samos"; sulphur springs, p. 3,550 (mainly Greeks); it has an area of 71 sq. m.

**Samshui,** *treaty-port* in Kwang-tung prov., China, on R. West; good tr. with Hong-Kong and by junks locally, p. 188,860. [6,420.

**Samsöe,** *isl.* Zealand, Denmark, area 42 sq. m., p.

**Samsun,** *spt.* on Black S., in Trebizond vilayet; exports tobacco, grain, etc.; p. 13,570.

**San,** *R.* in Galicia, trib. (250 m.) of R. Vistula.

**Sana,** *t.* in Arabia, cap. of Yemen; fortifd., manuf. jewellery, arms, etc., tr. in silks, cottons, and china, p. 45,750 (20,000 Jews).

**San Andres de Palomer,** *t.* in Spain, nr. Barcelona; commcl. and industrl., p. 15,340. [p. 26,800.

**San Angelo,** *t.* in Texas, U.S.A., on Concho R.,

**San Antonio,** *c.* at mth. of San Pedro R., Texas, U.S.A., gr. t. in cattle, hides, etc., cathedral, fort, and arsenal, p. 238,750. [tr., p. 11,020.

**San Benedetto,** *t.* on R. Po, nr. Mantua, Italy, gd.

**San Bernardino,** *c.* at base of S. B. Range in fruit regn. of S. California, U.S.A., gd. tr. in oranges and lemons, p. 37,500.

**San Carlos,** *t.* nr. Valencia, Venezuela, p. 11,220; also t. nr. Chillan, Chile, p. 9,570; also spt. (San Carlos de Ancud) Philippine Isls., on Luzon cst., p. 27,000.

**San Casciano,** *t.* nr. Florence, Italy, industrl., p. 13,500. [17,560.

**San Cataldo,** *t.* Caltanisetta prov., Sicily, gd. tr., p.

**San Cristobal,** *t.* in Mexico, Chiapa prov. (formerly Ciudal Real, and cap. of prov.), p. 13,830.

**San Cristoval,** *t.* in Tachira prov., Venezuela, p. 15,000.

**Sancti Spiritus,** *c.* in Santa Clara prov., Cuba, in grazing dist., p. 24,500.

**Sanct Johann.** (*See* **Saarbrück.**)

**Sandalwood Isl.,** in Malay Arch., S. of Flores, in Dutch residcy. of Timor, area 4,385 sq. m., very fertile, p. 200,000.

———, *urb. dist.*, mkt. *t.* on Trent and Crewe Canal, Cheshire, Eng., p. *6,411.* [p. 12,500.

**Sandec, New,** *t.* in Galicia, nr. Cracow, industrl.

**Sandgate,** *urb. dist.*, cst. *t.* nr. Folkestone, Kent, Eng., old castle, p. *2,189.*

**Sandhurst,** *par.* on R. Blackwater, Berks, Eng., military coll., p. 2,500; also c. on Bendigo Creek, Victoria, gold-mining dist., p. 41,000.

**San Diego,** *t.* on Pacific cst., California, U.S.A., fine harb., winter health resort, p. 148,000.

**Sandown,** *urb. dist.*, *t.* in Isle of Wight, on S. Bay, nr. Ryde, yachting centre, p. *6,167.*

**Sandringham,** *vil.*, with Royal res., nr. King's Lynn, Norfolk, Eng.

**Sandusky,** *c.* on S. Bay (an arm of L. Erie), Ohio, U.S.A., gd. tr. in coal, fruit, and foodstuffs, p. 24,750.

**Sandwich,** *mun. bor.* and Cinque Port on coast of Kent, Eng., at mouth of R. Stour; golf links opposite the Downs; an impt. seaport in mediæval days; p. *3,287.*

**Sandwich Isls.** (*See* Hawaii.).

**Sandy Hook,** narrow *penin.* (8 m. long) projecting into lower bay of New York, U.S.A.

**San Felipe de Aconcagua,** *t.* nr. Valparaiso, Chili, p. 11,750.

**San Felipe de Jativa,** *t.* in Spain, nr. Valencia, the the anc. Sætabis; noted in Roman times for its linen manuf.; old castle; p. 15,360.

**San Fernando,** *t.* Cadiz prov., Spain, on Isla de Leon; fine town-hall and fish-market, gardens and vineyards; p. 30,750.

**San Francisco,** spt. *c.* and *cap.* California, U.S.A., on the San F. bay (entrce. " the Golden Gate "); large harbour; finest c. on Pacific coast; exports silver, gold, quicksilver, corn, wool, etc.; manufs. boots, cigars, iron, etc.; almost entirely destroyed by earthquake, and 1,000 lives lost, in 1906, but since rebuilt on greatly improved lines; p. 635,000.

**Sangay,** *volcano* of the Andes, alt. 17,120 ft.

**Sangerhausen,** *t.* at foot of Harz Mtns., Prussian Saxony, p. 11,270. [p. 12,600.

**San Germano,** *t.* nr. Vernafro, prov. Caserta, Italy;

**San Gimignano,** *t.* in Siena prov., Tuscany, Italy; wall and towers, frescoed cathedral; 9,230.

**San Giovanni a Teduccio,** *t.* at foot of Vesuvius, B. of Naples, Italy; iron mines, ry. workshops; p. 19,750.

**San Giovanni in Fiore,** *t.* nr. Cosenza, Italy; p. 12,020. [15,930.

**San Giovanni in Persiceto,** *t.* nr. Bologna, Italy, p.

**Sangir,** *isl. group* between Philippines and Celebes, under Dutch suzerainty; eruption of volcano on chf. isl. killed 12,000 inhabitants in 1856; p. (of grp.) 50,000.

**Sanguinetto,** *R.* of Italy, flows to L. of Perugia; on its banks occurred, according to tradition, the battle of Thrasymene. [of Sacramento R.

**San Joaquin,** *R.* California, U.S.A., trib. (400 m.)

**San Jose,** *c.* in the beautiful fruit-growing valley of Santa Clara, California, U.S.A., 39,604.

**San Jose del Interior,** *c.* cap. of Costa Rica; many fine bldgs.; p. 51,395.

**San Juan,** *R.* Bolivia, trib. (300 m.) of R. Pilcomayo; also R., Mexico, trib. (160 m.) of Rio Grande; also R. of Nicaragua, outlet of L. Nicaragua, flows 90 m. to Caribbean Sea.

**San Juan Bautista,** *c.* on N. coast Costa Rica; fortfd., barracks, landlocked harbour; p. 33,000.

**San Juan de la Frontera,** *prov.* Argentina, next the Andes; area 37,865 sq. m., p. 161,750; cap. San Juan, on R. San J., nr. Mendoza, p. 20,000.

**San Lucar de Barrameda,** *t.* nr. mouth R. Guadalquivir, Cadiz, Spain; wines and agr. prod.; ruined castle; p. 24,000.

**San Luis,** *c.* Brazil, cap. Maranhão prov.; episcopal palace; p. 40,000; also t. in Santiago prov., Cuba, p. 6,750.

**San Luis Potosi,** *st.* Mexico, area 24,003 sq. m.; agr. and minl.; p. 640,000; cap. San Luis Potosi, centre for smelting silver, lead, and gold refining, p. 60,000.

**San Marco in Lamis,** *t.* San Severo, Foggia, Italy, p. 17,350.

**San Marino,** smlst. *st.* in Europe and smlst. republic in the world, lies on spurs of the Apennines betwn. the provs. of Forli and Pesaro, Italy, area 38 sq. m., p. 12,027; cap. San Marino, p. 3,750.

**San Miguel,** *c.* on the Rio Grande, Salvador, Central America; malarial swamps adjacent; p. 39,000.

**San Miguel de Mayumo,** *t.* Bulacan prov., Luzon, Philippine Isls.; cotton weavg., cabinet making; p. 39,000. [17,020.

**San Miguel el Grande,** *t.* nr. Guanajuato, Mexico, p.

**San Pablo,** *t.* in Laguna prov., Luzon, Philippine Isls.; agr.; p. 20,120.

**San Pier d'Arena,** *t.* subn. to Genoa, Italy, p. 24,760.

**San Pu,** *R.* of Tibet (850 m.), one of the headstreams of the Brahmaputra.

**Sanquhar,** *t.* on R. Nith, Dumfriessh., Scotl.; one of the Dumfries burghs; p. *3,346.*

**San Remo,** famous *seaside resort*, Liguria, Italy, on the Mediterranean, nr. Nice; flower and orange growg.; p. 22,700.

**San Roque,** *t.* in Andalusia, Spain, nr. Gibraltar, on N. shore of Bay of Algeciras, p. 7,930.

**San Salvador.** (*See* Salvador.)

**San Salvatore,** *t.* nr. Alessandria, Italy, p. 8,020.

**Sansanding,** *t.* on R. Joliba, in Bambarra, W. Africa, p. 40,000.

**San Sebastian,** fortfd. *c.*, cap. prov. Guipuzcoa, Spain, former summer rest. of the Court; captured by Wellington 1813; gd. tr. and fisheries; p. 52,097.

**San Severo,** *t.* nr. Foggia, Italy; industl.; p. 22,630.

**San Stefano,** cst. *t.* on Bosphorus, Thrace, where peace with Russ. was signed in 1878, p. 4,400.

**Santa Ana,** *c.* of Salvador, Centl. America; municipal palace, barracks; p. 76,000. Also c. Orange co., California, U.S.A., in fruit-growing region, p. 30,400.

**Santa Barbara,** *t.* and winter resort at ft. of Santa Inez mtns., California, U.S.A., p. 33,800.

**Santa Catherina,** an Atlantic *st.* Brazil, area 20,785 sq. m.; considerable mineral wealth; p. 633,462; cap. Florianopolis or Desterro, on Santa Catherina Isl., fortified.

**Santa Cruz,** *c.* on Monterey B., Santa C. co., California, U.S.A.; pop. seaside rest., p. 15,000; also Santa Cruz or St. Croix, one of the Virgin Isls. formerly with St. Thomas and St. John a Danish col.; area 110 sq. m., p. 36,000; also t. Luzon, Philippine Isls., nr. Manilla, p. 19,750.

**Santa Cruz de Teneriffe,** *spt.* cap. Canary Isls., N.E. cst. Teneriffe, p. 63,649.

**Santa Fé,** cent. *prov.* Argentina; area 50,713 sq. m.; agr. and stock-farmg., p. 1,250,000; cap. Santa F., t. on isl. in R. Salado, p. 121,250; also c. on plain at base of Sangre de Cristo range, New Mexico, U.S.A., alt. 6,954 ft., p. 11,500.

**Santal Parganas, The,** *dist.* S. Bhagalpur div., Bengal, India; area 5,456 sq. m., p. 1,850,000; cap. Dumka.

**Santa Maria,** *t.* in prov. Caserta, Campania, Italy, on site of anc. Capua; cathedl., glass and leather factories, p. 21,660.

**Santa Maura,** or **Leucadia,** one of the Ionian Isls., Greece; area 110 sq. m.; the anc. Leucas; exports currants, wine, and oil.

**Santander,** maritime *prov.* N. cst. Spain; area 2,108 sq. m.; agr., grape growg., fishy., p. 323,640; cap. S., spt., gd. harbr., and tr. p. 69,068; also name of st. in Colombia, E. of the Magdalena; area 17,865 sq. m., p. 226,319.

**Santarem,** *dist.* in Portugal, in the fertile valley of R. Tagus; area 2,555 sq. m., p. 325,000; cap. S., t. (walled) on height above right bank of Tagus; fine bridge, p. 8,920; also t. on R. Amazon, Brazil, p. 2,500.

**Santa Rosa,** *t.* amongst the Coast ranges, Sonoma co., California, U.S.A., in fruit and grain growg. region, p. 10,700.

**Santiago,** *R.* Ecuador, trib. (180 m.) of R. Amazon; also the most S. isl. of Cape Verde grp.; area 500 sq. m., p. 38,000; cap. Porto Praya.

**Santiago de Chile,** *prov.* C.; area 5,893 sq. m., p. 785,000; cap. S., c. on the Rio Mapocho, the most populous place on Pacific side of S. America; cathedl., university, gt. tr. and flourishg. industries, p. 507,296.

**Santiago de Compostella,** *c.* on R. Sar, prov. Coruna, Spain; cathedl. (with tomb of St. James), university, etc., p. 26,000.

**Santiago de Cuba,** spt. *c.* on S. cst. Cuba (former cap. of the isl.); exports sugar, coffee, tobacco, etc.; Spanish fleet destroyed by U.S.A. warships here 1898, town surrendering, p. 47,500.

**Santiago de las Vegas,** inland *t.* nr. Havana, Cuba, p. 12,000.

**Santiago del Estero,** *prov.* Argentina; area 55,385 sq. m., p. 360,750; cap. t., same name, on R. Dulce, p. 21,500.

**Santiago de los Caballero,** *t.* on Yaque R., Santo Domingo (Hayti); large tobacco tr., p. 71,956.
**Santipur,** *t.* on R. Hooghli, Nadia dist., Bengal, India; centre of local weavg. industry; p. 31,500.
**Santo Antonio,** *mst. N. isl.* of C. Verde *grp.*, mtnus. and fertile, p. 31,000.
**Santo Domingo,** or **San Domingo.** (*See Hayti.*)
**Santo Francisco,** *R.* Brazil, flows (1,600 m.) from Minas Geraes prov. to the Atlantic; navigable for 150 m. below the cataract of Paulo Affonso.
**Santorini,** volcanic *isl.* of the Greek arch., 10 m. long; p. 43,250, cap. Théra.
**Santos,** *c.* and *spt.* S. Brazil; exports coffee, sugar, rum, and tobacco; p. 145,000
**São Leopoldo,** former German *col.* and *t.* nr. Porto Alegré, Brazil, p. (of dist.) 30,000.
**Saône,** *R.* Grance, rises in the Vosges, and flows 282 m. to R. Rhône at Lyons.
**Saône-et-Loire,** *dep.* E. Central France, area 3,331 sq. m.; pastoral and vineyards., with consid. mineral wealth; p. 554,816; cap. Macon (*q.v.*).
**Saône-Haute.** (*See* Haute-Saône.)
**São Paulo,** *c.*, cap. Brazilian prov. same name (112,278 sq. m., on Atlantic cst.), one of the most flourishg. commrcl. cities of S. Brazil; p. 1,002,500; gt. coffee export.
**Sapporo,** admin. *cap.* isle of Yezo, Japan; garrison, and many flourishg. industries; p. 94,647.
**Sarabat,** *R.* Asia Minor, flows (180 m.) to G. of Smyrna.
**Saragossa,** *prov.* Spain, adjng. Navarre, area 6,726 sq. m., p. 479,454; cap. S. c. on the Ebro; two cathedls., university, citadel., leaning tower; captured by the Moors in the 8th century; regained by Christians in 1118, and became cap. of Aragon; capitulated to France, after obstinate defence, in 1809; p. 117,742. [p. 14,020.
**Sarangpur,** *t.* in Dewas st., Bhopal, Centrl. India,
**Saransk,** dist. *t.* in U.S.S.R., on rly. from Moscow to Kazan; industrl.; p. 15,250.
**Sarapul,** *t.* on R. Kama, U.S.S.R.; boot and glove factories; p. 23,150.
**Saraswati,** sacred *R.* of the Punjab, India.
**Saratoff,** old govt. U.S.S.R., on right bank of Lower Volga, area, 32,624 sq. m.; agr., manuf.; p. 2,500,000, mainly peasantry; cap. S., t. on R. Volga, impt. tr. centre, p. 152,000.
**Saratoga Springs,** summer *resort* at foot of the Adirondack Mtns., New York, U.S.A.; res. p. 13,150; many hotels.
**Sarawak,** *st.* in N.W. Borneo, area 42,000 sq. m., p. 600,000; governed by a Rajah, under Brit. protectn.; exports sago, rubber, etc.; p. 600,000; cap. Kuching.
**Sardinia,** *isl.* of the Mediterranean, included in Italy, and former kingdom, constructed out of Duchy of Savoy, area 9,299 sq. m., mtnous. but fertile, p. 880,863; cap. Cagliari (*q.v.*).
**Sardis,** ruined *c.* Asia Minor, anc. cap. Lydia, at ft. of Mt. Tmolus, site occupied by mod. vil. Sart.
**Sarguja,** nat. *st.* Chota Nagpur, Bengal, India, area 6,055 sq. m., p. 272,000.
**Sark,** one of the Channel Isls., 3½ m. long, 6 m. E. of Guernsey, pict. scenery.
**Sarnia,** *t.* on R. St. Clair, Ontario, Can., oil tr., p. *17,848.*
**Sarno,** *t.* in Salerno prov., Italy, industrl., p. 17,760. [Norway, p. 7,120.
**Sarpsborg,** *t.* on R. Glommen, co. Smaalenene,
**Sartar-Oe,** isl. nr. Bergen, Norway, 20 m. by 7 m.
**Sarthe,** *R.* of France, trib. (845 m.) of R. Mayenne; also dep. N.W. France, watered by R. Sarthe, area 2,412 sq. m., agr., vineyds., etc., p. 389,235; cap. Le Mans (*q.v.*).
**Sarum, Old and New.** (*See* Salisbury.)
**Sarzana,** *t.* Genoa prov., Liguria, Italy, nr. Spezia, cathedl., glass bottle factory, p. 15,220.
**Saskatchewan,** or **Nelson,** *R.* Canada, flows (1,450 m.) from Rocky Mtns. through L. Winnipeg to Hudson B.; also prov., Can., area 242,383 sq. m., p. *921,281.*
**Saskatoon,** *c.* Sask., Canada, p. *60,458.*
**Sassari,** *t.* on G. of Asinara, Sardinia, Italy, large cathedl., university, mod. Gothic palace, and old ducal pal. (now municipal offices), match, tobacco, and macaroni factories, p. 39,770; cap. of S. prov., area 4,141 sq. m., p. 342,595.
**Satara,** *dist.* Deccan div., Bombay, India, area 4,987 sq. m., p. 1,150,050; cap. S., t. nr. conflu. R. Kistna and Yena, p. 30,970.
**Satara Jagirs, The,** *grp.* nat. *sts.* Bombay, under Satara dist., B. Pres., India, total area 844 sq. m., p. 112,000.
**Satsuma,** *prov.* Japan, in S. of Kiu-Siu Isl. famous for its Satsuma ware (pottery); cap. S., *c.*; the Satsuma Isls. are a grp. W. of the prov.
**Saugus,** *t.* in Mass., U.S.A., nr. Lynn. on cst. Mass. Bay, p. 10,874.
**Sault, Ste. Marie,** *c.* Michigan, U.S.A., at rapids of R. St. Mary, outlet of Lake Superior; timber tr.; p. 12,096; also pt. on Canadian side, opp. above; p. 2,120.
**Savage Isl.,** or **Niue,** in Pacific Oc., betwn. Samoan Isls. and Tonga, p. 5,460.
**Savaii,** largest of Samoan *grp.* (*See* **Samoa.**)
**Savanna,** *c.* Illinois, U.S.A., on Mississippi R., Carrol co.; p. 5,000.
**Savannah,** *R.* running betwn. Georgia and S. Carolina, U.S.A. (450 m.), flows to the Atlantic; also c. on S. R., Chatham co., Georgia, U.S.A.; manure manuf., timber yds., rice culture, etc.; p. 82,250.
**Save,** *R.* France, trib. (65 m.) of R. Garonne; also R. Croatia and Carniola, separatg. Hungary from Serbia and Bosnia, trib. (550 m.) of R. Danube. [silk manuf.; p. 12,270.
**Savigliano,** *t.* in Cuneo prov., Piedmont, Italy;
**Savoie,** or **Savoy,** *dep.* S.E. France, on Italian border; area 2,389 sq. m.; corn and wine growg.; p. 224,874. Cap. Chambéry (*q.v.*). (*See also* **Haute-Savoie.**)
**Savona,** *t.* on W. Riviero cst., Genoa prov., Italy; iron and shipbldg. works; exports preserved fruits and tomatoes; p. 39,370.
**Savu,** *isl.* between Timor and Sandalwood, Malay Arch.; p. 16,500.
**Sawbridgeworth,** *urb. dist.*, *t.* on R. Stort, Herts, Eng.; p. *2,604.*
**Saxe-Altenburg,** former *duchy* Thuringia, Centl. Germy.; area 511 sq. m.; p. 211,638. Cap. Altenburg (*q.v.*).
**Saxe-Meiningen,** former *duchy* between Coburg and Gotha, Thuringia, Germy.; area 953 sq. m., p. 191,491. Cap. Meiningen.
**Saxe-Weimar,** former *grd. duchy*, Germy., one of the Thuringian sts.; area 1,388 sq. m.; p. 270,015. Cap. Weimar. [folk, Eng.; p. *1,259.*
**Saxmundham,** *urb. dist.*, mkt. *t.* nr. Ipswich, Suf-
**Saxony,** German state; area 5,787 sq. m.; great minl. wealth; p. 4,670,320. Cap. Dresden (*q.v.*). Also prov., Prussia, adjng. above on W.; area 9,750 sq. m.; agr. and minls., p. 3,000,000. Cap. Magdeburg. [quehanna; p. 7,850.
**Sayre,** *bor.* Bradford co., Penn., U.S.A., on R. Sus-
**Scafell Pike,** *mtn.* in Cumberland, 10 m. from Keswick, highest in Eng., alt. 3,210 ft.
**Scala Nova,** cst. *t.* of Asia Minor, nr. Smyrna, on G. S. N., an arm of the Ægean S., p. 18,790.
**Scalby,** *urb. dist.*, N.R. Yorks, Eng., p. *2,771.*
**Scammonden,** *urb. dist.*, W.R. Yorks, Eng., p. *394.*
**Scanderoon.** (*See* **Alexandretta.**)
**Scandinavia,** the gt. *peninsula* of N. Europe, comprising the land occupied by the peoples of Sweden, Norway and Denmark (*q.v.*).
**Scarba,** *isl.* of Argyll, Scotl., off N. end of Jura, 3½ m. by 3½ m.
**Scarborough,** *mun. bor.* and fashionable cst. *wat. pl.* N.R. Yorks, Eng., p. *41,791*; also t. in W. Indies, cap. Tobago Isl., p. 1,270.
**Scarpa,** or **Scarp,** *isl.* of the Outer Hebrides, Scotl., W. of Harris, 3 m. long.
**Scarpanto,** *isl.* of the Mediterranean, the anc. Carpathus, N. of Crete, 31 m. by 8 m., p. 5,050 (mainly Greeks). [of R. Scheldt.
**Scarpe,** *R.* France, dep. Pas-de-Calais, trib. (70 m.)
**Schaerbeek,** industrl. *t.* Belgium, on R. Senne, subn. to Brussels, p. 48,700.
**Schaffhausen,** most N. *cant.* Switzld., on R. Rhine next Baden; area 113 sq. m., pastoral and afforested; p. 50,428. Cap. S., *t.* on the Rhine; cathedral; p. 20,064. Noted falls near by.
**Schaumberg-Lippe,** former *principality* of Germy. in the Weser val., between the Prussn. provs. of Hanover and Westphalia; area 131 sq. m., p. 46,357. Cap. Bückeburg, on R. Aue (*q.v.*).
**Scheldt,** or **Schelde,** *R.* of France, Holland, and Belgium, rises in dep. Aisne and flows 248 m. to the N. Sea by the estuaries indentg. Zeeland.
**Schemnitz,** *t.* in co. Honthe, Hungary, 67 m. N. of Budapest; impt. mining centre in dist. producing gold, silver, copper, and lead; p. 16,750.
**Schenectady,** *c.* in val. of R. Mohawk, New York, U.S.A.; manuf.; p. 96,400.
**Scheveningen,** *wat. pl.* S. Holland, 2 m. N.W. of the Hague; large fishg. fleet, Kurhaus and Kursaal res. p. 21,270.

**Schiedam,** *t.* on R. Schie, nr. Rotterdam, Holland; gin distilleries; p. 40,535.

**Schiehallion,** *mtn.* Perthsh., Scotl., nr. Aberfeldy, alt. 3,547 *ft.*

**Schlei,** narrow *inlet* of the Baltic, Schleswig-Holstein, Germy., 25 m. long, penetrating to Schleswig, t., indust., p. 18,750; has cathedral.

**Schleswig-Holstein,** Pruss., adjoing. Denmark on the N.; area 5,805 sq. m., agr. and manuf.; p. 1,454,109; cap. Kiel (*q.v.*). The N. part of the prov. Schleswig, and the S. div., Holstein, were both Danish duchies prior to 1866; and a large portn. of the inhabts. still speak Danish.

**Schlettstadt,** fortd. *t.* in Lower Alsace, on R. Ill, nr. Strasburg. Formerly a free impl. c., has two cathedls.; p. 10,370. [20,425.

**Schneidenmühl,** mftg. *t.* in prov. Posen, Pruss., p.

**Schönberg,** *t.* on R. Tesco, Moravia, nr. Olmütz; textile ind.; p. 12,260.

**Schorlau,** or **Tchorlau,** *t.* in Rodosto vilayet, Thrace; carpet and cloth factories; mosques and Christian chs.; p. 12,730; half Greek.

**Schreckhorn,** *mtn.* of Bernese Alps, alt. 13,386 ft.

**Schuya,** *t.* on R. Tesa, Vladimir govt., Russ.; textile and soap factories; p. 24,570.

**Schuyler,** *c.* Nebraska, U.S.A., on Platte R.; industrl.; p. 5,000.

**Schuylkill,** *bor.* Penn., U.S.A. (p. 6,600) on S.R., which enters the Delaware below Philadelphia, length 130 m.

**Schwarzburg-Rudolstadt,** *province* of Thuringia, Germy.; area 363 sq. m., mainly agr.; p. 99,339; cap. Rudolstadt (*q.v.*).

**Schwarzburg-Sondershausen,** *province* of Germy.; betwn. Prussn. Saxony and Saxony proper; area 333 sq. m., p. 93,427; cap. Sondershausen, on R. Wipper; p. 7,100.

**Schwechat,** *t.* in Austria, nr. Vienna; large brewery and factories; p. 9,570.

**Schweidnitz,** *t.* nr. Liegnitz, Prussn. Silesia; textile indust.; p. 30,260.

**Schweinfurt,** *t.* on R. Main, Lower Franconia, Bavaria; ironworks; p. 16,350. [15,260

**Schwelm,** industrl. *t.* nr. Arnsberg, Westphalia; p.

**Schwerin,** *t.* (cap.) in Mecklenburg-Schwerin, Germy.; industrl. and educatl.; p. 45,455; also mftg. t. on R. Warthe, prov. Posen, Pruss.; p. 8,260. [works; p. 15,020.

**Schwerte,** *t.* nr. Hagen, Westphalia, Pruss.; nickel

**Schwetz,** *t.* on R. Vistula, nr. Marienwerder, West Pruss.; old castle, damask-weaving; p. 8,030.

**Schwiebus,** *t.* Brandenburg prov., Pruss., nr. Frankfort-on-the-Oder; old walls, anc. mkt. pl., and castle; p. 9,350.

**Schwyz,** or **Schweitz,** a forest *cant.* Switzerland; area 350 sq. m.; p. 59,731; cap. Schwyz, t. nr. L. of Lucerne, p. 7,620. [of R. Danube.

**Schyl,** *R.* Transylvania and Rumania, trib. (150 m.

**Sciacca,** *spt.* S. cst. Sicily, nr. Girgenti; hdqrs. of Mediterranean coral fishy.; p. 24,260.

**Scilla,** famous *promty.* on St. of Messina, Calabria, Italy; also spt. t. with citadel, on steep cliff overlookg. strait; celebrated for silk and wine; p. 7,490.

**Scilly Isls.,** *grp.* nr. Land's End, Cornwall, Eng.; total area, 10 sq. m.; p. 2,820; Hugh Town, the cap. of the isls., is on St. Mary's, the largest of the group.

**Scio,** *isl.* W. cst. Asia Minor; area 508 sq. m., devastated by earthqke. in 1881, p. 64,500; mainly Greeks; antimony and other mines, exports wine, fruits, and gum. The classical Chios Scio, or Castro, the cap. has a good harbr.; p. 15,260.

**Scioto,** *R.* of Ohio, U.S.A., joins the Ohio at Portsmouth after flowing 250 m. from the W. and N.

**Scone,** *par.* (with palace seat of Earl of Mansfield), Perthsh., Scotl., and a place of res. and coronation of the early Scottish kings. Thence Edward I, carried " the stone of destiny " to Westminster Abbey in 1296, p. *2,559.*

**Scotland,** the N. *div.* of the Isl. of Gt. Britain; area (includg. the isls. attached) 30,463 sq. m.; gtst. length, 280 m.; gtst. width, 150 m.; p. *4,842,554.* Cap. Edinburgh, chf. commercl. and industrl. c., Glasgow (*q.v.*). Very mtnous. and picturesque in N. and N. W. (the Highlands) with many lakes. In the Lowlands mainly fertile, with much mnl. wealth. Fisheries impt. Divided into 33 counties, which see.

**Scranton,** *c.* on Susquehanna R., Lackawanna co., Penn., U.S.A.; in anthracite coal regn., iron foundries and silk manuf.; p. 144,000.

**Scunthorpe,** *urb. dist., t.* in Lindsey div. Lincolnsh., Eng.; industrl.; p. *33,761.*

**Scutari,** *t.* on the Bosphorus, Asia Minor, opp. Constantinople, of which it is considered a suburb, p. (abt.) 50,000, mostly Turks; active tr. in Asiatic products; also t. in Albania, at foot of Scutari L. (anc. cap. Illyria); exports tobacco, grain, wool, skins, etc.; p. (est.) 35,000. Scutari L. lies on the borders of Montenegro and Albania and is 29 m. long, with outlet by the Bojana into the Adriatic.

**Seaford,** *urb. dist.,* cst. *wat. pl.,* Sussex, Eng., nr. Newhaven, p. *6,570;* golf-links.

**Seaforth,** *t.* in Huron dist., Ontario, Can., p. 3,750.

**Seaforth Loch,** on E. side of Isl. of Lewis, Outer Hebrides, Scotl., 14 m. long.

**Seaham Harbour,** *urb. dist., spt.* nr. Sunderland, Durham, Eng.; coal tr. centre, glass bottle wks., p. *19,394.*

**Seaton,** *urb. dist.,* Devon, Eng., p. *2,351.*

**Seaton,** *t.* nr. Workington, Cumberland, Eng., p. 3,018. [land, Eng., p. *7,377.*

**Seaton Delaval,** *urb. dist.,* nr. Blyth, Northumber-

**Seattle,** *t.* on Admiralty Inlet, King co., Washington, p. 370,500; has a great meat-packing tr., also State university.

**Sebastopol,** or **Sevastopol,** strongly fortifd. *spt.* in the Crimea; grain export and pop. wat. pl., thriving t., built on ruins left after the famous siege of 1855, p. 73,000.

**Sebenico,** cst. *t.* on the Adriatic, Dalmatia; fishy. and wine tr., p. 25,250.

**Se Chuen,** or **Se Tchuen,** *prov.* W. China, adjng. Tibet, area 218,490 sq. m., p. (est.) 54,500,000; traversed by Yangtse-Kiang.

**Secunderabad,** Brit. mil. *cantonment* (largest in India) in Nizam's Dominions, nr. Hyderabad, p. (of cantonmt. 6,000) of t. 30,000.

**Sedalia,** *c.* on prairie in Pettis co., Missouri, U.S.A. Rlwy. centre and works, p. 20,500.

**Sedan,** *t.* in Ardennes dep., France, nr. Mézières; formerly a strong fortress, scene of gt. German victy. over French army, 1870; weavg. indust., p. 19,470. [Eng., p. 3,770.

**Sedbergh,** mkt. *t.* nr. Ingleton, W.R. Yorks, Eng.

**Sedgley,** *urb. dist.,* industrl. *t.* nr. Wolverhampton, Staffs. Eng.; nail, rivet, chain, and lock works; p. *19,261.*

**Sedgmoor,** nr. Bridgewater, Somerset, Eng.; James II.'s victory over Monmouth, 1685.

**Seeland,** or **Zealand,** *isl.* Denmark, betwn. Cattegat and Baltic, area (with isls. attached) 2,840 sq. m., p. 752,230; chf. t. Copenhagen (*q.v.*).

**Seghill,** *urb. dist., t.* nr. Newcastle, Northumberland, Eng., p. *2,582.*

**Sego, Lake,** U.S.S.R. (20 m. by 20 m.), 30 m. N.W. of Lake Onega, outlet into White S.

**Segovia,** prov. of Old Castile, Spain, area 2,635 sq. m., p. 170,817; agr., stock-keeping, and manuf.; cap. S., walled *c.* nr. R. Eresma; paper-making and flour-mills, artillery school, p. 15,270.

**Segura,** *R.* Spain, flows (180 m.) to Mediterranean at Guardamar.

**Sehore,** *t.* Bhopal, Centl. India; p. 17,230.

**Seim,** *R.,* Ukraine, Tchernigov govt., trib. (300 m.) of R. Desna.

**Seine,** *R.* France, rising in Côte d'Or dep., and flowing 473 m. past Paris and Rouen to the Eng. Channel at Havre; also dep. France (with Paris as cap.), area 185 sq. m., p. 4,411,691.

**Seine-et-Marne,** *dep.* N. France; area 2,273 sq. m., agr., stock raising, dairying, vineyds., p. 349,234 (increasg.); cap. Melun.

**Seine-et-Oise,** *dep.* N. France; area 2,185 sq. m., mkt. gdng., vineyds., agr., p. 921,673; cap. Versailles.

**Seine-Inférieure,** coast *dep.* N. France; area 2,448 sq. m., pastoral, grain growg., dairying, manuf., p. 880,671; cap. Rouen.

**Selangor,** Malay *st.,* under Brit. protectn., on W. side of Peninsula, p. 90,000.

**Selby,** *urb. dist.,* mkt. and industrl. *t.* on R. Ouse, W.R. Yorks, Eng.; anc. abbey ch., p. *10,064.*

**Selenga,** *R.* Mongolia and Trans-Baikal, Siberia, flows 750 m. to L. Baikal.

**Selkirk,** inld. *co.* Scotl., between Midlothian and Dumfries, Peebles, and Roxburgh; area 269 sq. m., agr. (chfly. oat growg.), weavg., etc., p. *22,603;* cap. S., on Ettrick Water, p. *7,075.*

**Selma,** *c.* on Alabama R., Dallas co., Alabama, U.S.A., in cotton-growg. dist., p. 18,020 (more than half coloured). [pl., fine pier, p. 8,920.

**Semaphore,** *t.* nr. Adelaide, S. Australia; cst. wat.

**Semenovka,** or **Semionovka,** *t.* Ukraine, nr. Gomel; leather industry, impt. fairs, p. 17,200.
**Semipalatinsk,** old prov. Russ. Centl. Asia, in former Steppes governor-generalship; area 184,631 sq. m., p 845,000; cap. S., t. on the Irtish R., busy tr. centre, p. 30,270.
**Semiryechensk,** old *prov.* former Russn. Turkestan, S. of Semipalatinsk; area 152,280 sq. m., p. nearly 2,000,000.
**Semlin,** fort. *t.* Slavonia, nr. Belgrade, on R. Danube; gd. tr. with the Balkans, p. 14,750.
**Seneca Falls,** *vil.* on R. Seneca, at the Falls (50 ft. high), New York, U.S.A. manuf.; p. 6,450. R. Seneca receives the waters of Seneca Lake. (36 m. by 2m.), also of Cayuga and other lakes.
**Senegal,** *R.* Western Africa, formed by the union of R.'s Bafing and Bakhoy, and flowing abt. 1,000 m. from the Kong mtns. W. and N.W. to the Atlantic at St. Louis, above Cape Verde. Also name of French col. in W. Afr. betwn. R Gambia S. and the Sahara N., and stretching from the French Sudan E. to the Atlantic on the W.; area 74,112 sq. m.; p. 1,204,110. Cap. St. Louis (*q.v.*).
**Sennaar,** *dist.* Sudan, N.W. of Abyssinia, on the Blue Nile, below Khartum. Cap. Sennaa c. on Blue Nile.
**Sens,** *c.* on R. Yonne, Y. dep., France; the anc. Agedincum; fine cathedl.; p. 14,960.
**Seoni,** *dist.* in the Satpura tableland, Jubbulpore div., Cent. Provs., India; area 3,198 sq. m., mainly forest; p. 225,000. Cap. S., t. halfway betwn. Nagpur and Jubbulpore; p. 12,000. Also name of a t. in Hoshangabad dist., Centl. Provs., India; p. 6,890.
**Seoul,** or **Hanyang,** chf. *t.* Corea; p. (est.) 200,000. It stands on the Han R., and Chemulpo is the port.
**Septimer,** *mtn. pass* in Swiss Alps, nr. Chur, cant. Grisons, alt. 7,611 ft. [wks.; p. 36,954.
**Seraing,** *t.* in prov. Liège, Belgium; extensive iron-
**Serajevo,** or **Bosnia Serai;** cap. Bosnia, Jugo-Slavia, fortified town, p. 52,000.
**Serampur,** *t.* in Hooghli dist., Bengal, India, on rt. bank of R. H.; former Danish Settlement, sold to Britain in 1845; jute and paper mills; p. 41,000. [Jugo-Slavia (*q.v.*).
**Serbia,** formerly an indepdt. kingdom, now part of
**Serdofsk,** *t.* U.S.S.R., Russ.; grain tr.; p. 14,250.
**Serena,** *t.* nr. Coquimbo, Chili, on Pacific cst.; p. 15,240.
**Séres, Serros,** or **Siros,** *t.* nr. R. Struma, Macedonia, Greece; cotton tr. and carpet manuf.; p. 30,260.
**Sereth,** *R.* Moldavia and Bukowina, trib. (290 m.) of R. Danube; also *t.* in Bukowina, on R. S., 24 m. S.E. of Czernowitz; p. 7,950.
**Serghinsk, Upper** and **Lower,** *t.'s* of U.S.S.R., nr. Ekaterinburg; impt. ironwks.; joint p. 31,120.
**Sergipe,** cst. *prov.* Brazil; area 15,089 sq. m.; sugar and cotton crops; p. 535,094 (three-fourths negroes). Cap. Aracaju; Sergipe (or São Christovao) is a t. in the prov.; p. 21,000.
**Seringapatam,** *c.* on Kaveri R, Mysore, India; famous for its shrine of Vishnu, its fortress, palace, and Hyder Ali's mausoleum; p. 13,250. Here Tippoo Sahib was slain in 1799.
**Serpukhov,** *t.* on R. Nara, U.S.S.R.; sacked by the Tartars in 1382; leather and cotton trade; p. 30,920. [4,079 ft.
**Serra do Monchique,** *mtn. range* N. of Algarve, alt.
**Sesto Florentino,** *t.* nr. Florence, Italy, p. 14,750.
**Sestri Ponente,** *spt.* nr. Genoa, Italy; shipbuilding; p. 11,920.
**Settle,** mkt. *t.* on R. Ribble, W.R. Yorks, Eng., nr. Skipton; caves with remains of extinct fauna; p. 2,360.
**Setubal,** *c.* on R. Sado, Lisbon dist., Portugal; boat-bldg., fishing, sardine-curing, etc.; p. 24,020.
**Sevastopol.** (*See* Sebastopol.)
**Sevenoaks,** *mun. bor.,* mkt. *t.* and residtl. *dist.* Kent, Eng., p. *10,482.*
**Severn,** *R.* W. of Eng. and N. Wales; rises in Montgomersh., and flows (200 m.) to Bristol Channel; also R. Canada, flows (350 m.) to Hudson Bay.
**Sevier, Lake,** Utah, U.S.A.; area 150 sq. m., 125 m. S.W. of Gt. Salt L.
**Seville,** *prov.* Spain; area 5,429 sq. m.; agr., mining; p. 626,922. Cap. S., c. on R. Guadalquivir; splendid Gothic cathedral; exports lead, iron, quicksilver, cork, oranges, wine, etc.; artillery works, porcelain manuf., spirit distilleries, silk and tobacco factories; p. 150,631.
**Sèvres,** *t.* on R. Seine, dep. Seine-et-Oise, France; celebrated porcelain manuf.; p. 7,240.
**Sèvres, Deux,** *dep.* W. France; area 2,338 sq. m. (mainly agr.), p. 310,060; cap. Niort (*q.v.*).
**Seychelles,** group of 90 sm. Brit. *isls.,* Indian Ocean, formerly dependt. Mauritius, now a separate Crown Colony; largest isl. Mahé princ. t. Port Victoria; total area 148 sq. m., p. 24,523. [p. 7,500.
**Seymour,** *c.* Jackson co., Indiana, U.S.A.; manuf.;
**Seyne,** or **La Seyne-sur-Mer,** *t.* nr. Toulon, dep. Var, France; shipbuilding; p. 25,200.
**Shabatz,** *t.* on R. Save, Serbia; old castle; exports fruit, cattle, coal, and pigs, principally to Hungary; p. 12,670.
**Shadrinsk,** *t.* on R. Iset, U.S.S.R.; corn trade; p. (with subs.) 18,500.
**Shaftesbury,** *mun. bor.* Dorset, Eng., 19 m. W.S.W. of Salisbury, p. *2,366.*
**Shahabad,** *dist.* Patna div., Bengal, India, area 4,365 sq. m., p. (nearly) 2,000,000; cap. and administrative hdqrs., Arrah; also t. in Hardoi dist., Oudh, p. 18,850; also t. in Ambala dist., Punjab, p. 10,750.
**Shahjahanpur,** *dist.* Rohilkhund div., United Provs., India, area 1,744 sq. m.; cap. S., t. on Dcoha, p. 71,778; also t. in Gwalior, India, 60 m. from Indore, p. 9,670.
**Shahpur,** *dist.* Rawalpindi div., Punjab, India, area 4,840 sq. m., p. 500,000; cap. S., t. nr. Jhelum, p. 6,570.
**Sháhrúd,** *R.* Irak Ajemi, Persia, joins the Kizil-Uzen; also t. in Sháhrúd-Bostám prov., Persia, nr. Astrabad, consid. tr., p. 10,120.
**Shamaka, Old,** *t.* in Soviet Baku, Transcaucasia, U.S.S.R., on trib. of the R. Pirsagat, p. 30,000.
**Shamokin,** *bor.* on Shamokin Creek, Northumberland co., Penn., U.S.A.; iron-mftg. centre in anthracite coal regn., p. 20,100.
**Shanghai,** spt. *c.* on Wu-sung R., prov. Kiang-Su, China, open to foreign tr., most impt. of the Chinese treaty ports, immense export silk and tea, estimated p. 1,538,500.
**Shang-i-Yuen,** *t.* nr. Ning-Po, Che-Kiang prov., China, large tr., p. 95,000.
**Shanhai-Kwan,** *t.* and *port,* with garrison, Chi-li prov., China, on rly. from Pekin to Manchuria and the Liaotung G., the limit of the Russian sphere of influence defined in treaty of 1899 with Great Brit.
**Shanklin,** *urb. dist.,* cst. *t.* nr. Ventnor, Isle of Wight, picturesque wat. pl., p. *5,071.*
**Shannon,** *R.* I.F.S., separating Connaught from provs. of Leinster and Munster, and flowing to Atlantic (254 m.) at Loophead.
**Shan-Si,** inld. and hilly *prov.* N. China, touching Mongolia, and bounded W. and S. by R. Hoang-Ho, area 81,830 sq. m., p. 9,420,000; cap. Tai-yuan.
**Shan States,** native *sts.* in Farther India, partly under Brit. rule in Burma, partly indepdt., and partly under Siamese domination. (*See* **Burma** and Siam.)
**Shan Tung,** maritime *prov.* China, on the G. of Pe-chi-li and the Yellow Sea, area 55,970 sq. m., p. 25,810,000; contains on the cst. the treaty port of Chifu, Wei-hai-wai (formerly leased to Britain), and Kiao-chau (the former German sphere of influence); cap. Tsi-nan, large inld. c. nr. the Hoang-Ho R.
**Shap,** *urb. dist.,* Westmorland, Eng., p. *1,227.*
**Shari,** *R.* of French Sudan, West Africa, flows from the S. (about 700 m.) in L. Tchad, navigable for greater part of course.
**Sharon,** *t.* Mercer co., Penn, U.S.A., ironwks., p. 26,200.
**Sharpsburg,** *t.* on R. Allegheny, Penn., U.S.A., in colly. dist., p. 8,600.
**Sha-si,** *c.* and river *port* on the Yangtse, prov. Hupch, China; open to foreign tr.; p. 105,000.
**Shat-el-Arab,** *R.* at head of Persian Gulf, Asia (120 m.), formed by union of Tigris and Euphrates.
**Sheboygan,** *c.* on L. Michigan, Wisconsin, U.S.A.; furniture manuf.; p. 40,250.
**Shechem,** or **Nablus** (*q.v.*), *c.* Palestine.
**Sheepshed,** industrl. *par.* nr. Loughborough, Leicsh., Eng., p. 5,550.
**Sheerness,** *urb. dist.,* ft. *spt.* and garrison *t.* Isle of Sheppey, Kent, Eng.; dockyard; p. *16,721.*

**Sheffield**, *co. bor.* and industrl. *c.* W.R. Yorks, Eng., on R.'s Sheaf and Don; gt. cutlery and steel manuf. centre; p. *511,742*. [p. 39,000.
**Shehr-i-Subz**, industrl. *t.* nr. Samarkand, U.S.S.R.
**Shelbyville**, *t.* on Big Blue R., Indiana, U.S.A.; mftg. centre in colly. and agr. regn.; p. 11,000.
**Shelf**, *urb. dist.*, industrl. *t.* nr. Halifax, W.R. Yorks, Eng., p. *2,600*.
**Shelley**, *urb. dist.*, mftg. *t.* nr. Huddersfield, W.R. Yorks, Eng., p. *1,566*.
**Shenandoah**, *t.* in Schuylkill co., Penn., U.S.A.; in anthracite coalfield; p. 21,500; also R. Virginia, U.S.A., trib. (200 m.) of R. Potomac.
**Shendamangalam**, *t.* in Salem dist., Madras Pres., India, p. 18,370.
**Shen-Si**, *prov.* N.W. China, W. of Hoang-Ho, R.; area 75,270 sq. m., p. 6,725,000; cap. Si-ngan.
**Shepherd's Bush**, residentl. *sub.* W. London, Eng.
**Shepley**, *urb. dist.*, nr. Huddersfield, W.R. Yorks, Eng., p. *1,668*. [bourne; p. (dist.) 7,714.
**Shepparton**, *t.* Victoria, 118 m. N.N.E. of Mel-
**Sheppey, Isle of**, N. est. Kent, Eng., at mth. of R. Thames; 9 m. long, 5 m. wide.
**Shepshed**, *urb. dist.*, Leic., Eng., p. *5,759*.
**Shepton Mallet**, *urb. dist.*, mkt. *t.* nr. Wells, E. Somerset, Eng., p. *4,108*.
**Sherborne**, *urb. dist.*, mkt. *t.* Dorset, Eng., p. *6,542*.
**Sherbrooke**, *c.* at conflu. of R.'s St. Francis and Magog, Quebec, Can.; woollen and cotton manuf.; p. 19,270. [p. *4,141*.
**Sheringham**, *urb. dist.* and *wat. pl.*, Norfolk, Eng.,
**Sherman**, *t.* in Grayson co., Texas, U.S.A.; tr. in locally produced cotton and corn; p. 15,750.
**Sherwood Forest**, anc. royal *woodland*, Notts., Eng.
**Shetland, or Zetland, Isls.**, Scotld., 50 m. N.E. of the Orkneys; about 100 in group, chf. isl. Mainland (*q.v.*); total area 551 sq. m., p. *21,410*: chf. *t.* Lerwick. [Red R.
**Sheyenne**, *R.* Dakota, U.S.A., trib. (325 m.) of
**Shields, North.** (*See* Tynemouth.) Shields, South, *co. bor.*, *spt.* co. Durham, Eng., in Parly. div. Jarrow; shipbuilding and colliery centre; p. *113,452*.
**Shifnal**, mkt. *t.* nr. Shrewbury, Shropsh., Eng., p. 3,700.
**Shikarpur**, *dist.* Sind, prov. Bombay, India, area 9,296 sq. m., p. 1,150,000; cap. S., *t.* on R. Indus, carpet manuf., large tr.; p. 53,944; also S., *t.* in Bulandshar dist., India, p. 11,025.
**Shikoku**, *isl.* Japan, S. of Honshiu, area, 7,031 sq. m., p. 3,000,000.
**Shildon**, *urb. dist.*, *t.* nr. Bishop Auckland, Durham, Eng.; rly. works; p. *12,690*.
**Shilka**, *R.* E. Siberia, trib. (760 m.) of R. Amur.
**Shillong**, *t.* Khasi Hills dist., Assam, Ind.; cantonment for battalion of Ghurkas; p. 7,720.
**Shiloh**, *place* in Hardin co., Tennessee, U.S.A.; great battle of American Civil War, 1862, Confederates defeated by Grant; General Johnstone slain.
**Shimiyu**, *R.* Africa, headstream of R. Nile, flows 300 m. to L. Victoria Nyanza. [p. 67,866.
**Shimonoseki**, *spt.* S.W. point Honshiu Isl., Japan,
**Shing-King**, China. (*See* Liao-Tung.)
**Shin, Loch**, Sutherland, Scotl., 16½ m. long, discharged by R. Shin to the Oktell.
**Shipka Pass**, over the Balkans, 47 m. N.E. of Philippopolis; held by Russns. against Suleiman Pasha in the Turkish War, 1877.
**Shipley**, *urb. dist.*, worsted mftg. *t.* on **R.** Aire, 3 m. W. Bradford, W.R. Yorks, Eng., p. *30,243*.
**Shippensburg**, *t.* Penn., U.S.A., in Cumberland co.; industrl.; p. 4,300. [4,720.
**Shipston-on-Stour**, mkt. *t.* Worcestersh., Eng., p.
**Shiraz**, *c.* cap. Farsistan prov., Persia, beautifully sitd. in wine-growg. dist.; p. 50,000.
**Shire**, *R.* of Africa, flows (380 m.) from L. Nyassa to R. Zambesi; on it are the famous Murchison Falls, up to which the R. is navigable.
**Shirley**, *t.* Hants, Eng., adjng. Southampton, on N.W., p. 8,840.
**Shirwa, or Chilwah**, shallow L. nr. Nyassa, and E. of Shiré R., Africa, 40 m. long, 14 m. wide; has 4 isls. [1,500,000; cap. Licheh.
**Shoa**, southern *state* Abyssinia, S.E. Amhara, p.
**Shoalhaven**, *R.* of N.S.W., flows 260 m. to the Pacific.
**Shoeburyness**, *urb. dist.*, on N. side of Thames estuary, Essex cst., Eng.; artillery ranges; p. *6,717*.
**Sholapur**, *dist.*, Deccan div., Bombay, Brit. India, area 4,542 sq. m.; agr. (with cotton manuf. at Barsi, nr. the Nizam's Dominions); p. 720,000; cap. S., *t.* 164 m. S.E. of Poona; large bazaar, temples, etc.; p. 61,345.
**Shoreditch**, *met. bor.* Middlesex, Eng., in E. London; industrl.; p. *97,038*.
**Shoreham**, *urb. dist.*, *wat. pl.* W. of Brighton, Sussex, Eng.; an old spt. and market *t.*, p. *3,757*.
**Shorncliffe**, military *encampment*, Kent, Eng.
**Short Heath**, *urb. dist.*, industrl. *t.* nr. Wolverhampton, Staffs, Eng., p. *5,048*.
**Shoshonee Falls**, on Snake R., Idaho, U.S.A., alt. 200 ft.
**Shotts**, mining *par.* nr. Glasgow, Lanarksh., Scotl., p. *20,537*.
**Shreveport**, *c.* Caddo co., Louisiana, U.S.A.; mftg. centre in cotton-growg. dist.; p. 80,000.
**Shrewsbury**, *mun. bor.* Shropsh., Eng., on R. Severn; fine churches, Shire Hall, Guildhall, etc., good local tr.; p. *32,370*.
**Shropshire**, or **Salop**, N.W. midland co., Eng., bordering on Wales; area 1,343 sq. m.; fine pastoral country with hills and woodland, agr. and dairying, mining and manufs.; p. *244,162*; cap. Shrewsbury.
**Shumla**, fortfd. *t.* Bulgaria, 60 m. S.E. Rustchuk; slipper and cloth manuf., occupied by Russns. 1878; p. 24,030.
**Shusha**, industrl. *t.* U.S.S.R. Transcaucasia, 87 m. S.S.E. of Elizabethpol; silk-weaving and leather manuf.; p. 29,200. [p. 21,780.
**Shuster**, *t.* in Khuzistan, Persia, nr. Dezful;
**Sialkot**, *dist.* Rawalpindi div., Punjab, India, area 1,991 sq. m., p. 1,165,000; cap. S., *t.* 72 m. N.E. of Lahore; paper, cotton-cloth, and shawledging manuf., military cantonment; p. 64,869.
**Siam**, *ctry.* Indo-Chinese Penins., betwn. Lower Burma and the Shan States, the Malay Penins., Cambodia and Annam; area 198,900 sq. m.; princ. product rice; p. 8,500,000; cap. Bangkok (*q.v.*).
**Siberia**, U.S.S.R., from the Ural Mtns. to Sea of Okhotsk and Behring Strait, washed by the Arctic on the N., and bounded S. by Mongolia and Turkestan, area 4,210,420 sq. m., p. (est.) 9,257,820; climate mostly severe; chf. *t.*'s Tomsk (cap. W.S.) and Irkutsk (cap. S.S.).
**Sibonga**, *t.* in Zebu, one of the Philippine Isls., p. 23,300.
**Sibpur**, *t.* Bengal, India, subn. to Howrah (*q.v.*).
**Sicily**, the largest *isl.* of the Mediterranean, former Kingdom and pres. compartment of Italy, area 9,935 sq. m., produces corn, oranges, olives, silk, sulphur, and salt; beautiful climate, elevated and mtnous., highest pt. the volcano Mt. Etna (*q.v.*), p. 3,793,470; chf. *t.*'s Palermo, Catania, Messina, all of which see.
**Sidcup**, *urb. dist.*, and *res. dist.* Kent, Eng., 13 m. S.E. London, p. *12,360*.
**Sidlaw Hills**, low *mtn. range* Perthsh. and Forfarsh., Scotl.
**Sidmouth**, *urb. dist.*, *mkt. t.* and *wat. pl.* nr. Exeter, Devon, Eng., at mth. of R. Sid, p. *6,126*.
**Sidney**, *c.* on R. Miami, Ohio, U.S.A., industrl., p. 9,375.
**Sidon.** (*See* Saida.)
**Siegburg**, *t.* on R. Sieg, Bonn dist., Rhenish Pruss., tobacco and other factories, p. 17,220.
**Siegen**, *t.* on R. Sieg, nr. Cologne, Westphalia, Pruss., iron-mining and smelting, p. 25,030.
**Siemret**, *prov.* Siam, at N. end of Lake of Cambodia, grows poor rice, and has a p. of only 10,000, and a chf. *t.* with but 2,000 inhabs.
**Siena, or Sienna**, *t.* in Tuscany, 61 m. S. of Florence, many fine bldgs., university, cathedl., Palazzo, famous in development of architecture, industrl., p. 42,428.
**Siero**, *t.* Oviedo prov., Spain, in agr., live-stock raisg. and colly. dist., p. 25,000.
**Sierra Leone**, Brit. *col.* W. cst. of Afr., area 4,000 sq. m., p. 75,572, cap. Freetown or St. George (*q.v.*).
**Sierra Morena**, *mtn. range* Spain, betwn. Guadalquivir and Guadiana basins, highest point, 5,500 ft.
**Sierra Nevada**, *mtn. range*, prov. Granada, Spain, highest summit, Mulhacen (*q.v.*); also mtn. chain, California, U.S.A., highest pk. Mt. Whitney, alt. 14,898 ft.
**Sikkim**, protected *st.* in the E. Himalayas, India, adjng. Tibet, Nepaul, and Bhutan, area 2,818 sq. m.; has dense forests, with rich flora and Orchidaceæ, but grows rice and Indian corn in the clearances; p. 87,920; ch. *t.* Tumlong.

**Silchester,** *par.* Hants, Eng., betwn. Basingstoke and Reading; many int. Roman remains.

**Silesia,** former *prov.* Prussa., now partly in Poland, area 15,566 sq. m.; rich in coal and iron, p. 5,250,000, cap. Breslau.

**Silesia,** formerly a crown ld. and duchy of cis-Leithan part of Austria-Hungary, now in Czecho-Slovakia, area 1,707 sq. m., p. 670,937; collieries and dairy-farming with flourishg. mftg. industries.

**Silistria,** fortfd. *t.* on R. Danube, Bulgaria, below Rustchuk; mftg. centre in vineyd. dist., p. 13,120.

**Silloth,** *coat. pl.* on Solway Firth, Cumberland, Eng., p. 2,480.

**Silsden,** *urb. dist.*, industrl. *t.* nr. Keighley, W.R. Yorks, Eng., p. *4,881.*

**Silvertown,** industrl. riverside *dist.* on Thames, co. Essex, Eng., in West Ham par.

**Simbirsk,** old govt. U.S.S.R. along right bk. of Middle Volga, area 19,110 sq. m.; minl. and agr., p. nearly 2,000,000, mainly peasantry. Cap. S., *t.* lying betwn. the R.'s Volga and Sviaga; large tr., with famous horse fair.

**Simcoe, Lake,** N. of L. Ontario, Can., 30 m. by 18 m., discharges by R. Severn to Georgian Bay, L. Huron.

**Simferopol,** *t.* in Crimea, U.S.S.R., on R. Salghir, nr. Sebastopol, p. 30,760.

**Simla,** *dist.* Delhi div. Punjab, India, area 102 sq. m., p. 41,000; cap. S., t. (alt. 7,075 ft. above sea), with sanatorium; p. 15,000 (doubled in summer).

**Simla Hill States,** a collectn. of 23 nat. Indian *sts.* surroundg. the sanatorium of Simla, area 6,569 sq. m., p. 560,000.

**Simon's Bay,** C. of Good Hope, S. Afr.; on W. side of Cape of Good Hope; has govt. arsenals and extensive dockyards; Simon's Town, on the Bay, is 20 m. by rail from Cape Town; p. (of t.) *2,171* (whites).

**Simplon,** *mtn.* Switzerld., alt. 11,605 ft.; the pass over the Simplon (alt. 6,594 ft.) from Dromo d'Ossola, Italy, to Brieg in the Rhône val., was originally made by Napoleon I. The Simplon ry. tunnel leads from Visp on the Swiss side to the val. of the Po at Iselle on the Italian.

**Sinai,** *peninsula* betwn. G.'s of Akabah and Suez, at hd. of Red S.; area 11,055 sq. m., mainly desert; Mt. Sinai (the Arab Tebel Musa, or "Mt. of Moses"), called also Horeb, is one of numerous mtns. on the penins.; alt. 7,363 ft.

**Sinaloa,** or **Cinaloa,** *st.* Mexico, on G. of California; area 27,557 sq. m.; agr. and mining, rich in gold, silver, copper, iron, and lead; p. 330,000.

**Sind,** or **Scinde,** *div.* of Bombay Pres., India; formerly part of the Mogul Empire; area 46,986 sq. m., p. 3,278,493. Admin. hdqrs. at Karachi, sprt. for the Indus val. (*q.v.*).

**Singapore,** Brit. *isl.* at S. end Malay Penin., part of the Crown Col. of the Straits Settlements; strongly fort.; area 217 sq. m., p. 423,768.

**Singbhum,** *dist.* Chota, Nagpur div., Bengal, India; area 3,375 sq. m., p. 562,000; admin. hdqrs. Chaibassa.

**Sing Sing,** former name of the prison *vil.* of Ossining, Westchester co., New York, U.S.A.

**Sinope,** Turkish *t.* in Kastamuni vilayet, Asia Minor, on Black Sea, p. 9,260.

**Sion,** *cap.* Valais cant. on R. Rhône, built on two castled hills; cathedl., p. 6,300.

**Sioux City,** on Missouri R., Woodbury co., Iowa, U.S.A., meat-packing and various manufs., p. 80,000.

**Sioux Falls,** *t.* on Big Sioux R., Dakota, U.S.A., in rich wheat regn., p. 25,176.

**Sirajganj,** *t.* on R. Jumna, Pabna dist., Bengal, gt. jute mart, p. 27,000.

**Sirmur** or **Sirmoor,** nat. hill *st.*, Punjab, India, W. of the Jumna, area 1,108 sq. m., betwn. Simla and Mussoorie on the lower Himalayas, p. 141,000; chf. t. S. (or Nahan), 40 m. S. of Simla, palace of the Raja, p. 5,600.

**Sirsa,** *t.* Hissar dist., Punjab, India, hdqrs. *t.* of now absorbed dist. Sirsa, active tr. centre for Rajputana, p. 17,790.

**Sistova** or **Shistab,** industrl. *t.* on R. Danube, Bulgaria, nr. Simnitza, p. 12,110.

**Sitapur,** *div.* in United Provs., India, comprising Sitapur (area 2,251 sq. m.), Kheri and Hardoi dists., area 7,555 sq. m., p. 3,001,000; cap. S., t. on R. Sarayan, has milit. cantonmt., p. 25,670.

**Sitka,** formly. Novo Archangelsk, *t.* of S.E. Alaska, on Baranof Is., in Sitka Sound, chf. pt. of former Russn. America; gold mines and extinct volcano Mt. Edgecumbe near, p. 1,175.

**Sittingbourne,** *urb. dist.*, mkt. *t.* on Milton Creek, nr. Canterbury, Kent, Eng., paper mills and brickwks., p. 9,339. [m. S. of Cairo, p. 51,431.

**Siut** or **Assiout,** *t.* on l. bank R. Nile, Egypt, 227

**Sivaganga,** *t.* in Madura dist., Madras, India, industrl., p. 8,970.

**Sivas,** Turkish *vilayet,* Asia Minor, area 32,300 sq. m.; rich in minerals, has minl. springs, with fertile grain-growg. soil, fine orchds. and vineyds., besides timber forests, p. over 1,000,000; cap. S., t. in the Kizil Irmak valley; p. 45,000, three-fourths Moslems. [U.S.S.R.

**Sivash,** or **Putrid Sea,** lagoon on E. side of Crimea.

**Sivri-Hissar,** *t.* in Angora vilayet, Asia Minor, p. 11,780.

**Skager Rack,** arm of N. Sea, giving access to the Cattegat, between Norway and Jutland, 70–90 m. wide. [Denmark.

**Skaw, The,** or **Cape Skaw,** at extreme N. of

**Skegness,** *urb. dist., wat. pl.* on coast of Lincolnsh., Eng., p. *9,121.* [Yorks, Eng., p. *3,711.*

**Skelmanthorpe,** *urb. dist.*, nr. Huddersfield, W.R.

**Skelmersdale,** *urb. dist., t.* nr. Ormskirk, Lancs, Eng.; industrl.; p. *6,177.* [p. *13,654.*

**Skelton and Brotton,** *urb. dist.*, N.R. Yorks, Eng.,

**Skibbereen,** mkt. and *spt. t.* co. Cork, I.F.S., p. 3,640. [thwaite L., alt. 3,054 ft.

**Skiddaw,** *mtn.* Cumberland, Eng., E. of Bassen-

**Skien,** *spt.* on R. Skien, co. Bratsberg, Norway; saw-mills, ice, and timber trade; p. 16,503.

**Skipton-in-Craven,** *urb. dist., t.* on R. Aire, W.R. Yorks, Eng.; woollen factories, p. *12,434.*

**Skopin,** *t.* U.S.S.R.; corn, cattle, oil, and salt trade; flour mills; p. 16,740.

**Skowhegan,** *t.* on R. Kennebec, Maine, U.S.A.; manuf.; p. 5,981.

**Skye,** largest of the Inner Hebrides, Inverness-sh., Scotl.; area 547 sq. m.; sheep-farming and fisheries; p. 14,780. Only town, Portree (*q.v.*).

**Slagelse,** old *t.* on isl. Zealand, Denmark; p. 10,020.

**Slaithwaite,** *urb. dist.*, mkt. *t.* W.R. Yorks, nr. Huddersfield, Eng., p. *5,181.*

**Slatina,** *t.* on R. Olt, Rumania, 87 m. W. of Bucharest; anc. churches; p. 8,340.

**Slave Coast,** portion of Guinea coast, W. Africa, bordering on the Bight of Benin; divided between Britain and France.

**Slavonia,** or **Sclavonia,** formerly a Crown land (with Croatia) of Hungary, now Jugo-Slavia, area 8,987 sq. m., p. 1,250,000. Cap. Eszek (*q.v.*).

**Sleaford,** *urb. dist.*, mkt. *t.* Lincolnsh., Eng., p. *7,024.* [p. 10,120.

**Sliedrecht,** *t.* on R. Meuse, S. Holland; industrl.;

**Slieve Bloom,** *hill range,* King's and Queen's co.'s, Irel.; highest summit, 1,733 ft.

**Slieve Donard,** *mtn.* N. Irel., highest of the Mourne Mtns., co. Down, alt. 2,796 ft.

**Sligo,** coast *co.* I.F.S., Connaught prov.; area 737 sq. m., pasture, tillage, barren mtn., and turf; p. 78,750 (much declined). Co. *t.* S., on Sligo Bay; fisheries; p. 11,260.

**Sliven,** or **Slivno,** *t.* nr. the "Iron Gate" mtn. defile, Eastern Roumelia, Bulgaria; famous for black wine; p. 25,630.

**Slough,** *urb. dist.*, mkt. *t.* nr. Windsor, Bucks, Eng., nr. Burnham Beeches, and comprising pt. of par. of Stoke Poges (the village of Gray's famous "Elegy"), p. *33,530.*

**Sluis,** or **Sluys,** *vil.* in Zealand, nr. Bruges, p. 1,820.

**Small Heath,** industrl. *t.* adjoining Birmingham, Warwickshire, Eng.; hardware manuf.; p. 13,220. [Eng.; pottery; p. 14,019.

**Smallthorne,** *urb. dist. t.* nr. Burslem, Staffs.,

**Smethwick,** *co. bor.* and mftg. *t.* Staffs, Eng., N.W. sub. of Birmingham, p. *84,354.*

**Smichow,** *t.* on R. Moldau, Bohemia; manuf.; connected by bridge with Prague; p. 54,870.

**Smith Sound,** leads from Baffin Bay N. to Arctic Ocean. [and Kansas, U.S.A.

**Smoky Hill,** *R.* trib. (400 m.) Kansas R., Colorado,

**Smolensk,** old govt. U.S.S.R., lying E. of Moscow, area 21,638 sq. m.; forest, arable, and pasture; p. 1,975,000, mainly peasants; cap. S., *c.* on both banks of R. Dnieper; p. 51,000.

**Smyrna,** *c.* at head of Gulf of S., Asia Minor, exports figs, raisins, tobacco, carpets, rugs, etc. A very anc. and historic *c.*, and the chief commercial centre of the Levant; p. 349,000 (one-half Greek).

**Snae Fell,** highest *mtn.* in I. of Man, alt. 2,034 ft.
**Snaith,** mkt. *t.* W.R. Yorks, nr. Goole, on R. Aire, p. 4,579.
**Snake R.,** or **Lewis Fork,** trib. of Columbia R., flows 1,050 m. from Wyoming to Washington, U.S.A.
**Sneehaetten,** *mtn.*, highest Dovrefield range, Norway alt. 7,565 ft. [dustrial; p. 13,260.
**Sneek,** *t.* Friesland, Holland, nr. Leeuwarden; in-
**Sneeuwbergen,** *mtn. range,* C. of Good Hope, S. Afr., highest Compassberg, 8,500 ft.
**Sniatyn,** *t.* on R. Pruth, Galicia, Ukraine; tanning, horse and cattle fairs; p. 12,120.
**Snizort, Loch,** arm of sea (14 m. long), coast of Isle of Skye, Scotl.
**Snowdon,** *mtn.* nr. Carnarvon, Wales (highest in Eng. and W.), alt. 3,571 ft.
**Society Isls.,** *arch.* on S. Pacific, betwn. the Low Arch. and the Friendly Isls., under French protectn.; the chief are Tahiti (or Otaheite, *q.v.*) and Moorea; total area 600 sq. m., p. 11,691.
**Socorro,** *t.* Boyaca st., Colombia, p. 10,100.
**Socotra,** Brit. *isl.* in Indian Oc., S. of Arabia, and E. of Cape Guardafui; area 1,382 sq. m., prod. aloes and dragon's blood, p. 12,000.
**Söderhamn,** *spt.* on Dal-elf, nr. the Gulf of Bothnia, Sweden; timber tr., p. 11,262.
**Södermanland,** *prov.* Sweden, E. of Svealand and S.W. of Stockholm; area 2,631 sq. m., p. 190,473. [Isl., naval arsenal, p. 130,200.
**Soerabaya,** fortfd. *t.* on N. cst. Java, opp. Madura
**Soerakarta,** or **Solo,** *t.* in Java (nr. centre of isl.).
**Sofala,** *dist.* Mozambique, Portuguese E. Africa, N. of Inhambane; by some identified with the "Land of Ophir" of the Bible; cap. S., at mtn. of S. R., formerly a flourishg. commcl. place, p. 1,750.
**Sofia,** fortfd. *t.* on R. Isker, cap. Bulgaria, the anc. Sardica, and the Triaditza of the Byzantine Greeks, p. 154,430 (one-sixth Jews).
**Soignies,** industrl. *t.* on R. Senne, nr. Brussels, Belgium, p. 10,530.
**Soissons,** fortfd. *t.* nr. Laon, dep. Aisne, France; cathedl., ruined abbey; old Frankish cap., often besieged; industrl. and tr. in agr. produce, p. 13,600.
**Sokoto,** native *st.* of centrl. Sudan, betwn. Bornu and Ganda; area 173,000 sq. m., p. (est.) 8,000,000; now included in Brit. protectorate of Northern Nigeria.
**Sokotra.** (*See* Socotra.)
**Solent, The,** *channel* separatg. N. cst. of Isle of Wight from the Hants mainland, Eng., from W. Cowes to the Needles.
**Soleure,** *cant.* N. Switzld.; area 305 sq. m., arable, pastoral, and afforested; p. 130,617; cap. S., t. on R. Aar, p. 13,065.
**Solferino,** *vil.* nr. Mantua, N. Italy, battle 1859.
**Solihull,** mkt. *t.* nr. Birmingham, Warwicksh., Eng., p. 3,500. [centre of Germy., p. 51,050.
**Solingen,** *t.* nr. Cologne, Rhenish Fruss., cutlery
**Solola,** *t.* on L. Atitlan, Guatemala; cloth and pottery manuf.; p. 12,350.
**Solomon Isls.,** an archipelago in the W. Pacific, abt. 500 m. E. of New Guinea. [Flores, p. 15,000.
**Solor Isls.,** grp. of 4 *isls.* in Malay Arch., E. of
**Solway Firth,** *arm* of Irish S. (40 m. long), betwn. Dumfriessh., Kirkcudbright, Scotl., and Cumberland.
**Somaliland,** "the Eastern Horn of Africa," betwn. C. Guardafui and Strait of Bab-el-Mandeb, S. of the Equator; Brit. Somaliland (or the Somali Coast Protectorate) stretches along the Gulf of Aden; area 68,000 sq. m.; cap. Berbera. The Italian Protectorate in Somaliland embraces about 70,000 sq. m. of territory (including Gallaland) extndg. from the Juba R. northwd. to C. Guardafui along the coast, and bounded W. by Kenya Colony; French Somaliland, on the G. of Aden at the entce. to the Red S., is 40 m. long and about 125 m. wide.

st, S.W. cst. *co.* Eng., bounded inland by

p. *475,120*; impt. fisheries. Co. *t.* Bath (*q.v.*).
**Somerset, East,** *t.* C. of Good Hope, S. Afr., 80 m. W. Graham's Town, p. *2,324*.
**Somersworth,** mftg. *t.* on Salmon Falls R., Strafford co., New Hampshire, U.S.A., p. 5,500.
**Somerville,** *c.* on R. Mystic, subn. to Boston, Mass., U.S.A.; varied manufs.; p. 104,500.
**Somme,** cst. *dep.* N. France, area 2,443 sq. m.; mainly agr. with thriving textile industries; p. 452,624; cap. Amiens (*q.v.*). The R. Somme flows 116 m. in deps. Aisne and Somme to Eng. Channel.
**Sommen, Lake,** of Sweden (25 m. by 8 m.), 15 *m.* E. of L. Wetter.
**Sommerfeld,** *t.* Brandenburg, Pruss., on R. Lubis; cloth mftg.; p. 12,670.
**Sonderburg,** *spt.* and *wat. pl.* on cst. isl. Alsen, Schleswig-Holstein, Pruss.; castle (latterly mil. barracks); p. 5,950.
**Sondershausen.** (*See* Schwarzburg-Sondershausen.)
**Sondrio,** *prov.* Lombardy, Italy, on frontiers Tyrol and Switzld.; area 1,233 sq. m., p. 135,133; cap. S., t. on R. Adda, amongst Southn. Alps and nr. L. Como; silk industries; p. 9,021.
**Sonora,** *st.* Mexico, on G. of California, area 76,633 sq. m., agr., cotton, fruit, and tobacco growg., silver mining, p. 275,107. Cap. Hermosillo.
**Soochow,** or **Suchau,** *c.* cap. prov. Kiangsu, China, treaty port, silk weaving industry, and silk fabric export, p. 1,027,091.
**Soothill,** industrl. *twnshp.* adjng. Dewsbury, W.R. Yorks, Eng., p. 13,010. [Oedenburg.)
**Sopron, Soprony,** or **Oedenburg,** Hungary. (*See*
**Sorata,** *t.* 57 m. W. La Paz, Bolivia, p. 16,210, nr. are 2 pks. of the Andes, also called S., alt. 22,286 ft. and 21,043 ft.
**Sorau,** or **Zorowe,** *t.* on R. Sorebach, Pruss., nr. the Silesian frontier, cloth and linen weavg., p. 16,350.
**Soria,** *prov.* of Old Castile, Spain, area 3,983 sq. m., p. 157,547, agr. and cattle rearg., with cheese, timber, wool, and salt export. Cap. S., *t.* on R. Douro, walls and old castle, p. 7,220.
**Soroki,** or **Soroka,** *t.* on R. Dniester, gov. Bessarabia, Rum., tr. in wine, corn, cattle, wool, and fruit, ruined Genoese castle, relique of former coll. Olhionia, p. 16,350 (half Jews).
**Sorrento,** cst. *t.* nr. S. extrem. G. of Naples, Italy, fav. wat. pl. ancly. celebrated for its fine wines, p. 8,570.
**Soudan,** extensive regn. Africa, reachg. from Senegambia and the Atlantic to Abyssinia and the Red S., and from Sahara and Nubia, N., to the Congo and Guinea, S. The Egyptian Soudan stretches from the frontier of Egypt proper to L. Albert Nyanza N. and S., and from the Red S. and Abyssinia to Wadai E. and W.; area over 900,000 sq. m., and p. 3,400,000.
**Sound, The,** *channel* between the Cattegat and the Baltic, 3 m. across at narrowest p. from Denmark to the Zealand cst.
**South Africa.** (*See* Brit. S. Afr.)
**Southall and Norwood,** *urb. dist.*, Mx., Eng., 9½ m. W. London; industrl. and residtl., p. *38,932*.
**Southam,** mkt. *t.* nr. Warwick, Eng., p. 1,830.
**South Amboy,** spt. *bor.* on Raritan Bay, New Jersey, U.S.A.; asphalt works; p. 8,500.
**Southampton,** *co. bor., spt.* on Southampton Water, Hants, Eng., stn. for mail stmrs., Indian and Col.; fine docks (includg. largest dry dock in the world); p. *176,025*.
**South Australia,** *st.* of the Australian Commonwealth; between West Australia and Queensland, New S. Wales, and Victoria; area 380,070 sq. m., mainly undulating or level; productive of great wheat crops, some gold, lead and copper; exports corn, wool, and mutton; p. 539,000; cap. Adelaide.
**South Bend,** *c.* on St. Joseph R., Indiana, U.S.A.; agr. implement. manuf. and waggon bldg.; p. 107,500.
**South Bethlehem,** *t.* on Lehigh R., Penn., U.S.A.; ironworks and ordnance factories; p. 14,850. Seat of Lehigh University.
**Southborough,** *urb. dist.*, residtl. *t.* nr. Tunbridge Wells, Kent, Eng., p. *7,352*.
**South Brabant,** *prov.* Belgium. (*See* Brabant.)
**Southbridge,** mftg. *t.* Worcester co., on border of Connecticut, Mass., U.S.A., p. 14,275.
**South Carolina,** U.S.A., one of the original *sts.* of the Union, situate betwn. Georgia and N. Carolina on the Atlantic cst.; area 30,495 sq. m.; gt. cotton, rice, and tobacco output; p. 1,902,000; cap. Columbia; chf. pt. Charleston (*q.v.*).
**South Crosland,** *urb. dist.*, *t.* in W.R. Yorks, Eng., nr. Huddersfield; industrl.; p. *2,993*.
**South Dakota,** N.W. *st.* of the U.S.A., betwn. N. Dakota and Nebraska; area 76,868 sq. m., wheat-growing; p. 717,000. Cap. Pierre.

**South Darley,** *urb. dist.*, Derby, Eng., p. *731.*
**South Downs,** range chalk *hills*, Sussex and Hants, Eng.; splendid pasturage.
**Southend-on-Sea,** *co. bor.*, *wat. pl.* Essex, Eng., N. side of Thames estuary, opp. Sheerness; p. *120,093.*
**Southern Alps,** centl. pt. dividing *range*, S. isl. New Zeald.; highest pk., Mt. Cook (*q.v.*).
**Southgate,** *urb. dist.*, nr. Barnet, Middlesex, Eng.; residentl., p. *55,570.*
**South Georgia,** Brit. isl. of S. Atlantic Oc. (attached to Falkaind Isls. 900 m. away), area 1,570 sq. m., mountainous, peaks (6,000 to 8,000 ft.) snow-covered, p. 2,000.
**South Gosforth,** *t.* subn. to Newcastle, Northumberland, Eng.; p. 6,816.
**South Hadley Falls,** *vil.* on Connecticut R., Mass., U.S.A.; p. 6,900.
**South Holland,** *prov.* Netherlands on North Sea; area 1,131 sq. m., flat and intersected by streams and dykes; p. 1,670,170; cap. The Hague.
**Southington,** *t.* on Quinnipiac R., Hartford co., Connecticut, U.S.A.; cutlery and metal manuf., p. 5,150.
**South Kensington,** *dist.* Middlesex co., in W. London; contains S. K. Museum, the Nat. Hist. collectn. of the Brit. Museum, the Imperial Institute, etc.
**South Kingston,** *t.* Rhode Isl., U.S.A., p. 5,181.
**South Maratha Jagirs,** grp. of 10 nat. *sts.*, Kolapur Agency, Bombay, India; area 2,734 sq. m., p. 540,000. [Eng., p. *2,831.*
**South Molton,** *mun. bor.* nr. Barnstaple, Devon.
**South Norwalk,** *c.* at mth of R. Norwalk, Fairfield co., Connecticut, U.S.A.; residtl., fine villas, p. 7,250.
**South Omaha,** *c.* on R. Missouri, Douglas co., Nebraska, U.S.A.; gt. rlwy. and meat-packing centre, p. 33,500.
**South Orange,** *t.* on R. Rahway, Essex co., New Jersey, U.S.A.; beautifully sit. at ft. of Orange mtn.; residtl., p. 14,250.
**Southowram,** *urb. dist.*, industrl. *t.* adjng. Halifax, W.R. Yorks, Eng., p. *2,570.*
**Southport,** *co. bor.* and pop. cst. *wat. pl.*, S.W. Lancash., Eng., on the Irish Sea, p. *73,927*; also wat. pl. nr. Brisbane, Queensland.
**South Portland,** *c.* on P. Harbr., Cumberland co., Maine, U.S.A., p. 14,250.
**Southsea,** *dist.* S. of Portsmouth, Hants (*q.v.*); marine resort. [Horn.
**South Shetland,** *arch.* in S. Atlantic, 600 m. S. Cape
**South Shields.** (*See* Shields.)
**Southwark,** *met. bor.* Surrey, Eng., S. of Thames opp. London City; wharves, warehouses, etc.; p. *171,657.*
**Southwell,** mkt. *t.* Notts, nr. Newark, Eng.; cathedral, lace and silk, p. 3,330.
**South-West Africa,** German, comprised Damaraland and Namaqualand, now under Union of South Africa Mandate.
**Southwick,** *urb. dist.*, W. Suss., Eng., p. *6,138.*
**Southwick-on-Wear,** *urb. dist.*, Durham, Eng., p. 14,642.
**Southwold,** *mun. bor.* and *wat. pl.* nr. Lowestoft, Suffolk, Eng.; shrimp, sprat, and herring fishy., p. *2,753.*
**Sowerby,** *urb. dist.*, industrl. *t.* nr. Halifax, W.R. Yorks, Eng., on R. Calder; adjoins Sowerby Bridge; p. *14,679.* [p. *3,057.*
**Soyland,** *urb. dist.*, *t.* nr. Halifax, W.R. Yorks, Eng.
**Soah,** *R.* Ukraine, trib. (240 m.) of R. Dnieper.
**Spa,** *wat. pl.* nr. Liége, Belgium; picturesquely sit. amid wooded hills, res. p. 8,400; has Casino, visited by 17,000 persons annually during the season.
**Spain,** at present *republic* of the Iberian Penin., S.W. Europe, area 194,783 sq. m., bordering on B. of Biscay, the Atlantic, and the Mediterranean; mountainous and well watered, with rich agr., grazing and vineyd. dists., also consid. mini. wealth, manuf. and fisheries impt., commerce gt., p. 20,783,844; cap. Madrid.
**Spalato,** or **Spalatro,** *c.* of Dalmatia, Jugo-Slav., on the Adriatic; large shipping and genl. tr., p. 30,000.
**Spalding,** *urb. dist.*, mkt. *t.* on R. Welland, Lincolnsh., Eng., p. *12,592.*
**Spandau,** *t.* at conflu. R.'s Havel and Spree, Pruss; gt. military centre, with school of musketry, and Red Tower containg. war chests, p. 71,010.
**Spanish Town, Jamaica,** 10 m. W. of Kingston, on R. Cobra, p. 7,119.
**Sparta,** famous anc. *c.* of Laconia, in the Morea, Greece, on the R. Eurotas; flourished from the 9th cent. B.C. to 146 B.C., when it passed under Roman rule; also name of 25 places in U.S.A., the most considerable being a c. of Wisconsin, on the La Crosse R., in Monroe co., p. 5,000.
**Spartanburg,** *vil.* S. Carolina, U.S.A., cap. S. co., p. 29,200.
**Spartel, Cape,** N.W. extrem. Afr., at entce. to Strait of Gibraltar, Morocco. [*30,962.*
**Spenborough,** *urb. dist.*, W.R. Yorks, Eng., p.
**Spencer,** *t.* Worcester co., centl. Mass., U.S.A.; shoemkg., wire-drawg., p. 6,300.
**Spencer Gulf,** *bay* of S. Australia, 185 m. by 47 m.
**Spennymoor,** *urb. dist.*, mftg. *t.* co. Durham, Eng., nr. Bishop Auckland, p. *16,361.*
**Spey,** *R.* Inverness, Elgin and Banff (the most rapid in Scotl.), flows 107 m. to Moray Firth.
**Speyer,** or **Spires,** *c.* cap. Rhenish Bavaria, on R. Rhine; fine cathedral; its famous Diet of 1529 condemning the Reformation gave rise to the term "Protestant"; p. 23,326.
**Spezia,** cst. *t.* Liguria, Italy, on B. of Spezia; arsenal, docks, and maritime industries; p. (commune) 65,750. [also spt. on same, p. 6,550.
**Spezzia,** *isl.* off S. cst. Argolis, Greece, 5 m. long;
**Spice Isls.** (*See* Moluccas.) [11,720.
**Spinazzola,** *t.* nr.. Minervino, prov. Bari, Italy, p.
**Spitalfields,** *par.* of Tower Hamlets, E. London, Eng., formerly a great silk-wvg. centre.
**Spithead,** *roadstead* Portsmouth Harbr., Hants, Eng.; also channel betwn. N.E. cst. Isle of Wight and mainland.
**Spitzbergen,** *isl.* grp. in Arctic Oc., betwn. Nova Zembla and Greenland; area abt. 28,000 sq. m., thinly inhabited, belonging to Norway.
**Splugen Pass,** Rhætian Alps, betwn. Lombardy and Grisons, Switzld., alt. 6,939 *ft.*
**Spokane,** *R.* Idaho, U.S.A., flows (120 m.) to the Columbia at Washington; also *t.* on R. S., Washington, at the fall; gt. timber tr. and many manuf.; p. 116,600.
**Spoleto,** *t.* nr. Terni, Perguia, Italy; truffle industry, old citadel, p. 8,340.
**Sporades,** *isls.* of the Grecian Arch. in the Ægean and neighbouring seas, belonging to Greece, including Samos, Cos, etc.; see sep. entries.
**Spree,** *R.* Saxony and Brandenburg, Pruss., flowing 227 m. past Berlin to the Havel at Spandau.
**Spremberg,** *t.* on R. Spree, Brandenburg, Pruss., 78 m. from Berlin; cloth manuf., p. 11,950.
**Springfield,** *c.* on R. Connecticut, Hampden co., Mass., U.S.A., many manuf., p. 152,000; also c. on Sangamon R., Illinois, U.S.A., gt. ry. centre, p. 73,000; also c. on R. Mad, Ohio, U.S.A., agr. implt. manuf., p. 69,500; also c. of Greene co., Missouri, U.S.A., flour milling, has Congregational college; p. 59,300.
**Springhead,** *urb. dist.*, W.R. Yorks, Eng., p. *4,833.*
**Spring Valley,** *c.* in colliery region, Bureau co., Illinois, U.S.A., p. 5,000. [Humber estuary.
**Spurn Head,** *C.* N.E. Yorks, Eng., at mth. of
**Srinagar,** *c.* on R. Jhelum, N. India; cap. of nat. st. Kashmir; lies in the W. Himalayas, 5,263 ft. above sea-level; p. (c. and immediate subs.) 141,631.
**Srirangam,** *t.* in Trichinopoli, Madras, India; noted temple of Vishnu; p. 22,020. [18,950.
**Srivilliputur,** *t.* in Tinnevelli dist., Madras, India, p.
**Stade,** *t.* nr. Hamburg, Hanover, formly. fortified, p. 10,630.
**Staffa,** *isl.* of the Inner Hebrides, 6 m. N. Iona, off W. cst. Mull, Scotl.; Fingal's Cave, 227 ft. long, with other basaltic caves.
**Stafford,** W. Midland *co.*, Eng., area 1,171 sq. m.; rich in iron and coal, the "Black Country" being famous; has also large Potteries dist. and many thriving manufs.; with extensive brewery concerns; p. *1,431,175*; *mun. bor.* and co. t. Stafford on R. Sow, iron and salt wks., p. *29,485*; also S., t. Connecticut, U.S.A., 25 m. N.E. Hartford, p. 5,407.
**Staines,** *urb. dist.*, mkt. *t.* on R. Thames, co. Middlesex, Eng., p. *21,209.* [Yorks, Eng., p. *4,246.*
**Stainland,** *urb. dist.*, industrl. *t.* nr. Halifax, W.R.
**Stalybridge,** *mun. bor.*, *t.* in Cheshire, Eng., nr. Manchester; cotton-sping., weavg., and ironworks; p. *24,823.*
**Stamboul,** Turkish name for Constantinople (*q.v.*).
**Stamford,** *mun. bor.*, mkt. *t.* on R. Welland, on border Lincolnsh., and Northants, Eng., p. *9,946*; also c. on Fairfield co., Connecticut, U.S.A., on shore of Long Island Sound, p. 47,500.

**Stampalia,** *isl.* Greek Arch., 50 sq. m. area; the anc. Astypalæa.

**Standerton,** *t.* on Vaal R., Transvaal, S. Africa, p. *2,293.*

**Standish-with-Langtree,** *urb. dist., t.* nr. Wigan, Lancash., Eng.; industrl., p. *7,262.*

**Stanhope,** *urb. dist.*, mkt. *t.* Durham, Eng., on R. Wear, p. *1,746.*

**Staninaka,** *t.* on the Dérin, Déré R., Philippopolis dep., Bulgaria; wine tr.; p. 15,000.

**Stanislau,** *t.* on R. Bistritza, Galicia, Ukraine; tanning, dyeing, etc.; p. 33,000.

**Stanislaus,** *R.* California, U.S.A., trib. (200 m.) of the San Joaquin R.

**Stanley,** *urb. dist.*, Durham, Eng.; large industrl. centre, p. *24,458*; also small spt., cap. Falkland Isls., p. 1,000.

**Stanley Falls,** on the Upper Congo R., Africa, nr. the Equator, named after the explorer, the late Sir H. M. Stanley; also Stanley Pool, an expansion of the Lower Congo, 25 m. long, 16 m. wide.

**Stapleford,** mkt. *t.* on R. Erewash, Notts., Eng., p. *13,046.*

**Stapleton,** former *vil.* on E. cst. Staten Isl., New York, U.S.A., now incorporated in Richmond, one of the bors. of New York City.

**Stargard,** *t.* (with old gates) Pomerania prov., Pruss.; nr. Stettin, p. 29,120; ironfounding, sugar refining, etc., large tr.

**Staroi Oskol,** *t.* on R. Oskol, U.S.S.R.; tr. centre in prairie regn., p. 13,200.

**Start Point,** *C.* nr. Dartmouth, Devon, Eng.

**Stassfurt,** industrl. *t.* nr. Magdeburg, Pruss., p. 18,650.

**Staten Isl.,** the most S. point New York st., U.S.A., 14 m. long, constitutes Richmond co., 5 m. S.W. of N.Y. city; also isl. of Tierra del Fuego, 45 m. long.

**States of the Church,** Italian *territories* ruled over by the Pope, in his secular capacity prior to 1860, now absorbed by Bologna, Rome, and other provinces.

**Statesville,** *c.* N. Carolina, U.S.A., in Iredell co.; p. 10,750. [brunnen falls, 980 ft.

**Staubach,** in cant. Bern, Switzld., nr. Lauter-

**Staunton,** *t.* in upper Shenandoah Valley, Virginia, U.S.A., p. 12,000.

**Stavanger,** *spt.* on the Bukkefiord, Christiansand, Norway; margarine and preserved food factories, woollen mills, fish curing and tinning, shipbldg., etc.; p. 43,883.

**Staveley,** industrl. *t.* nr. Chesterfield, Derbysh., Eng., p. 9,250.

**Stavropol,** old govt. of Russn. Caucasia, area 23,398 sq. m., agr. and stock-keeping, p. nearly 1,000,000; cap. S., t. 360 m. N.W. of Tiflis, large trade, p. 47,000.

**Stawell,** *t.* co. Borung, Victoria, in the gold-ming. dist., p. 38,953.

**Steelton,** *bor.* on Susquehanna R., nr. Harrisburg, Penn., U.S.A.; steel foundries, p. 13,250.

**Stellenbosch,** *t.* 25 m. E. of Cape Town, S. Afr., p. *4,720.*

**Stendal,** *t.* nr. Magdeburg, Prussn. Saxony; cathedral, rly. wks., p. 18,963.

**Stepney,** *met. bor.*, E. London, Eng., p. *225,203.*

**Steppes,** area C. Asia (Kirghiz Steppe and region round Omsk), formerly included in W. Siberia, area 755,793 sq. m., p. 3,502,000; cap. Omsk (*q.v.*).

**Sterling,** *c.* on Rock R., co. Whiteside, Illinois, U.S.A.; agr. implt. mftg., p. 10,200.

**Sternberg,** *t.* nr. Brunn, Moravia, Czecho-Slovakia, textile manuf., p. 15,260.

**Stettin,** *spt.* at mouth of R. Oder on the lagoon Stettiner Haff, cap. Prussn. prov. Pomerania; impt. manufs. and large trade; p. (with subs.) 232,726.

**Steubenville,** *c.* on Ohio R., Jefferson co., Ohio, U.S.A.; mftg. centre in coal and natural gas region; p. 36,000.

**Stevenage,** *urb. dist.*, mkt. *t.* nr. Hitchin, Herts, Eng., p. *5,476.*

**Stevens Point,** *c.* on R. Wisconsin, Portage Co., Wisconsin, U.S.A.; timber tr., sawmills, etc.; p. 13,800.

**Stevenston,** *t.* in colliery dist. nr. const, Ayrsh., Scotl., 29 m. S.W. of Glasgow, p. *11,572.*

**Steyer,** industrl. *t.* on R. Enns, Upper Austria, nr. Linz; bicycle and small-arms factories; p. 18,250.

**Steynsdorp,** *t.* in Transvaal, S. Africa; cap. Komatie goldfield.

**Stillwater,** *t.* on St. Croix R., Washington co.; Minnesota, U.S.A.; large timber and river trade; p. 7,100.

**Stilton,** *vil.* in Huntingdonsh., Eng., 6 m. S.W. Peterborough; famous for cheese. [Ballantrae.

**Stinchar,** *R.* Ayrsh., Scotl., flows 30 m. to sea at

**Stirling,** midland *co.*, Scotl., bordering on F. of Forth; area 466 sq. m., p. *166,447*; coal-mining and agr., with textile manufs; cap. Stirling, anc. burgh, overlooking the Forth; p. *22,897.*

**Stockbridge,** mkt. *t.* on R. Test, Hants, Eng., p. 880; also t. and summer resort on the Housatonic R., in Berks co., Mass., U.S.A., p. 4,010.

**Stockerau,** *t.* on arm of the Danube, Kornenburg dist., Lower Austria; large corn mkt. and timber trade, with felt factories; p. 11,930.

**Stockholm,** *c.* on isls. at the outlet of L. Mælar, Sweden; cap. of S., and called the "Queen of the Baltic" for the beauty of its surroundings. Commercial and industrl. centre, with many academic institutions; p. 419,421.

**Stockport,** *co. bor.*, mftg. *t.* on R. Mersey, Chesh. and Lancs., Eng., p. *125,505.* [Eng., p. *9,253.*

**Stocksbridge,** *urb. dist.*, nr. Sheffield, W.R. Yorks,

**Stockton,** industrl. *t.* in San Joaquin co., California, U.S.A., p. 49,000.

**Stockton-on-Tees,** *mun. bor.*, spt. and mkt. *t.* Durham, Eng.; great iron bridge connects the town with Thornaby and South Stockton across the R. (included in the parly. bor.); p. *67,724.* Impt. iron and steel industries and large shipping trade.

**Stoke-upon-Trent,** *co. bor.* (including Hanley, Stoke-upon-Trent, Fenton, Longton, and Stoke Rural), Staffordsh., Eng.; art china and pottery; p. *276,619.* [*51,215.*

**Stoke Newington,** *met. bor.*, N.E. London, p.

**Stokesley,** mkt. *t.* 9 m. S.E. Stockton, N.R. Yorks, Eng., p. 1,946.

**Stolberg** *t.* nr. Aachen, Rhenish Pruss.; an old Huguenot t. with flourishing iron, brass, and glass manufs.; p. 13,120. [nr. Stoke, p. *5,952.*

**Stone,** *urb. dist.*, mkt. *t.* Staffs, Eng., on R. Trent,

**Stoneham,** *t.* in Middlesex co., Mass., U.S.A.; boot and shoe factories; p. 10,250.

**Stonehaven,** *spt., wat. pl.* and fishing *t.* Kincardinesh., Scotl., p. 4,280.

**Stonehenge,** prehistoric group of monumental stones on Salisbury Plain, Wilts, Eng.

**Stonehouse,** *t.* within the limits of Devonport, Eng, and forming with Plymouth "the Three Towns."

**Stonington,** *t.* of New London co., Connecticut, U.S.A., on Long Isl. Sound; manuf., p. 10,236.

**Stonyhurst,** Roman Catholic *college* and estab. nr. Clitheroe, N.E. Lancash., Eng.

**Stony Point,** *t.* on a rocky promonty. of R. Hudson, Rockland co., New York, U.S.A.; prominent in the Revolutionary war, p. 4,450.

**Stony Stratford,** mkt. *t.* on R. Ouse, nr. Buckingham, Eng., p. 2,040.

**Stornoway,** *spt.* on Isle of Lewis, Ross-sh., Scotl.; herring fishy. and steamer stn., p. *12,117.*

**Stoughton,** industrl *t.* nr. Boston, Mass., U.S.A., p. 8,300.

**Stour,** *R.* Suffolk and Essex, Eng., flows 42 m. to sea at Harwich; also R. of Somerset, Dorset and Hants; trib. (55 m.) of R. Avon; also R. of Kent, flows 40 m. past Canterbury to Pegwell Bay; also R. of Worcestersh. and Staffs., trib. (20 m.) of R. Severn.

**Stourbridge,** *mun. bor., t.* on R. Stour, Worcestersh., Eng., glass and fire-brick manuf., p. *19,903.*

**Stourport,** *urb. dist.*, mkt. *t.* Worcestersh., Eng., at conflu. of R.'s Stour and Severn, p. *5,949.*

**Stowmarket,** *urb. dist., t.* on R. Gipping, Suffolk, Eng., gun-cotton factory, corn tr., p. *4,296.*

**Stow-on-the-Wold,** *urb. dist.*, mkt. *t.* on the Fosse Way, Gloucestersh., Eng., p. *1,266.*

**Stradbroke, Is.,** E. of Moreton B., Queensland, 33 m. by 6 m.

**Straits Settlements,** Brit. *col.* on and about Strait of Malacca; distinct from the Federated Malay States Protectorate; consists of Singapore, Penang, Province, Wellesley, Dindings, and Malacca; total area 1,600 sq. m., p. 714,069; cap. Singapore (*q.v.*).

**Stralsund,** ft. *spt.* of Pomerania, Pruss., on the Strelasund strait separating Rügen isl. from mainland; has gd. grain tr. and various manufs.; p. 30,320.

**Strangford Lough,** *sea arm*, co. Down, N. Ireld., 18 m. long, 6 m. at entrance.

**——n, *burgh*, Loch Ryan, Wigtownsh., Scotl.;** creameries and impit. factories, p. *2,765*.

**Strasbourg**, fort *c.* Alsace-Lorraine, France, on R. Ill; captured 1870, rewon 1918; fine cathedl., university, imperial palace, many handsome new public bldgs., extensive tr., exports hops, sausages, famous pies, beer, etc., p. 166,767.

**Stratford**, *dist.* of E. London, Eng., in bor. of West Ham; also *c.* on Avon R., Perth co., Ontario, Can., p. *17,714*; also *t.* on Housatonic R., Fairfield co., Connecticut, U.S.A., p. 12,347.

**Stratford-on-Avon**, *mun. bor., t.* in Warwicksh., Eng.; birthplace of Shakespeare, memorial theatre, library, etc., p. *11,616*.

**Strathmore**, *gt. valley* of Scotl. stretching from Dumbartonsh. to sea at Stonehaven, Kincardinesh.

**Strathpeffer**, *wat. pl.* (mlnl. springs) in Highland valley Ross and Cromarty, nr. Dingwall.

**Strathspey**, *valley* of the Spey, N. Scotl., 70 m. long. [*3,836*.

**Stratton and Bude**, *urb. dist.*, Cornwall, Eng., p.

**Straubing**, *t.* nr. Ratisbon and R. Danube, Bavaria; industrl.; p. 18,350.

**Streatham**, residtl. *par.* in bor. of Wandsworth, Surrey, S.W. London, Eng.

**Streator**, *c.* on Vermillion R., Lasalle co., Illinois, U.S.A.; in coal and brick-clay regn.; p. 14,700.

**Street**, *urb. dist., t.* nr. Glastonbury, Somerset, Eng.; p. *4,453*.

**Stretford**, *urb. dist.*, industrl. *t.* S.E. Lancash., Eng., sub. to Manchester on S.W.; p. *56,795*. [13,024.

**Striegau**, mftg. *t.* nr. Breslau, Prussn. Silesia; p.

**Stromboli**, one of Lipari Isls., off N. cst., Sicily; p. 1,220; noted for active volcano, alt. 3,038 ft.

**Stromness**, mkt. *t.* and *port* of Mainland, Orkney Isls.; 13 m. W. Kirkwall; p. *2,116*.

**Stroud**, *urb. dist.* mkt. *t.* nr. Gloucester, Eng., on R. Frome; umbrella and walking-stick manuf.; p. *8,360*.

**Stry**, R. of Galicia, trib. (110 m.) of R. Dniester; also fort. *t.* on same nr. Lemberg; tanning and match-making; p. 26,840.

**Stuhlweissenburg**, *t.* nr. Pesth, Hungary; manuf.; p. 32,100. Has cathedl., former pl. of coronatn. of Kings of Hungary.

**Sturgeon Bay**, *arm* of Green Bay, Wisconsin, U.S.A.; also *c.* on same; p. 5,000.

**Sturminster Newton**, mkt. *t.* on R. Stour, N. Dorset, Eng.; p. 1,860.

**Stuttgart**, *c.* nr. bank of R. Neckar, cap. of Würtemberg, beautifully situated amid vine-clad hills; p. 309,197.

**Styr**, *R.* Galicia, Volhynia and Minsk, U.S.S.R., trib. (250 m.) of R. Tripet.

**Styria**, former *crownland*, Cisleithan div., Austria-Hungary; now Austria and Jugo-Slavia; area 6,327 sq. m.; produce. corn, wine and fruit; stock-rearing, poultry and bee-keeping industries; also various manufs.; p. 953,684.

**Styrian Alps**, that portn. of the mtn. system E. of the Haue Tauern.

**Suakin**, *spt.* of Nubia, on Red Sea; p. 12,000.

**Su-Chow-Fu**, *t.* on Lake of Imperial canal, prov. Kiang-Su, China; gt. commercial and industrl. centre; same as Soochow (*q.v.*).

**Suczawa**, *t.* in Bukowina, Rumania, formerly Austria; former res. of Moldavian princes; fancy leather industries; p. 11,300.

**Sudan**, *see* **Soudan** page 295. [Eng., p. *7,007*.

**Sudbury**, *mun. bor.* on R. Stour, Suffolk and Essex.

**Sudetic Mtns.**, *range* separatg. Bohemia and Moravia from Silesia; highest peak, Altvater, 4,880 ft.

**Suez**, *spt.* of Egypt, at hd. of G. of Suez (arm of Red S.) and S. entce. of Suez Canal, which crosses the Isthmus of S. to the Mediterranean at Port Said (99 m. long); the anc. Arsinoë; Suez has appropriate quays and harbours, and a p. of 30,996.

**Sufeid Koh**, *mtn.* range Afghanistan, S. of Kabul vall. and the Hindu Kush, highest summit, 14,200 ft.

**Suffolk**, most E. maritime *co.* Eng. bounded by Essex, Norfolk, Cambridge, and the N. Sea, area 1,475 sq. m., agr., fisheries, and manuf., p. *401,114*, co. t. Ipswich (*q.v.*).

**Suhl**, *t.* nr. Erfurt, Prussn. Saxony, industrl., p. 12,250.

**Suidun**, *t.* Kulja prov., China, walled and armed with steel ordnance, mil. *t.* with arsenal and res. of governor-genl., p. 30,920.

**Suir**, *R.* Munster prov., I.F.S., flows 85 m. to the Barrow, Waterford Harbr.

**Suk-el-Shuyukh**, *t.* on R. Euphrates, Turkey, W. of Bassorah, p. 11,350.

**Sukkur**, *t.* on R. Indus, Shikarpur dist., Sind., Bombay, India, opp. Rohri, gd. local tr., p. 33,000.

**Sulaiman, Mtns.**, *range* boundg. the Punjab and Afghanistan, highest peak, Takht-i-Sulaiman, 11,295 ft.

**Suleimanieh**, *t.* in Mosul vilayet, Asiatic Turkey, nr. Persian frontier, sometimes called the cap. of S. Kurdistan, active tr., p. 11,720.

**Sulina**, *t.* in Rumania, at mth. of Sulina branch of R. Danube, consid. grain tr., p. 5,940. [p. 5,400.

**Sulphur Springs**, *t.* Texas, U.S.A., in Hopkins co.,

**Sulu, or Sooloo, Isls.**, *arch.* betwn. Borneo and the Philippine Isls., grp. long notorious as a haunt of Malay pirates, total area 950 sq. m., p. 76,000; acquired by the United States, 1898.

**Sumatra**, *isl.* of the Malay arch. sep. from Java by Strait of Sunda, under Dutch influence, area 161,612 sq. m., p. 5,855,970; coffee, sugar, rice, pepper; mtnous., with mnl. wealth (gold and tin).

**Sumbawa**, one of the Little Sunda *isls.* in the E. Indian arch., E. of Lombok (Dutch) area (with neighbouring isls.), 5,240 sq. m., p. 152,000.

**Sumburgh Head**, S. extrem. Shetland. [15,000.

**Summit**, *c.* Union co., New Jersey, U.S.A., p.

**Sumter**, *c.* S. Carolina, U.S.A., cap. S. co., tr. centre for agr. regn., p. 12,000.

**Sunart, Loch**, sea *arm* (19½ m. long), N. of Mull, on Argyll cst., W. Scotl.

**Sunbury**, *urb. dist.*, mkt. *t.* Middlesex, Eng., on R. Thames, p. *13,329*; also bor. Penn., U.S.A., on Susquehanna R., rly. wkshops., p. 15,600.

**Sunda Isls.**, Malay *arch.* comprisg. Java, Sumatra, and the other isls. of the same chain as far as Timor.

**Sunda Strait**, betwn. Java and Sumatra, 13 m. wide, contains the volcanic isl. of Krakatoa (*q.v.*)

**Sundarbans, The**, tract of forest and swamp fringing the Gangetic delta, Brit. India, 165 m. long, 81 m. wide, reachg. from the mth. of the R. Hooghli to that of the R. Meghna.

**Sunday** (or **Raoul**) Isl., one of the Kermadec (*q.v.*) grp. in Pacific, N. of New Zealand, annexed by Brit. 1886.

**Sunday**, *R. C. of Good Hope, South Africa*, flows (200 m.) into Algoa B. N. of Port Elizabeth.

**Sunderland**, *co. bor., spt.* at mouth of R. Wear, co. Durham, Eng., gt. shipbldg. and coal export centre (includg. Monkwearmouth and parts of Bishopwearmouth), p. *185,870*. Fine harbour, piers and docks.

**Sundsvall**, *spt.* Vestnorrland co., Sweden, on a wide bay of the Baltic nr. Hernösand, timber and wood-pulp industries, p. 15,250.

**Sungari**, *R.* Manchuria, trib. (including the Nonni, over 1,000 m. long) of R. Amur.

**Sungei-Ujong**, nat. *st.* Malay Penin., attached (since 1876) to the Brit. protectorate of the Straits Settlements, p. 32,000.

**Sunningdale** and **Sunninghill**, *vills.* of Berks, Eng., nr. Staines and the R. Thames, residentl.

**Süntel**, grp. of *mtns.* in Germy., S.W. of Hanover, alt. 1,400 ft.

**Suonada**, lnld. *sea* Japan (length 240 m.) separating Honshiu isl. from Kiu-Siu and Shikoku.

**Superior**, *c.* Douglas co., Wisconsin, U.S.A., at head of L. Superior, gt. tr. in grain, timber and coal, p. 35,500.

**Superior, L.**, largest sheet of fresh water in the world, lying betwn. Brit. N. America and the U.S.A., one of the chn. of gt. lakes in the St. Lawrence system, area 32,000 sq. m., outlet to L. Huron by the St. Mary's R., receives the waters of the St. Louis, Pigeon and Nipigon.

**Sura**, *R.* U.S.S.R., trib. (400 m.) of R. Volga.

**Surat**, *dist.* Gujarat div., Bombay, India, area 1,662 sq. m., p. 640,000. Cap. Surat c., on R. Tapti, cotton manuf., silk brocade and embroidy., p. (with mil. cantonmt.) 18,299.

**Surbiton**, *urb. dist., t.* (residtl.) Surrey, Eng., on R. Thames, nr. Kingston, p. *29,396*.

**Surinam**, *R.* Dutch Guiana, flows 300 m. to sea nr. Paramaribo. The Dutch col. of Surinam, of which Paramaribo is cap., has an area of 46,060 sq. m., and produces cocoa and sugar; p. 145,000.

**Surrey**, *S. co.* of Eng., below the R. Thames (co. t. Guildford), area 758 sq. m., p. *1,180,810*.

**Suruga**, cst. *t.* Japan, 90 m. S.W. Tokio; large tr. and impt. industries; p. 35,700.

**Sus,** *prov.* S. Morocco, formerly an indpt. country; very mtnous; also R. of the prov., flowing (130 m.) W. to the Atlantic nr. Agadir (once the Portuguese Santa Cruz).

**Susa,** *spt.* Tunis on G. of Hamama; p. 8,410; also t. in Piedmont, Italy, on the Dora Riparia, nr. the French frontier; chf. t. of the Cottian Alps; cathedl.; p. 4,530; also ruined c. on R. Kerkha, Persia; the Shushan of Scripture.

**Susquehanna R.,** New York, Pennsylvania and Maryland, U.S.A., flows 422 m. past Harrisburg to Chesapeake B. at Havre de Gras.

**Sussex,** maritime *co.* S.E. Eng., adjng. Surrey, Kent, and Hants, and washed by Eng. Chan.; trav. E. to W. by the S. Downs; area, 1,458 sq. m., p. *770,078*; agr., hops, fruit, with coast industries, and manuf.; co. t. Chichester (*q.v.*).

**Sutera,** t. nr. Caltanisetta, Sicily, p. 4,830.

**Sutherland,** N. *co.* Scotland, N.W. Moray Firth, washed by Atlantic and N. Sea; area 2,102 sq. m., grazing and forest land, most sparsely pop. in Scotl.; p. *16,100*; mtnous. with many lochs; co. t. Dornoch.

**Sutlej,** *R.* of the Punjab, India, rises in the Himalayas nr. Manasarowar L., Tibet, at an alt. of 15,200 ft. and flows 1,000 m. to the Indus.

**Sutton and Cheam,** *urb. dist.*, nr. Croydon, Surrey, Eng.; industrl. and residentl.; p. *40,488*.

**Sutton Bridge,** *urb. dist.*, *t.* on R. Nen, Lincs., Eng., nr. Wisbech, p. *2,837*.

**Sutton-Coldfield,** *mun. bor.*, mkt. and industrl. *t.* Warwicksh., Eng., nr. Birmingham, p. *29,924*.

**Sutton-in-Ashfield,** *urb. dist.*, mftg. *t.* nr. Mansfield, Notts., Eng., p. *25,151*.

**Suvalki,** former *govt.* Poland, on Prussn. border; area 4,846 sq. m., now partly in Lithuania, agr. and industrl.; p. 750,000, mainly peasantry; cap. S., t. 75 m. N.W. Grodno, p. 31,600; trade in timber, cloth manuf. [250 m. to G. of Mexico.

**Suwannee, R.** Florida and Georgia, U.S.A., flows

**Suzdal,** *t.* U.S.S.R., on Kamenka R., seat of an old principality united with Moscow in 14th century, p. 7,350.

**Svart Elf,** *R.* Sweden, flows 102 m. to L. Skagera.

**Svea,** middle *terr.* Sweden, region of lakes and isls.

**Sveaborg,** fort. *t.* Finland, in Helsingfors harbr.

**Svendborg,** *spt.* cst. Fünen, Denmark; manuf. earthenware and tobacco; exports butter, etc., p. 13,350.

**Sviatoi,** *C.* hdld. on Arctic cst., U.S.S.R., nr. entce. White S. [Onega and L. Ladoga.

**Svir,** *R.* U.S.S.R.. (125 m.) flowing between L.

**Swabia,** former duchy of Germy. on the Rhine, now absorbed by Baden, Bavaria, and Würtemberg. Swabian Alps, mtns. of Würtemberg, includg. the Swabian Jura, range betwn. valleys of Neckar and Danube.

**Swabia and Neuburg,** governmentl. dist. Bavaria, N. of the Tyrol and Lake Constance, area 3,934 sq. m., p. 835,709; cap. Augsburg.

**Swadlincote,** *urb. dist.*, *t.* Derbysh., Eng., nr. Burton-on-Trent, p. *20,305*.

**Swaffham,** *urb. dist.*, mkt. *t.* Norfolk, Eng., nr. King's Lynn, p. *2,783*.

**Swale,** *R.* N.R. Yorks, Eng., trib. (60 m.) of R. Ure; also name of chan. betwn. Isle of Sheppey and Kentish mainld., Eng., 16 m. long. [10,500.

**Swampscott,** *cst.* vil. nr. Boston, Mass., U.S.A., p.

**Swan,** *R.*, W. Australia, flows to Indn. Oc. nr. Perth.

**Swanage,** *urb. dist.*, mkt. *t.* and *wat. pl.* on Isle of Purbeck, Dorset, Eng., stone quarries, p. *6,276*.

**Swansea,** *co. bor.*, *spt.* on Swansea B., Glamorganshire, Wales; princ. st. of Brit. copper tr. and tin-plate manuf.; also many other industries connected with coal, iron, etc.; large export; p. *164,825*.

**Swat,** *region* of Centl. Asia, W. of the Upper Indus, N.E. of Peshawur, on the N.W. frontier of India.

**Swatow,** treaty *port*, Kwantung prov., China, on R. Han, great inland and export tr.; exports, sugar and tea; p. 85,000.

**Swaziland,** mtns. *co.* S. Africa, on S.E. of Transvaal, between Drakensberg and Lobombo ranges; area about 6,678 sq. m., p. (est.) 133,563. Passed under Brit. rule in 1900.

**Sweden,** *country* of N. Europe forming E. (and larger) part Scandinavian Penins.; area 173,035 sq. m., p. 5,903,762. Mtns. W., but otherwise flat and cut up by R.'s and many L.'s, while one-fourth of the land is forest. Great timber export, mineral and mftg. industries, active agr. and dairying. Cap. Stockholm.

**Sweetwater R.,** Wyoming, U.S.A., flows 175 m. E. to the N. Fork of the Platte R.

**Swellendam,** *div.* C. of Good Hope, S. Africa, on coast; area 2,954 sq. m., p. 15,809. Cap. S., t. on Breede R. (one of the oldest Dutch settlements in S.A.), 140 m. E. of Cape Town.

**Swilly, Lough,** arm of the Atlantic (25 m. long), coast of Donegal, I.F.S.

**Swindon,** *mun. bor.*, mkt. *t.* Wilts, Eng., nr. Marlborough; gt. rly. wks., p. *62,407*.

**Swinemunde,** fort. *spt.* Pomerania, Pruss., on Isl. of Usedom, on the Baltic; the outport of Stettin (*q.v.*); shipping industries and large tr.; p. 11,350.

**Swineshead,** *t.* nr. Boston, Lincolnsh., Eng., p. 1,660..

**Swinton and Pendlebury,** *urb. dist.*, industrl. *t.* nr. Manchester, Lancs, Eng., p. *32,761*; also *urb. dist.* colliery *t.* nr. Sheffield, W.R. Yorks, Eng., p. *13,820*.

**Switzerland,** *Repub.* Centl. Europe, area 15,990 sq. m., mainly mtnous., forest-clad, with glaciers and snowy summits. Many L.s, largest Geneva (*q.v.*), p. 3,880,320. Industries, pastoral and mftg. (embroidery, clock and watch making, silk spinning). Cap. Bern (*q.v.*).

**Sydenham,** S.E. subn. *dist.* London, Eng., in Lewisham bor. (residtl., contains Crystal Palace); also bor. New Zealand, adjoining Christchurch, p. 11,950.

**Sydney,** c. cap. N.S.W., princip. spt. Australia, on shore of Port Jackson B.; many beautiful bldgs. and parks, stretchg. S. to Botany B. Has university and large commercl. and active industries; p. (with subs.) 897,640.

**Sydney,** or **S. Sydney,** *spt.* Cape Breton Isl., Nova Scotia, p. *22,319*; iron and steel works.

**Sydney Mines,** *spt.* on N. shore of S. Harbour, Nova Scotia, p. 4,350.

**Sylhet,** *dist.* Surma Valley div., Assam, India; area 5,414 sq. m.; tea-gardens in the Southern hills; p. 2,225,000; cap. S., *t.* on R. Surma; mat manuf., ivory and shell-carving; p. 14,700.

**Syra,** *isl.* of the Cyclades, in the Ægean S. (Greek) 11 m. long; rocky; p. 18,500. Cap. S. (or Hermoupolis), port of call for vessels plying betwn. the Black S. and Constantinople, p. 17,657.

**Syracuse,** or **Siracusa,** *prov.* S.E. Sicily; area 1,433 sq. m.; p. 500,670; cap. S., c. on isl. of Ortygia, off E. cst.; cathedrl.; exports olive oil, oranges, lemons, locusts beans, almonds, wine, etc.; p. 44,094; also c. on Onondaga Lake, O. co., New York, U.S.A.; p. 213,000.

**Syr Darya,** or **Sir Daria,** old govt. Russ. Turkestan; in valley of S. D. or Jaxartes R. (*q.v.*); area 165,906 sq. m., p. 1,210,000. Cap. Tashkend.

**Syria,** formerly *vilayet* Asiatic Turkey, stretching along E. shore of the Mediterranean and E. to the R. Euphrates. The prov., officially, excluded Palestine and Lebanon; area (est.) 60,000 sq. m.; p. 3,000,000. Cap. Damascus; spt. Beyrout. Now under French mandate.

**Szabadka,** free town of Hungary, 106 m. from Budapest; p. 93,000.

**Szarvas,** *t.* on the Körös, Hungary, nr. Csongrad; industrl.; p. 25,000.

**Szathmar-Nemeth,** *t.* (mftg.) on R. Szamos, nr. Debreczin, Hungary; p. 35,600.

**Szawli,** *t.* U.S.S.R.; distilleries and tobacco factories; p. 22,300.

**Szechuen.** (*See* **Sechuen.**)

**Szegedin,** *t.* on R. Theiss, Hungary, 100 m. S.E. of Budapest; great commercl. and industrl. centre, with many fine bldgs. and import. educational institutions; p. 109,896.

**Székesfehérvar,** old *t.* co. Fejér, Hungary; horse-breeding and trade; p. 37,500.

**Sziget,** *cap.* co. Mármaros, Hungary, on R. Iza; in salt-mining dist.; p. 22,240.

**Szolnok,** *t.* on R. Theiss, nr. Budapest, Hungary; manuf.; p. 29,350.

**Szombathely,** *t.* in Vasvar co., Hungary, nr. Pressburg; railway and industrl. centre; p. 31,600.

**Sztanicsics,** mftg. *t.* nr. Zombor, Hungary, p. 8,640.

**Taal,** *t.* in Luzon, Philippine Isls.; beautifully situated in fertile agr. dist.; devastated by fire 1890; p. 33,770. [9 m. long, p. 4,870.

**Taasinge,** or **Thorsenge,** *isl.* Denmark, S. of Fünen, 9 m. long, p. 4,870.

**Tabariyet,** or **Tiberias,** *t.* on L. of same name.
**Tabasco,** maritime *st.* Mexico, on G. of M., adjoining Guatemala, area 10,374 sq. m.; cacao, sugar-cane, tobacco, rubber, pepper, maize, and hard-woods; p. 193,675. Cap. San Juan Bautista.
**Table Bay,** *inlet* of Atlantic, cst. of C. of Good Hope, S. Africa; on it is Cape Town.
**Table Mountain,** C. of Good Hope, S. Africa, nr. Cape Town, alt. 3,600 ft.
**Tabor, Mt.** (**Jebel-el-tur**), Palestine, S.E. of Nazareth; reputed scene of Christ's *Transfiguration*; alt. about 1,800 ft.
**Tabriz,** cap, *prov.* Azerbaijan, Persia; gt. commcl. centre, formerly chf. emporium for the trade of Persia in the west, much of which is now diverted by the railway through the Caucasus; p. 200,500.
**Tachira,** *st.* on W. frontier Venezuela, p. 147,076; cap. San Cristoval.
**Tacna,** *prov.* Chili; industrl.; p. 38,012.
**Tacoma,** *spt.* on Puget Sound, Pierce co., Washington, U.S.A.; called the " City of Destiny," large timber and grain tr.; p. 107,800.
**Taconic,** or **Taghkanic Mts.,** *range* in Vermont and Mass., U.S.A., highest peak, 3,872 ft. [16,750.
**Tacunga** *t.* in the Andes, Ecuador, nr. Quito, p.
**Tadcaster,** mkt. *t.* on R. Wharfe, W.R. Yorks, p. 6,850.
**Tadmor.** (*See* **Palmyra.**) [Wales, 25 m. long.
**Taf,** or **Tave,** *R.* Pembroke and Carmarthen,
**Taff,** R. Glamorgan and Brecon, Wales, flows (40 m.) past Merthyr Tydvil to Cardiff.
**Tafilit,** *prov.* Morocco, an oasis of the Sahara, E. of Atlas, chf. t. Abuam. [65,750.
**Taganrog,** *spt.* on Sea of Azov, U.S.S.R., p.
**Taguayabon,** *t.* prov. Santa Clara, Cuba, p. 15,800.
**Tagus,** *R.* of Spain and Portugal, flows 540 m. to Atlantic at Lisbon. [and **Society Isls.**)
**Tahiti,** princ. *isl.* of Society grp. (See **Otaheite**
**Taimyr Penins.,** N. cst. Siberia, terminates with Cape Chelyuskin.
**Tain,** *spt.* on Dornoch Firth, Ross and Cromarty, Scotl.; one of the Wick parly. burghs; p. *2,176.*
**Tai-wan,** treaty *port,* cap. Formosa, on S.W. cst.; large tr.; p. 70,000.
**Tai-yuan,** *c.* on Fuen-ho R., China; cap. Shan-Si prov.; industrl. and commercl.; p. 250,000.
**Takamatsu,** *t.* in prov. Sanuki, Japan; *gt.* commerce; p. 48,319.
**Takata,** *t.* in Echigo prov., Japan, p. 29,216.
**Takt-i-Sulaiman,** highest *pk.* Sulaiman Mtns. (*q.v.*).
**Taku,** *forts* at mth. of R. Peiho, China, guarding entrance to Tientsin and Pekin; captured by Allies in 1900.
**Talavera,** *c.* on R. Tagus, nr. Toledo, Spain; fine streets and squares; fertile wine-growg. dist.; Wellington's vict., 1809; p. 11,790.
**Talbot,** *t.* on Back Creek, Victoria, 121 m. N.W. Melbourne, p. 1,382.
**Talca,** *t.* in prov. T., Chile; impt. tr. centre; p. 36,079.
**Talienwan,** open *B.* on E. side of Liaotung Pen., Manchuria; leased to Russ. (with Port Arthur) prior to the war with Japan, 1904, in the naval actns. of which it figured prominently.
**Talke,** or **Talk-o'-the-Hill,** industrl. *t.* nr. Newcastle, Staffs, Eng., p. 52,601.
**Talladega,** *c.* Alabama, U.S.A., in gold-mining dist.; college for coloured students; p. 7,600.
**Tallahassee,** *c.* Florida, U.S.A., cap. Leon co., p. 11,200. [S. to R. Yalabusha.
**Tallahatchee,** *R.* Mississippi, U.S.A., flows (240 m.)
**Tallinn.** (*See* **Reval.**)
**Tamanieb,** *vil.* nr. Suakin, Sudan; battle between Mahdists and British, 1884.
**Tamaqua,** *bor.* Schuylkill co., Penn., U.S.A.; mining and coal tr.; p. 13,000.
**Tamar,** *R.* Devon and Cornwall, Eng., flows 45 *m.* to Plymouth. [8,500.
**Tamatave,** chf. *spt.* Madagascar, on E. cst., p.
**Tamaulipas,** Mexican *st.* on G. of Mexico, S. of Texas; area 30,831 sq. m.; p. 256,278; cap. Ciudad Victoria.
**Tambov,** old govt. U.S.S.R., S.E. of Tula and Ryazan, area 25,710 sq. m.; agr. and stock-raisg.; p. 3,001,000; cap. T., *t.* on Tsna R.; p. 50,200.
**Tammerfors,** *t.* in Finland, on rapids betwn. Lakes Pyha-jarvi and Nasi-jarvi; many textile factories and paper-mills; p. 46,819.
**Tampa Bay, W.** *cst.* Florida, U.S.A. (40 m. long); also t. on same, popular winter rest., cigar factories, p. 51,608.
**Tampico,** *R.* Mexico (200 m.) flows through Vera Cruz st. to G. of Mexico.
**Tampico,** *spt.* of Mexico, on the Paunco; 9 m. from the Gulf of Mexico; p. 85,000.
**Tamsui,** fort. treaty *pt.* N.W. isl. of Formosa; p. 95,000. Bombarded by the French in 1884.
**Tamworth,** *mun. bor.* Warwick and Staffs, Eng., on R. Tame; anc. castle; p. *7,510*; also t. on Peel R. in N.S.W.; p. 6,230.
**Tanaro,** *R.* N. Italy, trib. (125 m.) of R. Po.
**Tanauan,** *t.* on Luzon Isl., Philippine grp.; p. 14,750; also smlr. *t.* on Leyte *Isl.*, same grp.; p. 10,100; both industrl. [India; p. 17,600.
**Tanda,** *t.* nr. Gogra R., Faizabad div., Oudh,
**Tanfield,** *urb. dist.,* Durham, Eng., p. *9,236.*
**Tanganyika,** gt. *lake,* E. Centrl. Afr., 400 m. long, grtest. width 45 m.; area abt. 12,700 sq. m.; 2,800 ft. above sea; discovd. by Burton and Speke in 1868, and since explored by Livingstone, Stanley, and others.
**Tanganvika Territory,** formerly German E. Africa, p. *8,163* whites, *32,892* coloured.
**Tangier,** *spt.* Morocco, on Strait of Gibraltar; ceded to Eng. in 1662 when Catherine of Braganza married Charles II., but abandoned to the Moors 22 yrs. later; sm. tr.; p. 50,000.
**Tanjore,** *dist.* in S. Karnatic, Madras, India; a Mahratta st. wh. came under Brit. rule at beginning 19th cent.; area 3,709 sq. m.; grows rice; p. 2,401,000. Cap. T., c. on R. Cauvery, an impt. Brahman centre, with gt. Dravidian pagoda and Bull shrine; p. 60,341.
**Tantah,** *t.* on Nile delta, Lower Egypt, nr. Cairo; noted for fairs and Moslem religious festivals, attended sometimes by 200,000 pilgrims and traders; res. p. 74,195. Has mosque and Khedival palace.
**Tantalam,** *isl.* in Gulf of Siam, on E. cst. Malay Penins.; 40 m. long. [New York, 12 m. long.
**Tappan,** *B.* an expansn. of Hudson R., N. of New
**Tapti,** *R.* westn. India; flows 450 m. to Gulf of Cambay at Surat from Betul dist., Centl. Provs.
**Taquari,** *R.* Brazil, Matto-Grosso prov., trib. (400 m.) of R. Paraguay.
**Tara,** *R.* Siberia, trib. (200 m.) of R. Irtish; also t. in Tobolsk govt., Russia, on R. Irtish; p. 8,916.
**Taradale,** *t.* Victoria, nr. Melbourne, p. (dist.) 3,000.
**Tara Hill,** nr. Navan, co. Meath, I.F.S., alt. 507 ft.; famous for mass meetings from anc. times.
**Tarai,** *dist.* Kumaun div., United Provs., India (now combined with Naini Tal), area 903 sq. m., mainly marshy jungle, p. 211,000; chf. t. Kasipur.
**Taranaki,** *prov.* New Zealand, in N. Isl., area 3,732 sq. m., p. 62,911; cap. New Plymouth.
**Taranto,** *t.* in prov. Lecce, Italy, on G. of T., an inlet of the Ionian S.; maritime arsenal with gt. commercl. and industrl. interests; strong castle; famous for its oyster fisheries; p. 58,820.
**Tarapaca,** *prov.* N. Chile (formerly a part of Peru), area 16,689 sq. m., rich in nitrates, p. 100,553, cap. Iquique.
**Tarascon,** *t.* in Bouches-du-Rhône prov., France, connected by bridges with Beaucaire, on opp. bank of R. Rhône; old castle, famous festival, p. 10,030.
**Tarastcha,** *t.* in U.S.S.R., flour mills, p. 12,800.
**Tarazona,** *t.* in vine-clad mtnous. dist. Saragossa prov., Spain, on R. Quelles, Gothic cathedral ch., p. 8,630.
**Tarbert,** *spt. vil.* on Loch T. (Loch Fyne), cst. of Argyll., Scot., p. 1,860; also name of sea locks (E. and W.) on the Kintyre Penins. and (also E. and W.) on coast of Harris Isl., in the Outer Hebrides.
**Tarbes,** *t.* on R. Adour, France, cap. of Hautes-Pyrenées prov., cathedrl., paper and flax factories, p. 27,000. [industrl., p. 9,600.
**Tarentum,** *bor.* on Allegheny R., Penn., U.S.A.;
**Tarifa,** *c.* on Gibraltar st., prov. Cadiz, Spain, fish tr., p. 11,950. [Franciscan convent.
**Tarija,** *t.* nr. Cintra, Bolivia, gd. tr., p. 10,000.
**Tarn,** *R.* France; trib. (235 m.) of R. Garonne; has famous rocky gorge (31 m. long) in its upper course; also name of a prov. of N. France, watered by Tarn and its tributaries, area 2,232 sq. m.; wheat and wine; p. 295,588, cap. Albi, glass-makg. centre.
**Tarn-et-Garonne,** *dep.* of W. France, area 1,440 sq. m., corn, wine, and manufs., p. 159,559, cap. Montauban.
**Tarnopol,** *t.* nr. Lemberg, Galicia, Ukraine; milling, honey and wax trade; p. 31,670.

**Tarnow,** *t.* on R. Biala, Galicia, Poland; mftg. centre (with garrison) in agr. dist.; p. 32,600.
**Tarporley,** *urb. dist.*, mkt. *t.* Chesh., Eng., p. *2,452*.
**Tarragona,** coast *prov.* Spain, on the Mediterranean, area 2,505 sq. m.; vineyards and agr.; p. 329,079. Cap. T., fortfd. spt. at mth. of Franconi R.; manuf., alcohol, liqueurs, chocolate, etc.; p. 25,200.
**Tarrasa,** *t.* in Barcelona prov., Spain, in fruit and wine-growing dist., royal college, thriving industries; p. 16,370.
**Tarrytown,** *vil.* Westchester co., New York, U.S.A. on Pappan Sea (Hudson R.); burial place of Washington Irving; p. 6,950.
**Tarsus,** anc. *c.* of Asia Minor, nr. Adana, surrounded by orange and citron groves; ruined Roman temple; p. 25,000. Birthplace of the Apostle Paul.
**Tartary,** or **Tatary,** *region* of Central Asia, now divided into Chinese or (E.) Turkestan and W. Turkestan, or Turkestan proper.
**Tartary, Gulf of,** arm of the Sea of Japan, separating Saghalien from the Siberian mainland.
**Tashkent,** *cap.* of the former Russn. genl.-governorship of Central Asia, on R. Syr Darya; has extensive silk manuf. and great commerce; p. 161,000.
**Tasman** (or **Blind**) **Bay,** on N. coast S. Isl., New Zealand.
**Tasmania** (formerly **Van Diemen's Land**), Brit. *isl.* S. of Victoria, and a State of the Commonwealth of Australia; separated by Bass Strait; area 26,215 sq. m.; agr. and mining; exports corn, wool, gold, tin, etc., p. 218,000; cap. Hobart.
**Tatar Bazardjik,** on the Upper Maritza, Bulgaria; large trade in rice and silk cocoons; p. 17,670.
**Tátrafüred,** *spa* in the Tatra Mtns. (highest Carpathian group), Hungary, amidst wild scenery; pop. summer resort; res. p. 2,500.
**Tauber,** *R.* Wurtemberg, trib. (74 m.) of R. Main; the Taubergrund valley is famous for its wines.
**Taung-ngu,** *dist.* Tenasserim div., Lower Burma, p. 131,000; cap. T., t. on Sittaung R., p. 17,770.
**Taunton,** *mun. bor.*, *t.* on R. Tone, Somerset, Eng., cap. of co.; old castle, p. *25,177*; also c. Bristol co., Mass., U.S.A.; cotton manuf., iron foundries, p. 37,360.
**Taunus,** *mtn. range* in Hesse-Nassau and Hesse-Darmstadt, Germy., betwn. the R. Lahn and the R.'s Rhine and Main; highest pk. Grosser Feldberg, 2,890 ft.
**Taupo,** *L.* (22 m. by 13 m.) in N. isl., New Zealand.
**Tauranga,** *t.* on Bay of Plenty, co. Auckland, New Zealand; p. 3,100.
**Taurida,** or **Krim,** Crimea Soviet, U.S.S.R. (includg. the Crimean penins.); area 24,540 sq. m.
**Taurus.** (*See* **Tabris.**)
**Tavasstehuss,** *govt.* Finland; area 8,182 sq. m., p. 357,186; cap. T., t. nr. Abo.
**Tavistock,** *urb. dist.*, mkt. *t.* in valley of R. Tavy, nr. Plymouth; tr. in arsenic extracted from copper ore, p. *4,453*.
**Tavoy,** *dist.* in Tenasserim div., Lower Burma, betwn. Siam and the Bay of Bengal; rice, p. 112,000; cap. T., t. on T. R., p. 16,450.
**Tavrov,** *t.* U.S.S.R., on R. Don, p. 12,570.
**Tavy,** *R.* of Devon, Eng., trib. (20 m.) of R. Tamar.
**Taw,** R. Devon, Eng., flows (50 m.) from Dartmoor to Bideford B.
**Tay,** *R.* Scotl., flows 120 m. from Loch Tay (14¼ m. long) in Perthsh., to the Firth of T.; the Tay Bridge crosses the Firth above Dundee, and is over 2 m. long.
**Tayabas,** *t.* in Luzon, Philippine Isls., on slope of extinct volcano Banájao; in rice and cocoa-nut growg. dist., p. 15,700. [ton regn., p. 7,600.
**Taylor,** *c.* Williamson co., Texas, U.S.A., in cot-
**Taylorville,** *t.* on South Fork of Sagamon R., Illinois, U.S.A., cap. of Christian co., p. 7,500.
**Tayport,** *t.* at mth. of Firth of T., Fifesh., Scotl., opp. Broughty Ferry, p. *3,164*. [in Gulf of Obi.
**Taz,** *R.* Siberia (300 m.), flows to Bay of Tazovsk
**Tchad Lake,** (*See* **Chad.**)
**Tchenstokov,** *t.* on R. Warthe, U.S.S.R., p. 20,960.
**Tchernigov.** (*See* **Chernigov.**)
**Tchistopol,** *t.* on R. Kama, U.S.S.R., p. 20,960.
**Tchuguev,** *t.* on the Northern Donets, U.S.S.R.; mil. centre, p. 14,720. [p. 15,020.
**Teano,** *t.* nr. Capua, prov. Caserta, Italy, cathdl., p.
**Tebbes,** *t.* prov. Kuhistan, Persia; gd. local tr., p. 11,470.
**Tecuci,** *t.* on Berland R., Rumania; fierce battle 1476; p. 16,120.
**Teddington,** *urb. dist.*, *t.* on R. Thames, Middlesex, Eng.; subn. to London; p. (residtl.) *23,362*.
**Tedsi,** *t.* nr. Terodant, prov. Sus, Morocco; gd. tr.; p. 14,750. [betwn. Yorks and Durham.
**Tees,** *R.* of N. Eng., flows (70 m.) E. to N. Sea,
**Tefle,** *R.* Brazil, trib. (500 m.) of R. Amazon.
**Tegucigalpa,** *t.* on Choluteca R., Honduras; cap. of the Republic; alt. 3,200 ft. above sea; united by bridge to Concepcion on opp. bank of R.; university; p. 40,175.
**Teheran** (or **Tehran**), fertile *prov.* Persia; cap. Teheran c. (which is also cap. of the Empire); became the res. of the Shah at end of 18th cent.; stands 70 m. due S. of the Caspian, at alt. 3,447 ft.; area, within the bastions 7½ sq. m.; p. over 220,000; silk, tapestry, and cotton factories; has twelve gates, closed at night.
**Tehri,** nat. *st.* Bundelkhand Agency, Centl. India; area 2,000 sq. m.; p. 322,000; cap. T., t., p. 19,250.
**Tehuacan,** *t.* in Pueblo st., Mexico, p. 10,426.
**Tehuantepec, Isthmus of,** separates G. of Mexico from the Pacific at narrowest pt. (130 m.) of Mexico; also t. on the T. R., nr. the Pacific cst. of the isthmus; once an Indian cap.; p. 9,500.
**Teign,** *R.* Devon, Eng., flows (30 m.) to sea at Teignmouth from Dartmoor.
**Teignmouth,** *urb. dist.*, spt. and mkt. *t.* nr. Exeter, Devon, Eng.; yacht bldg.; p. *10,019*.
**Teith,** sml. *R.* Perthsh., Scotl., joins R. Forth, nr. Stirling.
**Telav,** old *t.* in Transcaucasia, U.S.S.R.; p. 12,330.
**Tel-el-Kebir,** *vil.* Lower Egypt, 80 m. from Ismailia; here Wolseley defeated Arabi Pasha in 1882. [5,300.
**Tell,** *c.* Indiana, U.S.A., on Ohio R., Perry co., p.
**Tellicherry,** *t.* and *spt.* Malabar dist., Madras, Brit. India; exports coffee, spices, sandalwood, and cocoa-nuts; p. 29,100.
**Temascaltepec,** *t.* in Mexico, 68 m. S.W. of the c. of Mexico; gd. tr.; p. 11,690.
**Teme,** *R.* on border of Wales and Worcestersh., Eng., trib. (70 m.) of R. Severn. [nr. Belgrade.
**Temes,** *R.* Hungary, flowg. (180 m.) to R. Danube.
**Temesvar,** *t.* in Rumania, the most impt. commercl. and industrl. centre; fortress, castle, Roman Cath. cathedl.; p. 60,100.
**Temiscamingue, Lake,** Can., extensn. of the Upper Ottawa R., betwn. provs. Quebec and Ontario, 26 m. long. [outlet Madawaska R.
**Temiscouata, Lake,** Quebec, Can., 22 m. long.
**Temnikov,** *t.* in old Tambov govt., U.S.S.R.; industrl.; p. 15,750.
**Tempe,** romantic *vale* betwn. Mts. Olympus and Ossa, Thessaly, Greece, 6 m. long. [p. 11,610.
**Tempio,** *t.* nr. Ozieri, Sardinia, Italy; corks, etc.; p. 11,610.
**Temple,** rly. *t.* in cotton-growg. dist., Bell co., Texas, U.S.A., p. 15,750. [p. 2,830.
**Templemore,** mkt. *t.* on R. Suir, Tipperary, I.F.S.,
**Te Muka,** *t.* nr. Christchurch, N. Zealand, p. 3,200.
**Temyruk,** *t.* on S. of Azov, N. Caucasia, Russ.; once a Turkish fortress; grain export centre; p. 15,130.
**Tenasserim,** *div.* Lower Burma, on Siamese border; area 36,080 sq. m., extendg. along cst. B. of Bengal; p. 1,150,000; admin. hdqrs. Moulmein. T. t. is on cst. of T. div., at mth. of R. T. (250 m. long).
**Tenbury,** mkt. *t.* on R. Teme, Worcestersh., Eng.; p. 4,380. [marthen B.; p. *4,108*.
**Tenby,** cst. *wat. pl.* Pembrokesh., Wales, on Car-
**Tenedos,** *isl.* off W. cst. Asia Minor, 7 m. long; a Turkish possn. in the Ægean S.; p. 8,200.
**Teneriffe,** largest of the Canary Isles; area 782 sq. m.; p. 108,700. Cap. Santa Cruz de Santiago; contains famous extinct volcano peak of T., alt. 12,182 ft.; exports wine, fruit, etc.
**Tengri-Nor,** *L.* Tibet, 124 m. N.W. Lhassa, 80 m. long, 40 m. wide.
**Teng-Chow,** *spt.* Shang Tung prov., China; p. (est.) 200,000; also c. Fo-Kien prov., China, nr Amoy; p. 83,410.
**Tennessee,** S. centl. *st.* U.S.A., betwn. Mississippi R. and the Appalachian mtns., and S. of Kentucky and Virginia; area 41,687 sq. m.; cotton and agr. (chfly. Indian corn); p. 2,536,000. Cap. Nashville; chf. port Memphis.
**Tennessee,** *R.* the largest and most impt. branch of the Ohio, formed by union of the Clinch and Holston R.'s from Virginia, flows through Tennessee to Paducah, Kentucky, 782 m. from source of Holston R.

**Tenterden,** *mun. bor.*, mkt. *t.* nr. Rye, Kent, Eng.; ch. with famous steeple; p. *3,473.*
**Tenterfield,** *t.* Clive co., N.S.W., nr. Queensland border; gold and tin mines; p. (dist.) 5,060.
**Tepic,** *terr.* Mexico, washed by Pacific; area 11,279 sq. m.; agr. p. 151,000. Cap. T., t. nr. the port of San Blas; p. 15,500.
**Teplitz, or Toplitz,** *wat. pl.* Bohemia, 47 m. N.W. of Prague; textile and hardware industries; p. 27,100.
**Teramo,** *prov.* centl. Italy; area 1,067 sq. m.; p. 319,741. Cap. T., on Tardino R.; anc. Interamnium; cathedl., Roman antiquities; gd. tr.; p. 25,070.
**Terceira,** *isl.* of the Azores, N.W. of St. Michael, 28 m. long; p. 50,000. Cap. Angra.
**Terek,** *R.* of N. Caucasia, U.S.S.R., flows (350 m.) to Caspian S.; also prov. watered by same; area 23,548 sq. m., malarial; p. 950,000, mainly peasantry; vineyards, stock-raising, bee-keeping; chf. t. Vladikavkas, silk-worm culture.
**Terim,** *t.* in Hadramaut, S. Arabia; commercl. centre; p. 25,870. [festa.; industrl.; p. 22,000.
**Terlizzi,** *t.* in prov. Bari, Apulia, Italy, nr. Mol-
**Termini,** *spt.* Palermo, Sicily; tunny fishg., macaroni, olive oil, wine, sulphur; p. 35,720.
**Tern,** *R.* Shropsh., Eng., trib. (30 m.) of R. Severn.
**Ternate,** sml. *isl.* of the Moluccas, Dutch E. Indies; also spt. on same, p. 3,000; also Dutch residcy. of Malay Arch., includg. parts of Celebes, Jilolo, and smlr. isls.; area 155,800 sq. m., nutmeg export.
**Terni,** *t.* Perugia, Umbria, Italy, amongst the Apennines; iron and steel works, arms factory; p. 11,920.
**Terodant,** *t.* in Morocco, cap. Sus, p. (est.) 8,900.
**Terranova,** *t.* nr. Alicata, Sicily, on S. cst.; p. 18,650.
**Terre Haute,** *c.* on Wabash R., Vigo co., Indiana, U.S.A.; in coal and nat. gas regn.; p. 62,500.
**Terrell,** *c.* Kaufman co., Texas, U.S.A.; in cotton and timber dist.; p. 8,850. [p. 3,950.
**Terschelling,** *isl.* Holland, at entce. to Zuyder Zee,
**Teruel,** *prov.* Spain, in S. Aragon; timber forests, coal-beds, etc., area 5,720 sq. m.; p. 255,069. Cap. T., t. on R. Guadalaviar; cathedl.; p. 10,250.
**Teschen,** *t.* nr. Cracow, Silesia, Czecho-Slov., former cap. Duchy of Teschen; state printing works, small-arms factory; p. 21,643.
**Test,** or **Anton,** R. Hants, Eng., flows to head of Southampton Water. [shire, Eng.; p. *2,237.*
**Tetbury,** *urb. dist.*, *t.* nr. Circencester, Gloucester-
**Tettenhall,** *urb. dist.*, nr. Wolverhampton, Staffs, Eng., industrl.; p. *5,767.*
**Tetuan,** open *port* Morocco, on the Mediterranean, S. of Strait of Gibraltar, p. 37,000.
**Teutoburger Wald,** *mtn.* range Germy., extendg. from nr. Osnabrück, Hanover, through Westphalia and Lippe; highest pt. 1,500 ft. [Tweed.
**Teviot,** *R.* Roxburgh., Scotl., trib. (37 m.) of R.
**Tewkesbury,** *mun. bor.* Gloucestersh., on R. Avon, Eng., p. *4,352.*
**Texarkana,** *c.* of Texas and Arkansas, U.S.A , the div. passing down middle of main street; timber and cotton regn.; rlway. workshops; total p. 17,100.
**Texas,** most S.W. of the Gulf Sts., U.S.A.; area 262,398 sq. m.; largest cotton producr. dist. in the world; p. 5,652,000. Cap. Austin City; chf. port Galveston.
**Texel,** *isl.* N. Holland; area 83 sq. m.; p. 6,700. Has been the scene of many naval battles.
**Tezcuco, or Texocco,** *L.*, 24 m. E. of c. of Mexico; area 77 sq. m.; less than 2 ft. deep; contains no fish. [tine, Algeria.
**Tezzute,** magnificent ruins S. of prov. Constan-
**Thame,** *urb. dist.* and mkt. *t.* Oxford, Eng., p. *3,019.* [trib. (35 m.) of R. Thames.
**Thame,** *R.* Bucks and Oxfordsh. co.'s, Eng.,
**Thames,** *R.* Eng.,; rises in the Cotswold Hills, Gloucestersh., and flows past Oxford, Reading, Windsor, and London to the Nore (210 m.); also R. of Ontario, Can., flows 160 m. into L. St. Clair; also R. of Connecticut, U.S.A., flows (15 m.) into Long Isl. Sound at New London; also R. of New Zealand, flows (86 m.) to Gulf of Hauraki.
**Thames Ditton,** *vil.* and residtl. dist. on R. Thames, Surrey, Eng., opp. Hampton Court.
**Thana,** maritime *dist.*, Konkan div., Bombay, India; cap. T., fort. t. on Salsette Creek, 21 m. from Bombay c., p. 16,700.
**Thanet, Isle of,** N.E. extrem. Kent, Eng., formed by bifurcatn. of R. Stour, contains Margate, Ramagate, and Broadstairs, with other wat. places.
**Tharawaddi,** *dist.* Pegu div., Lower Burma, N. of Rangoon, mainly forest, with expanses of rice fields in the clearings, area 2,851 sq. m., p. 401,000, chf. vil., Gyobiogauk.
**Thaso,** or **Thasos,** *isl.* formerly of Turkey, in the Ægean Sea, length 15 m., area 188 sq. m., p. (mainly Greeks) about 10,000; also t. on N. cst., the anc. cap. under the Romans.
**Thaton,** *dist.* Tennasserim div. Lower Burma, area 5,089 sq. m., rice and tobacco, p. 365,000. Hdqrs. t. T., p. 10,255.
**Thaxted,** *t.* on R. Chelmer, Essex, Eng., nr. Dunmow, p. 2,020. [of The March.
**Thaya,** *R.* Lwr. Austria and Moravia, trib. (130 m.)
**Thayetmyo,** *dist.* Pegu div. Lower Burma, forest, rice, and tobacco, area 4,750 sq. m., p. 250,000. Dist. hdqrs., T. t. on Irrawaddy R., p. 21,000.
**Thebes,** ruined anc. *cap.* Upper Egypt, on both banks of R. Nile, site now partly occupied by villages Karnak and Luxor; important archæological discoveries in the Valley of the Kings in 1923; also anc. c. Bœotia, Greece, betwn. Eubœan S. and Corinthian Gulf, the mod. Thiva, p. (abt.) 4,000.
**Theiss,** largest *R.* of Hungary, princ. trib. (840 m.) of the R. Danube, navigable from Tokay.
**Theresienstadt,** royal free and garrison *t.* dist. Leitmeritz, Bohemia, on the R. Eger; in the "Bohemian Paradise" fruit regn.; p. 8,000; also T. (or Theresienopol), t. nr. Szegedin, Hungary; manuf.; p. 74,000.
**Therezina,** *t.* cap. Piauhy prov., Brazil; cotton and thread factory; p. 25,020.
**Thermopylæ,** or **Pylæ,** celebrated *pass* betwn. Mt. Æta and the sea, N.E. Greece; scene of struggle betwn. Persians and Spartans, 480 B.C.
**Thessaly,** or **Thessalia,** *nomarchy* of Greece, on G. of Salonica, ceded from Turkey in accdce. with Berlin Treaty, 1812; area 2,478 sq. m.; p. 150,000; cap. Larissa, an anc. N.E. div., Classic Greece, bd. N. by Macedonia.
**Thetford,** *mun. bor.* Norfolk and Suffolk, Eng., on R. Ouse, p. *4,097.*
**Thian Shan,** or **Celestial Mts.,** lofty *chn.* N. frontier Chinese Turkestan; highest pks., 24,000 ft.
**Thibaw,** N. Shan st., Burma; area 4,524 sq. m., p. 76,000; prod. rice, cotton and tea; chf. t. T., on Nam Tu R.
**Thiel,** or **Tiel,** *t.* on R. Waal, Gelderland, Holland; industrl.; p. 9,970. [cutlery manuf.; p. 17,120.
**Thiers,** *t.* nr. Clermont, Puy-de-Dôme dep. France;
**Thirlmere,** *L.* Cumberland, Eng., 5 m. S.E. Keswick, 3 m. long; furnishes part of the water supply of Manchester, through a conduit of 96 miles.
**Thirsk,** mkt. *t.* N.R. Yorks, Eng., p. 3,430.
**Thomas' Plains,** post *t.* Tasmania, 105 m. E.N.E. Launceston; p. (dist.) 1,250.
**Thomasville,** *c.* cap. T., co. Georgia, U.S.A.; cotton regn.; p. 12,000.
**Thompson,** *t.* on French R., Connecticut, U.S.A., p. 5,055.
**Thorenburg,** *t.* cap. Torda-Aranyos, Hungary, nr. Klausenburg; industrl.; p. 13,750.
**Thorn,** fortfd. *t.* on R. Vistula, Poland, p. 39,419.
**Thornaby-on-Tees,** *mun. bor.*, *t.* (oppos. Stockton) N.R. Yorks; has iron industries and manuf. blue and white pottery; p. *21,233.* [p. 6,120.
**Thornbury,** mkt. *t.* nr. Bristol, Gloucestersh., Eng.,
**Thornhill,** mftg. *t.* near Dewsbury, W.R. Yorks, Eng., p. 11,400.
**Thornton,** *urb. dist.*, Lancs, Eng., p. *10,144.*
**Thousand Isles,** L. of the expansion of the St. Lawrence R. at outfall of L. Ontario. The islets really number 1,500 to 1,800, and are partly sit. in New York State and partly in Canada. The Kuriles, S. of Kamchatka, are called the Thousand Isles by the Japs, to whom they belong.
**Thrace** or **Thracia,** anc. name of territory in S.E. Europe, part of which has been recently added to Greece. Successively under Macedonian, Roman, Byzantian, and Turkish rule, before passing to Greece. [boot manuf.; p. 3,250.
**Thrapston,** industrl. *t.* nr. Northampton, Eng.;
**Three Rivers,** *c.* and *port* at confl. R.'s St. Maurice and St. Lawrence, Quebec, Can.; wood pulp manuf.; p. *35,197.* Also vil. on St. Joseph's R., Michigan, U.S.A., p. 7,000.

**Throston,** *t.* nr. Hartlepool, Durham, Eng., p. 4,920.

**Thur,** *R.* Switzld.; flows 70 m. N. and W. to R. [Rhine, nr. Schaffhausen.

**Thurgau,** *cant.* Switzld.; area 381 sq. m., bounded by L. of Constance and Baden; p. 135,933. Cap. Frauenfeld (*q.v.*).

**Thuringia,** *state* of Cent. Germany, seated between Franconia, the Harz Mtns. and the R.'s Saale and Werra, and comprising in great part the mtnous. Thuringerwald dist.; area 4,546 sq. m., p. 1,511,876.

**Thuringian Forest,** or **Thuringerwald,** wild-wooded hill range of Centl. Germany, 95 m. long, famous for romantic scenery and legends.

**Thurles,** mkt. *t.* on R. Suir, Tipperary co., I.F.S.; horse fair; p. 4,420. [W.R. Yorks, Eng., p. *2,640*.

**Thurlstone,** *urb. dist.*, industrl. *t.* nr. Barnsley.

**Thurmaston,** *urb. dist.*, *t.* on R. Soar, nr. Leicester, Eng., p. *3,723*. [fishery centre.

**Thursday, Isl.,** Torres Strait, Queensland, pearl

**Thurso,** *t.* on T. Bay, Caithness; most N. t. on Scottish mainland; anc. stronghold of the Northmen; p. *4,095*.

**Thurstonland,** *urb. dist.*, W.R. Yorks, Eng., p. *3,980*. [2,510.

**Tiaro,** *t.* nr. Maryborough, Queensland, p. (dist.)

**Tiber,** *R.* of Italy, flows (220 m.) from the Apennines to the Mediterranean, passing Rome.

**Tiberias** (*see* **Tabariyeh**); **Tiberias, Sea of,** or **L. of Galilee**), Palestine, on R. Jordan, 14 m. by 8 m.; surface 755 ft. below sea-level.

**Tibet,** a lofty *land* of Centl. Asia, dependcy. of China, called the "Roof of the World," its lowest plains being 12,000 ft. above sea-level; area 463,200 sq. m., p. 2,000,000. Very much under priestly dominatn. and averse to Western incursn.; exports wool, musk, gold, skins, and drugs. Cap. Lhassa (*q.v.*) reached by Brit. expedition, Aug. 1904, when tr. rights were secured in Tibetan territory by treaty between the Dalai Lama and Brit.

**Ticino,** or **Tessin,** *cant.* Switzld.; area 1,087 sq. m.; forests, vineyds., and agr., p. 152,256. Cap. Bellinzona, largest t. Lugano; also T., R. of Switzld. and Italy, trib. (150 m.) of Po.

**Tickhill,** *urb. dist.*, *t.* nr. Rotherham, W.R. Yorks, Eng., p. *2,297*.

**Ticonderoga,** *t.* Essex co., New York, U.S.A., on outlet of L. George to L. Champlain, fortified by French, 1755 (as Carillon); captured by British (under Amherst) 1759, p. 3830.

**Tideswell,** *t.* nr. Buxton, Peak of Derbysh. Eng., p. 2,060.

**Tientsin,** *treaty port* prov. Chih-li, China, 70 m. S.E. Pekin; formerly held on lease by Britain, France, and Germy.; captured by the Allies, after the Boxer rebellion, July 14, 1900; p. 838,629.

**Tierra del Fuego,** *arch.* in extreme S. America, sep. from Patagonia by Strait of Magellan, divided politically betwn. Chili and Argentina; total area of the 11 large and 20 sm. isls., 28,185 sq. m., p. (includg. abt. 1,000 aboriginal Indians) 3,000. Gold is obtained in the Argentine portn. of King Charles South Land, the largest isl. of the arch. [university, p. 16,600.

**Tiffin,** *c.* on Sandusky R., Seneca co., Ohio, U.S.A.,

**Tiflis,** *region* Georgia, Transcaucasia; area 15,306 sq. m.; agr., cattle-rearg., vineyds., etc., p. 1,500,000. Cap. T., c. on R. Kur (cap. also of Caucasia), on main route betwn. Russ. and Persia; manuf. silk, cotton, leather goods, silver-ware, arms, etc., p. 346,766.

**Tigré,** *st.* of Abyssinia, in N.W. basin of the Mareb; formerly an indpt. kingdom; cap. Adowa.

**Tigre,** or **Tegueña,** *R.* Ecuador, trib. (400 m.) of R. Amazon.

**Tigris,** *R.* Asiatic Turkey, rising in mtns. of Armenia and Turkestan, flowing 1,100 m. to join the Euphrates 40 m. N.W. of Basra.

**Tikari,** *t.* in Gaya dist., Bengal, India; gd. tr., p. 13,110. [lishing, woollen manuf., p. 62,803.

**Tilburg,** *t.* nr. Breda, N. Brabant, Holland; flour-

**Tilbury,** *urb. dist.*, ry. and stmr. *stn.* with strong fort and extensive docks, N. side of R. Thames, Eng., opp. Gravesend, 20 m. E. of London, p. [illegible]

**Tilehurst,** *par.* subn. to Reading, Berks, Eng.

**Till,** *R.* N. Northumberland, Eng., trib. (32 m.) of R. Tweed.

**Tillicoultry,** *burgh*, Clackmannansh., Scotl., on R. Devon, nr. Alloa; wool factories; p. *4,461*.

**Tilsit,** *t.* on R. Niemen, nr. Memel, E. Prussia; iron-works and machinery manuf.; p. 37,250.

**Timaru,** *t.* nr. Christchurch, New Zealand, p. 16,800.

**Timbuctoo,** or **Timbuktu,** chief *t.* in the French Sudan, 8 m. N. of the N. bend of R. Niger, or border of the Sahara desert; a great trade centre; p. 7,000 (had 50,000 inhabs. under Mandingan rule).

**Timor,** E. *isl.* of the Malay Arch. (Lesser Sunda group); area 12,581 sq. m., divided between Portuguese Timor (7,330 sq. m., N. of the isl., port Dilli) and Dutch Timor (5,131 sq. m., S. of isl., port Coipang). Exports coffee, sandal-wood, ponies, etc.; total p. (est.) from 750,000 to 1,000,000.

**Timor-Laut,** or **Tenimber,** sm. Dutch *isl. group* in Arafura Sea, 260 m. N.E. Timor Isl.

**Timor Sea,** that part of the Indian Ocean N.W. of W. Australia and S. of Timor Isl. [3,020.

**Timperley,** *sub.* Altrincham, Cheshire, Eng., p.

**Tinnevelli,** *dist.* Madras, India, area 5,387 sq. m.; rice, coffee, cotton, tobacco; p. 2,000,000; cap. T., t. on Tambraparni R., p. 26,200.

**Tino,** or **Tinos,** *isl.* of Greece, one of the Cyclades group; area 81 sq. m., p. 12,500.

**Tintagel,** *vil.* nr. Launceston, Cornwall, Eng., with ruined castle, reputed birthplace of **King Arthur**; Tintagel Head is a rocky cliff on the coast.

**Tinto,** *R.* Spain, prov. Huelva, flows (65 m.) to the Atlantic; also hills of Lanarksh., Scotl., highest peak 2,300 ft.

**Tipperah,** nat. *st.* (area 4,086 sq. m., p. 150,000) and Brit. *dist.* (area 2,491 sq. m., p. 2,250,000) N.E. Bengal, India; prod., rice, jute betelnuts. Admin. hdqrs. Comilla.

**Tipperary,** inld. *co.* prov. Munster, I.F.S.; area 1,659 sq. m., pasture and tillage, p. 150,000; co. t. Clonmel (*q.v.*). T., t. 29 m. S.E. Limerick; manuf.; has 6,240 inhabs.

**Tippermuir,** or **Tibbermore,** 5 m. W. of Perth, Scot., the scene of the rout of the Covenanters by Montrose, Sept. 1st, 1644.

**Tipton,** *urb. dist.*, *t.* Staffs, Eng., p. *35,792*; also name of t. in T. co., Indiana, U.S.A., in agr. regn., p. 4,875.

**Tirana,** *t.* nr. Kroya, Albania; gd. tr., p. 11,250.

**Tiraspol,** *t.* on R. Dniester, Ukraine; flour mills, active tr. with Rumania, p. 29,270.

**Tireh,** *t.* at foot of Mt. Messogis, Asia Minor, connected by rail with Smyrna; raisins, corn, cotton, rice tr., p. 15,700.

**Tirhut,** a former *dist.* of Bengal, but since 1875 has been part of the districts of Darbhangah and Muzzaffarpur.

**Tirlemont,** *t.* nr. Brussels, Belgium, on R. Geete; captd. by Marlborough 1705, p. 17,020.

**Tirnovo,** fort. *t.* on R. Jantra, nr. Sistova; former cap. Bulgaria; p. 13,870.

**Tirol,** or **Tyrol,** mountainous region, Austria and Italy; betwn. Munich and Verona, the Brennan Pass furnishg. the connectg. way btwn.; the Tirol embraces all the highest pks. of the Austrian Alps, culminating in the Ortler Spitz (*q.v.*); area of Austrian Tirol 4,790 sq. m.; two-fifths forest, p. 306,304; cap. Innsbruck (*q.v.*), mountain pasture, vineyds., silk industries.

**Tirupati,** or **Tripetti,** *t.* in N. Arcot dist., Madras, India; famous hill temple or pagoda, a pl. of pilgrimage, p. 15,860.

**Tirupatur,** *t.* Salem dist., Madras Pres., India; commcl. centre, p. 19,000.

**Tisbury,** *t.* nr. Salisbury, Wilts, Eng., p. 3,020.

**Titchfield,** *t.* nr. Fareham, Hants, Eng., p. 4,710.

**Titicaca, Lake,** betwn. two ranges of the Andes, on borders Bolivia and Peru, 12,645 ft. above the sea; area 3,200 sq. m., av. width 27 m., gtt. length 101 m.; almost cut in two by penin. of Copacabana; nearly 700 ft. deep on E. side, shallow W. and S.; contains numerous isls., largest Titicaca. It is drained on the southern side by the Desaguadero.

**Titusville,** *c.* Crawford co., Penn., U.S.A., on Oil Creek; petrol regn., p. 8,000.

**Tiumen,** *t.* on R. Tura, Western Siberia, U.S.S.R.; carpet and leather manuf., p. 19,120.

**Tiverton,** *mun. bor.* Devon, Eng., 14 m. N. Exeter; lace manuf.; p. *9,611*.

**Tivoli,** *t.* in prov. Rome, Italy; sulphur baths, freqtd. by 40,000 persons annually; p. 12,340. The Falls of Teverone (Anio) supply power for the electric lighting of Rome. The famous Villa d'Este is nr. Tivoli.

**Tlaxcala,** *st.* Mexico, adjng. Puebla; area 1,534 sq. m.; agr.; p. 186,650; cap. T., p. 3,050.

**Tlemcen,** *t.* in Oran dep., Algeria; exports olive oil, grain, wool, onyx; p. 43,090.

**Tobago,** *isl.* Brit. W. Indies, and the most southerly of the Windward grp.; discovered by Columbus in 1489, and named by him Assumption, and has belonged to Britain since 1762. Its present name is supposed to be derived from the fact that the Carib natives were greatly addicted to tobacco; area 114 sq. m.; exports sugar, rum, coffee, etc.; p. 18,900, nearly all negroes; cap. Scarborough on S. side.

**Tobarra,** *t.* in Albacete prov., Spain; industrl.; p. 8,130.

**Tobol,** *R.* W. Siberia, U.S.S.R., trib. (500 m.) of R. Irtish.

**Tobolsk,** *area* W. Siberia, U.S.S.R., extendg. from the Arctic Oc. to the Steppes of Semipalatinsk and Akmolinsk; area 539,660 sq. m.; grain growg., dairying, and cattle raising; p. about 2,000,000, nearly all peasantry; cap. T., t. on R. Irtish; fishy., industries and tr.; p. 25,000.

**Tocantins,** *R.* of provs. Para and Goyaz, Brazil; flows 1,700 m. through the Para est. to the Atlantic; navigatn. interrupted by rapids 200 m. above Para.

**Toddington,** *t.* in Bedfordsh., 5 m. N. of Dunstable, p. 2,190. [Calder, W.R. Yorks, Eng., p. *22,223*.

**Todmorden,** *mun. bor.* and mkt. and mftg. *t.* on R.

**Togoland,** former Germ. *protectorate*, W. Afr., on G. of Guinea, now divided between Britain and France; area 33,700 sq. m.; p. 1,500,000, chiefv. Sudanese negroes; cap. Little Popo; Lome the chief port.

**Tokat,** *t.* on R. Yeshil Irmak, Sivas vilayet, Asia Minor; copper and yellow leather manuf.; Armenian massacre 1895; p. 30,500.

**Tokay,** mkt. *co.* Zemplen, Hungary; vineyard dist.; p. 5,570. The imperial Tokay liqueur wines are famed for their quality.

**Tokio,** (formerly called **Yeddo**), *c.* on Isle of Honshiu, at head of B. of Yeddo; cap. of Japanese Empire; an immense commercl. and industrl. centre, coverg. an area of 100 sq. m. on both sides of R. Sumida, connected by rly. (18 m.) with pt. of Yokohama; wide streets with ornamental trees betwn. carriage and footway, electric lighting, Imperial Palace, and other fine bldgs.; p. *2,070,913*. [N.E. coast, p. 73,096.

**Tokushima,** large *t.* of Shikoku, Japan, on the

**Toledo,** *prov.* Spain; area 5,919 sq. m.; mtnous.; till recently infested by brigands; agr. and vineyds.; also stock raising; p. 444,156; cap. T., anc. c. on R. Tagus; with cathedl., and many specns. of Gothic, Moorish, and Castilian architecture in its picturesque narrow streets; and famous Alcazar palace citadel; sword-making still flourishes; p. 25,350.

**Toledo,** *c.* on Maumee R., Ohio, U.S.A.; gt. rly. and mftg. centre, covering an area of 28½ sq. m.; p. 295,500.

**Tolima,** *vol.* of the Andes, Colombia, alt. 18,143 ft.; also st. in Repub. of Colombia, area 10,080 sq. m., p. 328,812; cap. Ibagué.

**Tolosa,** *t.* prov. of Guipuazoca, 15 m. S. of San Sebastian, p. 8,570.

**Toluca,** *cap.* st. of Mexico; was an Aztec pueblo at the Spanish conquest; p. 31,023.

**Tom,** *R.* Siberia, trib. (400 m.) of R. Obi.

**Tombigbee R.,** Mississippi, U.S.A., flows 500 m. S. to form the Mobile.

**Tomelloso,** *t.* Ciudad Real prov., Spain; wine and brandy exports; p. 9,360.

**Tomintoni,** *vil.* of Banffshire, nr. the Avon, 1,100 ft. above sea-level 14½ from Ballindallock.

**Tomsk,** *region* Western Siberia, adjng. Chinese frontier, area 333,159 sq. m.; agr. dairying, stock-raisg., fisheries, mining, and manuf.; p. about 3,000,000; cap. T., c. on Tom R. and a branch of Trans-Siberian rly.; university, cathedral and many thriving industries; p. 72,250.

**Tonawanda,** industrl. *vil.* on Niagara R., Erie co.; N.Y., U.S.A., p. 12,950.

**Tonbridge,** *urb. dist.* on R. Medway, Kent, Eng.; nr. Tunbridge Wells, and 27 m. S.E. of London, p. *18,332*.

**Tongking.** (*See* Tonquin.)

**Tongres,** episcopal, *c.* of Belgium, prov. Limburg, 12 m. N. of Liége; there is a mineral spring near mentioned by Pliny.

**Tonk,** nat. *st.* Rajputana Agency, India, in six separate portns.; total area 2,509 sq. m., p. 342,000; cap. Tonk, t. nr. the Banas R., walled with mud forts, p. 39,210.

**Tonneins,** *t.* on R. Garonne, Lot-et-Garonne dep., France; industrl.; p. 8,560.

**Tonquin, Tongking, or Tonkin,** N. prov. of Annam; ceded to France in 1884; area 40,530 sq. m., p. (est.) 6,500,000. Hai-phong is the French mil. and admin. pt.; Hanoi, on the Song Ka, or Red R., the largest t.

**Tonsberg,** *t.* (fort.) on B. nr. entrance to Christiania Fiord, Norway; hdqrs. of sealing and whaling fleet, oil mills; p. 8,930.

**Toombudra R.,** rises in S.W. Mysore, and flows 400 m. N.E. to the Kistnah, below Karnul.

**Toowomba,** *t.* in Aubigny co., Queensland; centre of pastoral dist., Darling Downs; wine manuf.; p. 24,200.

**Topeka,** *c.* on Kansas R., Shawnee co., Kansas, U.S.A.; flour milling; large tr.; p. 65,500.

**Toplitz,** or **Teplitz** (*q.v.*), Bohemian Spa.

**Topsham,** mkt. *t.* Devon, on the Exe, 4 m. S.S.E. of Exeter, p. 3,670.

**Torcello,** *isl.* (with anc. Byzantine cathedl.) on lagoon nr. Venice, Italy.

**Torda,** old *t.* nr. R. Aranyos, S.E. Koloswar, Hungary; salt-mines and baths; p. 12,560.

**Torgau,** *t.* on R. Elbe, Prussn. Saxony; royal studfarm of Graditz in vicinity; p. 12,350.

**Tormes,** *R.* of Spain, trib. (150 m.) of R. Douro; passes Salamanca.

**Tornea,** R. Lapland, flows (230 m.) betwn. Sweden and Russ. to the G. of Bothnia.

**Toro,** old *t.* Zamora prov., Spain, on R. Douro; cathedl., convents, palaces; p. 8,520.

**Tórökszentmiklos,** mkt. *t.* on Alföld plain, co. Jász-Nagy-Kun-Szolnok, Hungary; agr. dist.; p. 23,100.

**Toronto,** cap. Ontario prov., Can., on B. of T., Lake O.; spacious harbr., university, extensive tr., and manuf.; exports grain, timber, cattle, etc.; fine parliament bldgs., parks, etc.; p. *627,582*.

**Torpoint,** *urb. dist.*, Cornwall, Eng., p. *3,975*.

**Torquay,** *mun. bor.*, *wat. pl.* on Tor Bay, Devon, Eng.; p. *46,165*.

**Torre del Grecco,** *t.* on B. of Naples, Italy, at foot of Mt. Vesuvius; lava quarries, shipbldg. yards, coral fishy.; p. 25,650.

**Torre dell' Annunziata,** *t.* on E. side, B. of Naples, at S. foot of Mt. Vesuvius; royal arms factory, macaroni manuf., silkworm-breedg.; p. 27,370.

**Torredonjimeno,** *t.* on R. Salado de Porcuna, prov. Jaen, Spain; wine, wheat, fruit; p. 11,450.

**Torres Novas,** *t.* Santarem dist., Portugal; jute, cotton and paper factories; p. 11,620.

**Torrens L.,** 90 m. N. of Spencer's Gulf, S. Australia, named after Sir R. R. Torrens; it measures 130 by 20 m., and varies from the condition of a brackish lake to that of a tract of salt marsh.

**Torres Strait,** betwn. Cape York, Queensland, and New Guinea, 90 m. wide, dangerous navigation.

**Torres Vedras,** *t.* nr. Lisbon, Portugal; hot sulphur baths; here were the famous fortifications—"the lines of Torres Vedras"—constructed by Wellington in 1810; p. 6,920.

**Torreviega,** *spt.* Alicanti prov., on S. cst. of Spain; salt-beds, fisheries, etc.; p. 8,220.

**Torridge,** *R.* Devon, Eng., trib. (37 m.) of R. Taw.

**Torrington, Great,** *t.* on R. Torridge, nr. Bideford, Devon, Eng.; silk-glove industry; p. *2,913*; also t. on Naugatuck R., Litchfield co., Connecticut, U.S.A.; manuf.; p. 26,600.

**Tortola,** one of the Virgin Isls., Brit. W. Indies, 12 m. long, 4 m. wide, p. 6,120.

**Tortona,** *t.* nr. Alessandria, N. Italy, the Roman Dertona, cathedral, p. 15,760.

**Tortosa,** fort. *t.* on R. Ebro, Tarragona prov., Spain, wine, oil, and fruit, p. 24,770.

**Tortugas,** ten small *islets* off Florida, at the entrance of the Gulf of Mexico, 120 m. W.S.W. of C. Sable.

**Tory Island,** *isl.* 2½ m. long, 9 m. off the N.W. cst. of Donegal, N. Ireland; it has a lighthouse and a signalling station connected with Londonderry.

**Totana,** *t.* on R. Sangonera, Murcia prov., Spain, wheat, olives, oranges, p. 11,900.

**Totnes,** *mun. bor.* on R. Dart, Devon, Eng., originally walled, two gates remain, p. *4,525*.

**Totonicapan,** *t.* on high plateau of Guatemala, amidst luxuriant gardens, hot mnl. springs, p. 42,000, mainly Quiche Indians, skilled in furniture, pottery, and musical inst. manuf.

**Tottenham,** *urb. dist.*, N. London, co. Middlesex, Eng., p. *157,748*, industrial and residentl.

**Tottington,** *urb. dist.*, Lancs, Eng., p. *6,532*.

**Toul**, *t.* nr. Nancy, dep. Meurthe-et-Moselle, France, embroidy., pottery works, artillery park, amid fortfd. hills, p. 9,750.

**Toulon**, *spt.* c. and naval station on Mediterranean, dep. Var, France, arsenal, fine buildings, shipbldg., lace-mkg., wine-grg., fisheries, p. 106,331.

**Toulouse**, *t.* on R. Garonne, dep. Haute-Garonne, France, imposing bldgs. and monuments, museums, university, learned societies, cathedral, suffered in the Huguenot wars, last battle of Peninsular campaign fought here, p. 175,434.

**Toung-ngu**, *t.* in Burma, 170 m. N.E. of Rangoon, p. 22,020.

**Touraine**, former *prov.* France, now divided into Indre-et-Loire, and part of Vienne deps.

**Tourcoing**, *t.* nr. Lille, dep. Nord, France, flourishing textile industries, p. 78,600.

**Tournai**, *t.* on R. Scheldt, nr. Mons, prov. Hainault, Belgium, carpet mftg., p. 35,542.

**Tours**, *t.* on R.'s Loire and Cher, dep. Indre-et-Loire, France, splendid Gothic cathedl., silk cloth, carpet and pottery mftg., p. 75,096.

**Towcester**, mkt. *t.* Northants, Eng., on R. Tove, p. 2,910.

**Tower Hamlets**, *dist.* Middlesex co., Eng., in E. London, industrl. and residtl., contains the Tower of London.

**Tow Law**, *urb. dist.*, nr. Durham, Eng., p. *3,556*.

**Townsville**, *spt.* on Cleveland Bay, Queensland, p. 24,000. [p. (dist.) 4,330.

**Towong**, *t.* on Murray R., Victoria, pastoral dist.,

**Towton**, *vil.* 3 m. S. of Tadcaster, W.R. Yorks, was the scene of a famous battle in 1461, when the Lancastrians were defeated. [then B.

**Towy**, *R.* S. Wales, flows 65 m. S.W. to Carmar-

**Towyn**, *urb. dist.*, mkt. *t.* and *wat. pl.*, Merionethsh. Wales, p. *3,803*. [pool, Eng.

**Toxteth Park**, *townshp.* within parly. bor., Liver-

**Toyama**, *t.* on the W. coast of Japan, p. 73,032.

**Trafalgar, Cape**, on S.W. cst. Andalusia, Spain, between Cadiz and Gibraltar; in the bay Nelson's crowning victory was gained, Oct. 2, 1805, costing the gallant admiral his life.

**Tralee**, cst. *t.* co. Kerry, I.F.S., on R. Lee, p. 9,840.

**Tramore**, mkt. *t.* co. Waterford, I.F.S., p. 2,030.

**Tranent**, *burgh.*, co. Haddington, Scotl., in colly. dist., p. *9,002*.

**Trani**, Italian spt. *t.* on the Adriatic, Brani prov., 28 m. N.W. of Bari; has a famous 12th century cathedral, p. 25,620. [impt. missn. stn., p. 6,320.

**Tranquebar**, *spt.* Tanjore dist., Madras, India.

**Transbaikalia**, old *prov.* of Siberia, U.S.S.R., E. of Lake Baikal and adjoing. Chinese Mongolia, area 236,868 sq. m.; agr. with great minl. wealth, p. 840,000; traversed by the Yablonoi Mtns. and the Siberian rly., cap. Chita.

**Trans-Caspian Territory**, E. of the Caspian, N. of Persia and reachg. to Afghanistan.

**Trans-Caucasia**, Soviet of, part (S.E.) U.S.S.R. (See Tiflis and Georgia.)

**Transkei Territory**, C. of Good Hope, lies between the Great Kei R., and Natal; area 2,504 sq. m., p. 197,911, of whom some 2,278 are Europeans.

**Transleithania**, those countries of Hungary lying beyond the R. Leytha, which forms the E. bdy. of Lower Austria.

**Transvaal, The**, *province* of the Union of S. Africa, area 110,426 sq. m., p. 2,085,837, abt. 270,000 of whom are whites, mostly British and Boers; agr., with considble. minl. wealth; cap. Pretoria.

**Transylvania**, formerly a prov. of Hungary, now included in Rumania; surrounded and traversed by the Carpathians, area 22,312 sq. m., p. 2,678,367. [salt, wine, and fish, p. 60,779.

**Trapani**, fort. *spt.* Sicily, Italy, on W. cst., exports

**Trappe, La**, a narrow *valley* in the dep. of Orne, famous for its 12th century Cistercian abbey.

**Tras-os-Montes**, or **Traz-os-Montes**, *prov.* N.E. Portugal, area 4,163 sq. m., p. 440,000, and containing the dists. of Braganza and Villa Real.

**Trau**, *spt.* Dalmatia, on the Adriatic, nr. Spalato, ruined Venetian fort, p. 17,720.

**Traun**, *R.* of Upper Austria, trib. (100 m.) of R. Danube, expands in the Salzkammergut, nr. Gmunden, into the picturesque lake known as the Traun See, 8 m. by 2 m.

**Trautenau**, *t.* near Königgrätz, Bohemia, at foot of the Riesengebirge, on frontier of Prussn. Silesia, manuf., p. 15,450.

**Travancore**, nat. *st.*, S. India, in connection with Madras; area 7,129 sq. m.; exports cocoa-nuts, timber, spices, coffee, tea, etc.; p. 4,005,949. Cap. Trivandrum.

**Traverse Lake** (20 m. long), betwn. Minnesota and Dakota, U.S.A.

**Traverse City**, lake *port* of Michigan, U.S.A., on Grand Travers Bay; timber industries and tr.; p. 12,750.

**Trawden**, *urb. dist.*, nr. Colne, Lancash., Eng., p. *2,548*.

**Trebbia**, a southern *trib.* of the Po, and the scene of the defeat of the Romans by Hannibal, 218 B.C.

**Trebizond**, *prov.* Armenia, on S. cst. Black Sea; area 16,671 sq. m., mountainous and afforested, with much fertile land and consid. minl. wealth; 1,265,000. Cap. T., t. on Black Sea, mil. stn., large tr. and active industries, the anc. Trapezus, defended by citadel and forts; p. 55,000; Armenian massacre, 1895.

**Tredegar**, *urb. dist.*, mkt. and mining *t.* Monmouthshire, Eng., on R. Sirhowy, p. *23,195*.

**Tregaron**, *t.* of Cardiganshire, 10 m. N.E. of Lampeter; p. 2,950.

**Treinta y Tres**, a *dep.* of Uruguay, deriving its name from the thirty-three (Treinta y tres) patriots who revolted against the Brazilian govt. in 1825; area 3,682 sq. m.; p. 57,000.

**Tremadoc**, *vil.* in Carnarvonshire, 1¼ m. W.N.W. of Portmadoc.

**Trent**, *R.* Eng., rises in N. Staffs and flows (170 m.) through Derbysh., Notts, and Lincolnsh. to join the Ouse in forming the est. of the Humber; also small R. Dorset, Eng. (alternatively called the Piddle), flows 20 m. to Poole Harbr.; also R. of Ontario, Canada, flows 100 m. to B. of Quinte; also c. of the Tyrol, on R. Adige; extensive fortifications, silk manuf., sausages and comestibles, cathedl. and noted ch. of St. Maggiore, in which met the famous Council of T., 1545-63; p. 25,250. [R. Trent, p. 8,920.

**Trentham**, *par.* and industrl. dist. Staffs, Eng., on

**Trenton**, *c.* on Delaware R., Mercer co., New Jersey, U.S.A., cap. of the st.; ironworks, pottery, rubber, and other manuf.; p. 123,500. Also c. on Grand R., Missouri, U.S.A.; tr. centre in farm region; p. 7,000. Also t. on R. Trent, co. Hastings, Ontario, Canada; p. 4,500.

**Tréport, Le**, *spt.* nr. Dieppe, dep. Seine-Inférieure, France; sea-bathing resort, fishy. ind.; p. 5,270.

**Treves**, anc. *c.* Rhine prov., Pruss., on R. Moselle; cathedl. (containing the Holy Coat said to have been worn by Christ), many Roman antiquities; p. 46,000.

**Treviglio**, *t.* nr. Bergamo, Lombardy, Italy; silk manuf.; p. 10,520.

**Treviso**, *t.* in Venetia, Italy, on plain betwn. the Alps and G. of Venice; bombarded by Austrians, 1848, ironworks and majolica ware; p. 43,597.

**Triabuna**, *t.* nr. Hobart, E. cst. Tasmania, p. (dist.) 3,930.

**Trichinopoly**, *dist.* Madras, India; area 3,631 sq. m.; millet, rice, cotton, tobacco; p. 1,145,000; cap. T., t. on R. Cauvery; cigars from the Dindigul tobacco field, goldsmiths' work, pith modelling; p. 119,521.

**Trieste**, *t.* on the Adriatic, spt. of Italy; shipbldg. and extensive commerce; cathedral, castle, Roman antiquities; many manuf.; p. 229,510.

**Trifail**, *t.* on R. Save, Styria, Austria; lignite wks.; p. 12,020.

**Trikkala** (the anc. **Trika**), *t.* in Thessaly, Greece, nr. Larissa; many mosques; grain tr.; p. 18,947.

**Trim**, *t.* on R. Boyne, co. t. Meath, I.F.S., p. 1,560.

**Trincomali**, *t.* and naval *stn.* N.E. cst. Ceylon; grand harbr.; garrison Brit. artillery and infantry; tobacco, rice, palms; p. 29,500.

**Tringano**, *st.* Malay Penin., on G. of Siam, p. 30,000; also t. cap. of st., p. 16,020.

**Trinidad**, *isl.* Crown Col. Brit. W. Indies; area 1,863 sq. m.; sugar and cacao growg.; also coffee, tobacco, bananas, oranges, and rubber; p. 400,000; cap. Port of Spain (*q.v.*); also uninhabited volcanic isl. S. Atlantic, 680 m. E. of Brazil; also t. nr. S. cst. Cuba, 3 m. from Casilda port; exports honey; p. 12,750; also c. on the Purgatory R., Colorado, U.S.A.; rly. wks. in colly dist.; p. 11,750. [Galveston B.

**Trinity**, *R.*, Texas, U.S.A.; flows (500 m.) to

**Tripoli**, up to 1912 a Turkish *vilayet*, but since then an Italian colony of N. Africa, extendg. from the Sahara Desert to the Mediterranean between Egypt on the E. and Tunis on the W.; it includes the districts of Tripolitania and Cyrenaica, and is now known as Libia Italiana or Italian Africa; area abt. 406,000 sq. m.; p. (est.) 1,000,000; exports wools, skins, alfa

ivory, feathers, etc.; est. formerly notorious seat of Barbary pirates; cap. T., spt. 300 m. S. of Sicily; mftg. carpets, morocco leather, etc.; p. 73,000.

**Tripolitsa,** *t.* nr. Argos, on the Morea, Greece, cap. of Arcadia, p. 10,750.

**Tristan da Cunha,** *isl. group* (3) in S. Atlantic, 1,500 m. S.W. of St. Helena; annexed by Britain 1816; p. 217.

**Trivandrum,** *t.* in Southern India, cap. st. Travancore (*q.v.*); wood-carving; p. 28,650.

**Troezen,** *t.* in Argolis in ancient Greece, subject first to Argos, later to Sparta, and, from 469 to 445 B.C., to Athens.

**Trois Rivières,** *c.* Quebec, Can. (*See* Three Rivers.)

**Troitsk,** *t.* U.S.S.R., p. (industrl.) 6,920; also in Orenburg, W. Siberia; large trade; p. 16,340.

**Trömso,** *spt.* on sm. isl. of T. in T. Sound, Finmark, Norway; seal and walrus fishing and trade; p. 7,230.

**Trondhjem,** *spt.* on W. coast Norway, S. side T. Fjord; exports timber and wood-pulp, butter, fish, copper; contains anc. cathedral, burial place of early Norwegian kings, and place of coronation of recent sovereigns; p. 54,520.

**Troon,** *spt.* and *wat. pl.* Ayrsh., Scotl.; good harbour and graving docks; p. 6,640.

**Troppau,** fortfd. *t.* on R. Oppa, close to Prussian frontier, cap. Silesia, Czecho-Slov.; hat and jute manuf.; p. 30,100.

**Trossachs,** romantic *mtn. defile* of Perthsh. Highlands, nr. Callender, Scotl., tourist centre for beautiful loch dist.

**Trouville-sur-Mer,** *wat. pl.* at mouth of R. Touques in D. of the Seine, Calvados dep., France; boat-building, fisheries, etc.; p. 7,200.

**Trowbridge,** *urb. dist.*, mkt. *t.* nr. Bath, Wilts, Eng.; cloth works; p. *12,011.*

**Troy,** anc. *c.* of the Troad, Asia Minor, famous in classic Grecian legends as the cap. of Priam; identified by some as the modern Hissarlik, and by others as Bunarbashi. Also c. at the mouth of Mohawk R., on the Hudson, New York, U.S.A.; great shirt mftg. centre; p. 72,750 Also c. on the Miami R., Ohio, U.S.A., p. 8,850.

**Troyes,** *c.* on R. Seine, Aube dep., France; former cap. Champagne; magnif. cathedral, hosiery manuf.; p. 55,215.

**Trujillo,** old *t.* in prov. Caceres, Spain; wheat, wine fruit, phosphorite, timber, Roman remains, p. 13,110.

**Truro,** *mun. bor.*, at conflu. R.'s Kenwyn and Allen, Cornwall, Eng., nr. Falmouth; cathedl. (completed 1887), tin-smelting, jam works, p. *11,074*; also t. on the Salmon R., Nova Scotia, nr. hd. of Cobequid Bay; p. 6,214.

**Tsaritsin,** fortfd. *t.* on R. Volga, U.S.S.R.; gt. transit tr. by river and rail; p. 48,760.

**Tsarskoe-Selo,** *t.* nr. Leningrad, U.S.S.R.; two splendid palaces, p. 16,230.

**Tsi-Nan,** a *c.* of China, on the left bank of the Ta-tsin R., 100 m. from the Gulf of Pe-chi-li, with manufs. of glass and silk; p. 245,000.

**Tsitsihar,** *t.* of Manchuria, on the Vladivostok portion of the Trans-Siberian Ry., 250 m. S.W. of Aigun, p. 30,000.

**Tsuruga,** *t.* on W. side isl. Honshiu, Japan, p 21,050. [21,600.

**Tsuruoka,** *t.* of Japan, 70 m. N.E. of Niigata, p.

**Tsu-shima,** Japanese *isl.* between Corea and the isl. of Iki; area 262 sq. m., p. 41,000. Chf. t. Izu-ga-hara.

**Tuam,** mkt. *t.* co. Galway, I.F.S.; Roman Catholic and Protestant cathedls., p. 2,920.

**Tuamotu,** coral *arch.* in S. Pacific, part of French dependcy. Tahiti; area of grp. 330 sq. m., p. 3,828; gd. harbr. at Fakarava.

**Tübingen,** *t.* on R. Neckar, Würtemberg, Germ.; nat. university; printing works, factories, dyeworks; p. 20,481.

**Tubuai,** or **Austral Isls.,** *grp.* in S. Pacific, belonging to France since 1881, p. 2,550; their chief products are oranges, bananas, cotton, sugar, and tobacco.

**Tucson,** *c.* on Santa Cruz R., Arizona, U.S.A.; in gold, silver, and copper mining regn., p. 32,510; was founded in 1560 by a Jesuit mission and from 1867 to 1877 was the capital of Arizona.

**Tucuman,** *prov.* Argentina; area 10,422 sq. m., agr. and stock-raisg., p. 418,000. Cap. T., c. on Rio Sali, p. 100,000.

**Tudela,** *c.* on R. Ebro, prov. Navarre, Spain; distilleries, fruit-preservg., factories, etc., p. 8,860.

**Tuena,** ming. and farmg. *dist.* N.S.W., 200 m. S.W. Sydney.

**Tugela,** *R.* Natal and Zululand, S. Afr., flows 200 m. S.E. to sea.

**Tula,** old *govt.* of U.S.S.R., S. of Moscow; area 11,954 sq. m., grain-growing, pasturage, stock-keeping, p. 1,780,000. Cap. T., t. on both banks R. Upa; gun factory, sugar mills, and many smlr. industries, p. 129,700.

**Tulare, L.,** in T. co., California, U.S.A., 23 m long, 22 m. wide.

**Tulcea,** *t.* on R. Danube, Rumania; fish, grain and wool tr.; p. 19,270.

**Tulchin,** *t.* in Ukraine; flour and grain tr.; military depot; p. 22,120.

**Tuldja,** *t.* in the Dobrudja, Rumania, nr. Galatz; good tr.; p. 19,120.

**Tullamore,** mkt. *t.* King's co., I.F.S., on Grand Canal, nr. Portarlington; p. 5,050.

**Tulle,** *t.* cap. Correze dep., France; natl. sml.-arms factory; p. 18,730.

**Tumberumba,** *t.* nr. Albury, co. Selwyn, N.S.W., p. 3,120.

**Tummel,** *R.* Perthsh., Scotl.; flows 29 m. to R. Tay, through Loch Tummel.

**Tunbridge Wells,** *mun. bor.*, mkt. *t.* and fash. inld. wat. pl., Kent, Eng., on border of Sussex, 5 m. S. of Tonbridge t. and rly. jnctn. The chalybeate waters here date from 1606, when they were discovered by Lord North; p. *35,367.*

**Tundja,** *R.* Roumelia, trib. (150 m.) of R. Maritza.

**Tungabhadra,** *R.* S. India, the jnctn. of R.'s Tungra and Bhadra, forms N. boundary of Madras, trib. (400 m.) of R. Kistna.

**Tunguska,** a *trib.* of the Yenisei, in Siberia.

**Tunis,** one of the Barbary states N. Afr.; now a French regency; area (without the Sahara dists. properly allotted to Algeria) 50,000 sq. m., p. 1,053,000; agr., stock-rearing, mineral and phosphate working, silk and carpet weaving, pottery manuf., fishy. (including sponges); also fruit and flower growing, and perfume distillation. Chief t. T., spt. on bay off G. of T.; bazaars, palace of the Bey; many industries, much tr.; p. 170,381. The ruins of anc. Carthage are to the N.E.

**Tunstall,** industrl. *t.* nr. Newcastle, Staffs, Eng., collieries, potteries, and ironwks.; p. included in Newcastle-under-Lyme.

**Turfan,** a *c.* in Eastern Turkestan, on the southern side of the Tian-Shan Mtns.; p. 32,000.

**Turgai,** U.S.S.R., N. of S. of Aral, area 176,219 sq. m.; agr. and cattle breeding; p. 500,000 (largely nomadic Kirghiz); cap. T., t. on caravan road from Tashkent to Orsk, p. 2,500.

**Turin,** *c.* N. Italy, on R.'s Po and Dora; former cap. Piedmont and Sardinian sts.; has cathedl., university, royal palace and castle, and Palazzo Carignano; thrivg. and varied manufs. and extens. tr.; p. 451,992.

**Turkestan,** or **Hazret,** *t.* in the old Russn. Turkestan prov. Syr Darya, on high rd. from Tashkent to Orenburg; p. 13,250.

**Turkestan, E.,** or **Chinese,** *dependency* of Chinese Emp. in Centl. Asia, included officially in Chinese prov. Sin-Kiang, sep. from W. or Russn. Turkestan by Pamir plateau; area 431,800 sq. m., largely desert; p. 1,200,000; exports rugs and carpets, etc.

**Turkestan, W.,** or **Russian Turkestan,** a former *govt.-genl.* of Asiatic Russ., area 419,219 sq. m., p. 7,200,000; agr. stock-kpg., and various mftg. industries; cap. Tashkent (*q.v.*).

**Turkey,** in addition to Asiatic Turkey, formerly comprised large territory in Europe; the latter was reduced to the City of Constantinople and a narrow strip of country around it. Large portions of the European territory were lost in the war with the Balkan States in 1912-13, part being ceded to Greece and Serbia, and part to the formation of the new state of Albania. As a consequence of the Great War, much of the remaining European territory was given to Greece; that Power has had to restore a portion of Thrace. Turkey in Asia is also reduced, all the south-west of the Bagdad Railway becoming Arab territory, Mosul being placed with Bagdad within the British sphere. Turkey in Asia is also shorn of its Armenian territory, which is to become an independent state. The new capital is Angora in Asia Minor.

**Turk's Isls.,** Brit. *grp.* in S. of the Bahamas, subject to Jamaica (*q.v.*).

**Turnberry**, a ruined *castle* on the coast of Ayrshire, 6 m. N. of Girvan. Supposed to be the birthplace of Robert Bruce. There is a lighthouse within the ruins.

**Turnham Green**, S.W. *sub.* London, in Middlesex co., Eng. [playing-card manuf.; p. 22,160.

**Turnhout**, *t.* nr. Antwerp, Belgium; lace-making.

**Turnu Magurele**, *t.* nr. the R. Danube, Teleorman dist., Rumania, almost opp. Nicopoli, Bulgaria; grain tr.; p. 9,250.

**Turnu Severin**, *t.* below the Iron Gate cataracts of R. Danube, Mehedintl dist., Rumania; nr. are remains of Trajan's bridge, built A.D. 103; pig and cattle tr.; p. 20,000.

**Turriff**, *burgh* nr. R. Deveron, Aberdeensh., Scotl.; p. *3,944*.

**Turton**, *urb. dist.* nr. Bolton, S.E. Lancs., Engl.; industrl.; p. *11,847*.

**Tuscaloosa**, *t.* on Black Warrior R., Alabama, U.S.A.; st. university; p. 20,675.

**Tuscany**, *compartimento* and former grand duchy, Italy; area 9,304 sq. m.; p. 2,787,765. Includes provs. Arezzo, Florence, Leghorn, Siena, Grosseto, Lucca, Pisa, and Massa and Carrara, which see.

**Tuskegee**, *t.* in cotton regn., Macon co., Alabama, U.S.A.; noted for educatnl. institns., includg. college for coloured students; p. 3,320.

**Tutbury**, mkt. *t.* on R. Dove, Staffs., Eng.; p. 2,520. Here are the ruins of a pre-Norman castle, wherein Mary Queen of Scots was twice imprisoned.

**Tuticorin**, *spt.* Madras, Tinnevelli dist., India; extensive tr. with Ceylon, conch shell fishy.; p. 29,020.

**Tuttlingen**, *t.* on R. Danube, nr. Schaffhausen, Würtemberg; ruined castle of Honberg; textile industries, fruit tr.; p. 18,450.

**Tuxford**, *t.* in Notts, 11¼ m. N. of Newark, p. 1,320.

**Tuy**, *t.* on R. Minho, Pontevedra prov., Spain; cathedl., soap factories, tr. in agr. prod.; p. 11,240.

**Tuz-Gol**, salt *L.*, 100 m. S. of L. Balkash; 90 m. by 30 m. [Asia Minor.

**Tuz-Goli**, or **Tuz-Ghieul**, salt *L.* (45 m. by 16 m.).

**Tver**, old *govt.* U.S.S.R., N. of Moscow; area 25,225 sq. m.; agr., stock-rearing, and many manufs.; p. 1,925,000; cap. Tver, *t.* on R. Volga; cotton mills, corn tr.; p. 61,000.

**Tweed**, *R.*, S.E. Scotl.; rises in Peeblessh., and reaches sea (97 m.) at Berwick, dividg. Berwickshire from the Eng. co. Northumberland; famous for its salmon fisheries; and is renowned in literature and history.

**Tweeddale**, old name for co. Peebles, Scotl.

**Tweedmouth**, *spt.* Northumberland, Eng., at mth. of R. Tweed; p. 4,940.

**Twenty-four Parganas, The**, *dist.* Bengal, India; area 2,108 sq. m.; p. 2,000,000; admin. hdqrs. Alipur, a S. sub. of Calcutta city.

**Twerton**, *par.* nr. Bath, Somerset, Eng.; brick and woollen cloth manuf.; p. 17,650.

**Twickenham**, *urb. dist.*, N. bank of R. Thames, Middlesex, Eng., 11 m. S.W. of London c.; p. *39,909*.

**Two Rivers**, *c.* Wisconsin, U.S.A.; nr. Twin River Point on shore of L. Michigan, p. 10,350.

**Tyldesley**, *urb. dist.*, mftg. *t.* nr. Bolton, S.W. Lancs., Eng., p. *14,848*.

**Tyler**, *c.* Smith co., Texas, U.S.A.; mftg. centre in cotton-growg. dist., p. 17,600.

**Tyne**, *R.* Durham and Northumberld., Eng.; formed by junctn. of N. and S. Tyne at Hexham, 30 m. from sea at Tynemouth and S. Shields; total length 80 m., forms a continuous harbr. (with shipbldg. and other works) from Newcastle to Tynemouth.

**Tynemouth**, *co. bor.* Northumberland, Eng., at mth. of R. Tyne, on its N. bank, includg. in its area the townships of Tynemouth, North Shields, Cullercoats, Chirton, and Preston; favourite wat. pl., with old priory and castle, p. *64,913*.

**Tyree**, *isl.* of the Inner Hebrides, Argyllsh., Scotl., p. *1,461*. It has many small lakes of fresh water and contains numerous Scandinavian forts.

**Tyrol.** (*See* Tirol.)

**Tyrone**, inld. *co.* N. Irel.; area 1,260 sq. m., agr. and dairying, p. 142,010; cap. Omagh (*q.v.*); also bor. Blair co., Penn., U.S.A., on Little Juniata R.; ironworks, p. 9,040.

**Tyrrhenian Sea**, part of Mediterranean betwn. Italy and Corsica, Sardinia, and Sicily.

**Uanapu**, or **Anapu**, *R.* Brazil, trib. (400 m.) of R. Para.

**Ubeda**, *t.* on R. Guadalquivir, prov. Jaen, Spain; in vineyd. and fruit-growg. dist.; old walls; linen and esparto grass industries; p. 21,450.

**Ucayale**, *R.* of Peru, a head-strm. of R. Amazon, over 1,400 m. long, navigable for 1,000 m.

**Uccle**, *t.* Belgium, in S. Brabant, nr. Brussels; industrl.; p. 13,200.

**Uckfield**, *urb. dist.*, mkt. *t.* Sussex, Eng., on R. Ouse, p. *3,557*.

**Udaipur**, or **Oodeypore** (otherwise **Mewar**), nat. *st.* Rajputana Agency, India; area 12,756 sq. m.; p. 1,393,380. Cap. U., *c.* on bank of large L. amid wooded hills, 2,469 ft. above sea-level; marble pal. of the Maharana; temple of Siva; p. 45,000.

**Uddevalla**, *spt.* S. Sweden, on fjord connected with L. Wener; butter factories, porcelain wks.; p. 13,753.

**Uddingston**, *t.* on R. Clyde, co. Lanark, Scotl., 7½ m. E.S.E. of Glasgow; collieries, jam factory; p. 8,300.

**Udine**, *t.* betwn. Alps and G. of Venice, Italy; old castle (now barracks); silk, velvet, and cotton ind.; p. 40,695.

**Ufa**, U.S.S.R., in W. Urals; area 47,112 sq. m.; agr., stock-raising, ironwks.; p. nearly 3,000,000. Cap. U., at confl. of R. U. (flows 400 m. from the Ural Mtns.) with R. Belaia; iron and copper foundries and mchy. works; p. 97,000.

**Uganda**, Brit. *protectorate* E. Centl. Africa; area 110,300 sq. m.; p. *3,533,010*; traversed by rly., with terminus at Kavirondo B., on the Victoria Nyanza; cap. Kampala; admin. hdqrs. Entebbe; exports skins, ivory, chillies, cotton, and coffee.

**Uglich**, *t.* on R. Volga, U.S.S.R.; pal. of Prince Demetrius (slain in 1591); cathedl.; ham and sausage export; p. 13,700.

**Uinta**, a *mtn. range* of Utah, U.S.A.; its highest points are Emmons (13,694 fr.), Gilbert Peak (13,687 ft.), and Wilson (13,300 ft.).

**Uist**, N. (17 m. long, 3 m. to 13 m. wide) and S. (22 m. by 7½ m.), *isls.* of the Outer Hebrides, co. Inverness, Scotl.; Lochmaddy in the N. isl. is a par. with large tr. with the crofters; total p. *7,068*.

**Uitenhage**, *t.* nr. Port Elizabeth, C. of Good Hope, S. Afr.; thrivg centre agr. dist.; p. *9,347*.

**Ujain**, *t.* on R. Spira, nat. st. Gwalior, Centl. India; cap. Malwa in Hindu and Mahommedan days; p. 36,720.

**Ujiji**, *vil.* in sm. terr. same name (area 920 sq. m.) on E. shore L. Tanganyika, E. Afr., where Stanley found Livingstone, 1871.

**Ujjain**, *t.* Gwalior state, Central India; a sacred c. and formerly the cap. of Malwa, p. 41,640.

**Ujvidék**, *t.* on R. Danube, Bács-Bodrog co., Hungary; opp. Petervárad; tr. in fruit, wine, vegetables, corn; p. 31,170.

**Ukerewe**, *isl.* in Victoria Nyanza L., Centl. Afr.; 40 m. long.

**Ukraine**, *republic*, comprises former Russian govts. of Poltava, Kiev, Kharkov, Podolia, Volhynia, Kherson, Ekaterinoslav, and Chernigov (*q.v.*).

**Uleaborg**, N. *govt.* Finland; area 64,854 sq. m., partly forest and partly agr.; p. 366,800. Cap. U., spt. on G. of Bothnia; exports pitch, timber, hides, butter; p. 21,216. Ulea Lake (40 m. long) lies S.E. of U. t.

**Ullswater**, *L.* (8 m. long) on border Cumberland and Westmorland, Eng.; outlet by R. Eamont to the Eden.

**Ulm**, fort. *t.* on R. Danube (58 m. S.E. Stuttgart), Würtemberg; impt. rlwy. and strategic centre; cathedl. with lofty tower (528 ft.); clocks, linen, cutlery, confecty.; p. 46,500. [p. (dist.) 3,250.

**Ulmarra**, *t.* on Clarence R., N.S.W., nr. Grafton.

**Ulster**, *prov.*, N. Ireland, N. of Connaught and Leinster; area 1,564 sq. m., p. 1,749,500; colonised by Scots and English in early part of 17th cent. Comprises co.'s Londonderry, Down, Tyrone, Fermanagh, Antrim, and Armagh, all of which see.

**Ulundi**, *kraal* in Zululand, S. Africa, where Cetewayo was defeated by Lord Chelmsford in 1879.

**Ulva**, *isl.* of the Inner Hebrides, Argyll., Scotl., off W. coast of Mull; 5 m. long.

**Ulverston**, *urb. dist.*, N.W. Lancash., nr. Morecambe B.; paper mills, hardware manuf.; consid. canal traf.; p. *9,235*.

**Umbabog** *L.* (9 m. long), on boundary between Maine and New Hampshire, U.S.A., outlet by Androscoggin R.

**Umballa, India.** (*See* **Amballa.**)

**Umbria,** *compartimento,* Italy, between Tuscany and the Marches, and Rome and the Abruzzi; comprising the prov. of Perugia. (*q.v.*).

**Umea,** *R.* of Sweden, flows 250 m. to the G. of Bothnia; also t. on R. Umea nr. its mth.; timber tr.; p. 4,070. [mercial centre; p. 18,900.

**Umreth,** *t.* Kaira dist., Bombay, India; com-

**Unalaska,** largest of Fox Isls., in the Aleutian Chain, Alaska, U.S.A.; mtnous. and treeless; the vill. of Unalaska is the princ. port of Behring Strait.

**Ungava B.,** arm of Hudson Strait, projecting into Labrador. The territory of U. has large forests in the S., and in many parts minerals are abundant, iron ore being the most prominent.

**Unghvar,** *t.* 195 m. E.N.E. Pesth, Hungary; industrl.; p. 12,940. [U.S.A., p. 20,651.

**Union,** *t.* adjoining Hoboken West, New York,

**Union Springs,** *t.* Alabama, U.S.A., cap. Bullock co., p. 4,819.

**Uniontown,** *bor.* Penn., U.S.A., cap. Fayette co.; glass works, iron foundries; p. 19,900.

**United Kingdom.** (*See* **Britain.**)

**United Provinces of Agra and Oudh,** India, area 107,000 sq. m.; p. 45,500,000, mainly Hindus.

**United States of America,** *federal Republic* (largest in the world) of N. America, embracing the central portion from Atlantic to Pacific between Canada and the great L.'s, N. to the G. of Mexico and Rio Grande del Norte, S. Area (including Alaska, purchased from Russia in 1867, and other extra-territorial possessions) 3,743,530 sq. m., p. 117,859,490; cap. Washington; commercial metropolis, New York, both of which see, as also the separate States, alphabetically. The Spanish American War of 1898 resulted in the acquisition by the U.S.A. of the Philippines, Porto Rico, and the Danish possessions in the W. Indies were purchased by U.S.A. in 1917. The U.S.A. are very rich in every kind of minerals, produce much timber, corn, fruit, and vegetables, and stand high in the world in stock-raising and manufs. [industrl.

**Unley, S.** *sub.* Adelaide, S. Australia, residentl. and

**Unna,** *t.* nr. Dortmund, Westphalia, Pruss., iron-works, salt and coal mines, brickmkg., p. 16,570.

**Unst,** *isl.* (most N.) Shetland grp., length 12½ m.

**Unstrut,** *R.* Prussian Saxony, trib. (110 m.) of R. Saale. [long.

**Unter See,** W. portn. L. of Constance (*q.v.*) 13 m.

**Unterwalden,** old *cant.* Switzld., now subdivided into Obwalden and Nidwalden (total area O., 183 sq. m., N. 112 sq. m.), p. (O.) 15,500, (N.) 17,567. Bounded by Lucerne and the lakes of Uri and Bern, the canton is largely afforested, and the chf. t.'s are Sarnen and Stanz, mtn. pastures and dairying. [p. *5,480.*

**Upholland,** *urb. dist.,* Lancashire, 4 m. W. of Wigan.

**Uppingham,** mkt. *t.* co. Rutland, Eng., nr. Oakham, famous schl., founded in 1584 by Archdeacon Robert Johnson (1540-1625), it was materially developed and improved by Edward Thring, who was headmaster from 1853 to 1887; p. 6,770.

**Uppsala,** prov. E. Sweden, N. of Lake Mälar, area 2,053 sq. m., p. 125,000. Cap. U., t. on R. Sala, 45 m. from Stockholm, university and cathedl., p. 28,897.

**Upton-on-Severn,** mkt. *t.* nr. Malvern, Worcestershire, Eng., p. 2,520.

**Ural Mtns.,** gt. system of U.S.S.R., separating Asia from Europe, 2,050 m. long, highest summit, 5,286 ft. The Ural R. flows 1,000 m. S.W. and S. to the Caspian.

**Uralsk,** U.S.S.R., in genl. govt. of the Steppes, S. of the Ural R., area 141,174 sq. m., p. 780,000, mainly nomad Cossacks and cattle-rearers. Cap. Uralsk, t. on Ural R., great grain trading, and cattle mart centre, p. 40,000.

**Ura-tyube,** or **Ora-tepe,** *t.* in old prov. Samarkand, Russ. Turkestan, citadel, tr. in camel-wool cloth and horses, p. 22,250.

**Urbana,** *c.* on Embarrass R., Illinois, U.S.A., seat of st. university, p. 13,250; also c. of Champaign co., Ohio, U.S.A., manuf., p. 7,750.

**Urbino,** *t.* in the Marches, Italy, amongst E. spurs of the Apennines, cathedl., grand-ducal palace, university, manuf. majolica and silk, p. 5,570.

**Ure,** *R.* N.R. Yorks, Eng., flows E. and S.E. to the Swale (50 m.) to form the Ouse.

**Urfah,** fort. *t.* nr. Diarbekr, Syria, gd. local tr., p. 32,000.

**Urfahr,** *t.* on R. Danube, Lower Austria, connected by iron bridge with Linz, corn tr., p. 15,370.

**Urga,** Mongolia, on the Tola, and on the trade route to Peking. Seat of the Lama of the Mongols; p. 32,000.

**Uri,** *cant.* Switzld., S. of L. of Lucerne, area 415 sq. m., forest and mtn., traversed by St. Gothard Rlwy. and R. Reuss; p. 23,973; cap. Altorf (*q.v.*).

**Urmston,** *urb. dist.,* Lancs., p. *9,284.*

**Urubamba,** *t.* on R. U., nr. Cuzco, Peru, p. 4,850.

**Uruguay,** *R.* S. America, rises in S. Brazil, and flows betwn. Argentina and Brazil and Uruguay (850 m.) to Rio Plata; also U. (or Banda Oriental del U.) repub. S. America, between Brazil, Argentina, and the Atlantic, area 72,151 sq. m., p. (abt.) 1,810,000, cattle and sheep rearing, also fruit growing, cap. Montevideo (*q.v.*).

**Urumiyah, Lake of,** nr. Tabriz, N. Persia (85 m. by 30 m.), salt and shallow; also t. nr. the l. fort., in Azerbaijan prov., birthpl. of Zoroaster, p. 25,000.

**Urumtsi,** the capital *c.* of Chinese Zungaria.

**Urup,** one of the Kurile *isls.,* 50 m. long, 12 m. wide.

**Usa,** *R.* U.S.S.R., flows (200 m.) from the Urals to the Petchora.

**Usagara,** formerly a German possession in E. Africa, between the coast and Tanganyika.

**Usedom,** *isl.* Pomerania, Pruss., nr. Rügen, 30 m. long, 14 m. wide.

**Ushak,** *t.* in Brusa vilayet, Asia Minor, connected by rail with Smyrna and Konia, noted for pile carpet weaving, p. 12,200.

**Ushant,** *isl.* off French cst. nr. Brest (4½ m. long), contains vil. St. Michel, p. 25,050. It was off Ushant that Lord Howe gained his great naval victory on the "glorious first of June," 1794.

**Usk,** *R.* S. Wales and Monmouthsh., Eng., flows (57 m.) to Bristol Chan.; also *urb. dist.* on R. U., p. *1,315.*

**Uskub,** *t.* Serbia, Jugo-Slavia (captured by Bulgars Oct. 1915, retaken Oct. 1918), on R. Vardar, the anc. Scopi, silk prodn., opium, fruits, corn, etc., p. 41,750.

**Ustyug Velikiy,** *t.* U.S.S.R., on Sukhora R., great fair, fancy box and jewellery, and lock manuf.; also silver ware, p. 12,750.

**Usumacinta,** *R.* Mexico and Guatemala trib. (400 m.) of R. Tabasco.

**Usuri,** *R.* Manchuria, flows (340 m.) to Amur.

**Usworth,** *vil.* Durham, Eng., sub. to Gateshead; industrl., p. 5,820.

**Utah,** westn. *st.,* U.S.A.; area 82,190 sq. m., p. 546,000; cap. Salt Lake City (*q.v.*); Utah L., 23 m. long, and 4,400 ft. above sea-level, discharges by the R. Jordon to the Great Salt L. (*q.v.*).

**Utakamand,** or **Ootacamund,** *t.* in Madras, Brit. India; admin. hqrs. Nilgiris dist., summer cap. Madras govt., on a plateau 7,230 ft. above sea-level, mtn. surrounded by large artificl. L. and beautiful gdns., p. 15,270.

**Utica,** *c.* on Mohawk R., Oneida, co., New York, U.S.A.; clothg. and other manuf., p. 102,500.

**Utiel,** *t.* nr. the Rio Magro, Valencia prov., Spain, N.W. of Requena; brandies, wines, etc., p. 12,020.

**Utrecht,** *prov.* Holland, betwn. Gelderland and N. and S. Holland; area 525 sq. m., fertile agr. and stock-raising dist. S. of the Zuyder Zee, p. 341,793; cap. U., c. on the Old Rhine; university, cathedl., chemical, and cigar factories, p. 140,189; also name of a t. in Natal, S. Afr., cap. of U. dist., p. *689.*

**Utrera,** *t.* in Seville prov., Spain; industrl., p. 15,900. [p. *5,907.*

**Uttoxeter,** *urb. dist.,* nr. R. Dove, Staffs, Eng.,

**Uxbridge,** *urb. dist.,* mkt. *t.* Middlesex, Eng., on R. Colne, 18 m. N. of London, p. *31,866.*

**Uzbek Soviet,** formerly Samark and Province, formed out of the Zerafshan dist. in 1887, area 26,627 sq. m., p. 870,000; chfly. pastoral or agr., many nomadic Uzbegs and Kirghiz, cap. S., c. on the Zerafshan R., active tr. in silk, cotton, etc., p. 82,000 (40,000 in native c., rest in new Russn. town).

**Uzen** (Gr. and Little) *R.'s* of U.S.S.R., flowing 250 m. to the Caspian S.

**Uzes,** *t.* dep. Gard, France, on R. Auzon, nr. Nimes; cathedl., campanile, anc. castle, mediæval palace, anc. clock tower, silk manuf., wine and oil tr., p. 4,120.

**Uzkoi, Cape,** *promontory* on Ob Bay, N. Siberia.

**Vaal, or Gariep,** *R.* S. Afr.; rises in Quathlamba Mtns., and flows (560 m.) betwn. the Transvaal and Orange Free State to join the Orange *R.* nr. Kimberley.

**Valais,** *cant.* Switzerld., comprisg. upper valley of R. Rhône; area 2,025 sq. m.; surrounded by high mtns.; sparsely populated (128,246); cap. Scion (*q.v.*).

**Valdagno,** *t.* nr. Vicenza, Italy; industrl.; p. (com.) 7,920. [highest summit, 1,100 ft.

**Valdai Hills,** U.S.S.R.: watershed of R. Volga;

**Valdivia,** *prov.* S. Chili; area 8,991 sq. m.; p. 175,141; cap. V., t. on Calle-calle R., the nr. sea (port Corral); brewg. and tanning, p. 35,700.

**Valdosta,** *c.* in Lowndes co., Georgia, U.S.A., nr. Florida border; rly. centre; p. 13,720 (half negroes).

**Valeggio,** *t.* on R. Mincio, nr. Verona, Italy; fortfd. bridge, with causeway on Roman foundatns., 1,800 ft. long; p. 5,760.

**Valence,** *t.* on the Rhône, dep. Drôme, France; metal founding, hosiery manuf., tinned food prodn.; p. 26,470; vineyd. dist.

**Valencia,** *prov.* Spain, on Mediterranean; area 4,150 sq. m.; agr. vineyds., olive, fig, and orange growg.; live stock rearg.; silk, tapestry, and carpet manuf.; p. 923,426; cap. V., t. on R. Guadalaviar, 3 m. from the Mediterranean; many manuf., exports wine, fruits, corn, etc.; university, museum, interestg. cathedl.; p. 236,447; also c. in Venezuela, cap. Carabobo, nr. L. of V. (30 m. long), W. of Caracas; gd. tr.; p. 37,000.

**Valencia, Isl.,** S.W. co. Kerry, I.F.S. (6 m. by 2 m.); p. 2,260.

**Valenciennes,** fortfd. *t.* on R. Escaut, dep. Nord, France; famous for lace mftg.; metallurgical industries, starch, chemicals, etc.; p. 32,450.

**Valetta** (or **Valletta**), *spt. t.* cap. of Malta, on N.E. cst. of isl.; strongly fortfd., fine harbr.; many relics of the occupan. of the Knights of Malta; p. about 25,000. [p. 15,820.

**Valguarnera,** *t.* of Sicily, 16 m. E. of Caltanisetta.

**Valladolid,** *prov.* Centl. Spain; area 15,820 sq. m.; agr., vineyds., live-stock, mftg.; p. 282,347; cap. V., t. on R. Pisuerga; seat of army corps, university, cathedl.; thrivg. industries and tr.; p. 69,800; also c. nr. Merida, Yucatan; p. 5,350.

**Vallecas,** *t.* nr. Madrid, Spain; in flat fertile wine-growing dist., through which flows the Manzanares R.; p. 10,740.

**Vallejo,** *c.* at the outlet of the beautiful Napa valley, Solano co., California, U.S.A.; exports fruit and corn, p. 21,107.

**Valleyfield,** mftg. *t.* at ft. of L. St. Francis, Beauharnois co., Quebec, Can.; p. 13,160.

**Valls,** mftg. *t.* in Spain, 12 m. N. of Tarragona, p. 13,850.

**Valparaiso,** *prov.* Chili; area 1,775 sq. m., p. 320,388. Cap. V., c. and spt., the most impt. port on the Pacific cst. of S. America, and the greatest mftg., commercl. and industrl. centre of the Republic of C., p. 196,000; also name of a bor. Porter co., Indiana, U.S.A., clock manuf. and mchy. wks., p. 8,200.

**Van,** fort. *c.* on E. side of L. Van (salt, 75 m. long), Armenia, S. of Erzerum; p. 32,000. Cap. Villayet V., on Persian border; area 15,170 sq. m., mtnous. and pastoral, sulphur springs, petrol. wells, p. 379,800; also Lake, Armenia.

**Vancouver,** *isl.* off W. cst. Brit. Columbia (278 m. long, 50 m. to 65 m. wide), p. 16,400. Is separated from the mainland by Queen Charlotte Sound, Johnstone Strait, and the Strait of Georgia. Cap. Victoria, at S. end of isl., which is also cap. of colony; also name of a spt. in Brit. Columbia, terminus C. P. Rly. on Burrard Inlet, p. *245,307*; also c. Clarke co., Washington, U.S.A., nr. Portland; forest region and tr. centre for Hudson B., with military post at Fort Vancouver, p. 16,000.

**Vannes,** chf. *t.* dep. Mrobihan, France, on S. cst. Brittany; shipbldg., ironworks, breweries, p. 25,356.

**Var,** *R.* France, dep. Alpes-Maritimes, flows 60 m. S. to the sea; also dep. S. France, on the Mediterranean; area 2,333 sq. m., pasture, vineyds., sericulture, p. 322,945. Cap. Draguignan, Toulouse largest c.

**Varanger Fiord,** an *inlet* of the Arctic Ocean into Finmark, Norway's most northerly prov.

**Varese,** *t.* nr. Milan, N. Italy; silk spinning, gd. wine, p. 10,570.

**Varna,** fort. *t.* Bulgaria, on Black S.; chf. spt. of the country, with gt. grain tr., p. 50,819.

**Vasa,** *prov.* Finland; area 15,969 sq. m., p. 544,656. Cap. V., t. and port on G. of Bothnia; oats, butter and cattle export, p. 15,020.

**Vásarhely,** or **Hodmezo Vásarhely,** *t.* on L. Hodos, nr. Szegedin, Hungary; wine and tobacco manuf., p. 60,854.

**Vasilkov,** *t.* (industrl.) govt. Kiev, Ukraine, p. 19,200. [14,500.

**Vattila-gundu,** *t.* Madura dist., Madras, India, p.

**Vaucluse,** *dep.* S.E. France, area 1,381 sq. m.; agr., vines, sericulture; p. 219,602; cap. Avignon (*q.v.*).

**Vaud, or Pays de Vaud,** *cant.* W. Switzld., N. of L. of Geneva, area 1,244 sq. m.; timber forests and vineyards; p. 317,498; cap. Lausanne (*q.v.*).

**Vauxhall,** industrl. *sub.* S.W. London, nr. Thames.

**Veglia,** *isl.* in the Adriatic, belonging to Austria, S.E. of Trieste, area 165 sq. m., p. 22,170.

**Veja de la Frontera,** *t.* on R. Barbate, Cadiz prov., Spain; beautiful agr. and stock-rearg. country; p. 12,250. [p. 15,940.

**Vejle,** *spt.* Jutland, Denmark; gd. harbr. and tr.;

**Velbert,** *t.* nr. Barmen, gov. Düsseldorf, Pruss.; industrl.; p. 12,070.

**Velez Malaga,** *c.* in the prov. of Malaga, Spain, famous for its abundant crops of raisins, sugar, and olive oil.

**Velez Rubio,** *t.* in the prov. of Almeria, Spain, in the Sierra Maria Mtns. [and hide tr.; p. 22,000.

**Veliko Mikhailovka,** *t.* in govt. Kursk, Russ.; grain

**Velizh,** *t.* on R. Düna, govt. Vitebsk, Russ., p. 18,750.

**Velletri,** *t.* at foot of the Alban hills, nr. Rome, Italy; good wine; p. 17,600. At this spot Garibaldi gained a victory over the King of Naples, May 19, 1849.

**Vellore,** *t.* on R. Palar, N. Arcot div. Madras, Brit. India; military cantonment, perfume distillery; p. 45,000.

**Vendée,** or **La Vendée,** *dep.* W. France, on B. of Biscay, area 2,692 sq. m.; agr., pasturage, vineyards, fishery, sea-salt, and some manufs.; p. 397,292; cap. La Roche-sur-Yon.

**Vendôme,** *t.* on R. Loire, dep. Loire-et-Cher, France, nr. Tours; industrl.; p. 9,900.

**Vener, or Wener,** the largest of the Swedish lakes, 2,150 sq. m. in extent, discharging itself on the S. through the Gota R.

**Venetia,** *compartimento* N.E. Italy, betwn. the Alps and the Adriatic, area 9,463 sq. m., p. 3,732,941; embraces provs. Vicenza, Verona, Venice, Udine, Treviso, Padua, Belluno, and Rovigo (all of which see sep.); cap. Venice.

**Venezuela,** *repub.* S. America, on Caribbean cst. adjoing. Brazil, area 394,000 sq. m.; agr. coffee, cocoa, and sugar-growing, stock-raising; p. 3,027,000; cap. Caracas (*q.v.*). Venezuela is very mountainous, and includes vast extents of lake, swamp, and forest. The Andes extend through the country from the south of Lake Marcaibo to the Cordillera de Merida (15,500 feet). [19,200, ceded to Britain in 1812.

**Venguria,** *spt.* Ratnagiri dist., Bombay, India, p.

**Venice,** maritime *c.* Italy, at head of the Adriatic, situated on 80 isls. in the lagoons; splendid arch., rich in art treasures and historic associations; great commercl. and industrl. activity; p. (exclusive of garrison) 168,038. Also prov. Italy; area 944 sq. m., p. 497,590.

**Venlo,** Dutch *t.* on the Meuse, 20 m. W. of Crefield, p. 14,700.

**Vennachar,** *loch,* Perthsh., Scotl. (3¼ m. long), expansion R. Teith. [pottery industry; p. 9,002.

**Venosa,** *t.* in prov. Potenza, Italy; cathedral,

**Ventimiglia,** *t.* and coast *resort* nr. Nice, Italy, p. 5,650. Cathedral and Roman antiquities.

**Ventnor,** *urb. dist.* and *wat. pl.* S. coast Isle of Wight, p. *5,112*; 11 m. W. of Ryde; beautiful scenery, mild climate, much resorted to by invalids in winter.

**Vera,** *t.* in prov. Almeria, Spain, nr. coast, p. 9,020.

**Vera Cruz,** *c.* and *port* Gulf of Mexico, prov. Vera Cruz, Mexico; exports ores, precious metals, textiles, raw cotton, and petrol; p. 63,000. V. C. prov. has area 27,780 sq. m., p. 1,165,950. Contains volcano Orizaba (*q.v.*).

**Vercelli,** *c.* on R. Sesia, Novara prov., Piedmont, Italy; university, fine church of St. Andrea; large rice export; p. 35,760.

**Verden,** *t.* on R. Weser, Hanover, Prussia; Gothic cathedral dating from the 13th century; p. 10,670.

**Verdun,** fortfd. *t.* on R. Meuse, France; 12th century cathedral, confectionery, liqueur, and hardware factories; p. 13,450; also t. Quebec, Can., p. *60,378*.

**Vereeniging,** *t.* in Transvaal, on the Vaal, 35 m. S. of Johannesburg; the peace treaty betwn. the British and the Boers was signed here May 31, 1902; p. *3,399*.

**Vergara,** *t.* on R. Deva, in Basque prov., Guipuzcoa, Spain; p. 6,770.

**Veria,** *t.* in Vilayet of Salonica, Greece, 40 m. W. of the city of Salonica; p. 8,550.

**Verkhne-Dnieprovsk,** *t.* nr. Ekaterinoslav, U.S.S.R.; flour fairs; p. 12,780.

**Verkhne-Udinsk,** *t.* E. Siberia, U.S.S.R., at junction of R.'s Selenga and Uda, nr. Lake Baikal; good trade, great annual fair; p. 9,920.

**Verkhne-Uralsk,** *t.* on Upper Ural R., U.S.S.R.; tanneries, distilleries, tr. with Kirghiz Cossacks; p. 13,470.

**Vermont,** New England *st.* U.S.A., adjng. Quebec prov., Canada; area 9,124 sq. m., traversed by the Green Mtns., p. 353,000; agr., mills, and manuf. Cap. Montpelier (*q.v.*).

**Vernon,** *t.* on R. Seine, dep. Eure, France, p. 8,120. Also *t.* (containing Rockville c.) Tolland co., Connecticut, U.S.A.; manuf. silks, cotton, and woollens; p. 8,898.

**Vernoye,** *t.* Russn. Turkestan, cap. old Semirechinsk govt.; large tr.; p. 18,900.

**Verona,** fortfd. *c.* on R. Adige, Venetia, Italy; beautiful cathedl.; Roman antiquities; palace of the Scaliger (now law courts and gaol); active tr. and industries; p. 86,448; also prov. of Venetia compartimento; area 1,188 sq. m., p. 495,890.

**Versailles,** *c.* Seine-et-Oise dep., France, 12 m. W.S.W. of Paris; famous royal palace; here King William of Prussia was proclaimed German Emperor in 1871, after the Franco-Prussian War; mkt. gdng.; distilleries, etc., Treaty of V., 1919; p. 64,753.

**Versecz,** fortfd. *t.* nr. Temesvar, Hungary, p. 25,920.

**Verulam,** on R. Ver, opp. St. Albans, Herts, Eng.; site of ancient Roman c. [centre; p. 43,027.

**Verviers,** *t.* nr. Liège, Belgium; gt. cloth manuf.

**Vesenskaya,** *t.* U.S.S.R., on R. Don, in gdng. and cattle-breeding dist.; p. 31,200.

**Vesoul,** *t.* nr. Besançon, Haute-Saône dep., France, on R. Durgeon; p. 10,150.

**Vesuvius,** famous active *volcano*, S. Italy, on side of Bay of Naples; alt. 3,948 ft. Its eruption in A.D. 79 destroyed Pompeii and Herculaneum, and frequent eruptions have since occasioned havoc. A funicular railway from the base of the mountain to the edge of the crater has existed since 1880.

**Veszprim,** industrl. *t.* nr. Buda, Hungary; large tr. in grain and wine; p. 14,200. [10,220.

**Vevey,** *t.* on L. of Geneva, cant. Vaud, Switzld., p.

**Vexio,** *t.* cap. of Kronoberg co., Sweden, 60 m. W. by N. of Kalmar. Among the local industries matchmaking and iron-founding are the chief; p. 7,670.

**Vézère,** *R.* France, trib. (100 m.) of R. Dordogne.

**Vianna do Castello,** *spt.* Portugal, at mth. of R. Lima, nr. Oporto; manuf. lace and milk foods; exports; lampreys and salmon; p. 10,300.

**Viareggio,** sea-bathg. *rest.* on the Mediterranean nr. Pisa, Tuscany, Italy; p. 17,350. Here there is a monument to the poet Shelley.

**Viatka,** *R.* U.S.S.R., trib. (500 m.) of R. Kama; also old govt. (area 59,117 sq. m., p. 3,106,000), and *t.* cap. same, on R. V., p. 27,120; gd. trade.

**Viazma,** *t.* in Smolensk govt., Russ.; industrl.; p. 12,640.

**Viborg,** govt. in S.E. Finland, on B. of V., G. of Finland; area 16,691 sq. m.; p. 564,512. Cap. V., t. 85 m. N.W. Leningrad; castle, great timber export; p. 30,039; also old mkt. t. in mid-Jutland, Denmark; cathedral; distilleries, cloth factories, iron foundries; p. 8,920.

**Vicenza,** *c.* on R. Bacchiglione, 40 m. W. of Venice, Italy; silk-spinning, majolica, and textile factories; piano, watch and furniture making industries; p. 57,016. Also N. prov. of Venetia comp., Italy; area 1,052 sq. m.; p. 500,000.

**Vich,** or **Vique,** *c.* nr. Barcelona, Spain; cathedral, flourishing manuf.; p. 12,360.

**Vichy** (or **Moutiers-les-Bains**), *wat. pl.* dep. Allier, France, 35 m. S. of Moulins; mineral springs, large export of waters; p. 14,520 (annual visitors nearly 50,000).

**Vicksburg,** *c.* Warren co., Mississippi, U.S.A.; on cliffs above a "cut-off" L. on M. R.; mftg. centre in cotton and timber region; prominent in American Civil War, Confederate surrender 1863; p. 23,500.

**Victoria,** *state* of the Australian Commonwealth, separated by R. Murray from N.S.W. on N. Area 87,884 sq. m., mtnous., with fertile plains, and fine forests; agr., stock-farming, gold-mining, etc.; p. 1,657,000. Exports wool, corn, flour, etc. Cap. Melbourne (*q.v.*). Also cap. Brit. Columbia, on Isl. Vancouver (*q.v.*), p. *38,441*; also spt. and ch. t. Hong-Kong, on N.W. coast; immense tr., p. 342,000; also spt., cap. Espirito Santo, Brazil, p. 22,000; also t. nr. Caracas, Venezuela, p. 7,952; also t. on Guadaloupe R., Victoria co., Texas, U.S.A., p. 7,550.

**Victoria, East,** *div.* C. of Good Hope, S. Africa; area 576 sq. m.; p. 9,874. Chf. t. Alice.

**Victoria Lake,** on Pamir highland, 13,870 ft. above sea-level, is 17 m. long and 3 m. broad, and is supposed to be the chief source of the Oxus.

**Victoria Land,** *terr.* in Arctic regions, S.E. of Prince Albert Land; also region of the Antarctic, discovered by Ross in 1841.

**Victoria Nyanza,** largest known *lake* of Africa, lies on the Equator; area 25,000 to 26,000 sq. m., discharges to the N. by R. Nile; 3,705 ft. above sea. Discovered by Captain Speke in 1858.

**Victoria, West,** *div.* C. of Good Hope, S. Africa; area 15,815 sq. m., p. 7,514; cap. V. W., t., 410 m. N.E. Cape Town.

**Vienna,** *c.* on branch of R. Danube, Lower Austria, university, fine cathedl. St. Stepehn, Rathaus, Parliament bldg., magnif. Prater park, immense industrl. activity, thriving commerce and manuf., p. 1,841,326.

**Vienne,** *R.* France, trib. (220 m.) of the Loire; also dep. W. France, watered by R. V.; area 2,712 sq. m., agr. and vineyards; p. 306,248; cap. Poitiers. Also t. in dep. Isère, France, nr. Grenoble, on R. Rhône; textile ind. and glove factories; p. 23,170.

**Vienne, Haute.** (*See* **Haute-Vienne.**)

**Viersen,** *t.* nr. Düsseldorf, Rhenish Pruss.; velvet, plush, silk, and cotton industries; p. 25,760.

**Vierzon,** industrl. *t.* nr. Bourges, dep. Cher, France, p. 10,250.

**Vigan,** *t.* nr. Nîmes, dep. Gard, France, p. 5,615; also *t.* in S. Ilocos, prov. Luzon, Philippine Isls.; agr. and local industries; p. 20,000.

**Vigevano,** an Italian cathedral *c.*, 20 m. N.W. of Pavia, p. 15,120.

**Vigo,** fortfd. *t.* on Rio de Vigo, prov. Galicia, Spain; impt. fishery and shipping industries; p. 18,050. [gd. tr.; p. 17,120.

**Vilkomir,** *t.* in Kovno govt., Lithuania, nr. Vilna;

**Villa Clara,** *t.* nr. Trinidad, Cuba; industrl. and commercial; p. 24,360.

**Villa del Pilar,** *c.* of Paraguay, 104 m. from Asuncion; large orange output; p. 6,250.

**Villafranca,** *t.* in Verona prov., Lombardy, Italy; silk manuf.; p. 7,970.

**Villafrance de los Barros,** *t.* Badajos prov., Spain; wine and corn country; p. 10,310.

**Villajoyosa,** cst. *t.* on Mediterranean, prov. Alicante, Spain; fisheries and domestic manuf.; p. 9,350.

**Villa Nova de Gaia,** *t.* on R. Douro, Portugal; sub. to Oporto; pottery, wine casks, tobacco, and glass factories; p. 15,450.

**Villanueva de la Serena,** *t.* S. of R. Guadiana, prov. Badajos, Spain; in wine, wheat, hemp, and fruit-growg. dist.; p. 11,950.

**Villanueva y Geltru,** *spt.* Barcelona prov., Spain; fishy. and agr. centre; p. 12,360.

**Villa Real,** *dist.* Portugal; area 1,650 sq. m.; p. 250,000; cap. V. R., t. on R. Corgo; p. 7,020.

**Villa Rica,** *t.* (90 m. E. of Asuncion) Paraguay; in agr. and timber regn.; p. 26,250.

**Villefranche de Rouergue,** *t.* on R. Aveyron, nr. Toulouse, France; industrl.; p. 11,520.

**Villefranche-sur-Saône,** *t.* dep. Rhône, France; 19 m. N.W. Lyons; cotton and thread factories; p. 16,220.

**Villena,** industrl. *t.* Alicante prov., Spain; p. 15,350.

**Villeneuve-sur-Lot,** mftg. *t.* dep. Lot-et-Garonne, France; p. 14,930. [5,610.

**Villeneuve-sur-Yonne,** *t.* dep. Yonne, France; p

**Villengen**, *t.*, Baden, Germy.; chf. seat watch-mkg. ind., Black Forest: p. 8,370.

**Vilna**, Poland, within 10 miles of Lithuanian border; area 16,421 sq. m.; forest, agr., cattle-breeding; p. 2,000,000. Cap. V., *t.* on R. Villya; great industrial and commercial centre; Roman C. cathedl., ruined castle; p. 214,600; grain, coal, petroleum, corn and timber exports.

**Vilvorde**, *t.* on R. Senne, Brabant, Belgium; oil and chemical factories; p. 14,010.

**Vimiera**, *t.* in Estremadura, Portugal, nr. Torres Vedras; Wellington's victory, Aug 21, 1808; p. 2,620. [building, p. 10,120.

**Vinaroz**, spt. *t.* nr. mth. of R. Ebro, Spain; ship-

**Vincennes**, *t.* with castle and wood, 4 m. E. of Paris, France, p. 18,670. Also c. on Wabash R., Indiana, U.S.A.; ry. centre, p. 17,600.

**Vindhya**, mtn. *range* separatg. the Deccan from the Ganges basin, India, alt. of highest summit, 4,500 ft.

**Vinegar Hill**, nr. Enniscorthy, co. Wexford, I.F.S.; battle 1798.

**Vinh**, *t.*, cap. prov. Vinh, French Indo-China, betwn. Hanoi and Hué, p. of prov. 1,350,000.

**Vinnitsa**, *t.* on Bug R., govt. Podolia, Russ., p. 20,100. [centre, p. 19,750.

**Viramgam**, *t.* nr. Ahmadabad, Bombay, India; tr.

**Viravanallur**, *t.* in Tinnevelli dist., India; flourishg. commerce, p. 12,720.

**Virginia**, an Atlantic *st.* U.S.A., S. of Maryland; area 40,262 sq. m.; tobacco culture, p. 2,628,000; cap. Richmond (*q.v.*). Virginia is separated from Maryland by the Potomac R. and Chesapeake B. Virginia is famous for its Natural Bridge in Rockbridge co., and for its mineral springs. "Virginia leaf" tobacco is the finest quality that the United States produces. (*See also* W. Virginia.)

**Virginia City**, on E. slope Mt. Davidson, Nevada, U.S.A., alt., 6,205 ft. above sea; silver mining dist., p. 3,200. [23 m. S.W. London, Eng.

**Virginia Water**, artificl. *L.* nr. Windsor Park,

**Virgin Isles**, *grp.* in the W. Indies, E. of Porto Rico, comprising a pres. of the Brit. Leeward Isl. Col., certain dependencies of Porto Rico, and the isls. St. Croix, St. Thomas, and St. John (all of which see). Total area 275 sq . m., p. about 50,000. [gt. local tr., p. 16,418.

**Vishnii-Volotchok**, *t.* old Tver govt., U.S.S.R.;

**Visnagar**, *t.* in Baroda, Bombay Pres., India, p. 20,700.

**Vistula**, *R.* rising in Silesia, and flowing 693 m. past Cracow and through Poland and Pruss. to the Baltic nr. Dantzic. From Cracow to the sea it is navigable.

**Vitebsk**, old govt. U.S.S.R., adjng. Baltic Provs.; area 17,440 sq. m., forests, agr., and gdg., p. 1,600,000; cap. V., t. on R. Düna, 354 m. W. of Moscow; gt. tr. in corn and cattle, p. 70,010.

**Viterbo**, *c.* prov. Rome, Latium, Italy; alum mines, match manuf., p. 16,000.

**Viti Levu**, largest of Fiji *isls.* (90 m. by 50 m.), p. 70,000. [m. to R. Lena.

**Vitim**, *R.* E. Siberia, flows from nr. L. Baikal 900

**Vitré**, *t.* on R. Vilaine, dep. Ille-et-Vilaine, France; p. 12,200.

**Vitry le François**, *t.* (fortfd.) on R. Marne nr. Chalons, France; bell foundg. etc., good tr., p. 8,600.

**Vittoria**, *cap.* Basque prov., Alava, Spain, p. 30,180; Wellington's victory, June 21, 1813.

**Vittoria**, *t.* nr. Modica, prov. Syracuse, Sicily; silk manuf., p. 27,110.

**Vittorio**, *t.* nr. Treviso, Venetia, Italy; summer rest., saline and sulphur springs, has cathedl., silk-worm breeding and silk spinning centre, p. 11,920.

**Vivero**, *t.* prov. Lugo, Galicia, Spain; good consting trade and fishery; p. 12,960.

**Vizagapatam**, *t.* Madras, India, exports rice and sugar; weaving and ornamental wood box-making; p. 36,000.

**Vizeu**, *dist.* Portugal (anc. prov. Beira Alta), area 1,937 sq. m., p. 416,860. Cap. V., *t.* nr. Oporto; cathedral, Roman ruins; p. 8,130.

**Vizianagram**, *t.* in Vizagapatam dist., Madras, India, many fine buildings, good tr.; p. 34,000.

**Vlaardingen**, fishing *t.* on R. Maas, Holland, nr. Rotterdam, p. 11,430.

**Vladikavkaz**, fortfd. *t.* on R. Terek, N. Caucasia, U.S.S.R.; many factories and distilleries; an important railway terminus; p. 56,500.

**Vladimir**, old govt., U.S.S.R., between Nijni Novgorod and Moscow, area 18,864 sq. m.; manuf. and agr.; p. nearly 2,000,000. Cap. V., old c. on R.'s Lybéd and Klyazma; p. 31,200.

**Vladimir-Volhynsk**, *t.* in old govt. Volhynia, Ukraine, nr. the frontiers of Ukraine and Poland; p. 9,920.

**Vladivostok**, chf. spt. U.S.S.R. and naval station on the Pacific. Former Cap. of the viceroyalty of E. Asia, Siberia; terminus of the Trans-Siberian riwy.; p. 62,500.

**Vlieland**, Friesian *isl.* at entrance Zuyder Zee, N. Holland, 10 m. by 1¼ m.

**Vodina**, *t.* Bulgaria; good tr.; p. 12,460.

**Voghera**, *t.* nr. Alessandria, prov. Pavia, Italy, p. 17,630. [Lochearnhead.

**Voil, Loch**, Perthsh., Scotl. (3¼ m. long), W. of

**Voiron**, *t.* nr. Grenoble, dep. Isère, France; p. 12,510.

**Volcan de Agua**, conical *mtn.* nr. Guatemala t., Centl. America; discharges water, destroyed Old Guatemala by flood in 1541; alt. 12,197 ft.

**Volchansk**, *t.* in U.S.S.R., Ukraine, nr. Byelgorod; tanneries and distilleries; p. 12,970.

**Volga**, *R.* U.S.S.R., rises on Valdai plateau, govt. Tver, flows in a serpentine course 2,325 m. to the Caspian at Astrakhan.

**Volhynia**, old govt., Ukraine, on Austrian frontier, area 27,473 sq. m., p. about 3,000,000. Forest land in N., agr. S.; gdng., bee-keepg., stock-raisg., also many factories.

**Volkov**, *R.*, U.S.S.R., flows (130 m.) from L. Ilmen to L. Ladoga.

**Volksrust**, *t.* Transvaal, South Africa, p. *2,497*.

**Volo**, spt. *t.* nr. Larissa, at head of G. of V. in Thessaly, Greece; gd. harb. and tr.; p. 17,350.

**Vologda**, old govt. U.S.S.R., bordering on the Ural Mtns., area 150,428 sq. m., p. 1,350,000; cap. V., t. on V. R., p. 28,500; large tr. in agr. prod.

**Volsk**, *t.* on R. Volga, old Saratov govt., U.S.S.R.; gd. tr.; p. 37,120.

**Volterra**, *t.* nr. Pisa, Tuscany, Italy; saline spring, alabaster industries, p. 7,880.

**Voltri**, cst. *t.* nr. Genoa, Liguria, Italy, pilgrimage shrine, shipbldg. and ironwks., p. 8,010.

**Vorarlberg**, *prov.* Austria, W. of the Tyrol, area 1,004 sq. m., hilly, with mtn. valleys; goat and cow-kpg., weaving and embroidy., p. 133,212; cap. Bregenz (*q.v.*).

**Voronezh**, old govt. U.S.S.R., area 25,448 sq. m.; agr., stock-rearing, with woodwk. and domestic manufs.; p. 3,350,000, principally peasants; cap. V., on V. R. nr. its junction with R. Don; import. commcl. centre, p. 88,568.

**Vorontsovka**, *t.* in Voronezh, U.S.S.R.; rifle manuf. and impt. fairs, p. 13,030.

**Vosges**, *mtn. chain* E. France, 190 m. long; highest summit, the Ballon de Guebwiller (*q.v.*); also E. frontier dep., France, area 2,305 sq. m., agr., dairying, vineyds., textile inds., p. 383,684; cap. Epinal (*q.v.*) standing on the Upper Moselle.

**Voznesensk**, *t.* on R. Bug, govt. Kherson, Ukraine; cathedral, four large fairs annually, distilleries, p. 16,770.

**Vranya**, *t.* Serbia, Jugo-Slavia; garrison; flax and hemp culture and manuf., p. 13,040; near is the health rest. (warm sulphur springs) of Vranyska Banya. [jewellery; p. 16,014.

**Vratza**, *t.* on R. Vratzanska, Bulgaria; wine, silk,

**Vryburg**, *cap.* Brit. Bechuanaland, S. Afr.; gold-field in neighbourhood; p. *1,864*.

**Vryheid**, chief *t.* of a coal district in the extreme N.E. of Natal, p. *3,386*.

**Vulcano**, most S. *isl.* of the Lipari grp., 12 m. N. of Sicily. [Rumania and Transylvania.

**Vulcan Pass**, in the Carpathian Mtns., between

**Vyatka**. (*See* Viatka.) [p. 18,760.

**Vyazma**, *t.* of U.S.S.R., 90 m. E.N.E. of Smolensk.

**Vyrnwy**, *L.*, art. reservoir, Montgomeryshire, Wales, with a dam 1,180 ft. long, furnishing water to Liverpool; 5 m. long, with an area of 1,121 acres.

## W

**Waag**, *R.* Hungary, trib. (200 m.) of R. Danube.

**Waal**, southern *arm* of R. Rhine, separates from main stream nr. Arnheim, and flows through Gelderland to Gorinchem, where it is joined by the R. Mause, and pursues its course through several mouths in S. Holland to N. Sea.

**Wabash,** *R.* Ohio and Indiana, U.S.A., trib. (550 m.) of R. Ohio. The Wabash and Erie canal is 476 m. in length—the longest in the United States; also c., cap. W. co., on R.W., Ind., U.S.A., rlwy. centre; p. 8,750. [p. 4,044.

**Wabasha,** *t.* Minnesota, U.S.A., on R. Mississippi;

**Waco,** *c.* on Brazos R., Texas, U.S.A.; shipping point for cotton crop; p. 54,200.

**Wadai,** kingdom of central Sudan, W. of Darfur and E. of Lake Chad, Fr. Eq. Africa; area (abt.) 100,000 sq. m.; pastoral; inhab. by Mohammedan negroes of the Maba tribe; p. 2,000,000 to 4,000,000; chf. t. Abeshr.

**Wadebridge,** *urb. dist.* and *spt.* Cornwall, 7 m. N.W. of Bodmin, p. *2,460.*

**Wadelai,** *t.* left bank of the Upper Nile, Africa, 40 m. N. of the Albert Nyanza.

**Wadnagar,** *t.* nr. Visnagar in Baroda, India; p. 6,320.

**Wadsley,** *dist.* (industrl.) on R. Don, sub. (N.W.) to Sheffield, W.R. Yorks, Eng.

**Wady Halfa,** *place* at the second cataract of R. Nile, S. Egypt. There is steamer communication with Assuan, and with Khartoum by rail.

**Wageningen,** *t.* Netherlands, prov. Gelderland, 11 m. W. of Arnhem, p. 9,920.

**Wagga-Wagga,** *t.* on R. Murrumbidgee, N.S.W., 309 m. S.W. of Sydney; has a great railway bridge over the Murrumbidgee River; gold-mining; p. 6,200.

**Wagram,** *vil.* nr. Vienna, Lower Austria; here Napoleon defeated the Austrians in 1809.

**Wahsatch Mtns.,** on W. border Great Basin, Utah, U.S.A.; alt. of highest summit, 11,500 ft.

**Wai,** *t.* on Krishna R., Satara dist., Bombay Presidency, India, 30 m. from Poona. Contains large Hindu temples and is a great resort of pilgrims, p. 14,250.

**Waikato,** *R.* N. isl. N. Zealand, flows 250 m. to Tasman Sea.

**Wainfleet,** mkt. *t.* on R. Steeping, Lincolnsh., Eng., p. 1,460. [Chow; commcl. centre; p. 140,500.

**Waiping,** *t.* prov. Che-Kiang, China, S.W. of Hang

**Wairakei,** *t.* on L. Taupo, N. Zealand; health rest.; res. p. 1,210. [(dist.) 1,950.

**Wairo** (or **Clyde**), *t.* on W. R., New Zealand, p.

**Waitaki,** *t.* nr. Christchurch, New Zealand, p. 1,510.

**Waitara,** post *t.* nr. New Plymouth, New Zealand, p. 1,270. [p. 17,250.

**Waitzen,** *t.* on the Danube, 20 m. N. of Budapest,

**Wakamatsu,** *t.* in Japan, main island, 55 m. S.E. of Niigata, largely engaged in the manufacture of lacquer ware, p. 47,853.

**Wakatipu,** beautiful *L.* (52 m. by 2½ m.) S. isl. New Zealand; 1,200 ft. deep, 1,070 ft. above sea.

**Wakayama,** *t.* on the main island of Japan, 35 m. S.W. of Osaka. Is largely engaged in the cotton industry, p. 84,603.

**Wakefield,** *co. bor.,* mftg. *c.* W.R. Yorks, Eng., on R. Calder, 9 m. S. of Leeds; cathedl.; p. *59,115.* Has been the seat of a bishropic since 1888; also *t.* in Middlesex co., Mass., U.S.A.; industrl.; p. 16,600.

**Wakkerstroom,** *dist.* Transvaal, S. Africa, bounded N. by the Vaal R. [India, p. 11,250.

**Walajapet,** *t.* nr. Arat, N. Arcot div., Madras,

**Walcha,** *t.* in agr. dist. nr. Armidale, N.S.W., p. 1,420.

**Walcheren,** W.-most isl., prov. Zealand, Holland; 12 m. long, low-lying, agr.; p. 41,750. The Walcheren Expedition of 1809 was one of the most disastrous incidents of British naval history of the period.

**Waldeck,** *state* Germany, between Westphalia, Hesse-Nassau, Lippe, and Hanover; area 432 sq. m., p. 66,432; agr. and stock-feeding; cap. Arolsen (*q.v.*). [4,150.

**Walden,** *vil.* New York, U.S.A., Orange co., p.

**Waldenburg,** *t.* on R. Mulde, Saxony; industrl.; p. 3,250; also *t.* on R. Polsnitz, Prussn. Silesia; mftg. centre (porcelain and fire-clay), colliery dist.; p. 18,360.

**Wales,** *principality,* S.W. of Great Britain; washed by Irish Sea, St. George's Chan. and Bristol Chan.; area 7,362 sq. m., mountainous, with much mineral wealth; p. *2,593,014*; good pasturage. Chief c. Cardiff (*q.v.*).

**Walfisch Bay,** Brit. *harbr.* and *settlement* S.W. Afr. surrounded by former Germ. terr., annexed in 1884 to Union of S. Africa; area 430 sq. m., p. *753.*

**Walham Green,** *sub.* of London, 6 m. W.S.W. of St. Paul's.

**Walkden,** industrl. *dist.* S.E. Lancs, Eng.; p. 5,500. [subn. to Newcastle; industrl.; p. 15,010.

**Walker,** *t.* on R. Tyne, Northumberland, Eng.,

**Wallachia,** (part of the anc. Dacia), *div.* Rumania, betwn. the Carpathians and the Danube and the Black Sea and Serbia; area 30,000 sq. m., p. (abt.) 3,298,400.

**Walla-Walla,** *cap.* W.W. co., Washington, U.S.A., on Mill Creek, in wheat region, p. 16,000.

**Wallaroo,** *spt.* on W. Bay, Spencer Gulf, S. Australia, in copper ming. dist., p. 4,020.

**Wallasey,** *co. bor.,* adjng. Birkenhead, Cheshire, Eng., p. *97,465.*

**Wallenstadt,** *L.* cant. St. Gall, Switzerld. (11 m. long), nr. L. of Zurich.

**Wallingford,** *mun. bor.* on R. Thames, Berks, Eng., old castle, p. *2,840*; also t. nr. the Quinnipiac R., New Haven co., Connecticut, U.S.A., silver-plate works, p. 11,320.

**Wallis Isls.,** *grp.* in S. Pacific, nr. Samoa, Germ. possn.; largest (and only inhabited) isl. in the arch.: Uvea, p. 3,000.

**Wallsend,** *mun. bor.,* on R. Tyne, Northumberland, Eng., nr. Newcastle, at end of the old Roman wall, colly. dist., p. *44,582.*

**Walmer,** *urb. dist.,* cst. *t.* Kent, Eng., nr. Deal (included in Cinque Port of Sandwich), contains W. Castle, the offic. res. of the Lord Warden. Duke of Wellington died here in 1852. Bathg. rest., p. *5,324.*

**Walpole,** *vil.* nr. Boston, Mass., U.S.A., p. 7,450.

**Walsall,** *co. bor.,* *t.* nr. Birmingham, Staffs, Eng., mftg. bits, bridles, saddlery, etc., p. *103,102.*

**Walsden,** mftg. *t.* nr. Rochdale, S.E. Lancs. Eng., p. 5,220.

**Walsham, N.,** mkt. *t.* Norfolk, Eng., p. 4,254. S. Walsham is an adjacent vil. 5 m. nearer Norwich.

**Walsingham,** *t.* in N. Norfolk, 5 m. from Fakenham.

**Walsoken,** *urb. dist.,* on N. border Norfolk, Eng.; adjng. Wisbech, p. *4,058.* [5,443.

**Waltershausen,** *t.* nr. Gotha, Germy., industrl., p.

**Waltham,** *c.* nr. Boston, Mass., U.S.A., machine-made watches, p. 40,100.

**Waltham Abbey,** or **Waltham Holy Cross,** *urb. dist.,* *t.* on R. Lea, Essex, Eng., 12 m. N. of London; abbey founded by King Harold, cordite factory, p. *7,116.*

**Walthamstow,** *urb. dist.,* S.W. Essex, subn. to London; industrl. and residtl., p. *132,965.*

**Walton-in-le-dale,** *urb. dist.,* on R. Ribble, N.E. Lancs, Eng.; industrl., p. *12,718.*

**Walton-on-Thames,** *urb. dist.,* nr. Kingston, Surrey, Eng.; anglers' resort, p. *17,953.*

**Walton-on-the-Hill,** *mftg. sub.* Liverpool, Lancs, Eng.

**Walton-on-the-Naze,** *urb. dist.,* cst. *wat. pl.,* Essex, Eng., res. p. *3,066.*

**Walworth,** *dist.* S. London, Eng., in bor. Southwark.

**Wandsbeck,** *t.* in prov. Schleswig-Holstein, Pruss.; spirit manuf., oleographs, etc., p. 31,900.

**Wandsworth,** *met. bor.* Surrey, on R. Wandle and R. Thames, S.W. London, Eng.; p. *353,101.*

**Wanganui,** R. New Zealand (N. isl.) flows (160 m.) to S. Taranaki Bight; also t. on same, p. 26,000.

**Wansbeck,** *R.* Northumbld., Eng., flows 23 m. E. past Morpeth. [London, p. *19,183.*

**Wanstead,** *urb. dist.,* *t.* Essex, Eng., 7 m. N.E.

**Wantage,** *urb. dist.,* mkt. *t.* Berks., Eng., in vale of the White Horse, 20 m. W. of Reading; p. *3,424.*

**Wapakoneta,** *t.* nr. Piqua, Auglaize co., Ohio, U.S.A.; p. 5,380. [Eng., below the Tower.

**Wapping,** industrl. Thames-side *dist.* E. London,

**Warasdin,** fort. *t.* on R. Drave, Croatia, Jugo-Slavia; industrl., p. 11,750.

**Waratah,** *t.* Northumbld. co., N.S.W., colly. and vineyd. dist., p. 3,486.

**Warblington,** *urb. dist.,* Hants, Eng., p *4,320.*

**Warburg,** industrl. *t.* on R. Diemel, Westphalia, Pruss.; was an anc. Hanseatic t.; p. 5,850.

**Wardha,** *R.* of W. dist., Cent. India, flows 254 m. to join R. Wainganga, affit. of R. Godavari.

**Ware,** *urb. dist.,* mkt. *t.* Herts, Eng., on R. Lea, p. *6,171.* Also t. co. Hampshire, Mass., U.S.A.; cotton and woollen manuf.; p. 7,250.

**Wareham,** *mun. bor.,* mkt. *t.* nr. Dorchester, co. Dorset, Eng., p. *2,057.*

**Warialda,** *t.* in pastoral dist., N.S.W., on Gwydyr R., Burnett co., p. (dist.) 3,920.

**Warkworth,** *spt.* Northumberland, Eng., nr. mth. of R. Coquet, p. 11,850. [Eng., p. *5,176.*

**Warminster,** *urb. dist.,* mkt. *t.* Westbury div. Wilts,

**Warnsdorf,** *t.* Rumburg dist., Bohemia, nr. Saxon frontier; cotton spinning, calico printing, velvet, silk, and linen manuf.; p. 22,780.

**Warora,** *t.* Chanda dist., Cent. Provs., India; colliery region; p. 11,340. [sales; p. 4,954.

**Warragul,** *t.* nr. Melbourne, Victoria; live-stock

**Warren,** *c.* on the Mahoning R., Trumbull co., Ohio, U.S.A.; coal and iron mining dist.; p. 42,500; also bor. on the Allegheny R., Warren co., Penn., U.S.A.; in oil region; p. 14,950.

**Warrenpoint,** *t.* (spt.) at head of Carlingford Lough, co. Down, N. Ireland, p. 1,880.

**Warrington,** *co. bor.*, on R. Mersey, Cheshire and Lancs.; wire pins, files, and tool mftg.; p. *79,322*.

**Warrnambool,** *spt.* Villiers co., Victoria; wat. pl.; exports dairy prod.; p. 8,235.

**Warsaw,** *govt.* Poland, on bank of R. Vistula and Lower Bug R. down to Prussian frontier; area 6,749 sq. m.; agr., stock-raisg., machinery, and sugar factories; p. 211,165. Cap. W. c. on left bank of the Vistula (also cap. Poland) fort. and industrl. centre.; p. 931,176.

**Warsaw,** *t.* on R. Mississippi, Hancock co., Illinois, U.S.A.; p. 4,500; also c. on Tippecanoe R., Kosciusko co., Indiana, U.S.A.; p. 5,750.

**Warsop,** *urb. dist.* of Notts, 5 m. N.N.E. of Mansfield, p. *10,748*.

**Warthe,** or **Warta,** *R.* of Poland, Posen and Brandenburg, Pruss.; trib. (450 m.) of R. Oder; also t. on the Warthe, govt. Kalisz, Poland; p. 5,263.

**Warwick,** English midld. *co.*, contains the Forest of Arden, Stratford-on-Avon, Coventry, and a large portn. of Birmingham; area 902 sq. m.; rich in coal, iron and limestone; p. *1,534,762*. Cap. Warwick, c. on R. Avon; p. *13,459*; also t. in co. Merivale, Queensland; corn and vineyd. dist.; p. 4,014; also cotton mftg. t. Kent co., Rhode Isl., U.S.A., on Narranganseett Bay; p. 13,481.

**Wash,** *R.* flowing 20 m. from co., Rutland, Eng. to R. Welland, Lincolnsh.; also estuary of R.'s Welland, Witham, Ouse and Nen; co.'s Lincoln and Norfolk, 22 m. long, width at mth. in N. Sea, 15 m.

**Washa,** *L.*, nr. New Orleans, Louisiana, U.S.A.; 14 m. long.

**Washburne Mtns.,** range in the Yellowstone Natl. Park, U.S.A.; highest summit, 10,345 *ft.*

**Washington,** *st.* N.W. portn. U.S.A. on Pacific Oc., adjng. Brit. Columbia; area 66,836 sq. m.; rich in coal, iron and other minls., with much forest and agr. land; p. 1,634,000. Cap. Olympia; chf. c.'s, Seattle and Tacoma (*q.v.*). Also c., cap. of U.S.A., in Dist. of Columbia, on the R. Potomac; contains the Capitol (covering 3½ acres), with Senate Chamber, House of Representatives, Supreme Court, Library of Congress, etc.; also President's residence (The White House), etc.; p. 492,000. Also c. in coal regn. Indiana, U.S.A.; p. 9,100; also mftg. bor. (iron, brass, glass, etc.) in Washington co., Pa.; p. 24,750.; also c. Fayette co., Ohio, in farmg. dist. p. 4,850. Also name of many co.'s and smaller t.'s and vils. in U.S.A.

**Washita,** *R.* Arkansas and Louisiana, U.S.A., trib. (400 m.) of Red R.

**Wasmes,** *t.* nr. Mons, prov. Hainault, Belgium, in Le Borinage coal dist., p. 12,350.

**Wast Water, Lake,** Cumberland, Eng., nr. Keswick, 3 m. long.

**Watchet,** *urb. dist.* and *spt.* of Somerset, on the Bristol Channel, 16¼ m. N.W. of Taunton, p. *1,936*.

**Waterbury,** *c.* on Naugatuck R., New Haven, connecticut, U.S.A.; manuf. watches, pins, and brass goods; p. 100,700.

**Waterford,** *co.* in Munster prov., I.F.S., area 721 sq. m.; agr., live-stock, fisheries; p. 83,740; co. t. W., c. on R. Suir, *co. bor.*, cathedl., manuf., p. 26,647.

**Waterloo,** *vil.* S. Brabant, Belgium, 9 m. S.S.E. of Brussels; Napoleon's defeat by Wellington, June 18, 1815.

**Waterloo (-with-Seaforth),** *urb. dist., wat. pl.* at mouth of R. Mersey, Lancs, Eng., 5 m. N.N.W. of Liverpool, p. *31,180*; also c. on Cedar R., Blackhawk co., Iowa, U.S.A., mftg. centre in agr. dist., p. 47,200; also vil. Laurens co., S. Carolina, U.S.A., p. 5,450; also t. on Seneca L., New York, U.S.A., p. 4,050.

**Watertown,** *c.* on Black R., Jefferson co., New York, U.S.A., carriage works, foundries, and manufs., p. 32,300; also t. on Charles R., Middlesex co., Mass., U.S.A., contains national arsenal and the cemetery of Mt. Auburn, p. 21,457; also c. on R. Rock, Dodge and Jefferson co.'s, Wisconsin, U.S.A.; university, manuf., p. 10,750.

**Waterville,** *c.* on R. Kennebec, Maine, U.S.A.; cotton factories; university; p. 15,600.

**Watervliet,** *c.* (formerly vil. of W. Troy) on R. Hudson, Albany co., New York, U.S.A.; govt. arsenal; p. 16,085.

**Watford,** *urb. dist.*, mkt. *t.* on R. Colne, Herts, Eng. (connected with Bushey by bridge); cocoa and other manuf.; p. *56,799*.

**Wath-upon-Dearne,** *urb. dist.* and industrl. *t.* nr. Barnsley, W.R. Yorks, Eng., p. *13,653*.

**Watling Is.,** one of the Bahamas *grp.*, 18 m. long (generally supposed to be the San Salvador of Columbus); p. 2,350.

**Watling Street,** one of the principal *roads* of Britain.

**Watlington,** *t.* of Oxfordsh., 8 m. N.E. of Wallingford, p. 3,780.

**Watson's Bay,** New South Wales, 7 m. N.E. of Sydney, a favourite seaside resort.

**Wattenscheidt,** *t.* nr. Arnberg, Westphalia; industrial; p. 12,650.

**Watton,** mkt. *t.* on R. Wissey, Norfolk, Eng.; p. 1,520.

**Wattrelos,** *t.* nr. Lille, dep. Nord, France; industrl.; p. 20,230.

**Waukegan,** *c.* on L. Michigan, Illinois, U.S.A.; cap. of Lake country; engaged in the manufacture of brass and iron goods; a favourite summer resort; gd. harb. and tr.; p. 34,900.

**Waukesha,** *vil.* on R. Fox, W. co., Wisconsin, U.S.A.; magnesian springs, health rest.; the seat of the Carrol Presbyterian College; p. 17,600.

**Wausau,** *c.* Marathon co., Wisconsin, U.S.A., on Wisconsin R., in white pine regn.; timber works; p. 24,250. [50 m. to sea, nr. Yarmouth.

**Waveney,** *R.* Norfolk and Suffolk, Eng.; flows

**Waverly,** *vil.* on R. Chemung, Tioga co., New York, U.S.A.; tr. centre in dairy rgn.; p. 5,670; also vil. nr. Baltimore, Maryland, U.S.A.; p. 5,860; also t. on Cedar R., Bremer co., Iowa, U.S.A.; p. 3,709.

**Wavertree,** *dist.* S.E. Lancs, Eng., subn. (S.E.) of Liverpool; industrl. and residtl.

**Wavre,** *t.* nr. Brussels, S. Brabant, Belgium; mftg.; French victory over Prussns. here on morng. of battle of Waterloo; p. 8,620.

**Waxahachie,** *t.* Texas, U.S.A.; rly. centre in Ellis co.; p. 8,050.

**Waycross,** *t.* in Ware co., Georgia, U.S.A., p. 15,250.

**Waynesboro,** *t.* Franklin co., Penn., U.S.A.; industrl.; p. 10,200.

**Wazan,** sacred *c.* of Morocco, S.E. of Tangiers, p. 11,570. [industl., p. 19,820.

**Wazemmes,** *t.* France, subn. (S.W.) to Lille.

**Wazirabad,** *t.* nr. R. Chenab, Gujranwala dist., Punjab, India; boat-bldg., iron manuf., p. 16,450.

**Waziristan,** sectn. of *mtn.* dists. N.W. frontier, India, lying betwn. the Tochi and Gomul R.'s

**Weald, The,** wooded and pastoral tract S.E. Eng., extending from Folkestone, Kent, through parts of Surrey, Hants, and Sussex to the sea about Beachy Head.

**Wealdstone,** *urb. dist.*, Middlesex, Eng., p. *27,001*.

**Wear,** *R.*, Durham, Eng., rises on the western border of the county, flows 60 m. to N. Sea, at Sunderland, where great coal export and shipbuilding industries are carried on.

**Weaver,** *R.* Cheshire, Eng., trib. (45 m.) of R. Mersey.

**Weaver Hills,** Staffs, Eng., nr. E. bdr. of co., alt. 1,300 ft.

**Webb City,** Jaspar *co.*, Missouri, U.S.A., in lead and zinc regn., p. 6,750.

**Webster,** *t.* in Worcester co., Mass., U.S.A., on the French R.; textile and boot factories; p. 12,900.

**Wedmore,** *par.* nr. Axbridge, Somerset, Eng., p. 3,300.

**Wednesbury,** *mun. bor.*, mkt. *t.* nr. Birmingham, Staffs, Eng.; stoneware, potteries, iron and coal industries; p. *31,534*.

**Wednesfield,** *urb. dist.*, nr. Wolverhampton, Staffs, Eng.; lock and key manuf.; p. *9,333*.

**Weerdt,** industrl. *t.* nr. Limburg, Holland, p. 8,025.

**Weetslade,** *urb. dist.*, Northumberland, Eng., p. *7,736*.

**Wei-hai-wei,** Brit. naval *stn.*, N.E. cst. Shantung penins., China, nr. the treaty port of Chefoo; held under lease; area abt. 285 sq. m., p. 147,177. Harbr. and port fortified.

**Weimar**, *c.* on R. Ilm, nr. Erfurt, Germy., cap. of former grand duchy Saxe-Weimar; p. 37,237.
**Weinbirge**, *t.* in Bohemia, subn. to Prague.
**Weinheim**, *t.* on the "Mountain Road" at the foot of the Odenwald, N. of Heidelberg; castles and house of Teutonic Knights; wine, fruit, etc.; p. 12,560.
**Weinert**, *t.* on slope of the Erzgebirge, Kaaden dist., Bohemia; chf. centre of lace and fringe-making industry; p. 11,140.
**Weissenfels**, *t.* on R. Saale, nr. Merseburg, Prussian Saxony; mftg. centre in coal dist.; p. 31,200.
**Weisshorn**, the great Alpine *peak* rising W. of the Zermatt Valley (14,804 ft.), first climbed in 1861 by Prof. Tyndall. [p. 11,750.
**Weisskirchen**, industrl. *t.* nr. Temesvar, Hungary;
**Welland**, *R.* Northants and Lincolnsh., Eng., flows (70 m.) to the Wash.
**Welland Canal**, connects Lakes Erie and Ontario (35 m. long) W. of the Niagara.
**Wellesley Isls.**, group in the Gulf of Carpentaria, belonging to Queensland.
**Wellingborough**, *urb. dist.*, mkt. *t.* on R. Nen, Northants, Eng., 102 m. E.N.E. of Northampton; p. *21,221.*
**Wellington**, *urb. dist.*, mkt. *t.* nr. Shrewsbury, Shropshire, Eng., p. *8,185.* Its ancient name was Watling Town, because it stood on the line of Watling Street. Also *urb. dist.*, nr. Taunton, Somerset, Eng., p. *7,128.* Also t. in Hutt co., on Port Nicholson, New Zealand, cap. of the col., N. Island; fine harbour, impt. tr.; p. 118,500. Also prov. containing same, 200 m. by 80 m., p. 248,801. Also a centl. pastoral dist. N.S.W., area 16,695 sq. m. Also isl. off W. coast Patagonia (100 m. long), belonging to Chili.
**Wells**, *mun. bor.*, *c.* at foot of Mendip Hills, Somerset, Eng.; cathedral, bishop's palace; p. *4,833.* Also vil. York co., Maine, U.S.A., p. 3,854.
**Wells**, or **Wells next the Sea**, *urb. dist.*, spt. *t.* Norfolk, Eng., nr. Holkham Bay, p. *2,505.*
**Wellston**, *c.* Jackson co., Ohio, U.S.A., ry. centre, p. 5,300.
**Wellsville**, *c.* in colly. and farming dist., Columbiana co., Ohio, U.S.A., on the Ohio R., p. 7,800.
**Welshpool**, *mun. bor.* on R. Severn, Mongtomeryshire, Wales; nr. is Powis Castle; p. *5,637.*
**Welwyn**, *par.* of Herts, 5 m. N. of Hatfield, p. *8,585.*
**Wem**, *urb. dist.*, nr. Shrewsbury, Shropsh., Eng., p. *2,157.* [Harrow, p. *48,546.*
**Wembley**, *urb. dist.*, Middlesex, 2½ m. E.S.E. of
**Wemyss**, *par.* of Fife, 2 m. N.E. of Dysart, including the vils. of East and West Wemyss, combined p. *26,619.* [p. 2,030.
**Wendover**, a *par.* of Bucks, 5 m. S.E. of Aylesbury.
**Wener**, large *L.* Sweden, W.N.W. of L. Wettern, with which it is connected by canal (and thence with the Baltic); area, 2,149 sq. m
**Wenersborg**, *lake port* Sweden, on a tongue of land betwn. the R. Göta and the Vasobotten (the southnmost. bay of L. Wener); p. 6,770.
**Wenham Lake**, Massachusetts, 22 m. N.N.E. of Boston, famed for its large yield of ice.
**Wenlock**, or **Much Wenlock**, *mun. bor.*, *t.* Shropsh., Eng.; iron and coal dist., p. *14,152.*
**Wepener**, *t.* nr. Caledon R., on border Basutoland and Orange Free State, S. Afr., battle April, 1900, p. *1,247.*
**Werdau**, *t.* on R. Pleisse, nr. Zwickau, Saxony; textile and mchy. manuf., p. 22,020.
**Werden**, *t.* on R. Ruhr, in the Rhine prov., Pruss.; Benedictine abbey; cloth mftg. centre in colly. and quarry dist., p. 11,270.
**Wermelskirchen**, industrl. *t.* nr. Düsseldorf, Rhenish Pruss., p. 12,750.
**Wernigerode**, *t.* on R. Holzemme, at ft. of Harz mtns., Saxony prov., Pruss.; castle; p. 10,200.
**Werra**, *R.* Germany, a headstream of R. Weser; rises in Saxe-Meiningen, and flows (170 m.) through Thuringia to the Fulda at Münden.
**Wesel**, fort. *t.* Rhine prov., Pruss., nr. Duisburg, on R. Lippe; museum and meteorological stn.; p. 23,106.
**Weser**, *R.* W. Germany, flows from the conflu. of Fulda and Werra R.'s at Münden (270 m.) past Bremen.
**Wessex**, the ancient kingdom of the West Saxons, including Berks, Hants, Wilts, Dorset, Somerset, Devon, and Cornwall.
**West Bay City**, on *R.* Saginaw, Bay co., Michigan, U.S.A., opp. Bay C.; pine-timber industries; p. 15,000.
**West Boylston**, *vil.* nr. Worcester, Mass., U.S.A.; p. 4,417.
**West Bridgford**, *urb. dist.*, Notts, Eng., p. *17,821.*
**West Bromwich**, *co. bor.* on R. Tame, Staffs, Eng., nr. Birmingham; mchny., tools, and metal works; p. *81,281.*
**Westbrook**, *c.* Cumberland co., Maine, U.S.A.; paper, cotton and silk factories; p. 10,950.
**Westbury**, *urb. dist.* and old *t.* nr. Salisbury, Wilts, Eng., woollen factories, brickwks.; p. *4,044.*
**Westbury-on-Severn**, *urb. dist.*, 8 m. S.W. Gloucester, Eng.; industrl.; p. *1,746.*
**West Calder**, *t.* 15½ m. S.W. Edinburgh, Scotl.; p. *6,817.*
**West Chester**, *bor.* in mkt.-gdng. dist., Chester co., Penn., U.S.A.; residtl. sub., Philadelphia; p. 12,350.
**Westeraalen**, grp. of *isls.* on N.W. cst. Norway, separated from the Lofoten Isls., by the Raftsund.
**Westeras**, *t.* on N. bay of L. Mälar, Westmanland, Sweden; Gothic cathedl. (with val. episcopal libry.); 16th centy. castle; p. 13,200.
**Westerham**, mkt. *t.* nr. Sevenoaks, Kent, Eng., on Surrey border; p. 3,100.
**Westerly**, *vil.* on Rhode Isl., 44 m. S.S.W. of Providence, p. 9,952.
**Westfield**, *t.* Hampden co., Mass., U.S.A.; manuf.; p. 19,750.
**West Fiord**, *channel* sep. Lofoten Isls. from Norwegian mainland.
**West Flanders**, *prov.* Belgium, adjng. N. S. and French border, area 1,249 sq. m. (*See also* Flanders.)
**Westfield**, *t.* of Massachusetts, 9 m. W. of Springfield, p. 18,604.
**Westgate-on-Sea**, cst. *wat. pl.* nr. Margate, Kent, Eng., p. 4,300.
**West Ham**, *co. bor.* Essex, Eng., subn. to E. London; industrl. and residential; bordered by R.'s Thames and Lea; p. *294,086.*
**West Hartlepool**, *co. bor.*, Durham, Eng., p. *68,134.*
**West Haven**, *bor.* subn. to New Haven c., Connecticut, U.S.A., p. 12,379.
**West Hoboken**, *t.* on Hudson R. cliffs, N. of Jersey City, opp. New York, U.S.A.; silk factories; p. 40,068.
**West Houghton**, *urb. dist.*, mftg. *t.* nr. Wigan, S.E. Lancs, Eng., p. *16,018.*
**West India Isles**, or **Antilles**, *groups* in the Atlantic, extending between the coasts of Florida and Venezuela, separating the Caribbean Sea from the G. of Mexico.
**Westland**, *prov.* New Zealand (S. isl., W. cst.), sep. from Canterbury prov. (of which it was formerly a part) by the Southern Alps; 200 m. long, 30 m. wide, p. 20,000; chf. t.'s Greymouth and Hokitika; mountns., gold mining.
**West Lothian**, Scot., p. *81,426.*
**Westmanland**, *prov.* Sweden, N. of L. Mälar, area 2,608 sq. m., p. 168,709; cap. Westeras (*q.v.*).
**Westmeath**, inld. *co.* Leinster prov., I.F.S., area 708 sq. m.; pasture and tillage, with much bog; p. (declining) 59,812; dairying; co. t. Mullingar.
**Westminster**, *met. bor.* and c. on N. bank of the Thames, Middlesex, Eng., W. of London; contains Houses of Parliament, Westminster Abbey, Government offices, Royal Palaces (Buckingham P. and St. James's), etc., p. *129,535.*
**Westmount**, *t.* Quebec, Can., p. *23,267.*
**Westmorland**, *co.* of N.W. Eng., adjoing. Cumberland; area 783 sq. m., covering part of the Lake country (Windermere, Ullswater, Grasmere, etc.); p. *65,398*; cap. Appleby; most p. t. Kendal.
**Weston-super-Mare**, *urb. dist.*, *wat. pl.* Somerset, Eng., on an inlet of Bristol channel, p. *28,585.*
**West Orange**, industrl. *t.* Essex co., N. Jersey, U.S.A., p. 25,250.
**Westphalia**, W. *prov.* Pruss. (former duchy and sometime part of a kingdom); adjoins Holland, Hanover, and Rhenish Pruss.; area 7,807 sq. m.; p. 4,448,115.
**West Pittston**, *bor.* in anthracite coal regn. Lackawanna co., Penn., U.S.A.; p. 8,000.
**West Point**, military *stn.* (seat of the U.S. military Academy), Orange co., New York, U.S.A., on W. bank Hudson R. [Westport B., p. 4,460.
**Westport**, mkt. and spt. *t.* co. Mayo, I.F.S., on
**West Prussia**, *prov.* P., adjng. Baltic and Poland; area 3,026 sq. m., p. 826,881.
**Westray**, one of the Orkney Isls., 23 m. by sea from Kirkwall, Scotl.; 10 m. long; p. *1,270.*

**West Springfield**, *t.* (industrl.), Hampden co., Mass., U.S.A., p. 16,900.
**West Virginia**, an E. central *st.* U.S.A., bounded by the R. Ohio, the Alleghany Mtns., Virginia, Maryland, Kentucky, and Penn.; area 24,022 sq. m.; coal, salt, petrol; agr. and grazg.; p. 1,777,000. Cap. Wheeling.
**Westward Ho**, picturesque cst. *vil.* Bideford B., Devon, Eng., p. 5,890.
**Westwood**, *t.* in mining dist., nr. Rockhampton, Queensland, p. 8,670.
**Wetherby**, mkt. *t.* on R. Wharfe, W.R. Yorks, Eng., p. 2,460. [Prussn. Saxony, p. 11,700.
**Wetlin**, industrl. *t.* on R. Saale, nr. Schwarzburg,
**Wetter**, or **Wettern**, *L.* Sweden, 25 m. S.E. L. Wener (*q.v.*); area 733 sq. m.
**Wetteren**, *t.* in Belgium, nr. Ghent, on the R. Scheldt; textile manuf., p. 16,250.
**Wetterhorn**, famous *peak* of Bernese Oberland, Switzerland, alt. 12,165 *ft.*
**Wetzlar**, *t.* on R. Lahn, nr. Coblentz, Rhenish Prussia; in iron-mining regn.; p. 9,900.
**Wexford**, maritime *co.* of prov. Leinster, S.E. I.F.S.; area 901 sq. m., pasture, tillage, dairyg., stock-kpg., fishery, p. 102,200. Cap. W., t. on R. Slaney, p. 11,450. [R. Thames.
**Wey**, *R.* Hants and Surrey, Eng.; trib. (35 m.) of
**Weybourne**, *par.* of Norfolk on the cst., 13 m. E.N.E. of Walsingham.
**Weybridge**, *urb. dist.* on R.'s Thames and Wey, Surrey, Eng., p. *7,359.*
**Weymouth**, industrl. *t.* (boot and shoe manuf.) Norfolk co., Mass., U.S.A., p. 21,300; also pt. on St. Mary's B., co. Digby, Nova Scotia, p. 1,886.
**Weymouth and Melcombe Regis**, *mun. bor.* and *wat. pl.* on Weymouth B., Dorset, Eng., p. *21,982.*
**Whalsay**, a Shetland *isl.*, 13½ m. N.N.E. of Lerwick.
**Whangarei**, *t.* at mouth of W. R., New Zealand; farmg. and fruit growg., p. 2,350.
**Whangaroa**, *t.* nr. Auckland, New Zealand; mining dist., p. 2,400.
**Wharfe**, *R.* W.R. Yorks, Eng., flows 60 m. to R. Ouse, nr. Cawood. [U.S.A.; good tr., p. 5,850.
**Whatcom**, *t.* nr. Fairhaven, W. co., Washington,
**Wheatley**, *urb. dist.*, Oxon, Eng., p. *1,269.*
**Wheeling**, *c.* on R. Ohio, cap. of W. co., Virginia, U.S.A.; gt. rly. and riverside commcl. centre, iron and steel manuf., p. 62,000. [alt. 2,414 *ft.*
**Whernside**, *mtn.* nr. Ingleton, W.R. Yorks, Eng.,
**Whickham**, *urb. dist.*, nr. Gateshead, Durham, Eng., p. *20,782.*
**Whitburn**, cst. *par.* nr. Sunderland, Durham, Eng., p. 2,830; also burgh on R. Almond, Linlithgowshire, Scotl., p. *2,440.*
**Whitby**, *urb. dist.* and *spt.* and *wat. pl.* facing the German Ocean, at mth. of R. Esk, N.R. Yorks, Eng.; fisheries, jet manuf., shipbldg., famous abbey, p. *11,441.* [p. 3,870.
**Whitby** (formerly **Windsor**), *t.* on L. Ontario, Can.;
**Whitchurch**, mkt. *t.* nr. Basingstoke, Hants, Eng.; p. 1,935; also *urb. dist.*, nr. Shrewsbury, Salop, Eng.; p. *6,016*; also vil. on R. Taff, Glamorganshire, Wales, nr. Llandaff.
**White**, *R.* Arkansas, U.S.A., trib. (350 m.) of R. Mississippi; also R. Indiana, U.S.A., trib. (330 m.) of R. Wabash. [R. Tweed.
**Whiteadder**, R. Berwicksh., Scotl.; trib. (34 m.) of
**Whitechapel**, E. *dist.* of London, Eng.
**Whitefield**, *urb. dist.*, Lancashire, Eng.; p. *9,107.*
**Whitehall**, *t.* at head of L. Champlain, Washington co., New York, U.S.A.; timber trade, p. 5,175.
**Whitehaven**, *mun. bor.* in Egremont div., Cumberland, Eng.; iron-ore smelting, coast tr.; p. *21,142.*
**White Mtns.**, part of the Appalachian *system*, New Hampshire, U.S.A.; highest summit, Mt. Washington, 5,805 *ft.*
**White Plains**, *t.* Westchester co., New York, U.S.A., residentl.; here in 1776 Genl. Howe defeated the American forces; p. 37,250.
**White River**, rises in Arkansas and flows through that state and Missouri to the Mississippi near the mouth of the Arkansas; has a course of 800 m., 300 of which are navigable.
**White Sea**, or **G. of Archangel**, *inlet* of the Arctic Oc., U.S.S.R., area 47,346 sq. m.
**Whithorn**, *royal burgh* Wigtownsh., Scotl., p. *1,796.*
**Whitley and Monkseaton**, *urb. dist.* on Whitley B., nr. North Shields, Northumberland, Eng.; p. *24,210.* [*1932.*
**Whitley, Upper**, *urb. dist.* W.R. Yorks, Eng.; p.
**Whitney Mtn.**, a *peak* of the Sierra Nevada, California, U.S.A.; alt. 14,898 *ft.*
**Whitstable**, *urb. dist.*, *spt.* and *cst. rest.*, nr. Canterbury, Kent, Eng.; famous for its oysters; p. (of par., includg. Seasalter) *11,201.*
**Whittington**, or **Whittington Moor**, colly. *tnwshp.*, nr. Chesterfield, Derbysh., Eng.
**Whittlesey**, or **Whittlesea**, *urb. dist.*, mkt. *t.* Cambridgesh., Eng.; p. *8,299.*
**Whitwood**, *urb. dist.*, *t.* (mftg.) nr. Pontefract, W.R. Yorks, Eng.; p. *6,196.*
**Whitworth**, *urb. dist.*, nr. Rochdale, S.E. Lancash., Eng.; p. *8,360.*
**Whydah**, cst. *t.* Dahomey, on lagoon nr. W. cst. Africa; under French infl.; p. 15,000.
**Wichita**, *R.* Texas, U.S.A.; flows 225 m. to the Red R., Clay co.; also t. in the Arkansas valley, Kansas, U.S.A.; meat-packing centre in agr. and stock-raising regn.; p. 115,000.
**Wichita Falls**, *t.* Tex., U.S.A., p. 43,750.
**Wick**, *spt.* and *burgh*, Caithness, Scotl.; herring fisheries centre, p. *10,383.*
**Wicklow**, maritime *co.*, Leinster prov., I.F.S., on E. cst. S. of Dublin; area 781 sq. m., pastoral and agr., p. 59,970; chf. t.'s W. (cap.), Bray, and Arklow (*q.v.*).
**Widdin**, fort. *t.* on R. Danube, Bulgaria; ruined mosque and palace, p. 15,350.
**Widnes**, *mun. bor.*, on R. Mersey, Lancs, Eng.; manuf.; iron, copper, soda, candles, soap, manures, etc., p. *40,603.*
**Wied**, sm. *R.* Germy. joins R. Rhine at Neuwied.
**Wiesbaden**, *t.* and pop. *wat. pl.* on S. slope of the Taunus, Hesse-Nassau, Pruss.; mnl. baths, p. 97,566.
**Wieselberg**, *t.* on brch. of R. Danube, nr. Pressburg, Hungary, p. 5,216.
**Wigan**, *co. bor.*, S.W. Lancs., Eng.; cotton and iron mftg. centre in colly. dist., p. *85,357.*
**Wight, Isle of**, Eng. Chan., included in co. Hants; area 146 sq. m., undulating and agr. with numerous wat. places all round the isl.; p. *88,400.* Newport (*q.v.*) is the ch. t., Cowes (*q.v.*) princ. port.
**Wigston Magna**, *urb. dist.*, Leics., Eng., p. *11,393.*
**Wigton**, *urb. dist.*, mkt. *t.* of Cumberland, with manuf. of woollens, 11¼ m. S.W. of Carlisle, p. *3,521.*
**Wigtown** (or **West Galloway**), maritime *co.* on Irish Sea, S.W. Scotl.; area 485 sq. m.; oats, wheat, agr., dairying, p. *29,299.* Cap. W., on W. Bay, fishery, p. *1,531.*
**Wi-ju**, a *t.* of Korea, near the Chinese frontier to the south of the estuary of the Yalu; p. 35,000.
**Wilhelmshaven**, naval *stn.* of Germany, fort., in Jahde terr. on the N. S. nr. Bremen; also sea bathg. rest., p. 26,100.
**Wilkesbarre**, *c.* on R. Susquehanna, Luzerne co., Penn., U.S.A.; in anthracite coal regn., p. 88,000.
**Wilkinsburg**, *bor.* Allegheny co., Penn., U.S.A., subn. to Pittsburg, p. 30,000.
**Willemstad**, *cap.* Curaçoa, Dutch W. Indies, p. 19,900.
**Willenhall**, *urb. dist.*, Staffs, Eng., nr. Wolverhampton, p. *21,147.*
**Willesden**, *urb. dist.*, London, Eng.; residentl. and industrl., p. *184,410.*
**Williamette**, *R.* Oregon, U.S.A., trib. (3000 m.) of Columbia R.
**Williamsport**, *c.* on Susquehanna R., Lycoming co., Penn., U.S.A.; rly. centre, 70 m. N. of Harrisburg, timber tr.; p. 46,600. [bldg., p. 14,516.
**Williamstown**, *port* nr. Melbourne, Victoria; shipbldg.,
**Willimantic**, *c.* on R. W., Windham co., Connecticut, U.S.A.; thread and textile factories; p. 12,000.
**Willington**, *urb. dist.*, in colly. dist., co. Durham, Eng.; nr. Bishop Auckland; p. *8,960.*
**Willington Quay**, *t.* on R. Tyne, Northumbld., Eng., nr. North Shields; industrl.; p. 9,250.
**Wilmington**, *c.* on Delaware R., Newcastle co., Delaware, U.S.A.; shipbldg., iron foundries, machine-factories; p. 106,100; also c. on Cape Fear R., Hanover co., N. Carolina, U.S.A.; p. 32,150.
**Wilmslow**, *urb. dist.*, on R. Bollen, nr. Stockport, Cheshire, Eng.; p. *9,760.*
**Wilsden**, *t.* nr. Bradford, W.R. Yorks, Eng.; p. 2,970.
**Wilson**, *t.* N.C., U.S.A., p. 12,800.
**Wilton**, *urb. dist.* and old mkt. *t.* Wilts, Eng., nr. Salisbury; carpet manuf.; p. *2,193.* Former capital of Wessex and the seat of a bishopric until 1050.

**Wiltshire,** S.W. inland *co.*, Eng., N. of Hants and Dorset; area 1,354 sq. m.; agr. and pastoral; p. *303,255.* Cap. Salisbury.

**Wimbledon,** *mun. bor.*, Surrey, Eng., a S.W. sub. of London, with famous common; p. *59,520.*

**Wimborne,** or **Wimborne Minster,** *urb. dist.*, mkt. *t.* nr. Poole, Dorset, Eng.; p. *3,892.* Its minster contains the tomb of Ethelred I.

**Wimmeria,** N.W. *dist.* Victoria, Australia; area 25,000 sq. m.; pastoral.

**Wincanton,** mkt. *t.* nr. Glastonbury, Somerset, Eng.; p. 2,640.

**Winchcomb,** mkt. *t.* nr. Cheltenham, Gloucester, Eng.; p. 2,960.

**Winchelsea,** anc. *t.* nr. Hastings, Sussex, Eng.; formerly an import. walled spt.; p. 1,120. Old Winchelsea stood 3 m. to the S.E., but in 1287 was submerged by the sea.

**Winchester,** *mun. bor.*, *c.* on R. Itchen, Hants, Eng.; anc. cap. of the Saxons; fine cathedl., college, barracks; p. *22,969.*

**Winchester,** *t.* on Mad R., Litchfield co., Connecticut, U.S.A.; cutlery manuf.; p. 9,109. Also t. in Blue Grass; agr. and stock-raising region, Kentucky, U.S.A.; p. 8,200. Also t. in Middlesex co., Mass., U.S.A., subn. to Boston, p. 12,900. Also c. in the Shenandoah valley, Virginia, U.S.A.; Sheridan's victory over the Confederates, 1864; p. 11,250.

**Windau,** *spt.* in Courland, Latvia province, 120 m, N.E. of Memel, p. 8,200.

**Windermere,** largest Eng. *L.* (10 m. long, 1 m. wide), in Westmorland and Lancs., outlet to Morecambe Bay; also *urb. dist.* on E. shore of L., p. *5,701.*

**Windham,** *vil.* nr. Norwich, W. co., Connecticut, U.S.A.; industrl.; p. 13,801.

**Windlesham,** *urb. dist.*, Surrey, Eng., p. *5,254.*

**Wind River Mtns.,** Wyoming, U.S.A.; range of the Rockies; highest pt. Fremont's Peak, alt. 13,576 ft.

**Windsor,** *mun. bor.* of Berksh., Eng., on R. Thames; famous Royal castle (founded by William the Conqueror) and park, St. George's Chapel, and the Royal Mausoleum; p. *20,284.*

**Windsor,** *c.* and *port* on the Detroit R., Ontario, Canada; opp. Detroit c.; bicycle and machinery works; p. *62,957.* Also t. on Connecticut R., Hartford co., U.S.A.; industrl.; p. 5,620.

**Windward Isls.,** Crown Col., Gr. Brit., in the West Indies, comprising S.E. portion Lesser Antilles (St. Vincent, Grenada, Grenadines, Tobago, and St. Lucia; all of which see separately); total area 664 sq. m. [Cuba and Haiti.

**Windward Passage,** *channel* (60 m. wide) between

**Winfield,** *c.* on R. Walnut, Cowley co., Kansas, U.S.A.; collegiate and commercial centre in agr. dist.; p. 9,500.

**Wingfield,** *par.* in Suffolk, near Harleston.

**Wingham,** *t.* in farming dist., N. of Sydney, N.S.W., p. (dist.) 7,850.

**Winnebago,** *L.* nr. Milwaukee, Wisconsin, U.S.A., 27 m. long, outlet by Fox R., into Green Bay.

**Winnipeg** (formerly **Fort Garry**), *cap.* of the province of Manitoba, Can., at jnctn. of Red and Assiniboine R.'s; the principal commercial centre of the Canadian N.W.; p. *237,306.*

**Winnipeg,** *L.* Canada, 40 m. N. of Winnipeg c., 260 m. long, 25 m. to 60 m. wide; contains several large isls. (Reindeer, 70 sq. m., Big Isl., 60 sq. m.); receives the waters of the Winnipeg R. (flows 200 m. from the L. of the Woods), the Red R., and the Saskatchewan R.; discharges by the Nelson R. to Hudson Bay.

**Winnipegosis,** *L.* of Manitoba and Saskatchewan, Canada; area (exclusive of isls.) 2,000 sq. m.; 50 m. W. of L. Winnipeg, into which it empties.

**Winnipiseogee,** *L.* nr. Concord, New Hampshire, U.S.A.; noted for its beautiful scenery; 24 m. long; empties by the W. R. into the Merrimac.

**Winona,** *c.* on the Mississippi R., Minnesota, U.S.A.; rly. centre, tr. in corn and timber; p. 21,000.

**Winooski,** or **Onion R.,** Vermont, U.S.A., flows (90 m.) to L. Champlain.

**Winsford,** *urb. dist.*, on R. Weaver, nr. Northwich, Chesh., Eng.; salt wks.; p. *10,997.*

**Winslow,** mkt. *t.* of Bucks, 5½ m. S.E. of Buckingham; p. 1,820.

**Winston,** mftg. *t.* nr. Salem, N. Carolina, U.S.A.; tobacco and cotton factories; p. 78,000.

**Winterswyk,** *t.* nr. Arnheim Gelderland, Holland; industrl.; p. 8,900.

**Winterthur,** *t.* on R. Eulach, cant. Zurich, Switzld.; formerly a free imperial c., industrl. and commercial; p. 49,960.

**Winterton,** mkt. *t.* *urb. dist.*, Lincs., Eng., nr. Barton-on-Humber, p. *1,958.*

**Winthrop,** *t.* Mass., U.S.A., p. 16,900.

**Wipper,** *R.* Prussn. Saxony, trib. (50 m.) of R. Upstrut; also another R., Prussn. Saxony, trib. (40 m.) of R. Saale; also R., Westphalia, flows (50 m.) to R. Rhine, nr. Cologne.

**Wipperfürth,** *t.* Rhenish Prussia, 23 m. N.E. Cologne; industrl.; p. 6,350.

**Wirksworth,** *urb. dist.*, in Derbysh., Eng.; lead mining; p. *3,911.*

**Wirral,** industrl. *dist.* W. Cheshire, Eng., between estuaries of Dee and Mersey.

**Wisbech,** or **Wisbeach,** *mun. bor.*, *t.* on R. Nene, Isle of Ely, Cambridgesh., Eng.; exports coal; p. *12,005.*

**Wisby,** old *spt.* Gothland isl., W. cst. Sweden; p. 8,650.

**Wisconsin,** *R.* intersecting st. same name, U.S.A.; trib. (600 m.) of R. Mississippi; also N. centl. st. U.S.A., adjng. L. Superior and L. Michigan; area 55,256 sq. m., agr. land and rolling prairie, stock-raisg., corn-growing, timber tr., and mining. Wisconsin was admitted as a State in 1848; p. 3,020,000. Cap. Madison (*q.v.*).

**Wishaw,** *burgh* Lanarskh., Scotl., nr. Glasgow; railway works, engineering and other factories; p. 26,500.

**Wiske,** *R.* N.R. Yorks, Eng., trib. (24 m.) of R. Swale.

**Wismar,** fortfd. *spt.* on the Baltic, Mecklenburg-Schwerin, Germany; good trade; p. 22,160.

**Witham,** *R.* Rutland and Lincs., Eng., flows (80 m.) to the Wash; also *urb. dist.* nr. Chelmsford, Essex, Eng.; agr. centre; p. *4,367.*

**Withernsea,** *urb. dist.* and coast bathing *resort*, E.R. Yorks, Eng., nr. Patrington, p. *4,251.*

**Withington,** industrl. *t.* S.E. Lancs, Eng., within parly. limits of Manchester.

**Withnell,** *urb. dist.*, Lancs., Eng., p. *3,040.*

**Witkowitz,** mining *t.* in dist. Mährisch-Ostrau, Moravia, p. (mainly German) 24,750.

**Witney,** *urb. dist.*, mkt. *t.* in Woodstock div., Oxfordsh., Eng., blanket and glove factories; p. *3,409.*

**Witten,** *t.* on R. Ruhr, Westphalia, nr. Arnsberg; iron, glass, and machinery manuf.; p. 29,100.

**Wittenberg,** fortfd. t. on R. Elbe, Prussn. Saxony; castle-church, textile factories, flower cultivation, p. 21,200.

**Wittenberge,** *t.* in Potsdam govt., prov. Brandenburg, Prussa.; fine bridge over R. Elbe; woollen cloth manuf.; p. 19,260.

**Witwatersrand,** gold-mining *dist.* Transvaal, S. Africa, W. of Johannesburg.

**Wiveliscombe,** *urb. dist.*, nr. Taunton, Somerset, Eng., p. *1,262.*

**Wivenhoe,** *urb. dist.*, on R. Colne, Essex, Eng., p. *2,193.*

**Wladislawow,** *t.* (manuf) Poland, govt.. Suvalki, p. 10,350.

**Wloclawek,** or **Wlozlawsk,** industrl. *t.* on R. Vistula, Poland, govt. Warsaw, p. 23,500.

**Woburn,** mkt. *t.* Bedfordsh., Eng.; p. 1,470.

**Woburn Centre,** *c.* Middlesex co., Mass., U.S.A., nr. Boston; boot manuf.; p. 19,750.

**Wodehouse,** *dist.* C. of Good Hope, S. Africa, E. of Aliwal, N.; area 2,849 sq. m., p. 28,300. Chief t. Dordrecht.

**Woking,** *urb. dist.*, mkt. *t.* on R. Wey, nr. Guildford, Surrey, Eng.; convict prison, necropolis, and crematorium; p. *29,927.*

**Wokingham,** *mun. bor.*, mkt. *t.* nr. Reading, Berks., Eng.; p. *7,294.*

**Wolds, The,** chalk *range* of hills in Lincolnsh., Eng.; pastoral; 45 m. long; also agr. and grazing dist. E.R. Yorks, Eng., extending 35 m. from the Humber estuary to Flamborough Head.

**Wolfe Isl.,** in Lake of the Thousand Isles, River St. Lawrence, Canada.

**Wolfenbuttel,** *t.* in former Duchy of Brunswick, Germy.; machny. manuf.; gdng., fruit preservg.; p. 21,200.

**Wolgast,** *spt.* on R. Peene, Pomerania, Pruss.; formly. fortified; p. 8,400.

**Wollaston, Lake** (50 m. long), N.W. Territory, Brit. N. America; outlet to Mackenzie R.

**Wollin,** *isl.* in the Baltic, prov. Pomerania, Pruss. (22 m. long).

**Wolsingham,** *t.* on R. Wear, co. Durham, Eng., p. 2,944.
**Wolstanton, United,** *urb. dist.*, adjng. Stoke, co. Staffs, p. *30,528.*
**Wolverhampton,** *co. bor.*, in Staffs, Eng., 12 m. N.W. Birmingham; "the metropolis of the Black Country"; p. *133,190.*
**Wolverton,** *urb. dist.*, nr. Stony Stratford, Bucks, Eng.; rly. carriage wks. of the London, Midland and Scottish Rly.; p. *12,870.*
**Wombwell,** *urb. dist.* nr. Barnsley, W.R. Yorks, Eng., p. *18,365.*
**Wooburn,** *t.* nr. Wycombe, Bucks, Eng., p. 2,530.
**Woodbridge,** *urb. dist.*, mkt. *t.* on R. Deben, Suffolk, Eng., on the right bank of the Deben; p. *4,734.*
**Woodbury,** *t.* Lichfield co., Connecticut, U.S.A., p. 3,149; also t. nr. Philadelphia, New Jersey, U.S.A., p. 8,400. [London; p. *23,946.*
**Woodford,** *urb. dist.*, Essex, Eng.; subn. (N.E.) to **Wood Green,** *urb. dist.* Middlesex co., Eng., subn. (N.) to London; p. *54,190.*
**Woodhall Spa,** *urb. dist.*, nr. Horncastle, Lincs.; mineral spring, health resort; p. *1,372.*
**Woodlawn,** *t.* Penn., U.S.A., p. 12,495.
**Woodside,** *burgh* on R. Don, adjng. Aberdeen, Scotl., p. 6,350.
**Woodstock,** *mun. bor.* on R. Glyme, Oxfordsh., Eng.; formly. a glove-mftg. centre; Blenheim Palace lies outside the par.; p. *1,484.*
**Woodstock,** *t.* on Thames R., Oxford co., Ontario, Can., 30 m. N.E. of London; exports dairy produce; p. *11,391*; also vil. nr. Hartford, Connecticut, U.S.A.; p. 5,523.
**Woodville,** *t.* on co. Waipawa, New Zealand; p. 1,860; also t. nr. Adelaide, S. Australia; p. (dist.) 3,270.
**Woolwich,** *met. bor.*, garrison, and dockyd. t. on R. Thames, Kent, Eng.; 10 m. from London; princpl. artillery arsenal of Britain, dating from 1585; p. *146,944.* North Woolwich on opp. side of Thames (formerly included in Essex) now forms part of the co. of London.
**Woonsocket,** *c.* on R. Blackstone, Providence co., Rhode Isl., U.S.A.; textile manuf.; p. 50,000.
**Wooster,** *c.* Wayne co., Ohio, U.S.A.; in agr. dist.; university; p. 11,000. [p. 2,430.
**Wootton Basset,** mkt. *t.* nr. Swindon, Wilts, Eng.;
**Worcester,** midld. *co.* Eng., W. of Warwicksh.; area 751 sq. m.; agr., pasturage, hops, orchards, minls.; manuf.; p. *420,156.* Cap. W., *co. bor.* on R. Severn; cathedl., porcelain wks., iron foundries; p. *50,497.*
**Worcester,** *c.* in W. co., Mass., U.S.A., 44 m. S.W. of Boston; boot manuf., tool-making, etc.; p. 196,900; also t. in wine-growing dist., C. of Good Hope, S. Afr.; p. *4,781.*
**Workington,** *mun. bor.*, mkt. *t.* and *spt.* at mth. R. Derwent, Cumberld., Eng.; ironwks., cycle and motor-car factories; p. *24,691.*
**Worksop,** *urb. dist.*, mkt. *t.* Notts, Eng.; chair-making, box and case manuf.; p. *26,286.*
**Worlitz,** *t.* in Anhalt, Germy., nr. Magdeburg; ducal palace and park; p. 4,960.
**Worms,** *c.* nr. the Rhine, Hesse-Darmstadt, Germany; famous Romanesque cathedl. Centre of wine industry; gd. tr.; p. 51,860.
**Worms Head,** *promontory* on Glamorgansh. coast.
**Worsborough,** *urb. dist.* and industrl. *t.* in colly. dist. nr. Barnsley; W.R. Yorks, Eng.; p. *12,397.*
**Worsley,** *urb. dist.*, in S.E. Lancash., Eng., nr. Manchester; p. *14,503.*
**Worthing,** *mun. bor.*, *spt.* and *wat. pl.* Sussex, Eng., nr. Brighton; p. *46,230.*
**Wotton-under-Edge,** mkt. *t.* nr. Stroud, Gloucestershire, Eng.; p. 4,660.
**Wrangell,** settl. *t.* at N.W. end of W. Isl., S.E. Alaska, U.S.A.; p. (includg. native Indians) 910. Mt. Wrangell is a lofty pk. of Alaska, N.W. of Mt. St. Elias; alt. 17,500 ft.
**Wrath, Cape,** *headld.* at N.W. extrem. Sutherldsh., Scotl.
**Wrekin,** *hill* nr. Wellington, Shropsh., Eng.; alt. 1,320 ft.
**Wrexham,** *mun. bor.* on R. Clywedog, Denbigh and Flintsh., N. Wales; 12 m. S.W. Chester. W. was incorporated in 1857; p. *18,567.*
**Wrietzen,** industrl. *t.* on R. Oder, nr. Berlin, Pruss., p. 8,510.
**Wrockwardine,** *par.* nr. Wellington, Shropsh., Eng., p. 5,910. [Eng., industrl. p. *4,510.*
**Wrotham,** *urb. dist.*, sml. *t.* nr. Sevenoaks, Kent.
**Wroxeter,** *vil.* Shropsh., Eng.; on R. Severn, nr. Shrewsbury; on site of Roman Uriconium.
**Wuchang,** *c.* China; impt. officl. and commercl. centre; on the Yangste R. opp. the foreign settlement of Hankow; p. est. at 750,500. Exports tea, cotton, etc.
**Wuchow,** treaty *pt.* in Kwangsi prov., China, on the Si-Kiang (or West R.); p. 348,220.
**Wu-hu,** Chinese *treaty port*, 50 m. above Nanking, nr. the Yangtse; p. 235,550.
**Wupper,** a Rhine *tributary*, 40 m. long, between Cologne and Düsseldorf.
**Wurnu,** *t.* nr. Sokoto, B. Northn. Nigeria; p. 13,000.
**Würtemberg,** *state* S.W. Germy.; area 7,534 sq. m.; mtnous. and afforested (Black Forest), with much minl. wealth, especially salt; p. 2,526,200. Cap. Stuttgart (*q.v.*).
**Würzburg,** *fort. t.* Bavaria, on the R. Main in Lower Franconia; cathedl.; university, wine tr. centre; p. 86,571.
**Wurzen,** *t.* on R. Mulde, Saxony; old cathedl. and castle; iron foundries, mchny. manuf., biscuit-making; p. 17,920.
**Wyandotte,** *c.* on R. Detroit, Wayne co., Michigan, U.S.A., p. 29,800; also c. on R. Missouri, Kansas, U.S.A., p. 8,250.
**Wycombe,** or **High Wycombe.** (*See* **High Wycombe.**)
**Wye,** mkt. *t.* nr. Canterbury, Kent, Eng., p. 1,660; also R. Derbysh., Eng., flows 20 m. to R. Derwent, at Rowsley; also sm. R. of Bucks, affluent of R. Thames from High Wycombe; also impt. R. Eng. and Wales, rising in Montgomerysh., and flowing (130 m.) betwn. Gloucestersh. and Monmouthsh. to the R. Severn. [p. 4,746.
**Wymondham,** mkt. *t.* nr. Norwich, Norfolk, Eng.,
**Wynberg,** *vil.* C. of Good Hope, S. Africa, 8 m. from Cape Town. [Tasmania, p. 1,450.
**Wynyard,** *port* on Inglis R., nr. Launceston,
**Wyoming,** a N.W. *st.* of U.S.A., formerly part of Dakota territory; admitted to the Union in 1890; area 97,548 sq. m.; stock-raising, agr., coal-mining; traversed by Rocky Mtns. The Yellowstone Park is chiefly within its limits; p. 257,000. Cap. Cheyenne (*q.v.*).
**Wyoming Valley,** on the Susquehanna R., in N.E. Pennsylvania, about 30 m. long and 5 m. wide, is of great beauty and fertility and rich in anthracite.
**Wyre,** *R.* Lancs, Eng., flows 28 m. to Irish S. at Fleetwood; also a forest of Worcestersh., Eng.
**Wyvis, Ben,** *mtn.* Scotl. (*See* **Ben Wyvis.**)

**Xalanga,** *dist.* in Tembuland dist., C. of Good Hope, S. Afr., p. 16,839.
**Xalapa,** or **Jalapa,** *c.* Mexico, in st. Vera Cruz, 4,500 ft. above sea; pop. health resort.
**Xalisco,** *state* of Mexico; alternative name for Jalisco (*q.v.*).
**Xamiltepec,** *t.* nr. Oajaca, Mexico, p. 5,120.
**Xandare,** *t.* nr. R. Piguiry, Santa Catharina prov., Brazil, p. 6,000. [p. 4,350.
**Xanten,** *t.* nr. Cleves, Rhenish Pruss.; industrl.;
**Xanthi,** *t.* at ft. of Mt. Rhodope, Adrianople vilayet, Thrace; ruins of anc. stronghold, mosques, famous for De Yémidjé tobacco; p. 14,250.
**Xanthus,** ruined *c.* of Lycia, Asiatic Turkey, on the R. Xanthus (modern Kedja Ak); destroyed successively by the Persians (545 B.C.) and the Romans under Brutus (42 and 43 B.C.); impt. antiquities.
**Xenia,** *c.* in the Midami valley, Greene co., Ohio, U.S.A.; mkt. and mftg. centre in farmg. dist.; p. 10,650.
**Xeres,** or **Jerez de la Frontera** (*q.v.*).
**Xingu,** *R.* Brazil, trib. of the Amazon (1,300 m.); navigable for steamers 110 m. in st. of Pará.
**Xochicalco,** *place* in Mexico, 75 m. S.W. Mexico c.; famous ruins.
**Xochimilco,** *L.* of the Mexican valley, 7 m. S.S.E. of Mexico c., formerly contiguous with L. Tezcuco; also X., t. on L. X.; p. 14,200.
**Xucar,** or **Juvar,** *R.* of Spain, flows (200 m.) from New Castile through Valencia to the Mediterranean at Cullera. [Laconia, Morea, Greece.
**Xyli Bay,** *inlet* of the G. of Kolokytha, on S. cst.

**Y, or IJ** (Dutch, **Het Y**), an *arm* of the Zuyder Zee, connected by canal with the N. Sea; on its S. side stands Amsterdam c.

**Yablonoi Mtns.**, S.W. chain of the Stanovoi mtn. system, E. Asia, betwn. Siberia and Manchuria; highest summit Mt. Chokondo, 8,048 ft.

**Yakima**, *t.* Wash., U.S.A., p. 22,500.

**Yakima R.**, Washington, U.S.A. (208 m.), joins the Columbia R. above the mth. of the Snake R.

**Yakabo**, *t.* in Sokoto, Northern Nigeria, Brit. W. Afr., p. (est.) 90,000; gt. tr. centre.

**Yakova**, *t.* nr. Scutari, Albania, p. 26,000.

**Yaku-shima**, *isl.* of Japan, S. of Kiu-shiu, 14 m. long, 14 m. wide; forest-clad and mtnous. (Yaye-dake, alt. 6,515 ft.).

**Yakutsk**, Soviet E. Siberia, U.S.S.R.; reaching from the Arctic Oc. to Irkutsk, Transbaikalia, and Amur, and sep. from the Pacific by the narrow Maritime Prov.; area 1,535,000 sq. m.; climate very severe; has impt. gold-mines; p. only 320,000. Cap. Y., t. on R. Lena; gd. tr.; p. 6,700.

**Yalding**, *par.* on R. Medway, nr. Maidstone, Kent, Eng., p. 2,760.

**Yale**, *t.* on Fraser R., nr. New Westminster, Brit. Columbia, p. 3,200; University, U.S.A.

**Yalta**, *spt.* on S. coast of Crimea, Crimean Soviet, U.S.S.R.; winter rest.; p. 14,720.

**Yalu-Kiang**, *R.* on W. frontier Corea; flows 300 m. S.W. to Yellow Sea; gt. Japanese victory over Chinese, Sept. 17, 1894.

**Yamagata**, industrl. *t.* on the main island of Japan, 50 m. from Sandai, p. 47,883.

**Yambol**, *t.* on R. Tunja, Slivno dep., Bulgaria; old fortifications., ruined mosque; corn tr.; p. 15,260.

**Yamethin**, *dist.* Meiktila div., Upper Burma; area 4,258 sq. m.; mainly teak forest, with rice cultn. in clearings; p. 211,000. Hdqrs, t. Y., p. 7,146.

**Yamina**, *t.* in Gambia, W. Africa, p. 6,700; also t. (sometimes called Nyamina) on R. Niger, Bambarra st., W. Africa, p. 11,120 impt. tr. centre.

**Yana**, *R.* Siberia, flows (1,000 m.) to Arctic Oc. E. of R. Lena.

**Yanbu, or Yembo**, *spt.* of Hejaz, Arabia, on the Red Sea; the port for Medina, from which it is distant 125 m.

**Yang-Tchu**, *c.* on Grand Canal, prov. Kiang-su, China, N.E. of Nanking; gt. commercial and tradg. community; with immense junk traffic; p. (est.) 360,000.

**Yangtse-Kiang**, *R.* of China, rising in the Tibetan plateau and flowing, for 3,000 m. S. of Hoang-Ho, to the E. China Sea; the main *R.* is navigable direct for large sea-going steam craft to Ichang, 1,000 m. from its mouth.

**Yankton**, *c.* of Y. co., S. Dakota, U.S.A., on Missouri R.; large boat tr. in grain, seat of a college, p. 6,100. Previous to 1883 was the capital of the territory of Dakota; is about 200 m. from Omaha, and 569 m. from Chicago.

**Yao-Nan**, *c.* Yun-nan prov., China; large tr. in salt, musk, etc., p. 65,000.

**Yao-Tchu**, *c.* Kiang-si prov., China, nr. L. Po-Yang; gd. local tr., p. 56,500.

**Yap**, *isl.* of the Caroline grp. in the N. Pacific Oc. (10 m. long).

**Yapura**, *R.* of Brazil and Colombia, trib. (1,500 m.) of R. Amazon; navigable for 600 m.

**Yaqui**, *R.* Sonora st., Mexico, flows 400 m. S.W. to G. of California.

**Yaracuy**, *state* Venezuela, watered by Y.R., p. 108,022; cap. San Felipe.

**Yare**, *R.* Norfolk, Eng., flows 50 m., past Norwich c., to the sea at Yarmouth.

**Yaritagua**, *t.* nr. Barquisimeto, Venezuela; in a beautiful tobacco, coffee, cocoa, and sugar growing dist., p. 12,350.

**Yarkand**, *R.* Chinese Turkestan, trib. (500 m.) of R. Tarim, wh. flows to Lob Nor; also c. in a rich oasis crossed by Y. R., 100 m. S.E. Kashgar; the c. (p. 120,000) was formerly the cap. of an independt. Mohammedan kingdom.

**Yarm**, mkt. *t.* on R. Tees, N.R. Yorks, nr. Stockton, p. 3,160.

**Yarmouth**, *spt.* nr. Newport, Isle of Wight, Eng., p. 1,160; also spt. of Y. co., Nova Scotia, p. *7,008*; also t. nr. Portland, Maine, U.S.A., p. 4,200.

**Yarmouth, Great**, *co. bor., spt., fishy. t.* and *wat. pl.* at mth. of R. Yare, Norfolk and Suffolk, Eng.; hdqrs. of herring fleet; res. p. (incldg. Gorleston and Southtown) *56,769*.

**Yaroslav**, old govt. centl. U.S.S.R., traversed by R. Volga; area 13,751 sq. m., mftg., agr., gdng., dairying, p. 1,122,000; cap. Y., c. on the upper Volga; tobacco factories, cotton-mills, flour-mills, gd. tr. with both Moscow and Leningrad; p. 82,000.

**Yarrawonga**, *t.* in hilly agr. and fruit growg. regn.; 161 m. N.E. Melbourne, Victoria; p. (dist.) 2,620.

**Yarra-Yarra**, *R.* of Victoria, flows 100 m. W. to Port Philip B., passing Melbourne.

**Yarriba, or Yoruba**, former indept. *st.* of Upper Guinea, N.E. of Dahomey; now included in Brit. Nigeria; chf. t.'s Oyo (the old cap.), Ibadan, Abbeokuta and Illori.

**Yarrow**, picturesque *R.* Selkirksh., Scotl.; traverses Loch of Lowes and St. Mary's Loch, and flows 25 m. to the Ettrick.

**Yass Canberra.** (*See* Canberra.)

**Yaury, or Yaouri**, *t.* 65 m. N. of Boussa, on R. Niger, Brit. N. Nigeria; p. (est.) 30,000; large tr.

**Yaxley**, *par.* in co. Hunts, Eng., 4½ m. S. of Peterborough, p. 1,430.

**Yazoo**, *R.* Mississippi, U.S.A.; joins the R. M. above Vicksburg after a course of 280 m.; also c. on banks of Y. R., 48 m. N.E. of Vicksburg; p. 5,600. [springs; p. 2,220.

**Yberg**, *vil.* Switzld., 7 m. N.E. Schwytz; medicinal

**Yea**, *post t.* on Y. R., in pastoral dist., Victoria, 80 m. E.N.E. Melbourne; p. 3,216.

**Yeadon**, *urb. dist.*, industrl. *t.* nr. Leeds, W.R. Yorks, Eng.; p. *7,671*.

**Yealm**, sml. *R.* Devon, Eng., flows (12 m.) to Engl. Chan. [1,216.

**Yealmpton**, *par.* nr. Plymouth, Devon, Eng.; p.

**Yeardsley-cum-Whalley**, *urb. dist.*, nr. Stockport, Cheshire, Eng.; p. *1,745*.

**Yecla**, anc. mkt. *t.* prov. Murcia, Spain; p. 17,150.

**Yeddo**, old *name* of Tokio c., Japan (*q.v.*).

**Yeisk**, dist. *t.* on Y. B., in N.E. of S. of Azov, N. Caucasia, U.S.S.R.; exports corn, linseed, wool; p. 38,500.

**Yekaterinburg**, *t.* on R. Isset, at E. base of the Ural Mtns., old govt. Perm, U.S.S.R.; p. 52,000.

**Yekaterinodar**, *t.* on Kuban R., U.S.S.R.; cap. of old Caucasian prov. of K.; p. 69,500.

**Yekaterinograd**, fortfd. *t.* on *R.* Terek, old govt. Stavropol, U.S.S.R., p. 4,750.

**Yekaterinoslav**, Ukraine, adjng. the Don Cossacks and the S. of Azov; area 24,500 *sq.* m.; p. 1,752,000; cap. Y., fortfd. t. on R. Dnieper; p. 136,000.

**Yelabuga**, *t.* on R. Kama, old Viatka govt., U.S.S.R.; industrl.; p. 11,700.

**Yeletz**, *t.* on R. Sosna, old Orel govt., U.S.S.R.; grain and cattle tr.; p. 44,000.

**Yelisavetgrad**, *t.* in old Kherson govt., Ukraine, on the Ingull R.; impt. markets; p. 71,360.

**Yelisavetpol**, old govt. Transcaucasia, U.S.S.R.; area 16,721 sq. m., p. about 1,000,000; cap. Y., t. on trib. of Kur R.; p. 23,000.

**Yell**, *isl.* of the Shetland grp., Scotland, N. of Mainland, 17 m. long, p. *1,883*.

**Yellow R.**, China. (*See* Hoang Ho.)

**Yellow Sea**, *arm* of the Pacific Ocean, between Corea and China, branching into the Gulfs of Pechili and Liaotung; greatest width 400 m., length 600 m.

**Yellowstone Lake**, in the Y. Nat. Park, U.S.A., 20 m. long, 15 m. wide; traversed by the Y. R.; 7,740 ft. above sea-level.

**Yembo.** (*See* Yanbu.)

**Yemen**, *dist.* S.W. Arabia; adjng. Hedjaz, the Red Sea and the Gulf of Aden; a vilayet 400 m. long; grows coffee, tobacco, dates, spices and aromatic gums; p. 750,000. Cap. Sana; chief port Mocha.

**Yenesei**, *R.* of Siberia, flowing S. to N. from Mongolia to the Gulf of Yenesei (3,400 m.) and into the Arctic Ocean, E. of G. of Obi, navigable in its lower and middle course.

**Yeneseisk**, old prov. U.S.S.R., occupying most of the Yenesei basin, area 987,189 sq. m. Cap. Y., t. on the Y. R., 200 m. N.N.W. of Krasnoyarsk, centre of gold-mining region; p.13,700.

**Yenikale**, fortfd. *t.* Crimean Soviet, 65 m. E. of Kaffa, p. 2,250. The Strait of Yenikale separates the Crimea from Circassia, and connects the Sea of Azov with the Black Sea.

**Yeo**, or **Ivel**, *R.* Dorset and Somerset, Eng., trib. (24 m.) of R. Parret.

**Yeovil**, *mun. bor.* Somerset, Eng., on R. Yeo; glove manuf., motor-car works, p. *19,078*.

**Yeshil-Irmak**, *R.* Asia Minor, flows (200 m.) to Black S.

**Yeshil Kul**, *L.* nr. Keria, Chinese Turkestan, in a plateau of the Pamirs.

**Yesso, Yezo Jesso,** or **Ezo.** (*See* **Hokkaido.**)
**Yeste,** industrl. *t.* Albacete prov., Spain, p. 7,250.
**Yes Tor,** highest *summit* Dartmoor, Devon, Eng., alt. 2,050 ft. [Water, nr. Kelso; p. *612.*
**Yetholm,** *vil.* Roxburghsh., Scotl., on Bowmont
**Yezd,** Persian *prov.* S. of Khorassan; area 20,000 sq. m., bordering on the great deserts, p. 100,000. Cap. Y., p. 45,000. [Eng., p. *13,057.*
**Yjewsley and West Drayton,** *urb. dist.*, Middlesex.
**Ychow,** or **Yuchow,** *c.* prov. Hunan, China, at outlet of Tungting L. on the bank of the R. Yangtse.
**Yokohama,** *spt.* on Bay of Yedo, Japan; most impt. of the Japanese treaty ports, p. 422,942.
**Yola,** *t.* in the st. of Adamawa, nr. the R. Benué, Brit. Northern Nigeria; large native tr., p. 86,000.
**Yonkers,** *c.* Westchester co., New York, U.S.A., on R. Hudson; textile and iron manuf., p. 138,000.
**Yonne,** *dep.* Cent. France; area 2,894 sq. m., watered by R. Y. (171 m. long); agr. and wine-growing (Burgundy), has also much minl. wealth; p. 273,118. Cap. Auxerre.
**York,** largest *co.* in Eng., N. of Humber and S. of Durham, E. of Lancashire and washed by the N. Sea; area 6,067 sq. m., divided in three Ridings (W., largely *mftg.* and *mining*; N. agr., pastl., and mining; E. pastl., agr., with cst. industries), p. *4,304,655.* Cap. York, *co. bor.* on the R. Ouse; magnificent cathedl., old walls and castle, c. gateways and many fine churches; gd. tr. and mkts. for cattle and corn, p. *84,810.*
**York,** *c.* Nebraska, U.S.A., cap. Y. co., rlway. centre, p. 5,750; also bor. on Codorus Creek, Penn., U.S.A.; manuf.; p. 56,000.
**York R.,** a tidal estuary of Chesapeake B., U.S.A., formed by the meeting, at West Point, of the Virginian R.'s Pamunkey and Mattapony.
**York, Cape,** *promontv.* on York Peninsula, N. extremity of Queensland; also a C. of Hayes Peninsula, Greenland.
**Yorke Peninsula** (100 m. long, 30 m. wide), S. Australia; betwn. Spencer and St. Vincent Gulfs.
**York Isls.,** grp. in Torres Strait, S.E. of New Guinea, and N. of C. York.
**Yoruba.** (*See* Yarriba.)
**Yosemite Falls,** the 3 cataracts of Yosemite Creek (1,500 ft., 626 ft.—in broken or stepped cascades —and 400 ft.) in the Yosemite Valley, California, U.S.A.
**Youghal,** *spt.* on the estuary of the Blackwater, co., Cork, I.F.S.; fisheries; p. 6,150. [(dist.) 13,500.
**Young,** *townshp.* N.S.W., 245 m. S.W. Sydney, p.
**Youngstown,** *c.* on the Mahoning R., Ohio, U.S.A., in the Western Reserve; iron *mftg.* centre; p. 173,750.
**Yperlée,** R., Belgium (34 m.) enters N. Sea from West Flanders at Nieuport.
**Ypres,** *t.* on R. Yperlée, West Flanders, Belgium, 32 m. S.W. of Bruges; linen and lace manuf.; military schl.; p. 18,770.
**Ypsilanti,** *c.* on R. Huron, Washentaw co., Michigan, U.S.A.; mkt. and mftg. centre, in farmg. regn.; p. 10,410.
**Yrfon,** *R.* Brecknock, Wales; trib. (20 m.) of R. Wye.
**Yssel,** *Rs.* of Holland; the Nieuwe Y., an arm of the Rhine from Arnheim, joins the Oude Y. at Doesburg and flows (abt. 70 m.) as the Y. to the Zuyder Zee, being navigable all the way; the Neder Y. flows into the Meuse above Rotterdam, and is an arm of the Leck.
**Yssingeaux,** *t.* nr. Le Puy, dep. Haute Loire, France; industrl.; p. 8,760.
**Ystad,** *spt.* S. Sweden, on the Baltic nr. Malmö; p. 9,960.
**Ystwith,** *R.* Cardigansh., Wales, flows 25 m. to the Bay, at Aberystwith. [the N. Sea.
**Ythan,** *R.* Aberdeensh., Scotl.; flows 35 m. S.E. to
**Yuba,** *R.* trib. of the Feather R.; one of the headstreams of the Sacramento, in the mining region of California, U.S.A.
**Yucatan,** *st.* of Mexico, on Caribbean S. and G. of Mexico, adjng. Brit. Honduras, area 15,939 sq. m.; agr.; p. 347,780; cap. Merida (*q.v.*).
**Yudanamutana,** copper-mining *dist.* S. Australia, 460 m. N.W. Adelaide.
**Yuen-hwa,** *t.* in prov. Che-kiang, China, N. of Hang-chow-fu; large tr.; p. 80,000.
**Yuen-Kiang,** *R.* Hu-Nan prov., China (400 m.), outlet by L. Tung Ting to the Yangste.
**Yuensan,** or **Gensan,** *spt.* Corea, opposite Japan, p. 39,000.
**Yukon,** *R.* of Canada and Alaska (2,000 m., navigable 1,200 m.), empties into Behring S.; also mining terr. in the extreme N.W. of Brit. N. America, containing the Klondyke goldfields, p. 8,512. (*See* "General Information" Section.)
**Yuk-Shan,** *t.* nr. source of Kan-Kiang R., Kiang-Si prov., China, p. 34,600.
**Yun Nan,** S.W. *prov.* China, adjoining Burma, area 146,680 sq. m.; mntnous.; p. 8,053,000; cap. Yun Nan-fu, *t.* on L. Tien-hai; manuf.; p. 50,000.
**Yuriev,** Russian name for Dorpat (*q.v.*), Esthonia.
**Yverdun,** *t.* nr. Lausanne, cant. Vaud. Switzld; the Roman Eborodunum; old castle, wat. place adjacent; p. 6,700.
**Yvetot,** *t.* nr. Rouen, dep. Inférieure, France; anciently a principality; p. 9,260.

**Zaandam,** *t.* on the Y. R., N. Holland, nr. Amsterdam; industrl.; p. 28,846.
**Zab,** *R.* of Asiatic Turkey (250 m., divided into Zab Asfal—or Lesser Zab and Greater Zab); trib. to the Tigris.
**Zabern,** *t.* at foot of a pass over the Vosges, nr. Strasburg, Alsace-Lorraine, France; p. 8,930.
**Zaborze,** mftg. *t.* in govt. Oppeln, Polish Silesia; in colly. dist.; p. 13,740.
**Zacapa,** *t.* on Grande R., Guatemala; industrl.; p. 19,500.
**Zacatecas,** *st.* of centl. Mexico; area 24,471 sq. m.; rich in silver mines; p. 480,690; cap. Z., thrivg. commercl. *t.* on Mexican Centl. Ry.; p. 19,000.
**Zacatula,** *t.* nr. mth of the Balsas R., Guerrero st., Mexico; industrl.; p. 8,760.
**Zadonsk,** industrl. *t.* on R. Don, U.S.S.R.; p. 11,300.
**Zagazig,** *t.* on the Sweet-water Canal, Egypt, on site of anct. Bubastus, 39 m. N.E. of Cairo; centre of cotton and grn. tr.; p. 21,560.
**Zahleh,** *t.* on slope of Mt. Lebanon, 23 miles E. of Beirut, Syria; p. 15,500.
**Zaisan,** *t.* in old prov. Semipalatinsk, former Russn. Centl. Asia, on the Jemen R., p. 5,020.
**Zalamea la Real,** *t.* nr. Seville, Spain; commcl. and manuf.; p. 8,300.
**Zambesi,** *R.*, S. Africa, flows (abt. 1,500 m.) to the Mozambique Chan. of the Indian O., receiving the R. Chobe and the R.'s Loangwa, Kafui and Shire from L. Nyassa. (*See also* **Victoria Falls.**)
**Zambesia, British,** *terr.* of S. Afr. now officially included in Rhodesia (*q.v.*).
**Zamboanga,** *t.* at pt. of penin. of Mindanao Isl., Philippine grp.; tr. centre in agr. dist.; exports rubber, etc.; p. 18,750.
**Zamora,** *prov.* Spain, on Portuguese border; area, 4,097 sq. m.; agr., wine-growing, olives, etc.; also live-stock rearing for export; p. 262,986; cap. Z., *t.* on R. Douro; p. 18,200. Also name of a S.W. central st. of Venezuela; area, 25,212 sq. m.; p. 55,055; cap. Barinas.
**Zamosc,** or **Zamostie,** old *t.* Poland, govt. Lublin; formerly an impt. fortress; bentwood furniture factory, p. 14,120.
**Zana Lake,** Abyssinia. (*See* **Dembea.**)
**Zanesville,** *c.* on Muskingum R., Ohio, U.S.A.; brick and tile manuf., ironworks, etc., p. 37,000.
**Zante,** *isl.* of the Ionian grp., S. of Cephalonia (24 m. by 12 m.), currants and other fruit, p. 49,000. Cap. Z. *t.* on E. cst., site of anc. c. Zacynthus, p. 11,071.
**Zanzibar,** *sultanate* of E. Afr., under Brit. protectn., includg. the fertile isl. of Z. off the cst. (area 1,200 sq. m.), Pemba and a strip of the mainld.; total area 7,420 sq. m., p. 197,000; cap. Z.; *t.* on the W. cst, of Z. isl., p. 35,000; exports cloves, copra, chillies, etc. [21,400.
**Zapotla,** *t.* in st. Zalisco, Mexico; gd. local tr., p.
**Zara,** *spt.* Dalmatia, on the Adriatic; cap. of D. and seat of the Diet; glass-making, corn-milling, fishery, etc., p. 35,120.
**Zaragoza.** (*See* **Saragossa.**)
**Zaria,** *t.* in Zeg-Zeg st., Centl. Afr.; now incld. in Brit. Protectorate of Northern Nigeria, p. (est.) 50,000.
**Zaslav,** *t.* Ukraine; formly. pt. of Lithuania, flourishg. manuf., p. 14,750.
**Zea,** or **Zia,** *isl.* of the Cyclades, Greece, with *t.* on same; the anc. Ceos.
**Zealand,** or **Zeeland,** S.W. prov. Holland, on N. Sea; area 690 sq. m., comprises isls. at mth. of R. Scheldt, p. 221,000, cap. Middelburg.
**Zealand,** *isl.* of Denmark. (*See* **Seeland.**)

**Zebu,** *isl.* of the Philippines grp., E. of Negros, 135 m. long, p. 330,000; cap. C. on E. coast.

**Zeebrugge,** the port of Bruges, with which since 1907 it has been connected by a ship canal.

**Zeeland.** (*See* **Zealand** and **Seeland.**) Also vil. nr. Grand Rapids, Ottawa co., Michigan, U.S.A., p. 3,400. [36 m. S.S.W. of Mafeking, p. *1,837.*

**Zeerust,** goldfield *dist.* in W. of Transvaal, S. Afr.,

**Zeila,** or **Zaylah,** *t.* on G. of Aden, E. Afr.; occupied by British in 1884; p. 6,050.

**Zeitz,** *t.* on the White Elster R., nr. Leipzig, prov. Saxony, Pruss.; textile factories; perambulator and pianoforte making; p. 30,220.

**Zelaya,** *t.* in Guanajuato prov., Mexico; gd. local p. 11,100.

**Zele,** *t.* nr. Dendermonde, E. Flanders, Belgium; industrl.; p. 16,750. [p. 4,930.

**Zellerfeld,** *t.* in Hanover, nr. Clausthal; industrl.;

**Zenjan,** *t.* Persia, prov. Irak-Ajemi; 133 m. N. of Hamadan; impt. commercl. centre; p. 15,975.

**Zerafshan,** or **Zarafshan,** old govt., former Russn. Turkestan, prov. Samarkand; area 19,664 sq. m.; p. (abt.) 400,000. Cap. Samarkand (*q.v.*).

**Zerbst,** *t.* nr. Magdeburg, Anhalt, Germy.; walled, with moats and towers; gold and silver thread mkg., mchy., and starch manuf.; p. 18,770.

**Zermatt,** *mtn.* hamlet at ft. of Matterhorn, cant. Valais, Switzld.; one of the chf. tourist centres in the Alps; p. 820.

**Zetland,** Scotland, p. *21,410.*

**Zhitomir,** *t.* Ukraine; an anc. Lithuanian c., with large Jewish community and impt. commerce; p. 70,600. [12,370.

**Zhizdra,** industrl. *t.* old Kaluga govt., U.S.S.R.; p.

**Zilah,** *t.* cap. Szilágy co., Hungary; large wine tr.; p. 7,960. [tr.; p. 8,400.

**Zilgia,** *t.* nr. Khotan, Chinese Turkestan; gd. local

**Zillerthall,** beautiful Tyrolese *valley,* watered by R. Ziller, trib. (50 m.) of R. Inn; p. 15,070.

**Zillerthaler Alps,** *mtn. grp.* in the Tyrol, extendg. E. from Bremner to Hohe Tauern.

**Zion,** *t.* Ill., U.S.A., p. 6,000.

**Zittau,** *t.* on R. Mandau, Saxony, nr. the Bohemian and Silesian frontiers; linen and damask manuf., and commercl. centre in colliery dist.; p. 35,958.

**Ziskov,** industrl. *t.* in Bohemia, sub. to Prague c.

**Zlatusk,** *t.* in the Urals, old govt. Ufa, U.S.S.R.; manuf. and tr.; p. 21,200.

**Zloczow,** *t.* on trib. of R. Bug, nr. Lemberg, Galicia, Ukraine; linen manuf.; p. 13,840.

**Znaim,** *t.* in Moravia, Czecho-Slovakia; textiles, earthenware and vinegar manuf.; p. 17,770.

**Zolotonsha,** mftg. *t.* Ukraine; p. 9,460.

**Zombor,** industl. *t.* Hungary, 120 m. S. Budapest, cap. of co. Bács.; p. 27,120.

**Zoutpansberg,** mtnous. *dist.* in N.E. Transvaal, S. Afr.; gold-fields.

**Zschoppau,** *t.* on R. Z., 26 m. E. Zwickau, Saxony; p. 8,350; industrl.

**Zug,** smlst. of the Swiss *cantons* (centl.); area 92 sq. m.; p. 31,569. Cap. Z. on L. of Z., 13 m. N.E. Lucerne; notable landslips, 1435 and 1887; p. 6,570. The L. of Z. (8¼ m. long, 2¼ m. wide) has its outlet by the R. Lorze.

**Zulia,** *st.* Venezuela, on Caribbean S.; p. 119,453.

**Zülichau,** *t.* 50 m. E. Frankfort-on-the-Oder, Brandenburg prov., Pruss.; Russn. vict. 1759; p. 8,360.

**Zululand,** Brit. *protectorate* in S.E. Afr., part of the col. of Natal since 1897; area 10,425 sq. m.; p. 219,606. The mineral resources of the country are considerable, including gold, silver, lead, copper, tin. Zulu war, 1878–80. It was in this campaign that the French Prince Imperial lost his life.

**Zungaria, Soungaria,** or **Dzungaria,** *country* N. of E. Turkestan; formerly Chinese terr., but now included in U.S.S.R.

**Zurich,** *cant.* Switzld., bounded N. by R. Rhine, area 665 sq. m.; contains large part of L. of Z. (23 m. long, 2½ m. wide) and sevl. other lakes; p. 538,602. Cap. Z., most impt. and populous t. in Switzld; p. 190,116. [industrl.; p. 6,530.

**Zuruma,** *t.* on W. slope of the Andes of Ecuador,

**Zutphen,** fort. *t.* on R. Yssel, Gelderland, Holland, nr. Arnheim; brisk tr.; p. 20,560. Sir Philip Sydney died here in 1586.

**Zuyder Zee,** *gulf* or arm of the N. Sea, formerly a lake; enlarged by inundatns. in the 13th centy.; area 2,027 sq. m. (max. length 85 m., breadth 45 m.); mean depth 11½ ft.

**Zvenigoroika,** *t.* in Ukraine; flour mills and distilleries, grain tr.; p. 18,970.

**Zvornik,** *t.* on R. Dvina, Bosnia; gd. local tr.; p. 11,300.

**Zwarte Water,** *stream* in Holland, on which is situated Zwolle.

**Zwartsluis,** *t.* nr. Zwolle, Overyssel, Holland; p. 4,930.

**Zweibrücken,** *t.* nr. Speyer, Rhenish Bavaria, on R. Erbach; p. 12,220.

**Zwellendam,** *t.* 104 m. E. of Cape Town, Brit. S. Afr.; cap. Z. dist., C. of Good Hope; p. 2,964.

**Zwickau,** *t.* nr. Chemnitz, Saxony, on the Zwickhauser Mulde; gt. commercl. centre (largest railway stn. in Germany), in colly. region; chemical mchy., porcelain, paper, glass, and other manuf.; p. 69,595; also smlr. t. same name, nr. Reichenberg, Bohemia; p. 5,660. [frontier; p. 8,620.

**Zwittau,** *t.* nr. Brünn, Moravia; on the Bohemian

**Zwolle,** *c.* nr. Zutphen, Holland, cap. Overyssel, on the Zwarte Water; formerly a Hanseatic city; great cattle mart; p. 35,619.

**Zwyndrecht,** *t.* on R. Scheldt, E. Flanders, Belgium, nr. Dendermonde; gd. tr.; p. 4,020.

# PEARS' ATLAS

OF THE

# WORLD

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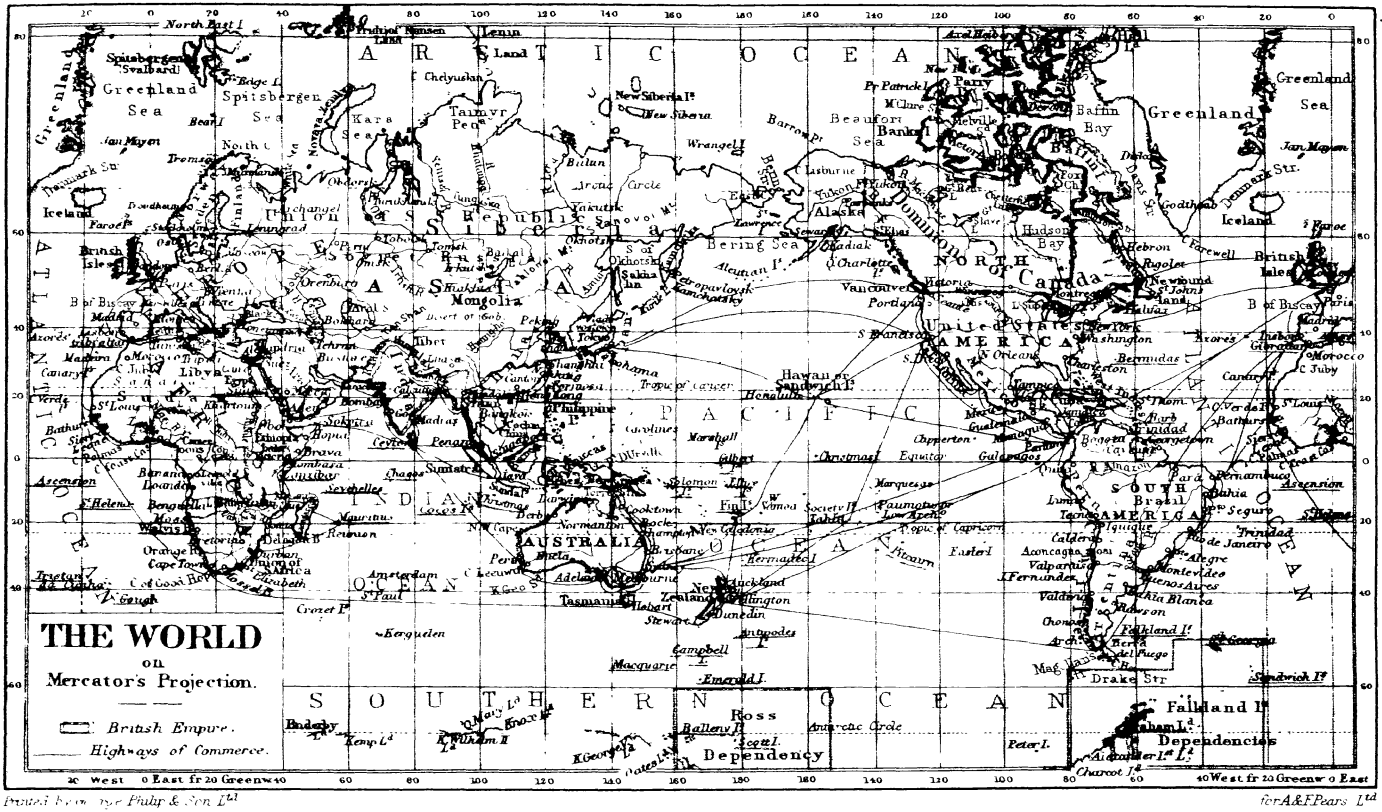


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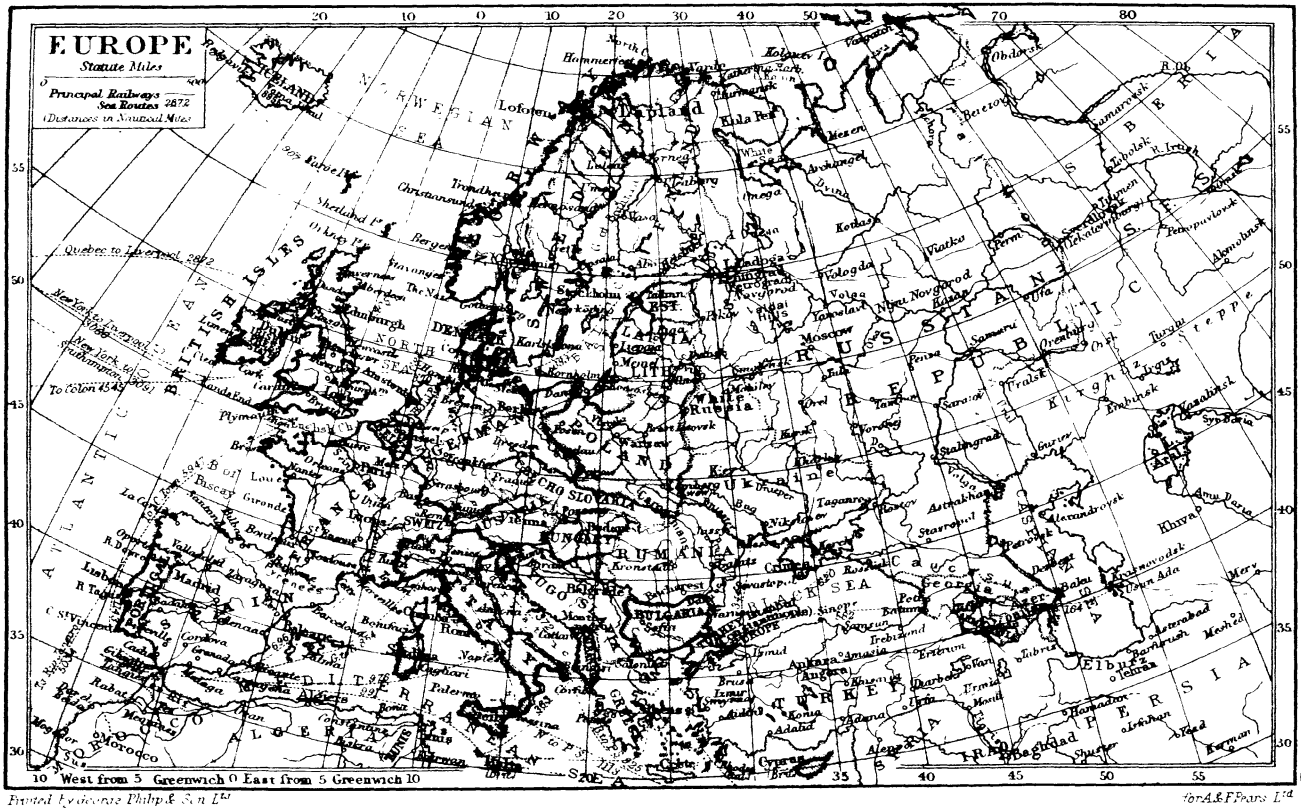


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ENGLAND & WALES
Statute Miles
0 5 10 20 30 40 50
Principal Railways
Principal Sea Routes 422
Distances in Nautical Miles
SCOTLAND
NORTH SEA
IRISH SEA
IRELAND
Northumberland
Cumberland
Durham
Yorkshire
Lancashire
Cheshire
Derbyshire
Lincolnshire
Notts
Leicester
Rutland
Norfolk
Suffolk
Essex
Kent
Sussex
Hampshire
Isle of Wight
Dorset
Devon
Cornwall
Somerset
Gloucester
Wiltshire
Berkshire
Oxfordshire
Buckinghamshire
Hertfordshire
Bedfordshire
Cambridgeshire
Huntingdonshire
Northamptonshire
Warwickshire
Worcestershire
Herefordshire
Shropshire
Staffordshire
Monmouthshire
Glamorgan
Carmarthen
Pembroke
Cardigan
Radnor
Brecon
Montgomery
Denbigh
Flint
Merioneth
Carnarvon
Anglesey
Caernarvon Bay
Liverpool Bay
Morecambe Bay
Solway Firth
North Channel
Firth of Clyde
Kintyre
Arran
Ailsa Craig
Isle of Man
Douglas
Belfast
Donaghadee
Mull of Galloway
Portpatrick
Stranraer
Larne
Ballycastle
Mull of Kintyre
Campbeltown
Girvan
Ayr
Hamilton
Motherwell
Carstairs
Lanark
Dumfries
Moffat
Langholm
Jedburgh
Kelso
Coldstream
Galashiels
Peebles
Selkirk
Hawick
Berwick-upon-Tweed
Duns
Tweedmouth
Holy I.
Farne Is.
Bamburgh Cas.
Seahouses
Alnmouth
Warkworth
Amble
Blyth
Whitley
Tynemouth
North Shields
South Shields
Sunderland
Seaham
Hartlepool
West Hartlepool
Whitby
Robin Hood B.
Scarborough
Filey
Flamborough Head
Bridlington
Spurn Head
Withernsea
Hornsea
Beverley
Hull
Grimsby
Louth
Skegness
Boston
Wash
Lynn
Yarmouth
Lowestoft
Aldeburgh
Harwich
Felixstowe
Ipswich
Colchester
Clacton
Southend
Sheerness
Margate
Ramsgate
Deal
Dover
Folkestone
Hythe
Rye
Hastings
Eastbourne
Beachy Head
Brighton
Worthing
Littlehampton
Bognor
Selsey Bill
Chichester
Portsmouth
Southsea
Gosport
Spithead
Ryde
Cowes
Yarmouth
Lymington
Christchurch
Bournemouth
Poole
Swanage
Portland Bill
Weymouth
Lyme Regis
Seaton
Sidmouth
Exmouth
Dawlish
Teignmouth
Torquay
Brixham
Dartmouth
Start Point
Salcombe
Plymouth
Eddystone
Rame Head
Looe
Fowey
Mevagissey
St. Austell
Falmouth
Helford R.
Lizard Point
Mullion
Porthleven
Penzance
Land's End
St. Ives
Hayle
Camborne
Redruth
Truro
Newquay
Padstow
Tintagel
Boscastle
Hartland Point
Bideford
Barnstaple
Ilfracombe
Lynmouth
Minehead
Watchet
Weston-super-Mare
Burnham
Bridgwater
Taunton
Wellington
Exeter
Honiton
Axminster
Bridport
Chesil Bank
Abbotsbury
Swanage
Wareham
Corfe Castle
Isle of Purbeck
Studland
Durlston Head
Needles
Alum Bay
Totland Bay
Freshwater
Yarmouth
Cowes
Ryde
Sandown
Shanklin
Ventnor
St. Catherine's Point
Blackgang Chine
Freshwater Bay
Compton Bay
Brook
Chale
Niton
Rocken End
Whitecliff Bay
Bembridge
Foreland
Sandown Bay
Culver Cliff
Selsey Bill
Pagham Harbour
Bognor
Littlehampton
Worthing
Shoreham
Brighton
Rottingdean
Newhaven
Seaford
Cuckmere Haven
Beachy Head
Eastbourne
Pevensey Bay
Hastings
Fairlight
Rye
Winchelsea
Dungeness
Romney Marsh
Hythe
Folkestone
Dover
Deal
Sandwich
Ramsgate
Margate
Broadstairs
North Foreland
Reculver
Herne Bay
Whitstable
Faversham
Sheerness
Isle of Sheppey
Queenborough
Chatham
Rochester
Gravesend
Tilbury
Purfleet
Grays
Southend
Shoeburyness
Foulness I.
Maplin Sands
Wallasea I.
Dengie Flats
Bradwell
Mersea I.
Colne R.
Brightlingsea
Walton-on-the-Naze
Harwich
Orfordness
Aldeburgh
Southwold
Lowestoft
Yarmouth
Cromer
Sheringham
Wells
Hunstanton
Wash
Boston
Skegness
Gibraltar Pt.
Mablethorpe
Sutton-on-Sea
Saltfleet
Grimsby
Immingham
Hull
Spurn Head
Withernsea
Hornsea
Bridlington
Flamborough Head
Scarborough
Whitby
Redcar
Middlesbrough
Stockton
Hartlepool
Seaham
Sunderland
Tynemouth
Blyth
Amble
Alnmouth
Warkworth
Seahouses
Bamburgh Cas.
Farne Is.
Holy I.
Berwick-upon-Tweed
Tweedmouth
Duns
Coldstream
Galashiels
Kelso
Jedburgh
Hawick
Selkirk
Peebles
Carstairs
Lanark
Motherwell
Hamilton
Ayr
Girvan
Mull of Kintyre
Campbeltown
Arran
Ailsa Craig
Firth of Clyde
North Channel
Mull of Galloway
Portpatrick
Stranraer
Larne
Belfast
Donaghadee
Strangford Lough
Carlingford Lough
Dundalk
Drogheda
Dublin
Howth
Kingstown
Wicklow
Arklow
Wexford
Rosslare
Tuskar Rock
Waterford
Dungarvan
Youghal
Cork
Kinsale
Old Head of Kinsale
Courtmacsherry
Clonakilty
Bantry
Dursey I.
Valentia I.
Dingle
Tralee
Fenit
Kerry Head
Loop Head
Shannon R.
Limerick
Foynes
Kilrush
Scattery I.
Galway
Aran Is.
Inishmore
Inishmaan
Inishere
Clifden
Slyne Head
Eagle I.
Achill I.
Clew Bay
Westport
Blacksod Bay
Broadhaven
Belmullet
Erris Head
Killala Bay
Sligo
Donegal Bay
Ballyshannon
Donegal
Lough Swilly
Rathlin I.
Fair Head
Ballycastle
Rathlin Sound
Torr Head
Red Bay
Glenarm
Carnlough
Larne
Belfast Lough
Bangor
Donaghadee
Copeland Is.
Mull of Galloway
Luce Bay
Wigtown Bay
Whithorn
Isle of Whithorn
Burrow Head
Solway Firth
Annan
Gretna
Carlisle
Wigton
Maryport
Workington
Whitehaven
St. Bees Head
Ravenglass
Barrow-in-Furness
Walney I.
Piel I.
Fleetwood
Blackpool
Lytham St. Anne's
Preston
Southport
Formby Pt.
Liverpool Bay
Bootle
Liverpool
Birkenhead
Wallasey
Hoylake
Dee R.
Point of Ayr
Rhyl
Prestatyn
Colwyn Bay
Llandudno
Conway
Penmaenmawr
Bangor
Menai Str.
Anglesey
Holyhead
Skerries
Carnarvon Bay
Pwllheli
Aberdaron
Bardsey I.
Cardigan Bay
Aberystwyth
Borth
Aberdovey
Barmouth
Harlech
Portmadoc
Criccieth
Pen-y-Chain
Nevin
Abersoch
Porthdinllaen
Aberdaron
Bardsey I.
St. David's Head
Ramsey I.
Fishguard
Strumble Head
Newport
Cardigan
Aberystwyth
Borth
Aberdovey
Barmouth
Harlech
Portmadoc
Criccieth
Pen-y-Chain
Nevin
Abersoch
Porthdinllaen
Aberdaron
Bardsey I.
St. David's Head
Ramsey I.
Fishguard
Strumble Head
Newport
Cardigan
Milford Haven
Pembroke
Tenby
Caldy I.
Carmarthen Bay
Burry Port
Llanelli
Swansea
Mumbles
Port Talbot
Aberavon
Neath
Briton Ferry
Swansea Bay
Mumbles Head
Oystermouth
Gower Peninsula
Worms Head
Rhossili
Oxwich Bay
Oxwich Pt.
Port Eynon
Port Eynon Bay
Penrice
Swansea
Llanelli
Burry Port
Carmarthen Bay
Tenby
Caldy I.
Milford Haven
Pembroke
Dale
Skokholm I.
St. Ann's Head
Marloes
Broad Haven
Jack Sound
Skomer I.
Skokholm I.
St. Ann's Head
Dale

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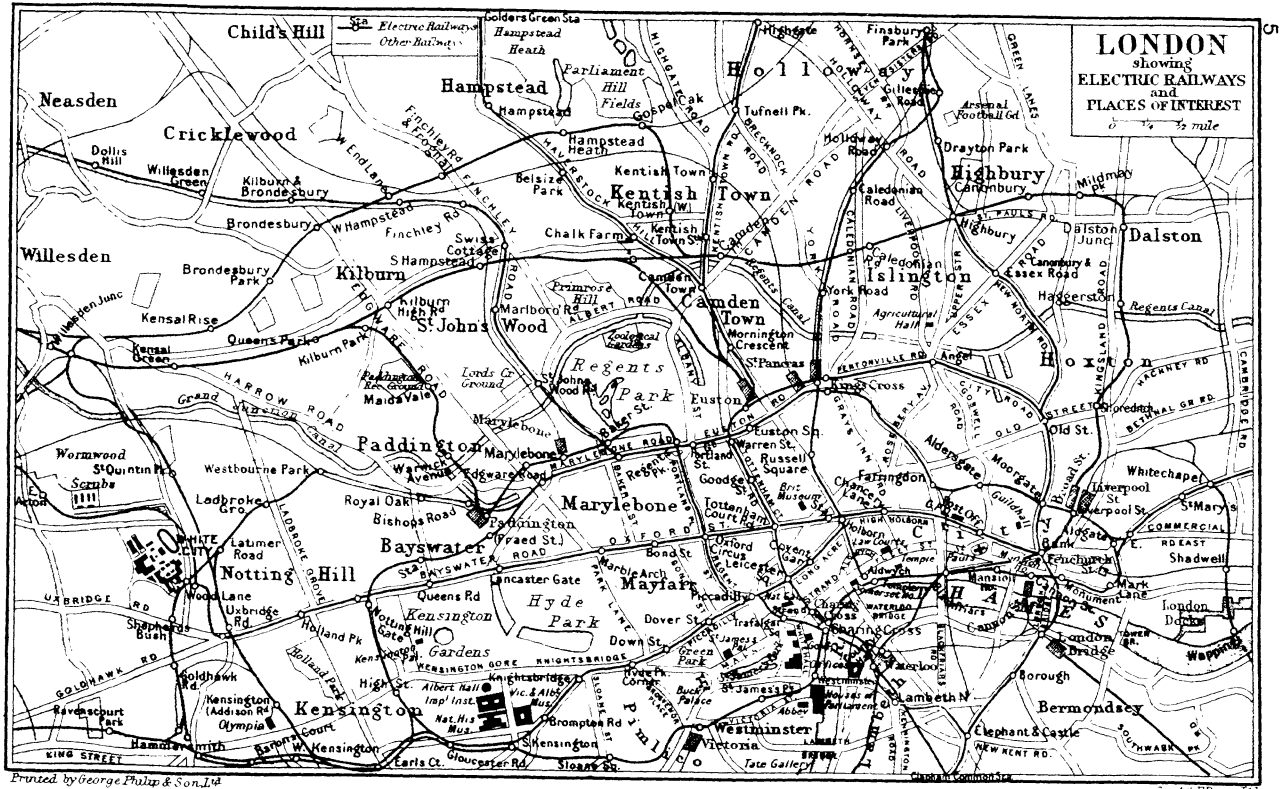
LONDON
showing
ELECTRIC RAILWAYS
and
PLACES OF INTEREST
Electric Railways
Other Railways
Child's Hill
Golders Green Sta
Hampstead Heath
Parliament Hill Fields
Neasden
Cricklewood
Hampstead
Highgate
Holloway
Finsbury Park
Tufnell Pk.
Gospel Oak
Dollis Hill
Willesden Green
Kilburn & Brondesbury
Hampstead Heath
Kentish Town
Drayton Park
Highbury
Willesden
Brondesbury
Brondesbury Park
Kilburn
Chalk Farm
Caledonian Road
Islington
Dalston
Kensal Rise
Queens Park
Kilburn Park
St. John's Wood
Camden Town
Mornington Crescent
Regents Park
Euston
St. Pancras
Angel
Hoxton
Kensal Green
Marlborough Rd
Primrose Hill
Zoological Gardens
Lords Cricket Ground
Maida Vale
Grand Junction Canal
Paddington
Marylebone
Euston Sq.
Warren St.
Russell Square
Farringdon
Wormwood St Quintin Pk
Westbourne Park
Edgware Road
Portland Pl.
Goodge St.
Chancery Lane
Whitechapel
Scrubs
Ladbroke Grove
Royal Oak
Bishops Road
Paddington (Praed St.)
Tottenham Court Rd
Holborn
Liverpool St
St Mary's
Latimer Road
Bayswater
Oxford Circus
Bond St.
Leicester Sq.
Aldgate
Notting Hill
Marble Arch
Mayfair
Piccadilly
Aldwych
Fenchurch St.
Shadwell
White City
Wood Lane
Uxbridge Rd.
Queens Rd
Lancaster Gate
Hyde Park
Dover St.
Strand
Mark Lane
Shepherds Bush
Holland Pk
Kensington Gardens
Down St.
Green Park
Charing Cross
London Docks
Goldhawk Rd.
Knightsbridge
St. James's Pk.
Waterloo
Wapping
Ravenscourt Park
Kensington (Addison Rd)
Albert Hall
Vic. & Alb. Mus.
Nat. His. Mus.
Lambeth N.
Borough
Bermondsey
Hammersmith
Olympia
Earls Court
Brompton Rd
Westminster
Victoria
Elephant & Castle
Kensington
Gloucester Rd.
Sloane Sq.
Tate Gallery
Clapham Common Sta
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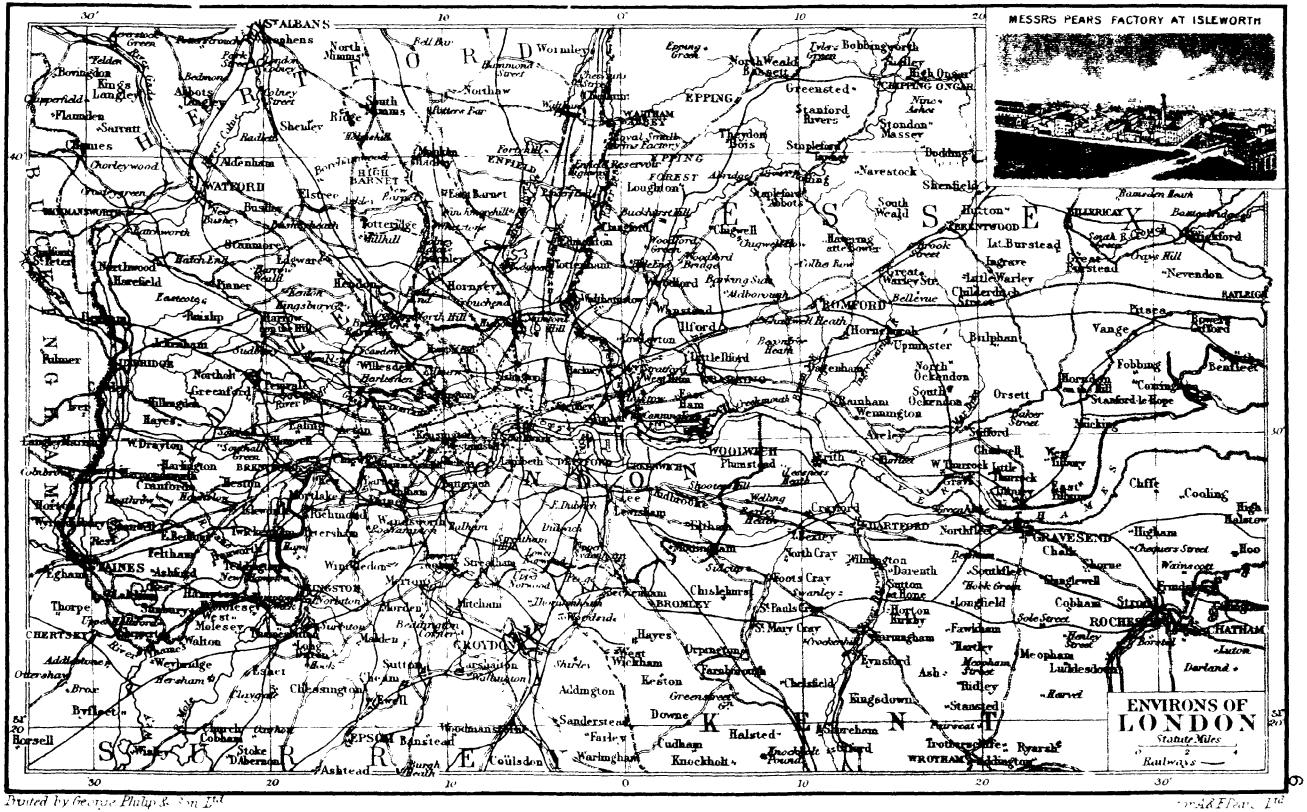
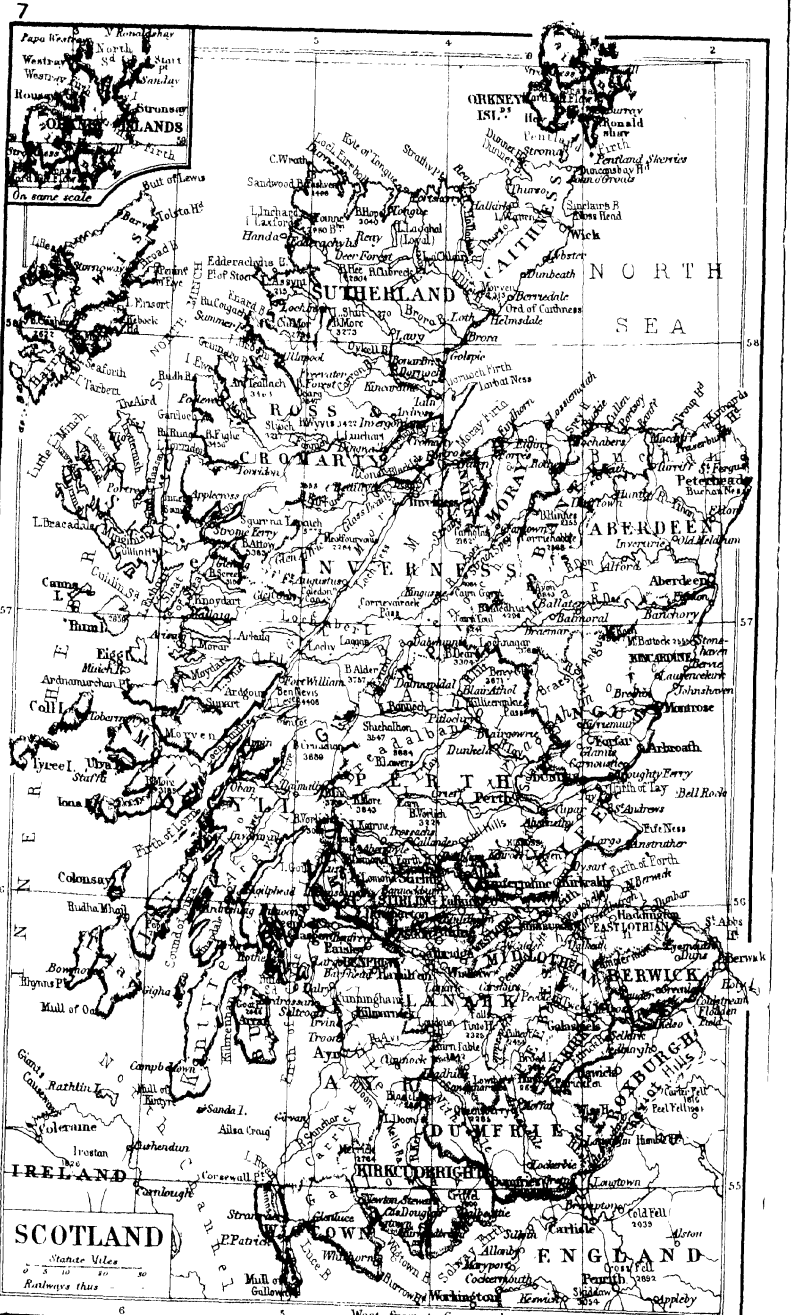
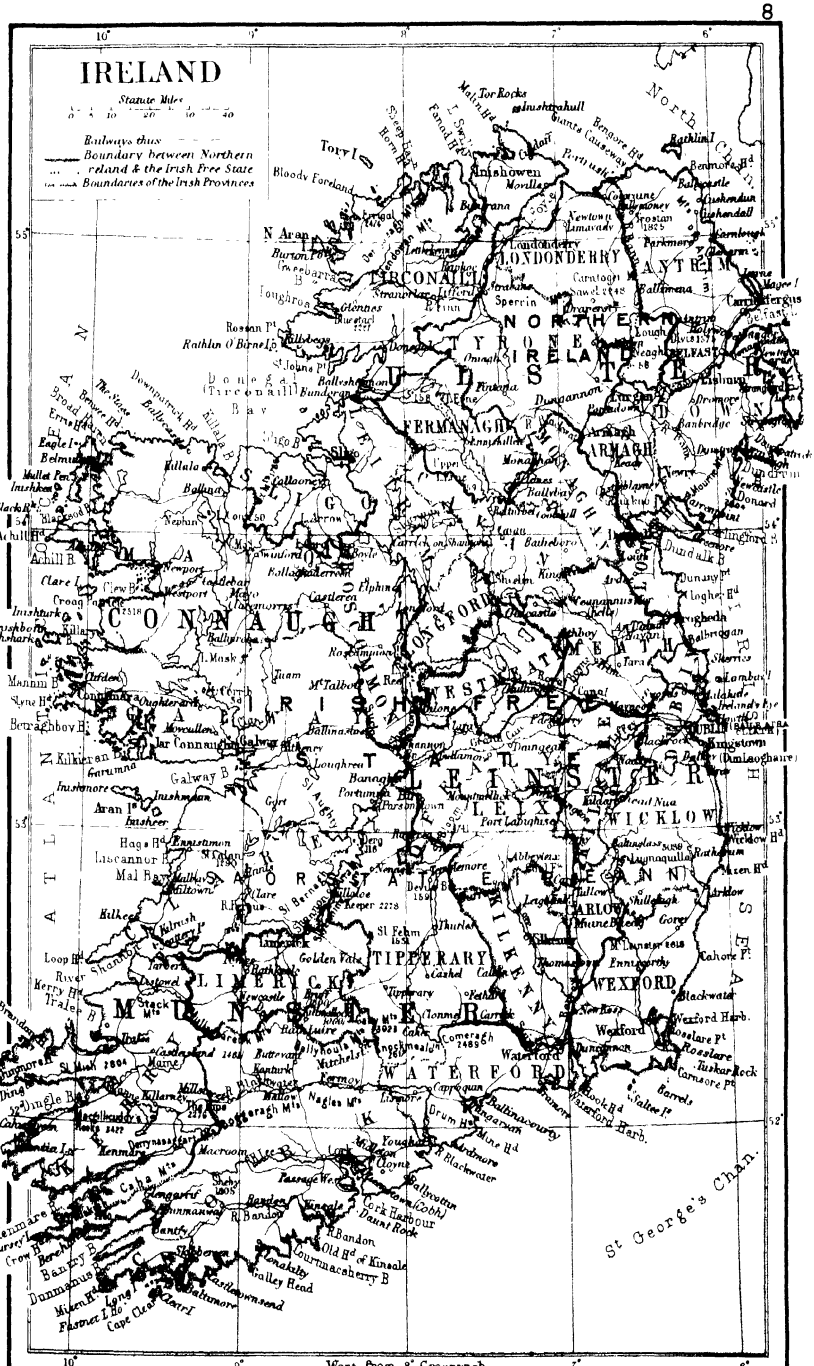
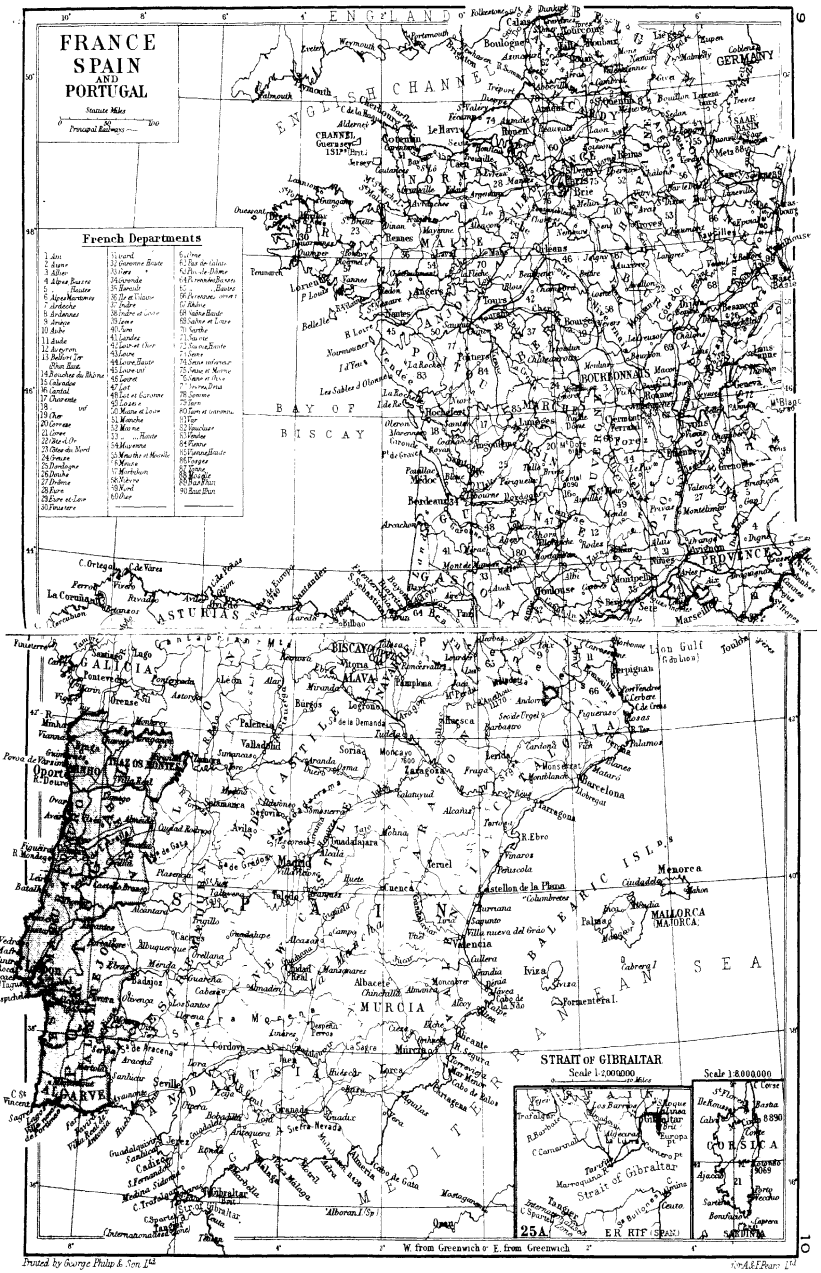
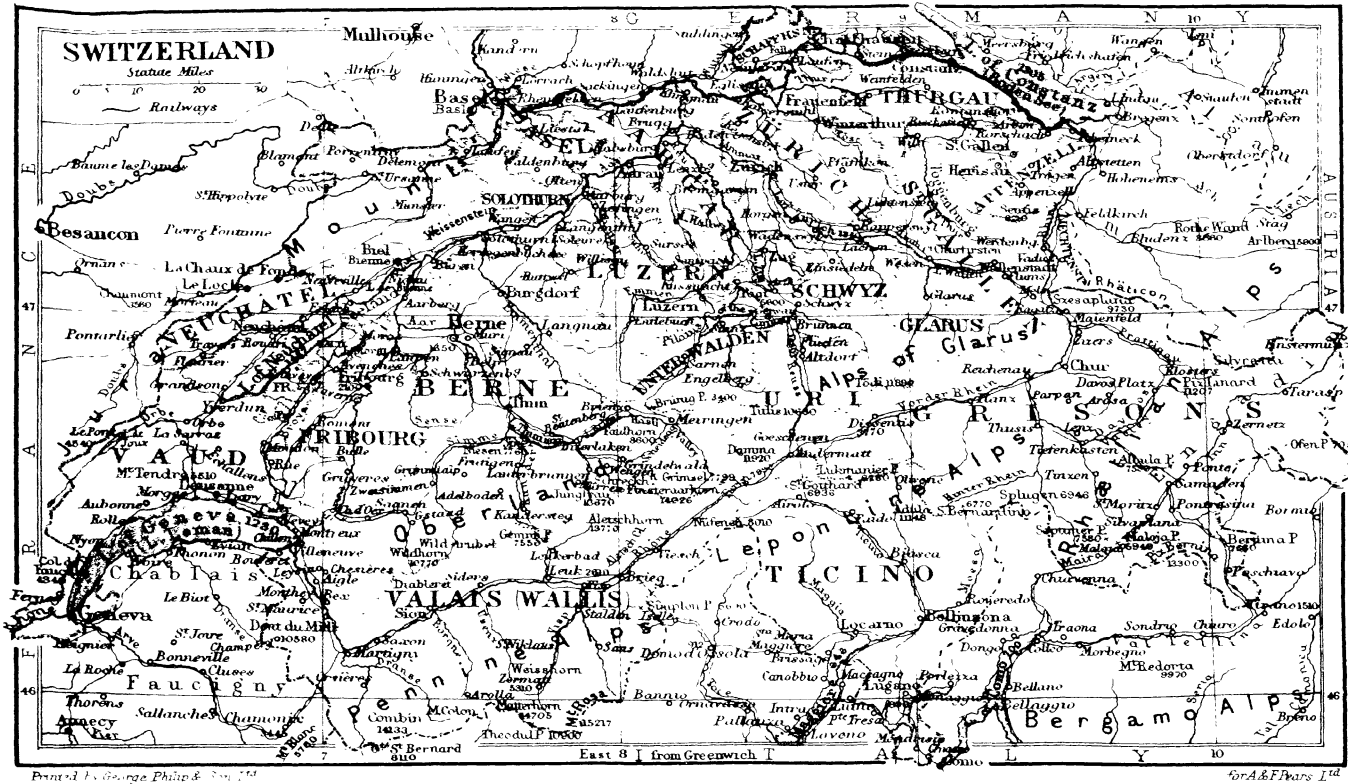
For A. & F. Pears Ltd


MESSRS PEARS FACTORY AT ISLEWORTH
ENVIRONS OF LONDON
Statute Miles
Railways
ST ALBANS
WATFORD
EPPING
EPPING FOREST
ROMFORD
WOOLWICH
GRAVESEND
CROYDON
EPSOM
KINGSTON
RICHMOND
HAMPTON
CHERTSEY
WINDSOR
HARROW
HENDON
BARNET
ENFIELD
WALTHAM ABBEY
HERTFORD
WARE
HODDESDON
BROXBOURNE
HATFIELD
HEMEL HEMPSTEAD
BERKHAMSTED
RICKMANSWORTH
UXBRIDGE
SLOUGH
WINDSOR
STAINES
EGHAM
WEYBRIDGE
ESHER
KINGSTON
WIMBLEDON
MITCHAM
CROYDON
BECKENHAM
BROMLEY
ORPINGTON
SIDCUP
BEXLEY
ERITH
DARTFORD
GRAVESEND
ROCHESTER
CHATHAM
GILLINGHAM
SITTINGBOURNE
FAVERSHAM
MAIDSTONE
ASHFORD
TENTERDEN
HYTHE
FOLKESTONE
DOVER
DEAL
SANDWICH
RAMSGATE
MARGATE
CANTERBURY
WHITSTABLE
HERNE BAY
REIGATE
DORKING
GUILDFORD
WOKING
ESHER
LEATHERHEAD
EPSOM
SUTTON
CARSHALTON
WALLINGTON
PURLEY
CATERHAM
OXTED
EDENBRIDGE
WESTERHAM
SEVENOAKS
TONBRIDGE
TUNBRIDGE WELLS
CROWBOROUGH
EAST GRINSTEAD
HORSHAM
CRAWLEY
REDHILL
GODSTONE
LINGFIELD
HASLEMERE
PETERSFIELD
LIPHOOK
FARNHAM
ALDERSHOT
CAMBERLEY
BAGSHOT
WOKINGHAM
READING
HENLEY
MARLOW
HIGH WYCOMBE
AMERSHAM
CHESHAM
BERKHAMSTED
TRING
LEIGHTON BUZZARD
DUNSTABLE
LUTON
HITCHIN
BALDOCK
ROYSTON
BISHOP'S STORTFORD
SAWBRIDGEWORTH
HARLOW
ONGAR
BRENTWOOD
ROMFORD
HORNCHURCH
UPMINSTER
GRAYS
TILBURY
PURFLEET
SOUTHEND
SHOEBURYNESS
WESTCLIFF
LEIGH
CANVEY ISLAND
HADLEIGH
RAYLEIGH
BILLERICAY
WICKFORD
BASILDON
SOUTH BENFLEET
CHALK
HIGHAM
CLIFFE
COOLING
HOO
STROOD
CHATHAM
ROCHESTER
GILLINGHAM
SITTINGBOURNE
FAVERSHAM
WHITSTABLE
HERNE BAY
MARGATE
RAMSGATE
DEAL
SANDWICH
DOVER
FOLKESTONE
HYTHE
ROMNEY
RYE
HASTINGS
BEXHILL
EASTBOURNE
SEAFORD
NEWHAVEN
BRIGHTON
HOVE
WORTHING
LITTLEHAMPTON
BOGNOR
CHICHESTER
PORTSMOUTH
SOUTHSEA
HAVANT
WATERLOOVILLE
ALTON
ODIHAM
BASINGSTOKE
NEWBURY
THATCHAM
READING
WOKINGHAM
BRACKNELL
ASCOT
WINDSOR
SLOUGH
EGHAM
STAINES
HAMPTON
KINGSTON
SURBITON
MALDEN
WORCESTER PARK
EWELL
EPSOM
LEATHERHEAD
DORKING
BOOKHAM
GUILDFORD
WOKING
WEYBRIDGE
ESHER
CHERTSEY
ADDLESTONE
OTTERSHAW
CHOBHAM
BYFLEET
WEST BYFLEET
COBHAM
STOKE D'ABERNON
OXSHOTT
LEATHERHEAD
EFFINGHAM
BOOKHAM
GUILDFORD
SHERE
ABINGER
DORKING
REIGATE
BANSTEAD
COULSDON
PURLEY
CROYDON
ADDINGTON
SANDERSTEAD
SOUTH CROYDON
BECKENHAM
PENGE
ANERLEY
NORWOOD
DULWICH
CAMBERWELL
PECKHAM
NEW CROSS
DEPTFORD
GREENWICH
WOOLWICH
PLUMSTEAD
ERITH
BEXLEY
SIDCUP
FOOTSCRAY
SIDCUP
CHISLEHURST
BROMLEY
ORPINGTON
FARNBOROUGH
KESTON
HAYES
WEST WICKHAM
BECKENHAM
PENGE
ANERLEY
NORWOOD
DULWICH
CAMBERWELL
PECKHAM
NEW CROSS
DEPTFORD
GREENWICH
WOOLWICH
PLUMSTEAD
ERITH
BEXLEY
SIDCUP
FOOTSCRAY
CHISLEHURST
BROMLEY
ORPINGTON
FARNBOROUGH
KESTON
HAYES
WEST WICKHAM
ADDINGTON
SANDERSTEAD
SOUTH CROYDON
CROYDON
PURLEY
COULSDON
BANSTEAD
EPSOM
EWELL
SURBITON
KINGSTON
MALDEN
WORCESTER PARK
WORCESTER
WORCESTER
WORCESTER


Papa Westray
North Ronaldsay
Westray
Sanday
Stronsay
Rousay
ORKNEY ISLANDS
Stromness
Kirkwall
Scapa Flow
Firth
On same scale
Butt of Lewis
Tolsta Hd
Barra Head
Lewis
Stornoway
Loch Erisort
Loch Seaforth
Loch Roag
Loch Tarbert
The Aird
Harris
Loch Maddy
North Uist
Benbecula
South Uist
Eriskay
Barra
Vatersay
Pabbay
Mingulay
Berneray
Sandray
Pabbay
Boreray
Skye
Portree
Loch Snizort
Loch Dunvegan
Loch Bracadale
Loch Harport
Loch Eynort
Loch Slapin
Loch Scavaig
Loch Coruisk
Cuillin Hills
Rum
Eigg
Muck
Ardnamurchan Pt
Coll
Tiree
Tiree I.
Iona
Staffa
Colonsay
Oronsay
Islay
Rhinns of Islay
Mull of Oa
Jura
Gigha
Kintyre
Campbeltown
Mull of Kintyre
Sanda I.
Ailsa Craig
Arran
Holy I.
Lamlash
Brodick
Rathlin I.
Giant's Causeway
Coleraine
Londonderry
Lough Foyle
Lough Swilly
Tory I.
Malin Hd
Inishtrahull
Fanad Hd
Tarbet
Loch Lomond
Loch Long
Loch Fyne
Loch Awe
Loch Etive
Loch Leven
Loch Linnhe
Loch Eil
Loch Shiel
Loch Sunart
Loch Moidart
Loch Nevis
Loch Hourn
Loch Alsh
Loch Duich
Loch Carron
Loch Torridon
Loch Ewe
Loch Gairloch
Loch Broom
Loch Kanaird
Loch Inver
Loch Assynt
Loch Eriboll
Loch Hope
Loch Laxford
Loch Inchard
Loch Clash
Loch Shin
Loch Naver
Loch Loyal
Loch Rannoch
Loch Tay
Loch Earn
Loch Lubnaig
Loch Katrine
Loch Achray
Loch Venachar
Loch Voil
Loch Doine
Loch Ard
Loch Chon
Loch Arklet
Loch Vennachar
Loch Lomond
Loch Ness
Loch Oich
Loch Lochy
Loch Arkaig
Loch Garry
Loch Quoich
Loch Hourn
Loch Morar
Loch Shiel
Loch Eil
Loch Leven
Loch Linnhe
Loch Etive
Loch Awe
Loch Fyne
Loch Long
Loch Lomond
Loch Tay
Loch Rannoch


IRELAND
Statute Miles
0 5 10 20 30 40
Railways thus
Boundary between Northern Ireland & the Irish Free State
Boundaries of the Irish Provinces
ULSTER
CONNAUGHT
LEINSTER
MUNSTER
NORTHERN IRELAND
THE IRISH FREE STATE
LONDONDERRY
ANTRIM
TYRONE
FERMANAGH
DONEGAL
SLIGO
LEITRIM
ARMAGH
DOWN
MONAGHAN
CAVAN
LOUTH
MEATH
WESTMEATH
ROSCOMMON
GALWAY
MAYO
KING'S CO.
QUEEN'S CO.
KILDARE
WICKLOW
DUBLIN
CARLOW
KILKENNY
TIPPERARY
LIMERICK
CLARE
WEXFORD
WATERFORD
CORK
KERRY
Tory I.
Bloody Foreland
N. Arran I.
Inishowen
Londonderry
Lough Foyle
Lough Swilly
Lough Neagh
Belfast
Belfast Lough
Strangford Lough
Carlingford Lough
Dundalk B.
Donegal B.
Sligo B.
Clew B.
Galway B.
Lough Corrib
Lough Mask
Lough Ree
Lough Derg
Shannon
Lough Erne
Lough Gill
Lough Allen
Lough Gara
Lough Conn
Lough Arrow
Lough Sheelin
Lough Owel
Lough Ennell
Lough Boderg
Lough Key
Lough Gur
Lough Graney
Lough Leane
Lough Guitane
Lough Currane
Lough Derravaragh
Lough Lene
Lough Ennell
Lough Owel
Lough Boderg
Lough Key
Lough Gur
Lough Graney
Lough Leane
Lough Guitane
Lough Currane
Lough Derravaragh
Lough Lene
Aran Is.
Inishmore
Inishmaan
Inisheer
Achill I.
Clare I.
Inishturk
Inishbofin
Inishshark
Mannin B.
Slyne Hd.
Erris Hd.
Eagle I.
Benwee Hd.
Broad Haven
Blacksod B.
Inishkea
Belmullet
Downpatrick Hd.
The Stags
Rathlin O'Birne I.
Rossan Pt.
Tory I.
Fanad Hd.
Malin Hd.
Inishtrahull
Giant's Causeway
Rathlin I.
Fair Hd.
Torr Hd.
Bengore Hd.
Ballycastle
Ballintoy
Portrush
Portstewart
Coleraine
Magilligan Pt.
Lough Foyle
Culmore Pt.
Inishowen Hd.
Dunaff Hd.
Malin Tor Rocks
Stroma I.
Pentland Firth
Kinnaird Hd.
Fraserburgh
Peterhead
Aberdeen
Stonehaven
Montrose
Arbroath
Dundee
Tay Br.
Tay R.
Firth of Tay
Carnoustie
Barry
Monifieth
Broughty Ferry
Tayport
St. Andrews
Leuchars
Crail
Anstruther
Elie
Fife Ness
Kilconquhar Loch
Leven
Kinghorn
Burntisland
Aberdour
Inchcolm I.
Inchkeith I.
Leith
Edinburgh
Portobello
Musselburgh
Prestonpans
Cockenzie
Port Seton
Aberlady
Gullane
Dirleton
North Berwick
Tantallon Castle
Bass Rock
Berwick-on-Tweed
Holy I.
Farne Is.
Coquet I.
Coquet Hd.
Amble
Warkworth
Alnmouth
Boulmer
Craster
Dunstanburgh Castle
Embleton Bay
Beadnell Bay
Seahouses
Farne Deep
Inner Farne
Longstone
Staple I.
Harker Rock
Knivestone
Outer Farne
Megstone
Hare Pipe
Wideopen
Whitley Bay
Cullercoats
Tynemouth
North Shields
South Shields
Jarrow
Hebburn
Gateshead
Newcastle
Wallsend
Tynemouth Pier
Tynemouth Lt. Ho.
Roker Pier
Roker
Sunderland
Seaham
Seaham Hbr.
Hartlepool
Hartlepool Hbr.
Hartlepool Lt. Ho.
Middlesbrough
Redcar
Saltburn
Whitby
Whitby Hbr.
Whitby Lt. Ho.
Robin Hood's Bay
Scarborough
Scarborough Hbr.
Scarborough Lt. Ho.
Filey
Filey Brigg
Flamborough Hd.
Flamborough Lt. Ho.
Bridlington
Bridlington Hbr.
Bridlington Quay
Bridlington Lt. Ho.
Spurn Hd.
Spurn Lt. Ho.
Spurn Pt.
Spurn Hd. Lt. Ho.
Kilnsea
Withernsea
Withernsea Lt. Ho.
Hornsea
Hornsea Mere
Hornsea Lt. Ho.
Aldbrough
Aldbrough Lt. Ho.
Mappleton
Mappleton Lt. Ho.
Barmston
Barmston Lt. Ho.
Skipsea
Skipsea Lt. Ho.
Ulrome
Ulrome Lt. Ho.
Barmston Drain
Barmston Drain Lt. Ho.
Barmston Drain Lt. Ho.
Barmston Drain Lt. Ho.


FRANCE
SPAIN
AND
PORTUGAL
Statute Miles
Principal Railways
French Departments
1 Ain
2 Aisne
3 Allier
4 Alpes Basses
5 Alpes Hautes
6 Alpes Maritimes
7 Ardèche
8 Ardennes
9 Ariège
10 Aube
11 Aude
12 Aveyron
13 Bouches du Rhône
14 Calvados
15 Cantal
16 Charente
17 Charente Inf.
18 Cher
19 Corrèze
20 Corse
21 Côte d'Or
22 Côtes du Nord
23 Creuse
24 Dordogne
25 Doubs
26 Drôme
27 Eure
28 Eure et Loir
29 Finistère
30 Gard
31 Garonne Haute
32 Gers
33 Gironde
34 Hérault
35 Ille et Vilaine
36 Indre
37 Indre et Loire
38 Isère
39 Jura
40 Landes
41 Loir et Cher
42 Loire
43 Loire Haute
44 Loire Inf.
45 Loiret
46 Lot
47 Lot et Garonne
48 Lozère
49 Maine et Loire
50 Manche
51 Marne
52 Marne Haute
53 Mayenne
54 Meurthe
55 Meurthe et Moselle
56 Meuse
57 Morbihan
58 Nièvre
59 Nord
60 Oise
61 Orne
62 Pas de Calais
63 Puy de Dôme
64 Pyrénées Basses
65 Pyrénées Hautes
66 Pyrénées Orient.
67 Rhin Bas
68 Rhin Haut
69 Rhône
70 Saône Haute
71 Saône et Loire
72 Sarthe
73 Savoie Haute
74 Savoie
75 Seine
76 Seine Inférieure
77 Seine et Marne
78 Seine et Oise
79 Sèvres Deux
80 Somme
81 Tarn
82 Tarn et Garonne
83 Var
84 Vaucluse
85 Vendée
86 Vienne
87 Vienne Haute
88 Vosges
89 Yonne
90 Belfort
ENGLAND
ENGLISH CHANNEL
CHANNEL Islands 1911
Guernsey
Jersey
GERMANY
BELGIUM
NORMANDY
BRITTANY
MAINE
ANJOU
POITOU
BOURBONNAIS
BURGUNDY
SAVOY
PROVENCE
BAY OF BISCAY
GASCONY
ASTURIAS
GALICIA
BISCAY
NAVARRE
CASTILE
LEON
ARAGON
CATALONIA
VALENCIA
MURCIA
ANDALUSIA
ESTREMADURA
PORTUGAL
ALGARVE
BALEARIC ISLES
MAJORCA
MINORCA
IVIZA
FORMENTERA
STRAIT OF GIBRALTAR
Scale 1:2000000
Scale 1:8000000
CORSICA
SARDINIA
Lion Gulf
(Golfe du)
MEDITERRANEAN SEA
W. from Greenwich
E. from Greenwich
Printed by George Philip & Son Ltd
For A.&E.Pearz Ltd

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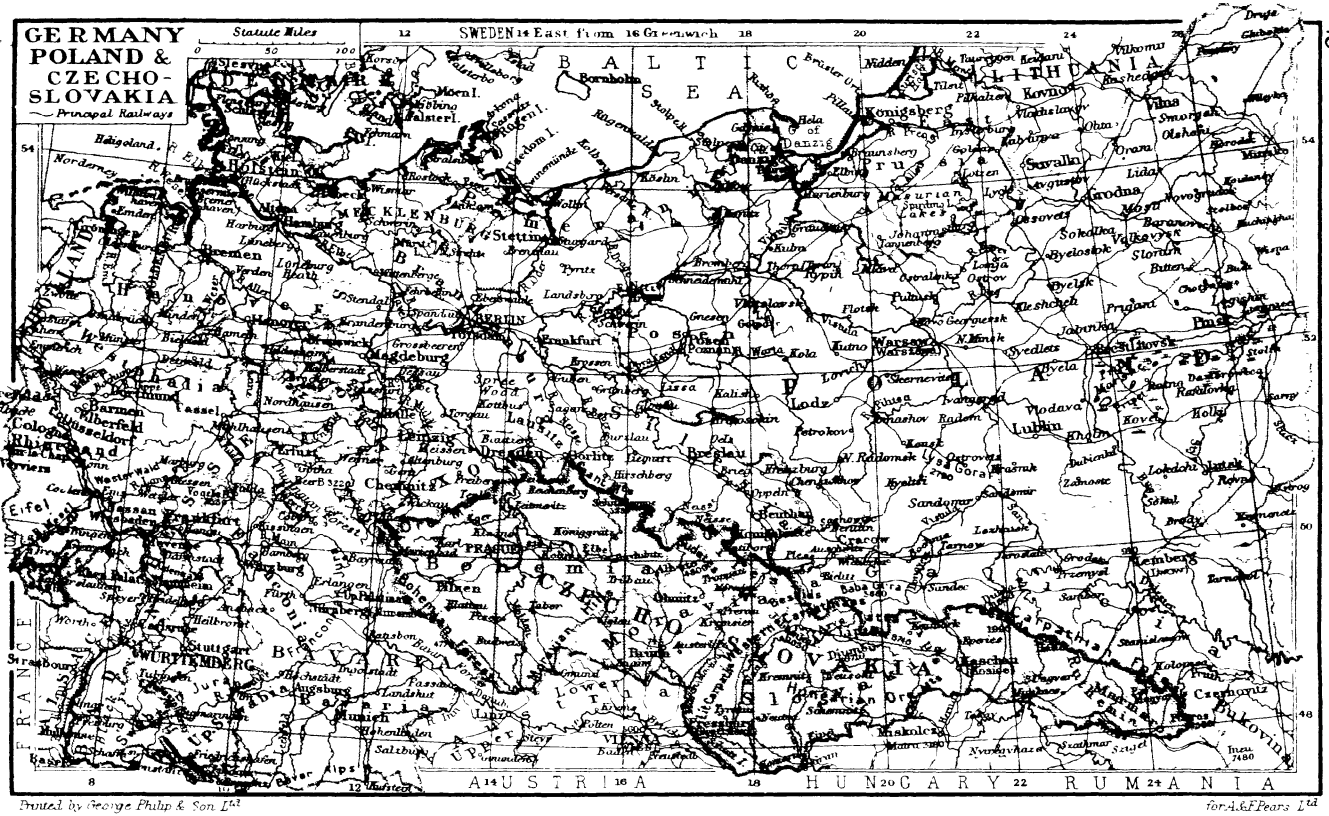
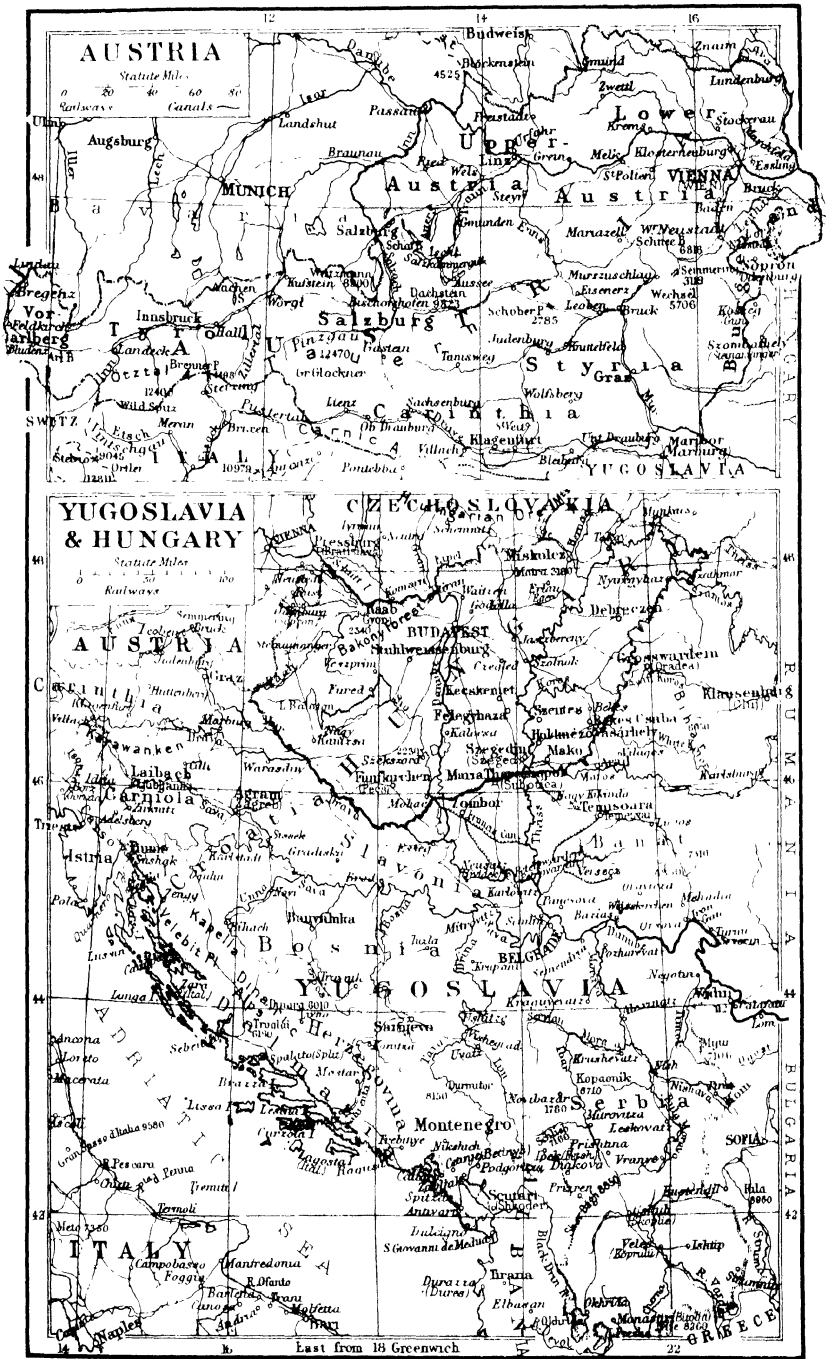

GERMANY
POLAND &
CZECHO-
SLOVAKIA
Principal Railways
Statute Miles
0 50 100
SWEDEN
East from Greenwich
BALTIC SEA
Bornholm
Gdansk
Free City of Danzig
Königsberg
LITHUANIA
Kaunas
Vilkomir
Memel
Libau
Windau
Mitau
Riga
Pernau
Reval
Hapsal
Dorpat
Narva
Pskov
Lake Peipus
Lake Ilmen
Novgorod
Lake Ladoga
Petrograd
Lake Onega
Petrozavodsk
Lake Peipus
Lake Chudskoye
Lake Pskovskoye
Lake Ilmen
Lake Seliger
Lake Beloye
Lake Kubenskoye
Lake Vozhe
Lake Kubenskoye
Lake Lacha
Lake Vozhe
Lake Kubenskoye
Lake Lacha
Lake Vozhe
Lake Kubenskoye
Lake Lacha

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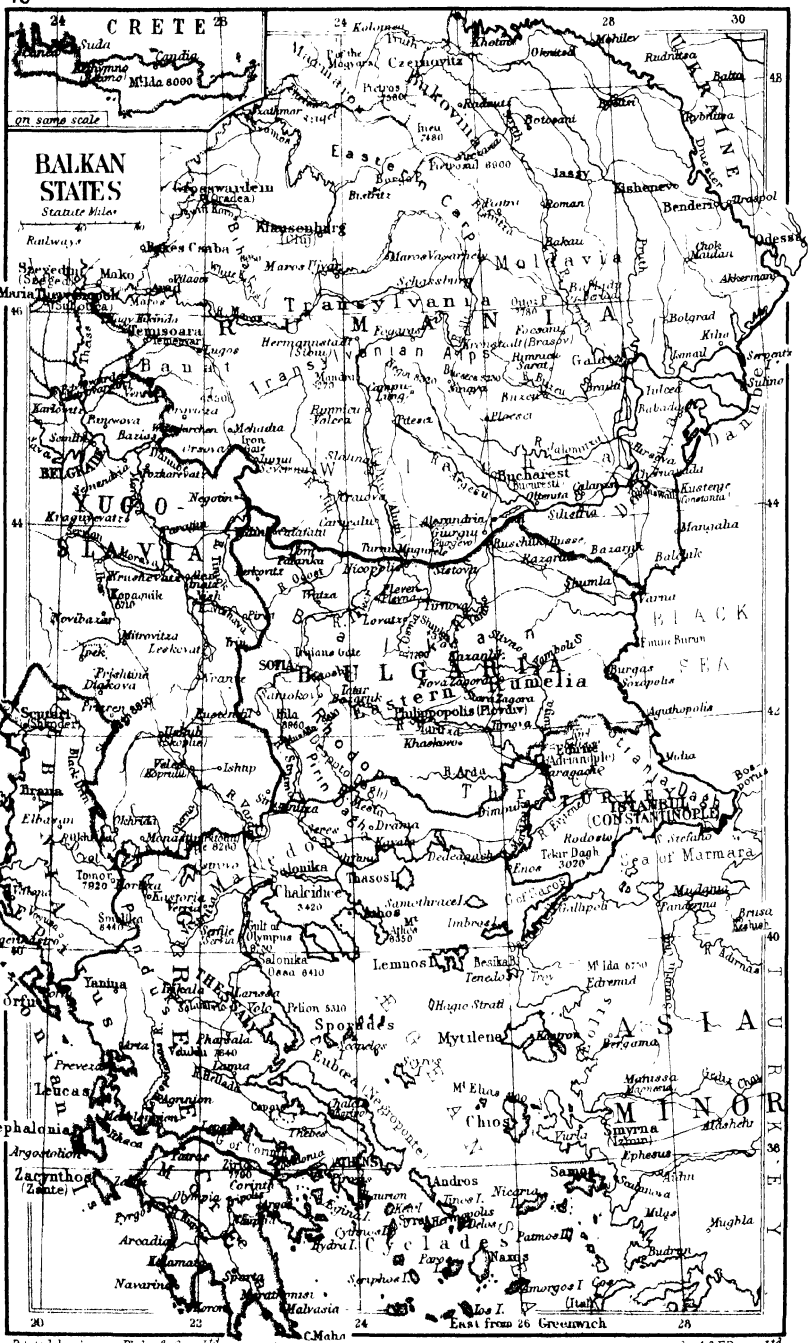
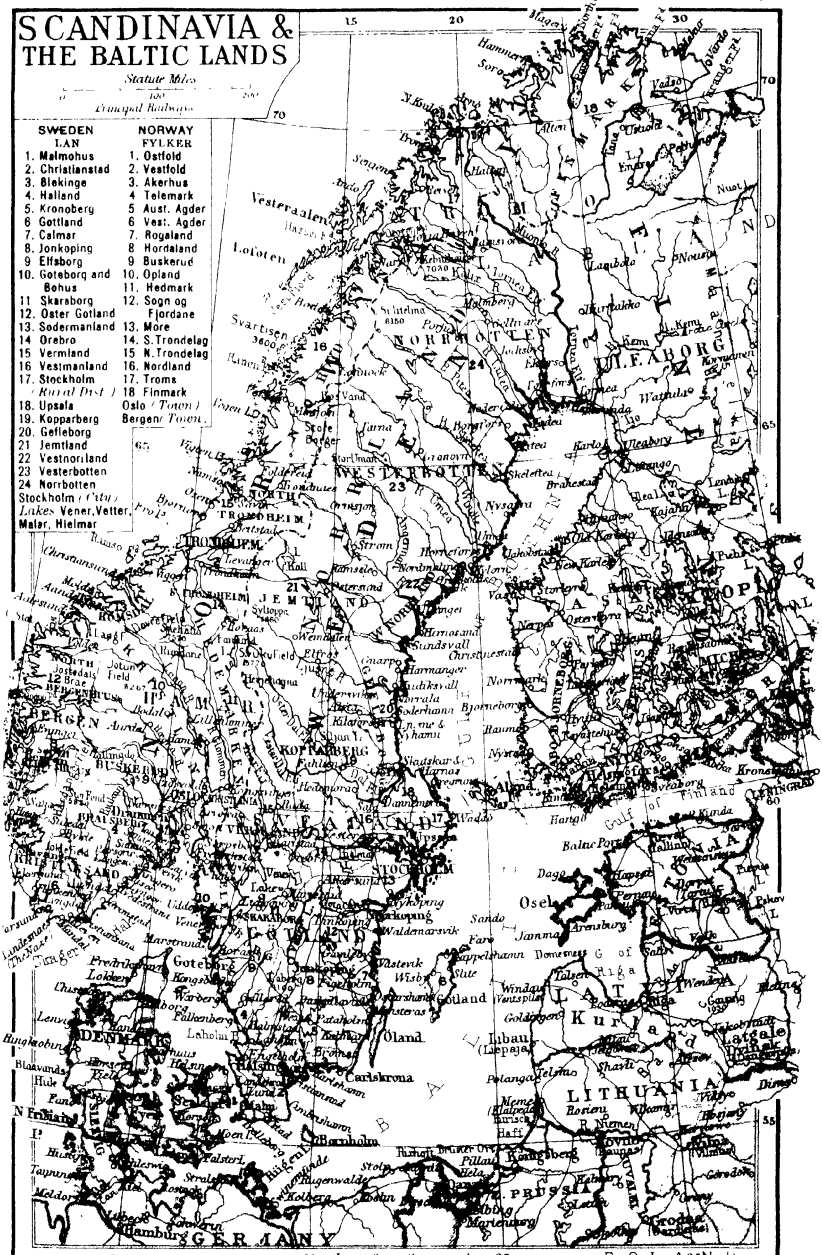

BALKAN STATES
Statute Miles
on same scale
CRETE
Suda
Candia
Rethymno
Canea
Mt Ida 8000
Kalocsa
Theiss R.
Maros R.
Czernovitz
Pruth R.
Khotin
Okopy
Mohilev
Rudnitsa
Balta
Dniester R.
Bessarabia
Moldavia
Jassy
Kishenev
Benderi
Bratslav
Odessa
Akkerman
Dniepr R.
Kilia
Ismail
Sulina
Galatz
Braila
Danube R.
Roman
Bakau
Focsani
Botosani
Pruth R.
Rodna
Bistritz
Klausenburg
Marosvasarhely
Szekelyhid
Mako
Maria Theresiopolis
Transylvania
RUMANIA
Bihar Mts
Transylvanian Alps
Hermannstadt
Fogaras
Kronstadt (Brassov)
Sarat
Buzeu
Ploesti
Bucharest
Giurgevo
Rustchuk
Bazardjik
Varna
Baltchik
Kustendje
Mangalia
Silistria
Turtukai
Alexandria
Turnu Magurele
Rahova
Calafat
Widin
Vidin
Orsova
Mehadia
Temesvar
Lugos
Karlsburg
Arad
Szabadka
Baja
Mohacs
Essek
Peterwardein
Semlin
BELGRADE
Obrenovatz
Valjevo
Mitrovitza
Novibazar
Kopaonik
Uschitza
Prishtina
Djakova
Prizrend
Skutari
Scutari
Durazzo
Elbasan
Ochrida
Monastir
Prilep
Veles
Koprulu
Ishtip
Strumitza
Kustendil
Sofia
Samakov
Ichtiman
Philippopolis (Plovdiv)
Khaskovo
Tatar Bazardjik
Stanimaka
Dedeagatch
Gumurjina
Adrianople (Edirne)
Karagatch
Constantinople
Istanbul
Sea of Marmara
Rodosto
Tekir Dagh 3020
Enos
Gallipoli
Lemnos
Besika B.
Tenedos
Mt Ida 5750
Edremid
Mytilene
Pergamo
Smyrna
Aidin
Ephesus
Samos
Andros
Naxos
Paros
Patmos
Milos
Mughla
Budrun
Cos
Rhodes
Scarpanto I.
Kasos I.
Crete
Sporades
Chios
Mt Elias
Lesbos
Thasos
Samothrace
Imbros
Mt Athos 6350
Olympus
Salonika
Chalcidice
Vardar R.
Struma R.
Strymon R.
Mesta R.
Maritza R.
Ardas R.
Tundja R.
Hebrus R.
Black Sea
Yanina
Corfu
Ionian Islands
Cephalonia
Argostolion
Zacynthos (Zante)
Leucas
Prevesa
Arta
Lamia
Pharsala
Volo
Pelion 5310
Othrys
Eubœa
Negroponte
Thebes
Athens
Corinth
Patras
Missolonghi
Lepanto
Arcadia
Kalamata
Navarino
Modon
Coron
Marathonisi
Malvasia
Cerigo I.
Los I.
Amorgos I.
Mt Maha
Printed by George Philip & Son Ltd
for A & F Pears Ltd
East from 26 Greenwich


SCANDINAVIA &
THE BALTIC LANDS
Statute Miles
Principal Railways
SWEDEN
LAN
1. Malmohus
2. Christianstad
3. Blekinge
4. Halland
5. Kronoberg
6 Gottland
7. Calmar
8. Jonkoping
9 Elfsborg
10. Goteborg and Bohus
11 Skarsborg
12. Oster Gotland
13. Sodermanland
14 Orebro
15 Vermland
16 Vestmanland
17. Stockholm (Rural Dist.)
18. Upsala
19. Kopparberg
20. Gefleborg
21 Jemtland
22 Vestnorrland
23 Vesterbotten
24 Norrbotten
Stockholm (City)
Lakes Vener, Vetter, Malar, Hielmar
NORWAY
FYLKER
1. Ostfold
2. Vestfold
3. Akerhus
4 Telemark
5 Aust. Agder
6 Vest. Agder
7. Rogaland
8 Hordaland
9 Buskerud
10. Opland
11. Hedmark
12. Sogn og Fjordane
13. More
14. S. Trondelag
15 N. Trondelag
16. Nordland
17. Troms
18 Finmark
Oslo (Town)
Bergen (Town)
East from Greenwich
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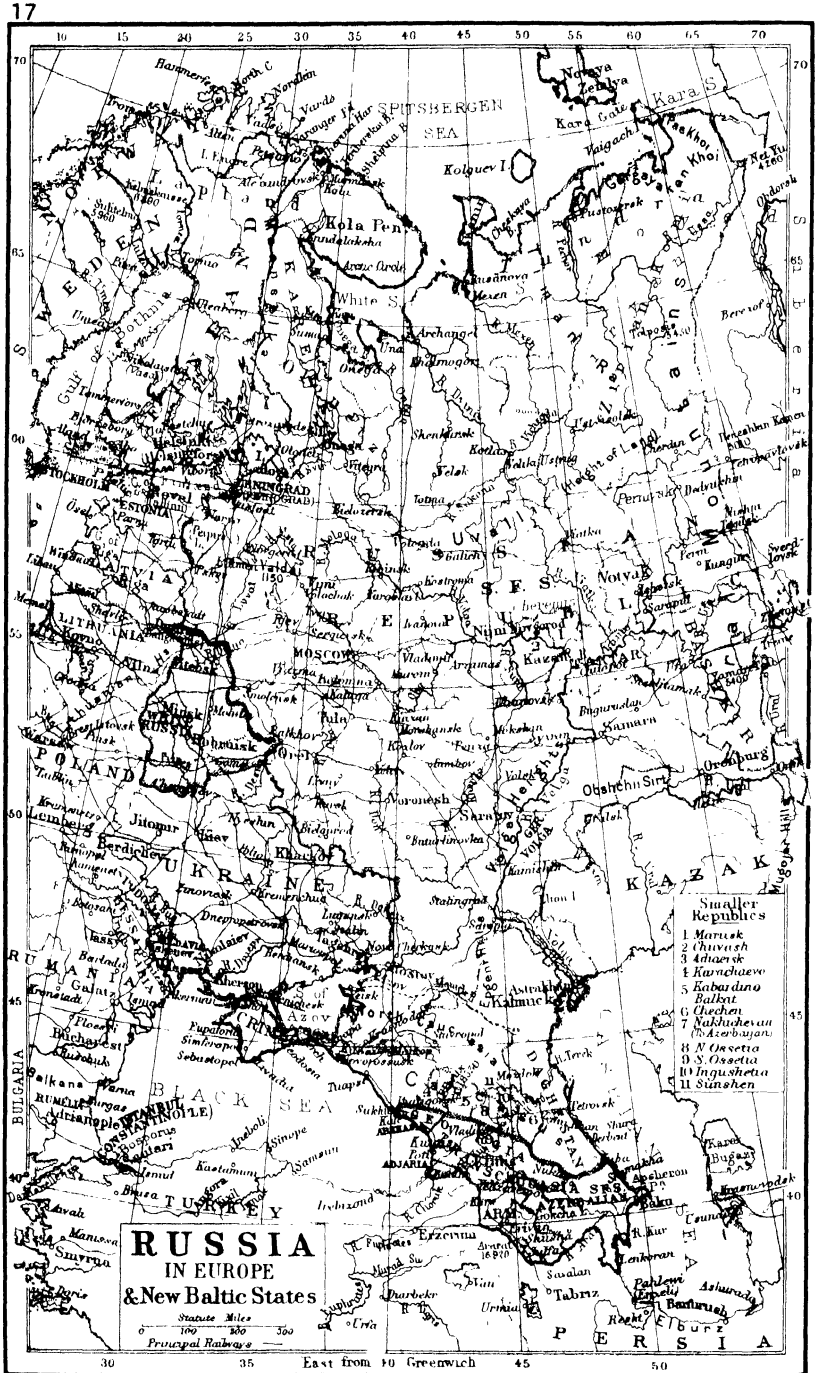


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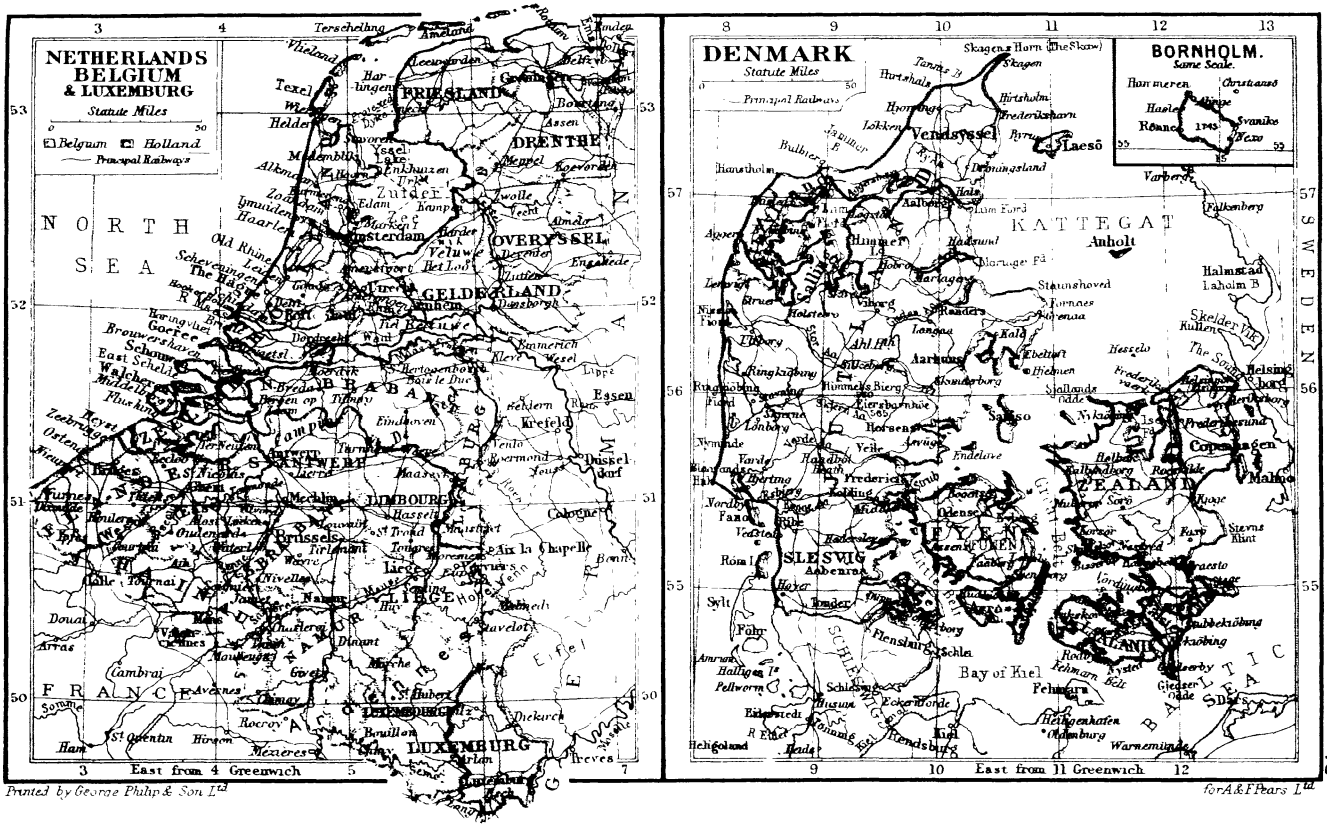


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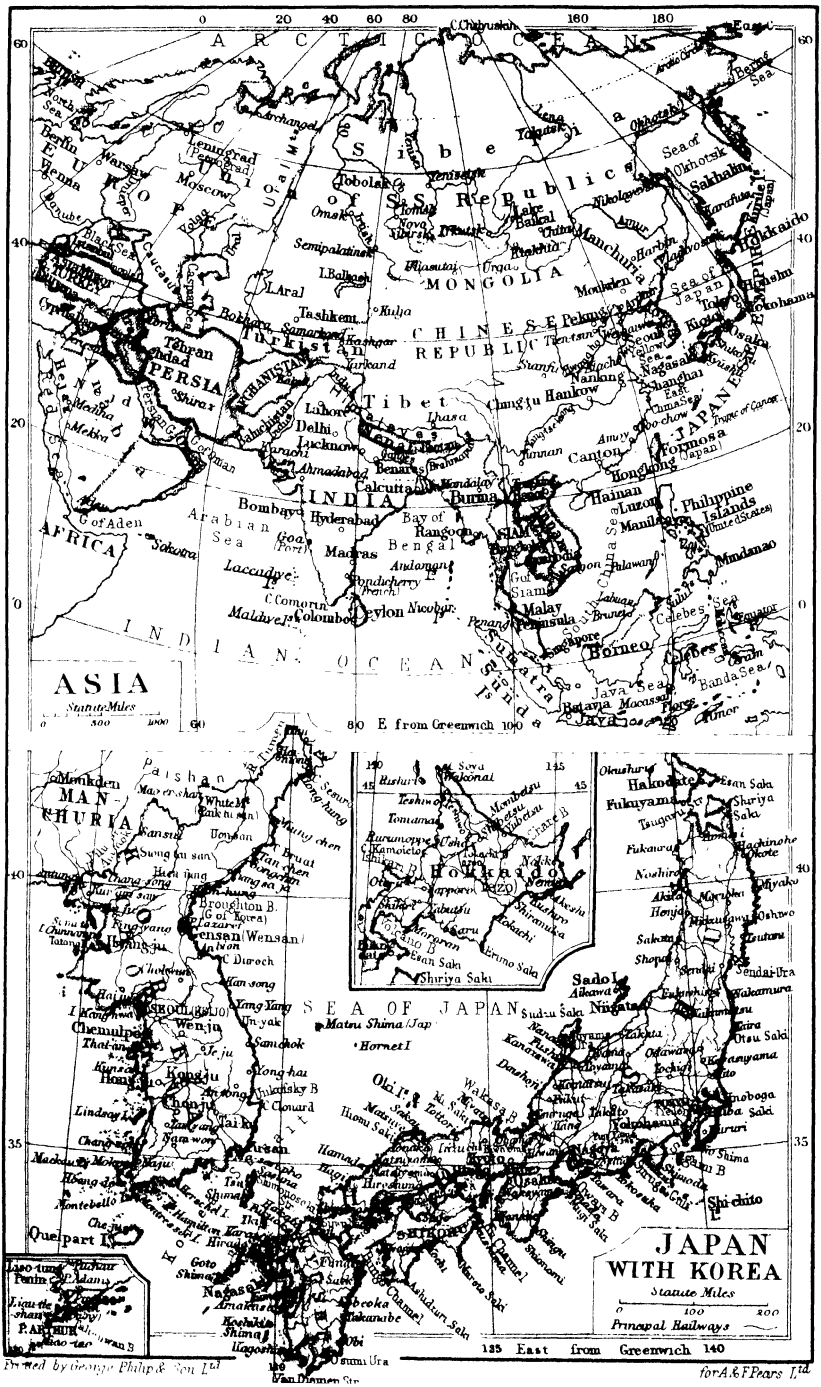
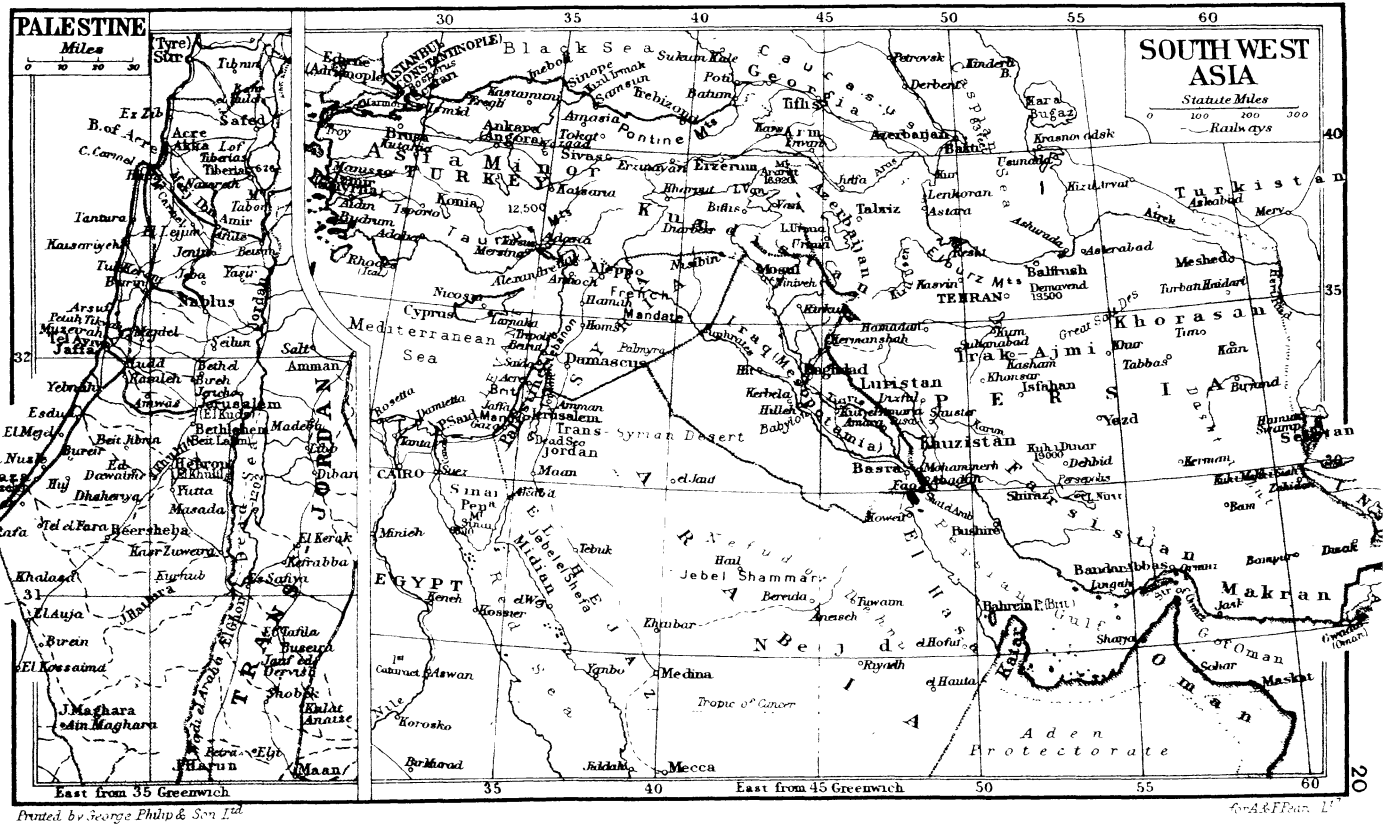

ASIA
Statute Miles
0 500 1000
ARCTIC OCEAN
INDIAN OCEAN
EUROPE
Siberia
Union of S.S. Republics
MONGOLIA
CHINESE REPUBLIC
Tibet
INDIA
PERSIA
Arabian Sea
Bay of Bengal
Sea of Japan
Yellow Sea
East China Sea
Philippine Islands
Borneo
Celebes
Java
Sumatra
Malay Peninsula
AFRICA
Moscow
Leningrad
Archangel
Tashkent
Bokhara
Samarkand
Kashgar
Yarkand
Tehran
Baghdad
Delhi
Lahore
Lucknow
Calcutta
Bombay
Hyderabad
Madras
Rangoon
Bangkok
Saigon
Hankow
Nanking
Shanghai
Canton
Hongkong
Formosa
Manchuria
Harbin
Vladivostok
Sakhalin
Hokkaido
Honshu
Tokyo
Yokohama
Osaka
Kyoto
Nagasaki
Manila
Mindanao
Singapore
Penang
Batavia
Macassar
Timor
Ceylon
Colombo
Laccadive Is.
Maldive Is.
Andaman Is.
Nicobar Is.
Pondicherry
Goa
Aden
Mecca
Basra
Shiraz
Isfahan
Kabul
Kandahar
Herat
Meshed
Caspian Sea
Black Sea
Aral
L. Balkash
Semipalatinsk
Omsk
Tobolsk
Yenisei
Lena
Irkutsk
Baikal
Yakutsk
Okhotsk
Sea of Okhotsk
Behring Sea
Behring Str.
Kamchatka
Nikolaevsk
Khabarovsk
Amur
Ussuri
Mukden
Changchun
Kirin
Port Arthur
Dairen
Antung
Fusan
Seoul
Chemulpo
Gensan
Vladivostok
Nagasaki
Kagoshima
Yokohama
Nagoya
Kobe
Osaka
Kyoto
Tokyo
Sendai
Niigata
Aomori
Hakodate
Muroran
Otaru
Sapporo
Shikotsu L.
Toya L.
Yezo
Kurile Is.
Shikotan
Sea of Japan
Tsushima
Iki
Goto Is.
Quelpart
Formosa Channel
Tsugaru Str.
Tsushima Str.
Van Diemen Str.
Sunda Is.
Celebes Sea
Banda Sea
Timor Sea
Java Sea
Gulf of Aden
Gulf of Oman
Persian Gulf
Red Sea
Suez Canal
Mediterranean Sea
Black Sea
Caspian Sea
Aral Sea
Lake Baikal
Lake Balkash
Lake Issyk-Kul
Lake Urmia
Lake Van
Lake Tiberias
Dead Sea
Euphrates R.
Tigris R.
Indus R.
Ganges R.
Brahmaputra R.
Irrawaddy R.
Mekong R.
Yangtze Kiang
Hwang Ho
Amur R.
Lena R.
Yenisei R.
Ob R.
Volga R.
Danube R.
Nile R.
Zambesi R.
Congo R.
Niger R.
Orange R.
Murray R.
Darling R.
Swan R.
Fitzroy R.
Victoria R.
Ord R.
Gulf of Carpentaria
Arafura Sea
Timor Sea
Coral Sea
Tasman Sea
New Zealand
Auckland Is.
Campbell Is.
Macquarie Is.
Kerguelen Is.
Heard I.
Prince Edward Is.
Crozet Is.
Marion I.
Tristan da Cunha
Gough I.
St. Helena
Ascension I.
Fernando Noronha
Trinidad I.
Martin Vaz Is.
Rocas
St. Peter and St. Paul Rocks
Atol das Rocas
Abrolhos Is.
Trindade

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For A. & F. Pam. Ltd.

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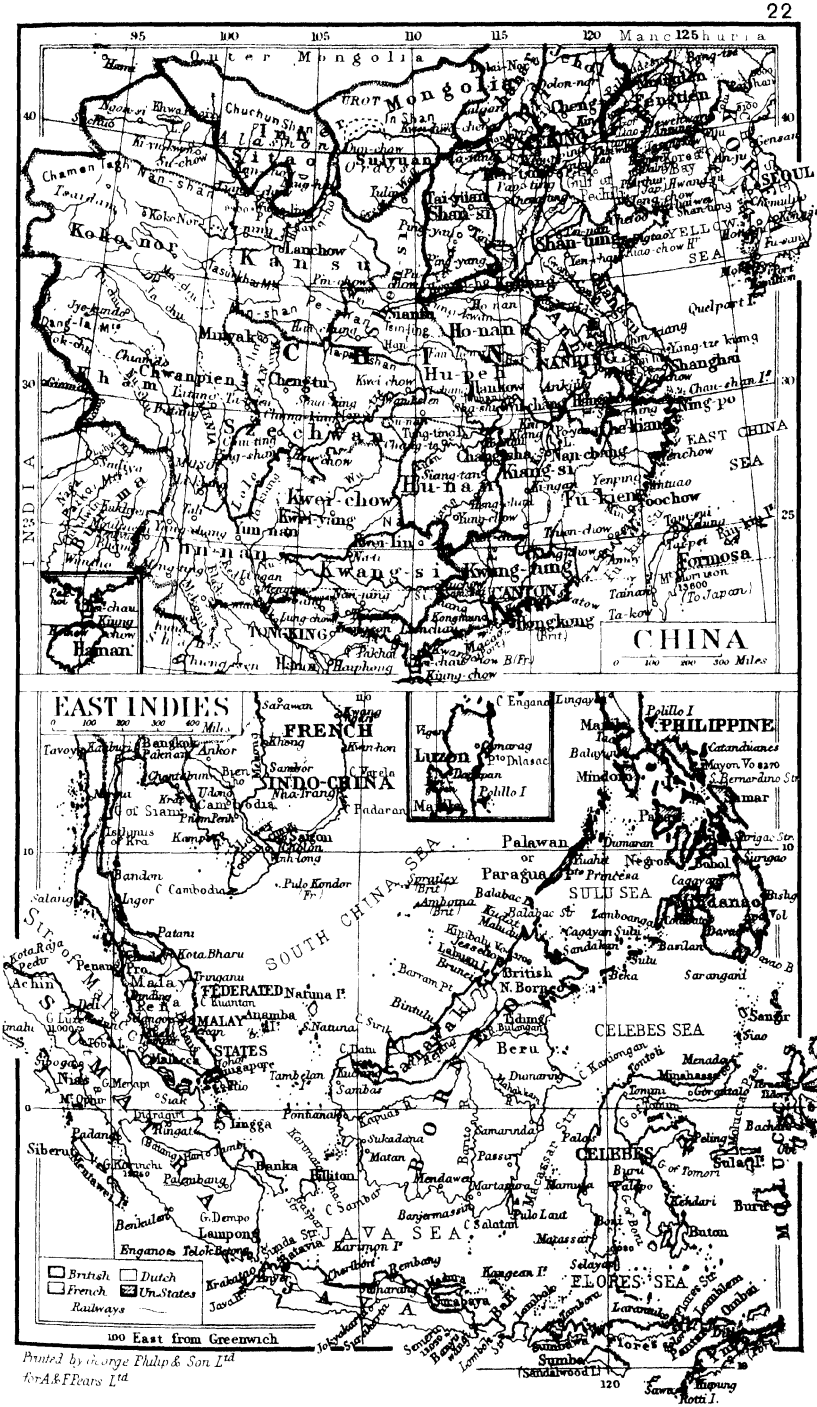
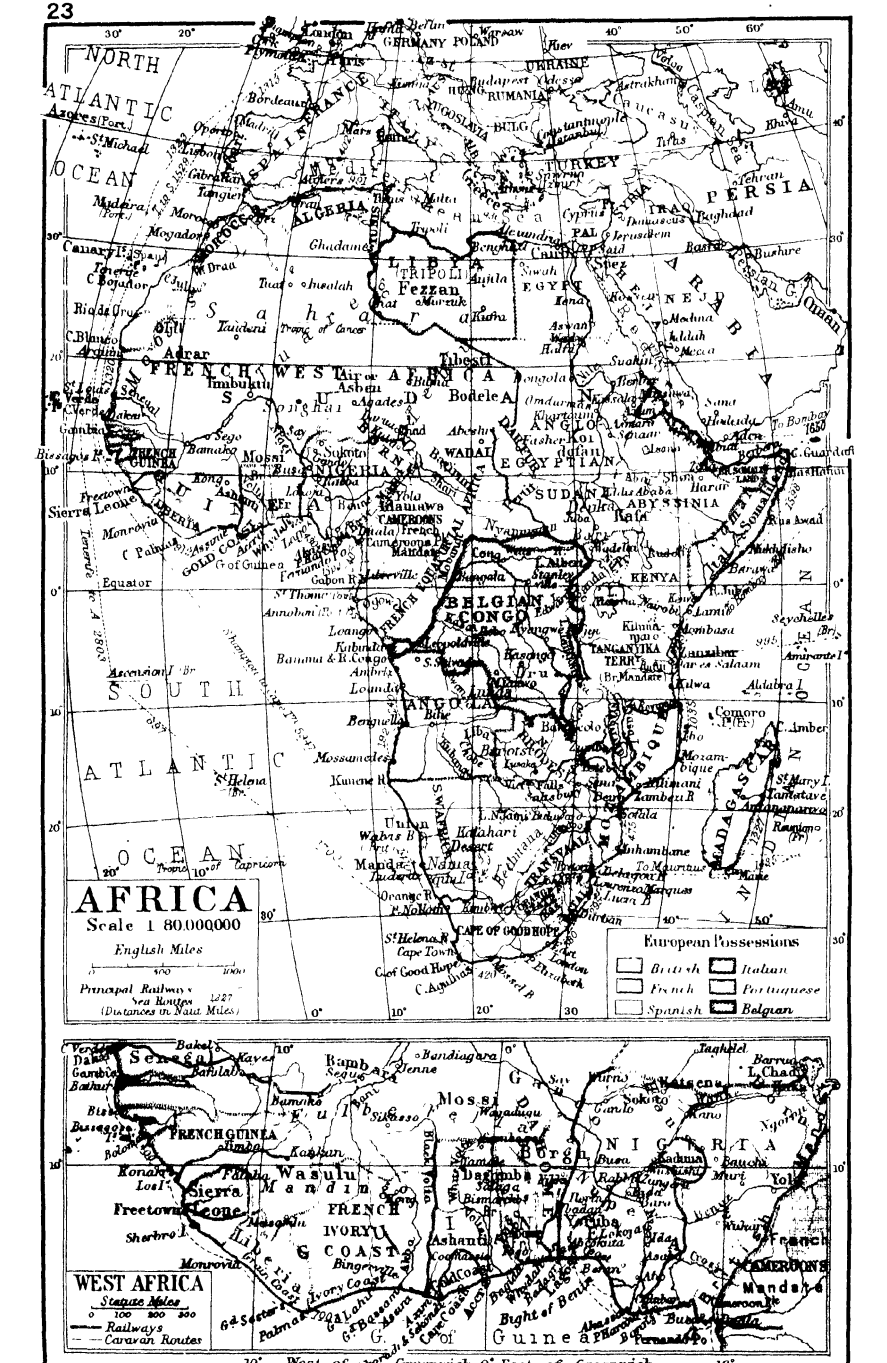

95
100
105
110
115
120
125
Manchuria
Outer Mongolia
Inner Mongolia
Kansu
Koko-nor
Shensi
Shan-si
Ho-nan
Hu-peh
Szechwan
Kwei-chow
Yun-nan
Kwang-si
Kwang-tung
Shantung
Kiang-su
Nan-king
Shanghai
Ning-po
Fu-kien
Formosa
Chusan
Amoy
Swatow
Hongkong
Macao
Canton
Chefoo
Weihaiwei
Port Arthur
Talienwan
Newchwang
Peking
Tientsin
Taiyuan
Sianfu
Hankow
Ichang
Chungking
Chengtu
Kweichow
Yunnan
Lanchow
Ningsia
Kuei-hwa
Kalgan
Urga
Uliassutai
Kobdo
Hami
Barkul
Turfan
Ili
Tarbagatai
Altai
Lake Baikal
Irkutsk
Yenisei
Lena
Yakutsk
Verkhoyansk
Kolyma
Anadyr
Kamchatka
Okhotsk
Sea of Okhotsk
Sea of Japan
Vladivostok
Gensan
Fusan
Seoul
Yellow Sea
East China Sea
Quelpart I.
Loochoo Is.
Japan
Tokio
Yokohama
Nagasaki
Kagoshima
Hakodate
Aomori
Sendai
Niigata
Kanazawa
Nagoya
Osaka
Kobe
Hiogo
Shimonoseki
Fukuoka
Kumamoto
Miyazaki
Matsuyama
Takamatsu
Tokushima
Wakayama
Hamamatsu
Shizuoka
Mito
Utsunomiya
Maebashi
Kofu
Nagano
Toyama
Fukui
Tottori
Matsue
Okayama
Hiroshima
Yamaguchi
Oita
Kochi
Naha
Loochoo Is.
Bonin Is.
Volcano Is.
Marcus I.
Iwo
Pagan
Agrigan
Guam
Saipan
Rota
Tinian
Yap
Palau Is.
Caroline Is.
Ponape
Kusaie
Ruk
Mortlock Is.
Marshall Is.
Jaluit
Ebon
Mille
Arno
Majuro
Wotje
Kwajalein
Gilbert Is.
Ocean I.
Nauru
Fanning I.
Christmas I.
Washington I.
Phoenix Is.
Hull I.
Sydney I.
Enderbury I.
Canton I.
Howland I.
Baker I.
Jarvis I.
Line Is.
Palmyra I.
Kingman Reef
Johnston I.
Wake I.
Midway Is.
Hawaiian Is.
Honolulu
Hilo
Kahului
Lahaina
Kealakekua
Kawaihae
Mauna Loa
Mauna Kea
Haleakala
Kilauea
Waimea
Lihue
Nihau
Kauai
Oahu
Molokai
Maui
Hawaii
Pearl Harbor
Diamond Head
Waikiki
Punchbowl
Kaneohe
Wahiawa
Schofield Barracks
Fort Shafter
Fort Ruger
Fort DeRussy
Fort Armstrong
Fort Kamehameha
Fort Weaver
Fort Barrette
Fort Hase

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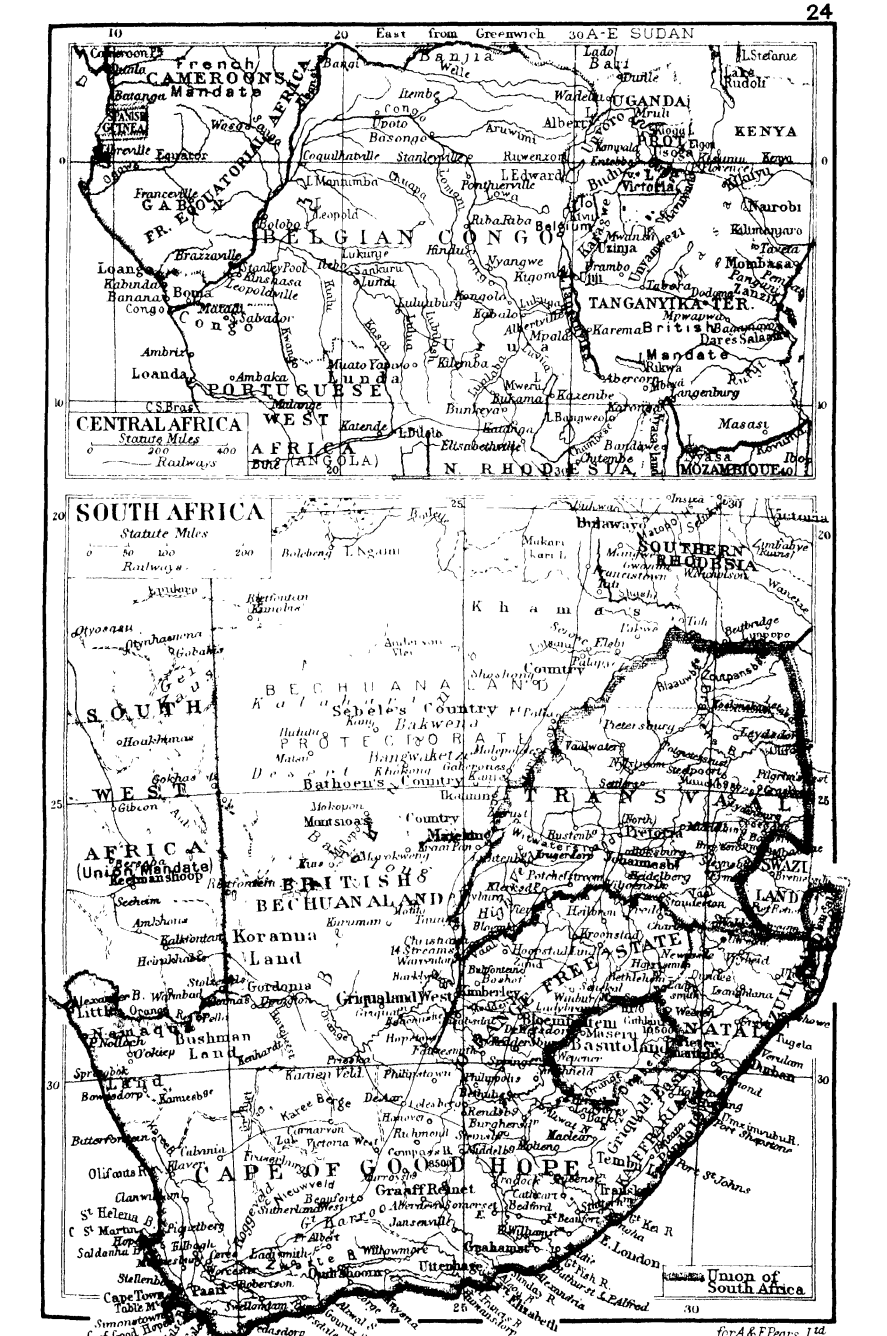
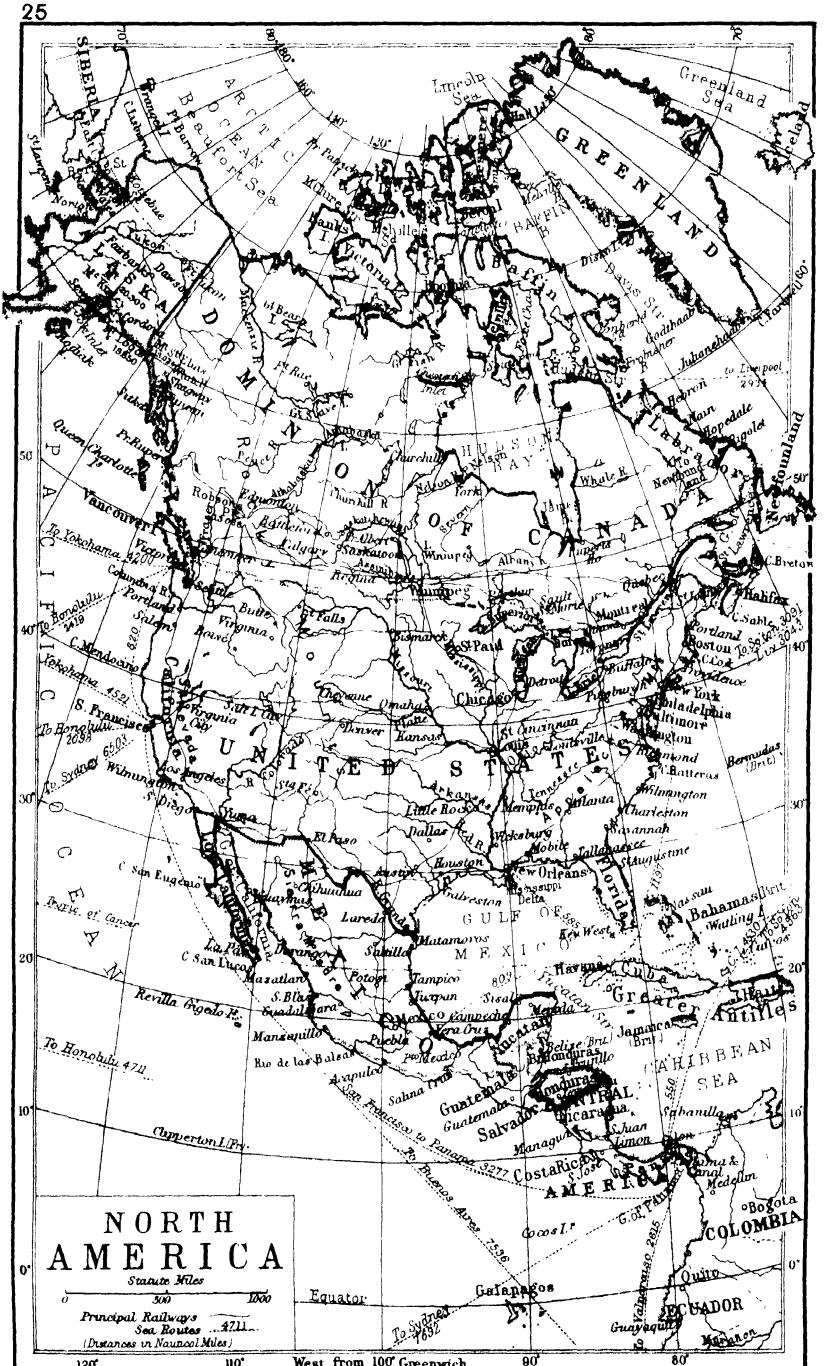
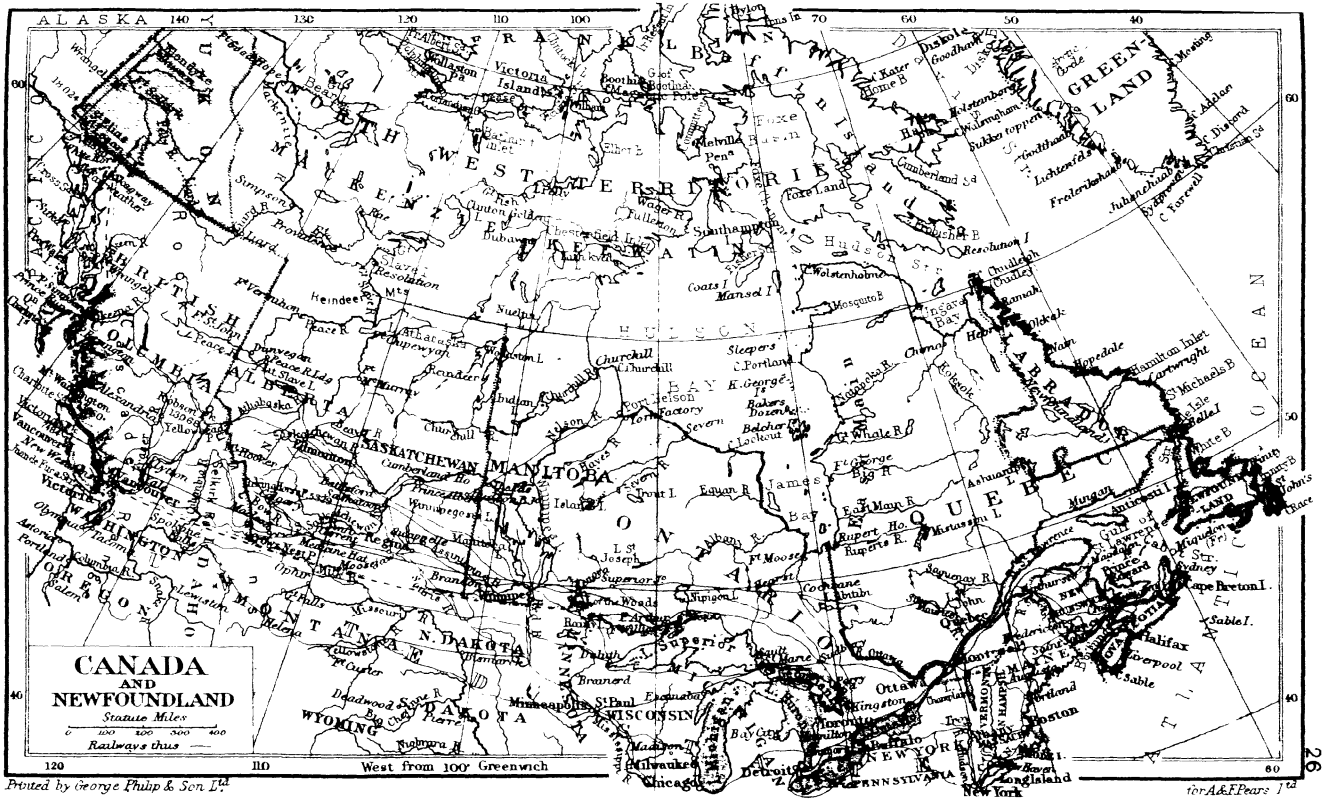

East from Greenwich
CENTRAL AFRICA
Statute Miles
Railways
SOUTH AFRICA
Statute Miles
Railways
French CAMEROONS
Mandate
FR. EQUATORIAL AFRICA
BELGIAN CONGO
PORTUGUESE WEST AFRICA (ANGOLA)
N. RHODESIA
S. RHODESIA
NYASALAND
MOZAMBIQUE
UGANDA
KENYA
TANGANYIKA TER.
British Mandate
Union of South Africa
BECHUANALAND PROTECTORATE
Bechuana Land
Khama's Country
Sebele's Country
Bathoen's Country
Montsioa's Country
Linchwe's Country
Moleopole's Country
Gaberones
Mafeking
Vryburg
Kuruman
Taungs
Kimberley
Griqualand West
Griqualand East
Basutoland
ORANGE FREE STATE
TRANSVAAL
NATAL
SWAZILAND
CAPE OF GOOD HOPE
Cape Town
Table Mt.
C. of Good Hope
Simonstown
Port Elizabeth
East London
Graaff Reinet
Victoria West
Calvinia
Namaqua Land
Bushman Land
Gordonia
Koranna Land
Griqualand West
Basutoland
Zambesi R.
Limpopo R.
Orange R.
Vaal R.
Victoria Falls
Lake Victoria
Lake Tanganyika
Lake Albert
Lake Edward
Lake Rudolf
Lake Nyasa
Lake Bangweolo
Lake Mweru
Lake Kivu
Lake Kioga
Lake Kyoga
Lake Ngami
Kilimanjaro
Mt. Elgon
Mt. Ruwenzori
Mt. Mlanje
Mt. Gorongoza
Mt. Chiradzulu
Mt. Milanje
Mt. Kenia
Mt. Aberdare
Mt. Meru
Mt. Kulal
Mt. Moroto
Mt. Debasien
Mt. Elgon
Mt. Ruwenzori
Mt. Kilimanjaro


NORTH AMERICA
Statute Miles
0 500 1000
Principal Railways
Sea Routes ... 4711...
(Distances in Nautical Miles)
Equator
West from 100° Greenwich
120° 110° 90° 80°
ARCTIC OCEAN
Beaufort Sea
Lincoln Sea
Greenland Sea
GREENLAND
Baffin Land
Hudson Bay
Davis Str.
Labrador
Newfoundland
DOMINION OF CANADA
Alaska
Yukon
Mackenzie R.
Great Slave L.
Great Bear L.
Athabasca L.
Winnipeg
Vancouver
Victoria
Seattle
Portland
San Francisco
Los Angeles
San Diego
Mexico
Guadalajara
Monterrey
Laredo
Brownsville
Matamoros
Tampico
Vera Cruz
Puebla
Acapulco
Yucatan
Campeche
Merida
Belize
Honduras
Guatemala
Salvador
Nicaragua
Managua
Costa Rica
San Jose
Panama
Panama Canal
Colon
Havana
Cuba
Jamaica
Greater Antilles
Lesser Antilles
Bahamas
Florida
Key West
Miami
Charleston
Savannah
Wilmington
Norfolk
Washington
Baltimore
Philadelphia
New York
Boston
Portland
Halifax
Sable I.
C. Breton
Bermudas (Brit.)
Hatteras
Chicago
St. Paul
Minneapolis
Duluth
Winnipeg
Regina
Calgary
Edmonton
Prince Rupert
Queen Charlotte Is.
Vancouver I.
Juan de Fuca Str.
Columbia R.
Rockies
Great Falls
Bismarck
Omaha
Denver
Kansas City
St. Louis
Cincinnati
Pittsburgh
Buffalo
Toronto
Montreal
Quebec
Ottawa
Kingston
Detroit
Cleveland
Niagara Falls
Lake Superior
Lake Michigan
Lake Huron
Lake Erie
Lake Ontario
Mississippi R.
Missouri R.
Ohio R.
Rio Grande
Colorado R.
Columbia R.
Yukon R.
Mackenzie R.
Nelson R.
Churchill R.
Saskatchewan R.
Red R.
Arkansas R.
Tennessee R.
Atlanta
Memphis
Little Rock
Dallas
Houston
New Orleans
Galveston
Vicksburg
Mobile
Tallahassee
Augustine
Wilmington
Charleston
Savannah
Bermuda
Hatteras
Baltimore
Washington
Philadelphia
New York
Boston
Portland
Halifax
Sable I.
C. Breton
Labrador
Newfoundland
Greenland
Baffin Land
Hudson Bay
Davis Str.
Lincoln Sea
Greenland Sea
Arctic Ocean
Beaufort Sea


CANADA
AND
NEWFOUNDLAND
Statute Miles
0 100 200 300 400
Railways thus
West from 100° Greenwich
ALASKA
BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
ONTARIO
QUEBEC
NEW BRUNSWICK
NOVA SCOTIA
NEWFOUNDLAND
LABRADOR
GREENLAND
HUDSON BAY
ATLANTIC OCEAN
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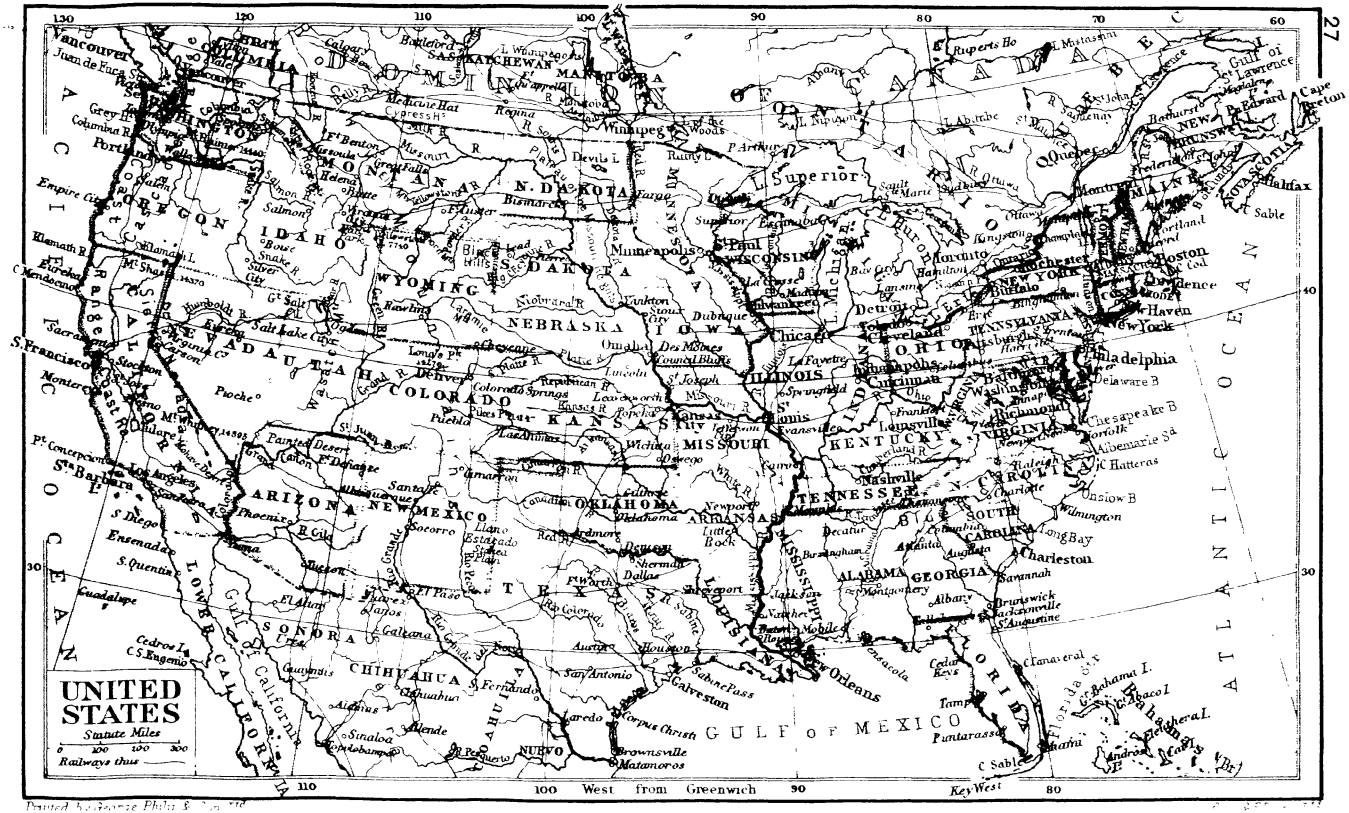
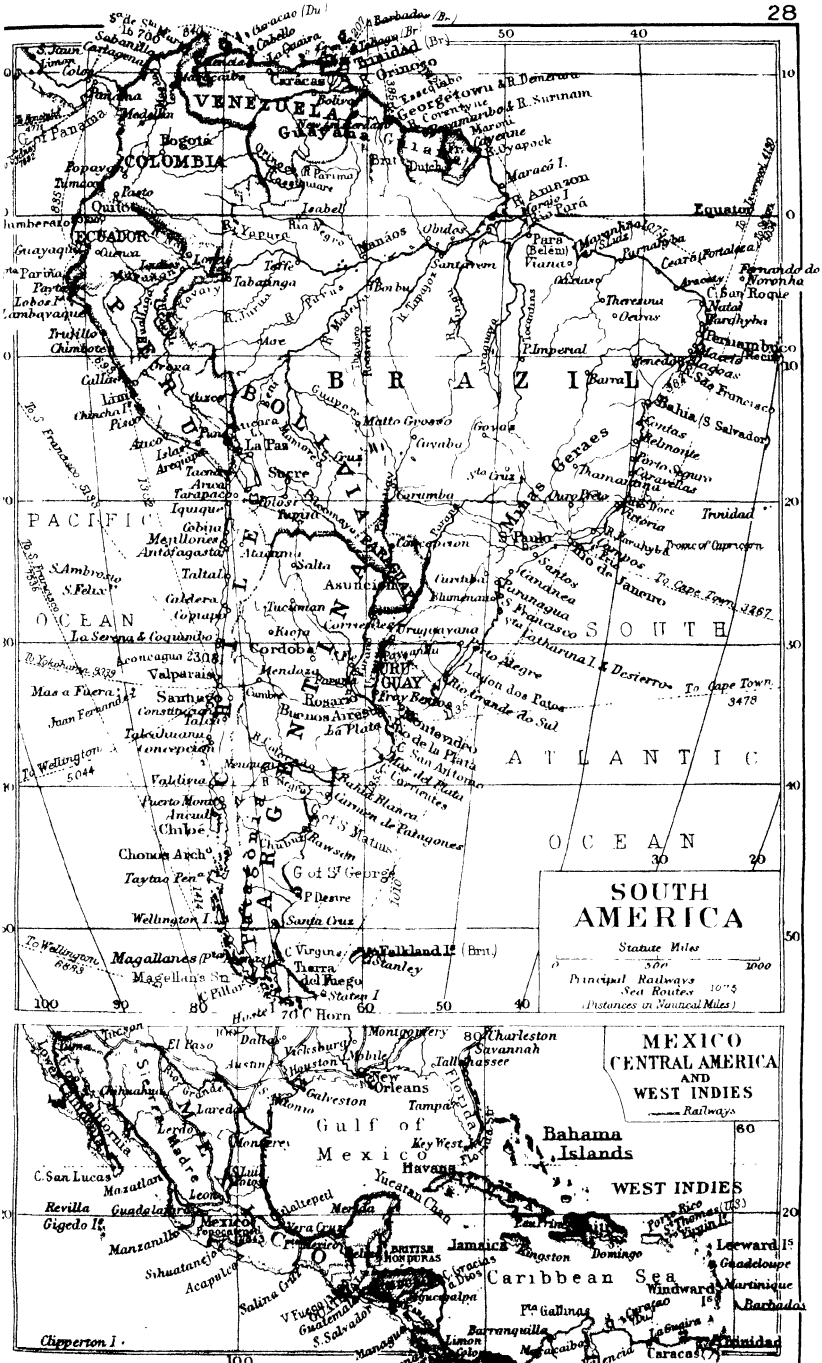

UNITED STATES
Statute Miles
0 100 200 300
Railways thus
Vancouver
Juan de Fuca
Portland
Columbia R.
Grey Bull
Columbia R.
Empire City
Klamath R.
Mendocino
Sacramento
S. Francisco
Stockton
Monterey
Pt. Conception
St. Barbara
Los Angeles
S. Diego
Ensenada
S. Quentin
Guadalupe
Cedros I.
C. S. Eugenio
Gulf of California
Gila R.
Colorado R.
Yuma
Mohave
Colorado Desert
Salton
Pt. Diablo
Mt. Shasta 14350
Mt. Hood 11225
Mt. Whitney 14898
Mt. Diablo 3876
Shasta
Humboldt R.
Humboldt L.
Carson R.
Carson L.
Salt Lake City
Great Salt L.
Bear R.
Weber R.
Provo
Uintah
Wasatch
Denver
Pueblo
Colorado Springs
Republican R.
Kansas R.
Topeka
Lawrence
Missouri R.
St. Joseph
Omaha
Council Bluffs
Lincoln
Platte R.
Niobrara R.
Yankton
Dubuque
Chicago
Springfield
Peoria
Quincy
Hannibal
St. Louis
Evansville
Louisville
Cincinnati
Columbus
Indianapolis
Toledo
Cleveland
Detroit
Erie
Buffalo
Rochester
Toronto
Hamilton
Kingston
Montreal
Quebec
Ottawa
Lake Superior
Lake Michigan
Lake Huron
Lake Erie
Lake Ontario
St. Lawrence
Gulf of St. Lawrence
Cape Breton
Halifax
Sable
Boston
Providence
New Haven
New York
Philadelphia
Baltimore
Washington
Delaware B.
Chesapeake B.
Albemarle Sd.
Pamlico Sd.
Hatteras
Richmond
Norfolk
Nashville
Memphis
Vicksburg
Natchez
Jackson
Little Rock
Fort Smith
Oklahoma
Shreveport
Dallas
Fort Worth
Austin
Houston
Galveston
San Antonio
Sabine Pass
Corpus Christi
Brownsville
Matamoros
Laredo
Nuevo
Monterey
Saltillo
Chihuahua
Sonora
Sinaloa
Mazatlan
Durango
Zacatecas
Guadalajara
Tepic
Mexico
Puebla
Vera Cruz
Tampico
Rio Grande
Rio Bravo
Rio Nazas
Rio Conchos
Rio Grande
Rio Colorado
Rio Gila
Rio Salado
Rio Verde
Rio Panuco
Rio Lerma
Rio Santiago
Rio Grijalva
Rio Usumacinta
Rio Tabasco
Rio Coatzacoalcos
Rio Papaloapan
Rio Mezcalapa
Rio Alvarado
Rio Tecolutla
Rio Tuxpan
Rio Soto la Marina
Rio Tamesi
Rio Guayalejo
Rio Tamiahua
Rio Jamapa
Rio Blanco
Rio Atoyac
Rio Mexcala
Rio Balsas
Rio Zacatula
Rio Ameca
Rio Grande de Santiago
Rio Lerma
Rio Chapala
Rio Verde
Rio Grande de Morelia
Rio Tepalcatepec
Rio Tepalcatepec
Rio Grande de Morelia

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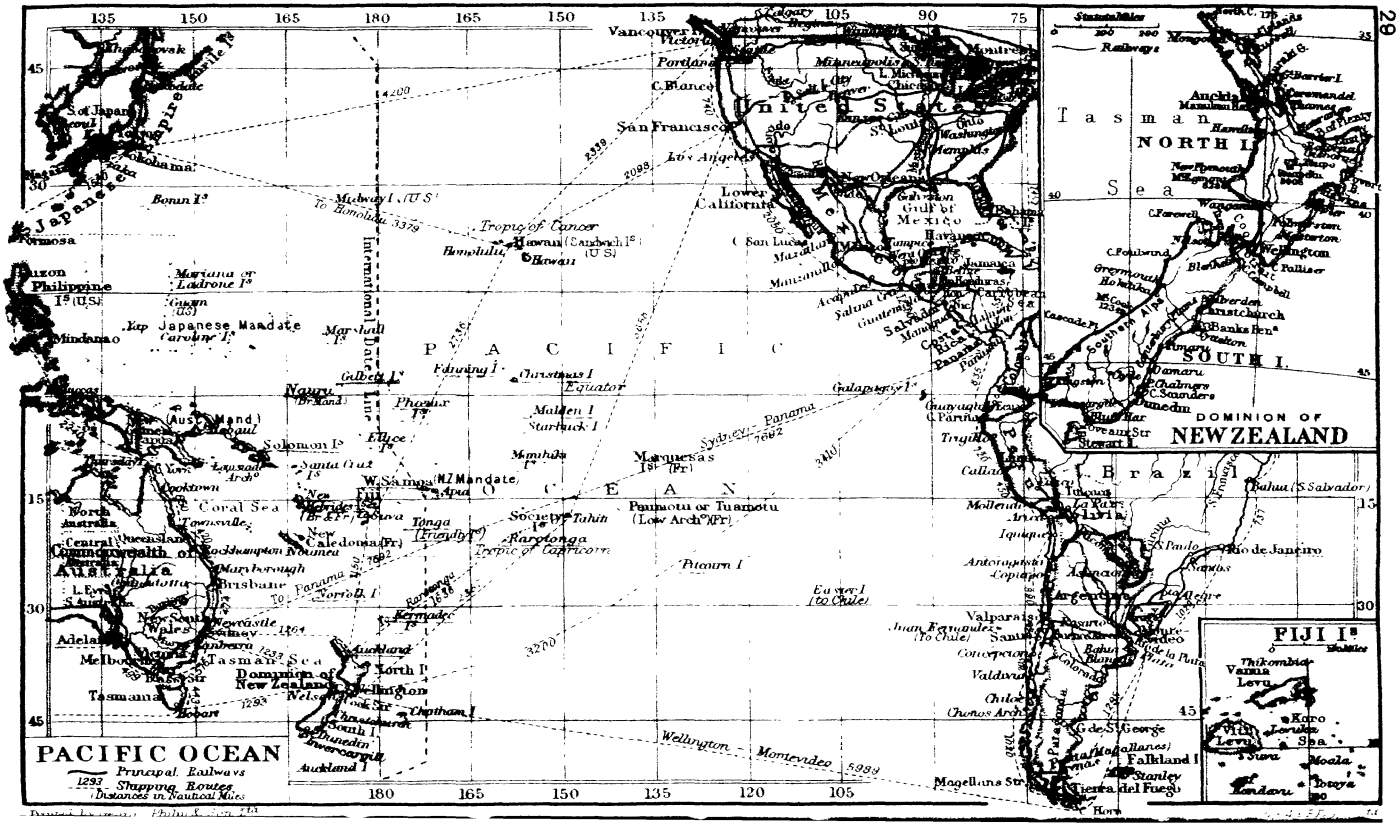
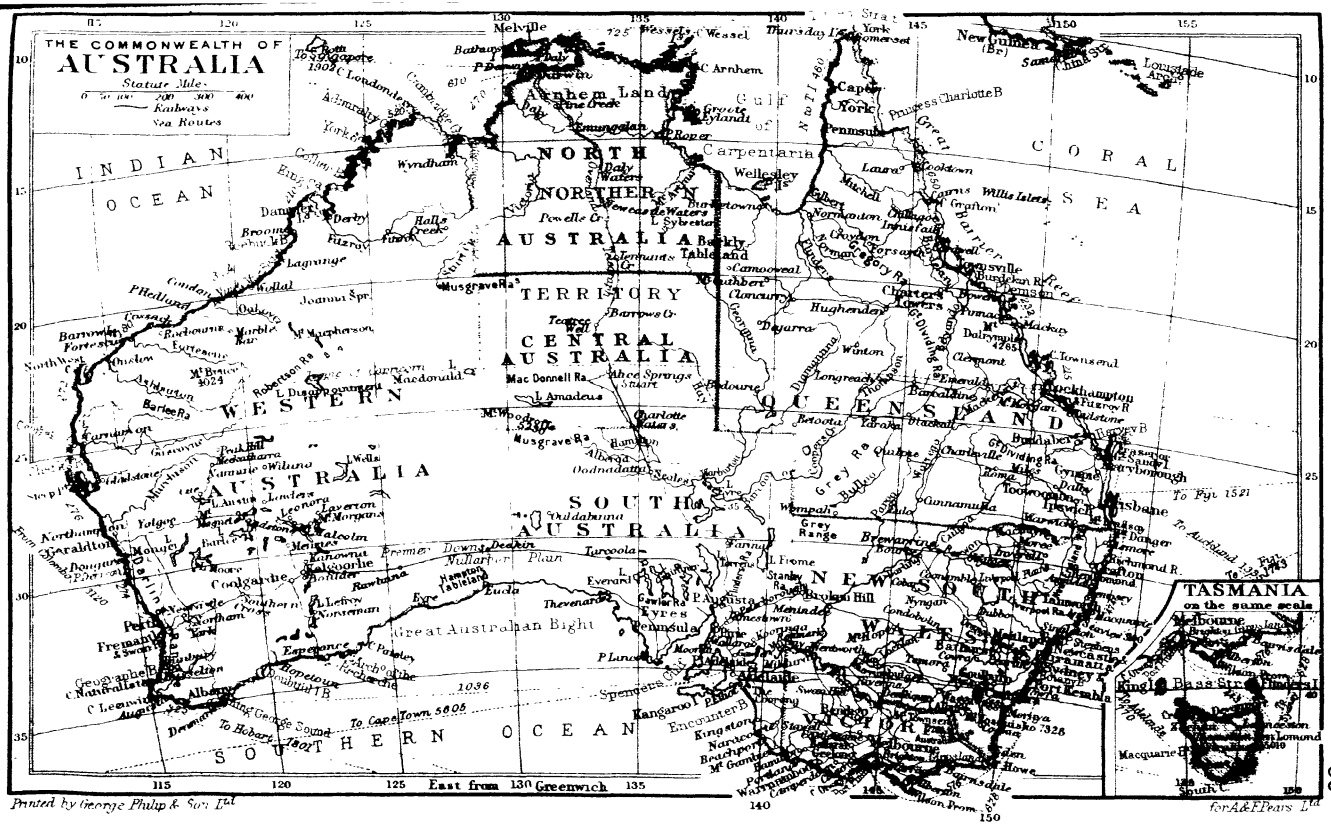
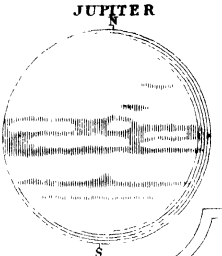
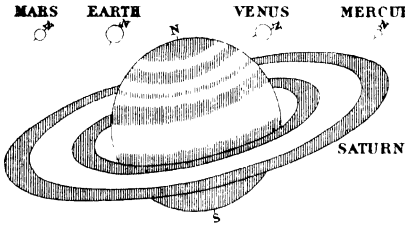

PACIFIC OCEAN
Principal Railways
1293 Shipping Routes
Distances in Nautical Miles
DOMINION OF
NEW ZEALAND
FIJI Is
Tasman Sea
NORTH I.
SOUTH I.
Japan Sea
United States
Mexico
Gulf of Mexico
Caribbean Sea
Brazil
Argentina
Chile
Philippine Is (U.S.)
Japanese Mandate
Marshall Is
Gilbert Is
Phoenix Is
Line Is
Solomon Is
New Caledonia (Fr)
Society Is
Tahiti
Marquesas Is (Fr)
Tuamotu or Paumotu (Low Archs) (Fr)
Easter I (to Chile)
Juan Fernandez (to Chile)
Galapagos Is
Hawaii (Sandwich Is) (U.S.)
Midway I. (U.S.)
Wake I
Guam (U.S.)
Mariana or Ladrone Is
Caroline Is
Yap
Mindanao
Luzon
Formosa
Japan
Sea of Japan
Yokohama
Kobe
Seoul
Fusan
Nagasaki
Peiping
Tientsin
Dairen
Port Arthur
Vladivostok
Hakodate
Bonin Is
Tropic of Cancer
Tropic of Capricorn
Equator
International Date Line
To Honolulu
To Panama
Sydney-Panama
Wellington-Montevideo
Magellans Str
Tierra del Fuego
Cape Horn
Falkland Is
Stanley
Vancouver
Victoria
Portland
San Francisco
Los Angeles
San Diego
Lower California
San Luciano
Mazatlan
Manzanillo
Acapulco
Salina Cruz
Guatemala
Salvador
Nicaragua
Costa Rica
Panama
Colombia
Guayaquil
Callao
Lima
Iquique
Antofagasta
Coquimbo
Valparaiso
Santiago
Concepcion
Valdivia
Chiloe
Chonos Archs
Trinidad
Bahia (S Salvador)
Rio de Janeiro
Santos
Sao Paulo
Montevideo
Buenos Aires
La Plata
Bahia Blanca
Rosario
Cordoba
Mendoza
Tucuman
Jujuy
Salta
Asuncion
Corumba
Manaos
Iquitos
Trujillo
Maracaibo
Caracas
Barranquilla
Cartagena
Havana
Jamaica
Haiti
Puerto Rico
Bermuda
Nassau
Miami
Tampa
Key West
New Orleans
Galveston
Houston
Memphis
St Louis
Chicago
Minneapolis
Winnipeg
Calgary
Edmonton
Prince Rupert
Queen Charlotte Is
Alaska
Aleutian Is
Honolulu
Hawaii
Samoa
Fiji Is
Tonga (Friendly Is)
Rarotonga
Pitcairn I
Kermadec Is
Norfolk I
Lord Howe I
New Hebrides
Solomon Is
Santa Cruz Is
Ellice Is
Gilbert Is
Nauru
Malden I
Starbuck I
Christmas I
Fanning I
Suva
Apia
W. Samoa (N.Z. Mandate)
Noumea
Brisbane
Sydney
Melbourne
Adelaide
Perth
Fremantle
Hobart
Launceston
Canberra
Newcastle
Townsville
Rockhampton
Cooktown
Thursday I
Torres Str
Coral Sea
Great Barrier Reef
Arafura Sea
Timor Sea
Gulf of Carpentaria
Great Australian Bight
Spencer Gulf
Gulf St Vincent
Port Augusta
Port Pirie
Broken Hill
Kalgoorlie
Coolgardie
Esperance
Albany
Geraldton
Carnarvon
Darwin
Port Darwin
Port Essington
Groote Eylandt
Melville I
Bathurst I
Cape York
Torres Str
Thursday I
Cooktown
Townsville
Rockhampton
Brisbane
Sydney
Newcastle
Canberra
Melbourne
Adelaide
Port Augusta
Port Pirie
Broken Hill
Perth
Fremantle
Albany
Esperance
Kalgoorlie
Coolgardie
Geraldton
Carnarvon
Darwin
Port Darwin
Port Essington
Groote Eylandt
Melville I
Bathurst I
Auckland
Wellington
Lyttelton
Christchurch
Dunedin
Invercargill
Bluff Harbour
Stewart I
Foveaux Str
Cook Str
Cape Farewell
Westport
Greymouth
Hokitika
Nelson
Blenheim
Picton
Wanganui
New Plymouth
Napier
Gisborne
Hamilton
Auckland
Whangarei
Kaipara Harbour
Manukau Harbour
Waitemata Harbour
Bay of Islands
Cape Reinga
Kaikoura
Timaru
Oamaru
Otago Harbour
Port Chalmers

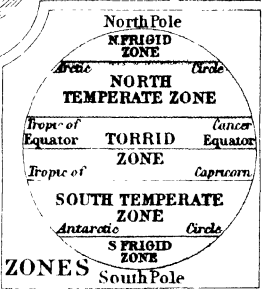

THE COMMONWEALTH OF
AUSTRALIA
Statute Miles
Railways
Sea Routes
INDIAN
OCEAN
SOUTHERN
OCEAN
CORAL
SEA
NORTHERN
TERRITORY
CENTRAL
AUSTRALIA
WESTERN
AUSTRALIA
SOUTH
AUSTRALIA
QUEENSLAND
NEW SOUTH
WALES
VICTORIA
Arnhem Land
Gulf of Carpentaria
Great Australian Bight
Musgrave Ras
Mac Donnell Ra
Alice Springs
Darwin
Melville
Groote Eylandt
C Arnhem
Wyndham
Halls Creek
Broome
Derby
Port Hedland
Carnarvon
Geraldton
Perth
Fremantle
Albany
Kalgoorlie
Coolgardie
Esperance B
Eucla
Ayers Rock
Lake Eyre
Lake Torrens
Lake Frome
Lake Gairdner
Lake Amadeus
Lake Mackay
Lake Nash
Lake Callabonna
Lake Eyre
Lake Torrens
Lake Frome
Lake Gairdner
Lake Amadeus
Lake Mackay
Lake Nash
Lake Callabonna
Cape York
Princess Charlotte B
Great Barrier Reef
Gulf of Carpentaria
Normanton
Cloncurry
Mt Isa
Townsville
Mackay
Rockhampton
Gladstone
Brisbane
Toowoomba
Charleville
Longreach
Winton
Boulia
Birdsville
Thursday I
Horn I
Torres Str
New Guinea (Br)
Louisiade Arch
Willis Islets
Grafton
Coffs Harbour
Port Macquarie
Newcastle
Sydney
Wollongong
Canberra
Albury
Wagga Wagga
Griffith
Deniliquin
Mildura
Swan Hill
Bendigo
Ballarat
Melbourne
Geelong
Warrnambool
Portland
Mt Gambier
Port Pirie
Port Augusta
Whyalla
Port Lincoln
Ceduna
Eyre Pen
Kangaroo I
Encounter B
Spencer G
St Vincent G
Great Australian Bight
Nullarbor Plain
Hampton Tableland
Darling Range
Murchison R
Gascoyne R
Ashburton R
Fortescue R
Roebourne
Onslow
Carnarvon
Shark B
Exmouth G
Dampier Arch
Barrow I
Montebello Is
Lacepede Is
Ashmore Is
Cartier I
Scott Reef
Timor Sea
Arafura Sea
Gulf of Carpentaria
Coral Sea
Tasman Sea
Bass Str
King I
Flinders I
Furneaux Group
Tasmania
on the same scale
Hobart
Launceston
Devonport
Strahan
Queenstown
Macquarie Harbour
Port Arthur
Ross
Oatlands
Campbell Town
Deloraine
Wynyard
Smithton
Stanley
Cape Grim
Waratah
Zeehan
Rosebery
Mole Creek
Sheffield
Latrobe
Ulverstone
Penguin
Burnie
Table Cape
Circular Head
Port Sorell
Beaconsfield
Scottsdale
George Town
Low Head
Bicheno
Swansea
Triabunna
Orford
Sorell
Richmond
Brighton
Bothwell
New Norfolk
Huonville
Cygnet
Dover
Geeveston
Southport
Recherche Arch
Esperance B
Albany
Geographe B
Leeuwin C
Naturaliste C
Cape Leeuwin
Cape Naturaliste
Cape Mentelle
Cape Clairault
Cape Hamelin
Cape Peron
Rottnest I
Garden I
Shoalwater B
Cockburn Sd
Warnbro Sd
Mandurah
Bunbury
Busselton
Augusta
Flinders B
Hopetoun
Ravensthorpe
Norseman
Kalgoorlie
Coolgardie
Menzies
Leonora
Laverton
Wiluna
Meekatharra
Mt Magnet
Cue
Mt Morgans
Mt Sir Samuel
Mt Leonora
Mt Margaret
Mt Malcolm
Mt Keith
Mt Weld
Mt Ida
Mt Jackson
Mt Monger
Mt Burges
Mt Barker
Mt Gardner
Mt Hart
Mt Hay
Mt Hann
Mt Hardman
Mt Hedland
Mt Hedland
Mt Hedland

# THE EIGHT GREAT PLANETS
## ON A UNIFORM SCALE

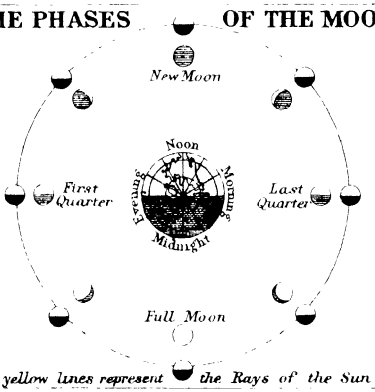
| Planet | Mean Diameter | Anal Rotation H M S | Inclination of Equator to Ecliptic |
|---|---|---|---|
| Neptune | 32900 | | 35°? |
| Uranus | 31900 | | 101°? |
| Saturn | 71000 | 10 14 0 | 28°10′ |
| Jupiter | 86500 | 9 55 0 | 3° 5′ |
| Mars | 4200 | 24 37 33 | |
| Earth | 7913 | 23.56. 4 | 23°28′ |
| Venus | 7600 | 224·7 *Days* ? | |
| Mercury | 3030 | 87·9 *Days* ? | |

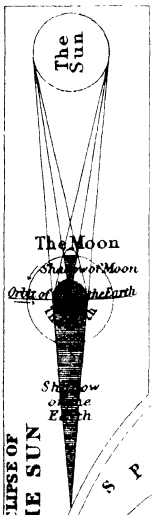




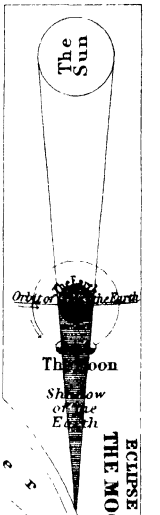




# THE PHASES OF THE MOON



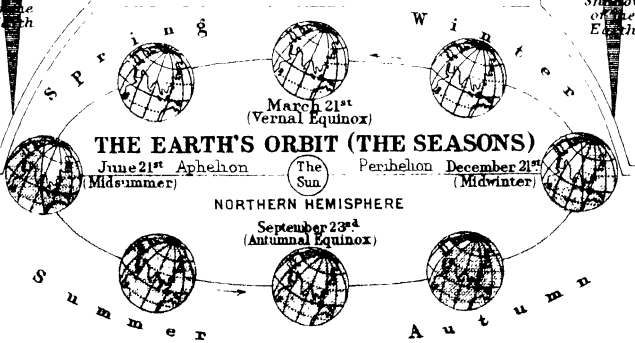




ECLIPSE OF THE SUN




ECLIPSE OF THE MOON

# THE EARTH'S ORBIT (THE SEASONS)

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# ENGLISH DICTIONARY

PEARS—THE PURE SOAP

*For particulars of Pears Famous Toilet Preparations turn to end of Book*

# Pears' New Dictionary of the English Language

## EXPLANATIONS

**Arrangement.**—The words are given in alphabetical order.
**Spelling.**—The most current form of English spelling is adopted.
**Meanings.**—The most usual meaning is given first, with variants following where necessary.
**Pronunciation.**—The pronunciation is given after each word, the different vowel-sounds being indicated by marks over them. Thus—

ā is pronounced as in day, mate.
ă is pronounced as in at, fan, fad.
ä is pronounced as in arm, father, half.
ē is pronounced as in eve, me.
ĕ is pronounced as in elk, mend.
ê is pronounced as in where, there.
ī is pronounced as in ice, tide.
ĭ is pronounced as in pin, pit.
ī is pronounced as in machine.
ō is pronounced as in old, bold.
ŏ is pronounced as in odd, pot.
ô is pronounced as in storm, stork.
ū is pronounced as in mute, tube.
ŭ is pronounced as in up, tub.
û is pronounced as in burn, urge.

*th* soft as in forth.
th hard as in then.

Consonant pronunciations are for the most part unvarying.
The pronunciation of short simple words was not deemed necessary to be given.
**Accent.**—The accented syllable of a word is marked thus: ′ on the pronunciation spelling.
**Grammatical Classification.**—Immediately after each word its grammatical classification is indicated by the following abbreviations:—

adj. ..... adjective.
adv. ..... adverb.
con. ..... conjunction.
excl. ..... exclamation.
n. ..... noun.
prep. ..... preposition.
pron. ..... pronoun.
v. ..... verb.

## A

**Abacus,** ab′a-kus, *n.* a counting board.
**Abaft,** *adv.* the stern part of a ship.
**Abandon,** a-ban′dun, *v.* to forsake.
**Abandoned,** a-ban′dund, *adj.* deserted; wicked.
**Abase,** ă-bās′, *v.* to cast down; to humiliate.
**Abasement,** a-bās′ment, *n.* humiliation
**Abash,** a-bash′, *v.* to cause shame.
**Abate,** ă-bāt′, *v.* to lessen.
**Abatis,** a′bat-is, *n.* barricade of felled trees.
**Abattoir,** a-bat-wâr′, *n.* public slaughter-house.
**Abbess,** abb′ess, *n.* the head of a convent.
**Abbot,** ab′ut, *n.* the head of an abbey.
**Abbreviate,** ab-brē′vi-āt, *v.* to abridge; to shorten.
**Abdication,** ab-di-kā′shun, *n.* renouncing office.
**Abdomen,** ab-dō′men, *n.* lower part of belly.
**Abduct,** ab-dukt′, *v.* to carry off by force.
**Abduction,** ab-dŭk′shun, *n.* carrying off.
**Aberration,** ab-ĕr-ā′shun, *n.* wandering from right.
**Abet,** a-bet′, *v.* to be accessory to.
**Abeyance,** a-bā′ans, *n.* held in suspense.
**Abhorrence,** ab-hor′rens, *n.* great hatred.
**Abide,** a-bīd′, *v.* to wait for; to dwell.
**Ability,** a-bil′i-ti, *n.* skill, power.
**Abjectness,** ab-jekt′ness, *n.* low condition.
**Abjure,** ab-jūr′, *v.* to repudiate solemnly.
**Ablation,** ab-lā′shun, *n.* wearing away by water action.
**Abnegate,** ab′ne-gāt, *v.* to renounce.
**Abnormal,** ab-nor′mal, *adj.* contrary to rule.
**Abolish,** ab-ol′ish, *v.* to do away with
**Abolition,** ab-o-lish′un, *n.* doing away with.
**Abominable,** ab-om′in-ăbl, *adj.* hateful.
**Abominate,** ab-om′in-āt, *v.* to detest.
**Aboriginal,** ab-o-rij′in-al, *adj.* primitive, native.
**Aborigines,** ab-o-rij′in-ēz, *n.* a country's first inhabitants.
**Abortion,** ab-or′-shun, *n.* premature birth.
**Abortive,** ab-or′tiv, *adj.* immature, untimely.
**Abound,** a-bownd′, *v.* to be plenteous.
**About,** a-bowt′, *prep.* near to, around.
**Abrade,** ab-rād′, *v.* to rub off.
**Abridgment,** a-brij′-mĕnt, *n.* a shortening.
**Abrogate,** ab′ro-gāt, *v.* to repeal, or annul.
**Abrupt,** a-brupt′, *adj.* sudden.
**Abscess,** ab′ses, *n.* a collection of pus or matter.
**Abscond,** abs-kond′, *v.* to escape secretly.
**Absent,** abs′-ĕnt, *n. adj.* not present; inattentive.
**Absent,** abs′ent, *v.* to keep away.
**Absentee,** ab-sent-ē′, *n.* one who is absent.
**Absolute,** ab′sol-ūt, *adj.* without condition.
**Absoluteness,** ab-so-lūt′ness, *n.* completeness.
**Absolution,** ab-so-lū′shun, *n.* remission.
**Absolutism,** ab-so-lūt′ism, *n.* government without restriction.
**Absolve,** ab-sŏlv′, *v.* to acquit.
**Absorb,** ab-sorb′, *v.* swallow up.
**Absorption,** ab-sorp′shun, *n.* the act of absorbing.
**Abstain,** abs-tān′, *v.* to refrain from.
**Abstemious,** abs-tē′mi-us, *adj.* moderate.
**Abstinent,** abs′tin-ent, *adj.* abstaining from.
**Abstract,** abs-trakt′, *v.* to remove; to condense.
**Abstraction,** abs-trăk′shun, *n.* act of abstracting; absent-mindedness.
**Abstruse,** abs-troos′, *adj.* difficult to comprehend.
**Absurd,** ab-surd′, *adj.* unreasonable.
**Abundant,** ab-und′ant, *adj.* plentiful.
**Abuse,** ab-ūs, *n.* wrongful use.
**Abut,** a-but′, *v.* to adjoin; to end.
**Abutment,** a-but′ment, *n.* that which adjoins.
**Abyss,** a-bis′, *n.* a bottomless chasm.
**Acacia,** a-kā′-shi-a, *n.* a leguminous plant.
**Academy,** a-kăd′e-mi, *n.* a higher school; a society for the advancement of art or science.
**Acadian,** a-kā-di-an, *adj.* native to Nova Scotia.
**Acanthus,** a-kan′thus, *n.* a prickly plant; an architectural ornament.
**Accede,** ak-sēd′, *v.* to agree.
**Accelerate,** ak-sel′er-āt, *v.* to put on speed.
**Accent,** ak′sent, *n.* voice emphasis.
**Accentuation,** ak-sent-ū-ā′shun, *n.* marking accents.
**Accept,** ak-sept′, *v.* to receive or to agree to.

**Acceptable,** ak-sept'a-bl, *adj.* agreeable.
**Acceptance,** ak-sept'ance, *n.* agreement; an accepted bill.
**Access,** ak'ses, *n.* right of approach; increase.
**Accessory,** ak-ses'o-rĭ, *adj.* additional; aiding.
**Accession,** ak-sesh'ŭn, *n.* succeeding to; increase.
**Accident,** ak'sĭd-ent, *n.* a chance occurrence.
**Acclamation,** ak-lam-ā'shun, *n.* shout of approval.
**Acclimatise,** ak-lī'mat-īz, *v.* to become seasoned to a foreign climate.
**Acclivity,** ak-lĭv'ĭt-ĭ, *n.* rising ground.
**Accommodate,** ak-om'ō-dāt, *v.* to entertain; to adapt.
**Accommodating,** ak-om'ō-dāting, *adj.* obliging.
**Accompanist,** akŭm'pan-ist, *n.* that which goes along with; instrumental aid to vocal solo.
**Accompany,** ak-um'pan-ĭ, *v.* to go with.
**Accomplice,** ak-om'plis, *n.* companion in crime.
**Accomplish,** ak-kom'plish, *v.* to complete.
**Accomplishment,** *n.* completion; special ability.
**Accord,** ak-kôrd', *v.* in agreement.
**Accordance,** ak-kôrd'ans, *n.* harmony.
**Accordion,** ak-kor'dĭ-on, *n.* a keyed bellows instrument.
**Accost,** ak-kost', *n.* to speak to.
**Account,** ak-kownt', *v.* to reckon; *n.* statement.
**Accountable,** ak-kownt'a-bl, *adj.* responsible.
**Accountant,** ak-kownt'ant, *n.* one skilled in accounts.
**Accoutre,** ak-koo'ter, *v.* to equip.
**Accoutrements,** ak-koo'ter-ments, *n.* war equipments.
**Accredit,** ak-kred'ĭt, *v.* to authorise.
**Accretion,** ak-krē'shun, *n.* the process of growing.
**Accrue,** ak-kroo', *v.* to be added.
**Accumulate,** ak-kūm'ūl-āt, *v.* to pile together.
**Accuracy,** ak-kūr-as-ĭ, *n.* precision, correctness.
**Accurate,** ak'ūr-āt, *adj.* free from error.
**Accursed,** ak-kurs'ed, *adj.* under a curse; wicked.
**Accuse,** ak-kūz', *v.* to blame; to charge.
**Accustom,** ak-kust'um, *v.* to render familiar.
**Ace,** ās, *n.* the one sign on dice, cards, etc.
**Acephalous,** a-sef'a-lŭs, *adj.* headless.
**Acerbity,** as-ĕr'bĭ-tĭ, *n.* bitterness.
**Acetify,** as-ĕt'ĭ-fī, *v.* to turn sour.
**Acetopathy,** as-et-op'ă-*thi*, *n.* treatment by acetic acid.
**Acetous, Acetic,** *adj.* a quality of sourness.
**Achievement,** a-chēv'ment, *n.* something accomplished.
**Achromatic,** ak-ro-mat'ĭk, *adj.* colourless.
**Acid,** as'ĭd, *adj.* sour.
**Acidify,** as-ĭd-ĭf-ĭ, *v.* to make acid.
**Acidulate,** as-ĭd'-ū-lāt, *v.* to turn slightly sour.
**Aciform,** as'ĭ-form, *adj.* needle-shaped.
**Acknowledgment,** ak-nol'ĕj-ment, *n.* admission, confession.
**Acme,** ak'mē, *n.* the supreme point.
**Acne,** ak'nē, *n.* pimple.
**Acolyte,** ak'o-līt, *n.* church attendant.
**Aconite,** ak'o-nīt, *n.* monk's hood.
**Acorn,** ā'korn, *n.* seed of the oak.
**Acoustics,** ak-ows'tĭks, *n.* science of sounds.
**Acquaint,** ak-wānt', *v.* to inform.
**Acquaintance,** ak-wānt'ance, *n.* knowledge; a friend.
**Acquiesce,** ak-wĭ-ĕs', *v.* to agree to.
**Acquirement,** ak-wīr'ment, *v.* something learned.
**Acquisitiveness,** ak-wiz'ĭtiv-ness, *n.* desire to acquire.
**Acquit,** ak-wĭt', *v.* to release.
**Acquittal,** ak-wĭt'al, *n.* judicial release.
**Acquittance,** ak-wĭt'ance, *n.* a discharge.
**Acre,** ā'ker, *n.* 4,840 sq. yds.
**Acrid,** ak'rĭd, *adj.* biting.
**Acrimony,** ak'rĭ-mūni, *n.* bitterness of speech or thought.
**Acroamatic,** ak-ro-ă-mat'ĭk, *adj.* secret; select.
**Acropolis,** ak-ro'po-lis, *n.* a citadel.
**Acrostic,** ak-ros'tik, *n.* poem of which the initial letters of each line form a word.
**Act, akt,** *v.* to perform; to feign; *n.* deed; a section of a play.
**Actinism,** ak'tin-izm, *n.* chemical force of sun's rays.
**Action,** ak'shun, *n.* activity; battle; lawsuit.
**Actionable,** ak'shun-abl, *adj.* liable to legal proceedings.
**Activate,** ak'tiv-āt, *v.* to render active.
**Actor, Actress,** *n.* stage player.
**Actual,** akt'ū-al, *adj.* real.
**Actuary,** akt'ū-ar-ĭ, *n.* clerk; insurance officer.
**Actuate,** akt'ū-āt, *v.* to influence.
**Aculeated,** ak-ul-e-āt'ed, *adj.* pointed.
**Acumen,** ak-ū'men, *n.* quick perception.
**Acuminate,** ak-ū'min-āt, *adj.* taper pointed.
**Acupressure,** ak-ū-presh'ūr, *n.* closing bleeding artery with needle.
**Acute,** ak-ūt', *adj.* keen.
**Adage,** ad'āj, *n.* proverb.
**Adagio,** ad-ā'jē-o, *adv.* slow movement in music.
**Adamant,** ad'a-mant, *n.* diamond; very hard stone.
**Adapt,** ad-apt', *v.* to fit.
**Adaptable,** *adj.* that may be adapted.
**Add,** *adv.* to put one thing to another.
**Addenda,** ad-den'da, *n.* plural of addendum.
**Addendum,** ad-den'dum, *n.* something to be added.
**Adder,** *n.* venomous snake.
**Addicted,** ad-ĭkt'ed, *adj.* devoted to
**Addition,** ad-ish'un, *n.* the act of adding.
**Add'le, Add'led,** *adj.* putrid; empty.
**Add'le-headed,** *adj.* empty-brained.
**Address,** ad-dress', *v.* to speak or write to.
**Adduce,** ad-ūs', *v.* to quote.
**Adept,** ad-ept', *n.* a proficient.
**Adequate,** ad'ē-kwāt, *adj.* sufficient.
**Adhere,** ad-hēr', *v.* to stick to; to be unshaken.
**Adher'ent,** *adj.* sticking to; *n.* a follower.
**Adhesive,** ad-hē'sĭv, *adj.* sticky.
**Adieu,** a-dū, *adv.* farewell.
**Adipose,** ad'ĭ-poz, *adj.* fatty.
**Adit,** ad'ĭt, *n.* horizontal opening into mine.
**Adjacent,** ad-jā'sent, *adj.* near.
**Adjective,** ad'ject-ĭv, *n.* a noun-qualifying word.
**Adjoin,** ad-join', *v.* to be next to.
**Adjourn,** ad-jurn', *v.* to postpone.
**Adjudge,** ad-jŭdj', *v.* to decide; sentence.
**Adjudicate,** ad-joo'dĭ-kāt, *v.* to pronounce judicially.
**Adjure,** ad-jūr', *v.* to charge on oath.
**Adjust,** ad-just', *v.* to regulate.
**Adjustment,** *n.* settlement.
**Adjutant,** ad'ju-tant, *n.* military officer.
**Administer,** ad-min'-is-ter, *v.* to manage.
**Administration,** ad-min'-is-trā'shun, *n.* act of administration.
**Administrator,** ad-min-is-trā'ter, *n.* one who controls.
**Admirable,** ad'mer-abl, *adj.* worthy of approval.
**Admiral,** ad'mer-al, *n.* naval commander.
**Admiralty,** ad'mer-al-tĭ, *n.* board for conducting naval affairs.
**Admire** ad-mir', *v.* to have in high regard.
**Admissible,** ad-mis'sibl, *adj.* allowable.
**Admission,** ad-mish'un, *n.* the thing admitted; leave to enter.
**Admit,** *v.* to let in; to concede.
**Admix,** *v.* to mix.
**Admixture,** ad-mix'tūr', the thing added.
**Admon'ish,** *v.* to reprove.
**Ado,** a-doo', *n.* fuss; difficulty.
**Adobe,** a-dō'bā, *n.* sun-dried brick.
**Adolescence,** ad-o-les'ens, *n.* the time of youth.
**Adore,** a-dōr', *v.* to worship.
**Adorn,** a-dōrn', *v.* to ornament or embellish.
**Adrift,** a-drift', *adj.* or *adv.* floating at random.
**Adroit,** ad-raw'ĭt, *adj.* dexterous.
**Adulation,** ad-ū-lā'-shun, *n.* flattery.
**Adult,** ad-ŭlt', *adj.* mature.
**Adulterate,** a-dult'-er-āt, *v.* to mix with impurity.
**Adultery,** a-dult'er-ĭ, *n.* marital infidelity.
**Adumbrate,** ad-um'brāt, *v.* to shadow faintly.
**Advance,** ad-vans', *v.* to go forward; promote.
**Advantage,** ad-vant'āj, *n.* superiority; gain.
**Advene,** ad'vēn', *v.* to accede.
**Ad'vent,** *n.* coming; the four weeks preceding Christmas.
**Adventitious,** ad-vent-ish'us, *adj.* additional; casual.
**Adventure,** ad-vent'ūr, *n.* risk; enterprise; surprising incident.
**Ad'verb,** *n.* a word modifying a verb, adjective, or other adverb.
**Adversary,** ad'ver-ser-ĭ, *n.* an enemy or opponent.
**Adversative,** ad-vers'ă-tiv, *adj.* contrary; opposed.
**Adverse,** ad'vers, *adj.* in opposition; contrary.
**Adversity,** ad-vers'ĭt-ĭ, *n.* misfortune.
**Advert',** ad-vert', *v.* to refer to.
**Advertency,** ad-vert'en-sĭ, *n.* attention to.
**Advertise,** ad'ver-tīz, *v.* to notify publicly.
**Advertisement,** ad-vert'is-ment, *n.* public notification.
**Advertiser,** ad-ver-tīz'er, one who advertises.
**Advice,** ad-vīs', *n.* counsel; notice.

**Advise,** ad-vīz', *v.* to give counsel to.
**Advisedly,** ad-vis'ed-li, *adv.* deliberately.
**Advocate,** ad'vo-kāt, *n.* one who pleads for.
**Advowee,** ad-vow'ī, *n.* one possessing an advowson.
**Advowson,** ad-vow'sun, *n.* right of presentation to a church living.
**Adytum,** ad'i-tum, *n.* sacred part of temple or church.
**Adz, or Adze,** *n.* a carpenter's tool.
**Ægis,** ē'jis, *n.* shield; protection.
**Ægrotat,** ē'grō-tāt, *n.* certificate of illness.
**Aerate,** ā-er-āt', *v.* to mix with air.
**Aerial,** ā-ē'rial, *n.* pertaining to the air.
**Aerie, ā'ri** or ē'ri, *n.* nest of bird of prey.
**Aeriform,** ā'er-i-form, *adj.* of the nature of air or gas.
**Aerify,** ā'er-if-i, *v.* to combine or fill with air.
**Aerodrome,** ā'-ēr-ō-drōm, *n.* a machine-flying course.
**Aerolite,** ā'er-o-līt, *n.* meteoric stone.
**Aeromancy,** ā-er-om'ansi, *n.* divination by air.
**Aerometry,** ā-er-om'e-tri, *n.* science of air measurement.
**Aeronaut,** ā'er-o-nawt, *n.* professional balloonist.
**Aeronautics,** ā-er-o-naw'tiks, *n.* the science of air navigation.
**Aeroplane,** ā'ēr-ō-plān, *n.* a flying machine with plane or planes.
**Aerostatics,** ā-er-o-stat'iks, *n.* the science of elastic fluids or air equilibrium.
**Æsthetics,** ēs-*th*et'iks, *n.* science of taste and beauty.
**Affable,** af'fă-ble, *adj.* agreeable; easy mannered.
**Affair,** af-fār, *n.* business; transaction.
**Affect,** af-fekt', *v.* to influence; to move; to pretend.
**Affectation,** af-fekt-ā'shun, *n.* artificiality; pretence.
**Affecting,** af-fek'ting, *adj.* moving; touching.
**Affiance,** af-fī'ans, *n.* pledge of marriage.
**Affidavit,** af-fi-dā'vit, *n.* declaration on oath.
**Affiliate,** af-fil'ee-āt, *v.* to adopt.
**Affinity,** af-fin'iti, *n.* kinship; attraction.
**Affirm,** af-firm', *v.* to assert positively; to declare.
**Affirmation,** a-firm-ā'shun, *n.* what is affirmed.
**Affix,** af-fiks', *v.* to add.
**Affix,** af'fiks', *n.* word ending.
**Affiation,** af-flā'shun, *n.* breathing upon.
**Afflatus,** af-flā'tus, *n.* inspiration.
**Afflict,** af-flikt', *v.* to cause pain or grief.
**Affluence,** af'floo-ens, *n.* wealth; abundance.
**Afford,** af-fōrd', *v.* to yield; to be able to bear cost.
**Afforest,** af-for'-est, *v.* to set apart as forest land.
**Affranchise,** af-fran'shīz, *v.* to emancipate; to free
**Affray,** af-frā', *n.* a brawl or fight.
**Affret,** af-fret', *n.* a frivolous onset.
**Affright,** af-frīt', *v.* to frighten.
**Affront,** af-frŭnt', *v.* to insult; to meet face to face.
**Afield,** a-fēld', *adj.* on the field.
**Aflame,** a-flām', *adj.* flaming.
**Afloat,** a-flōt', *adj.* floating; at sea.
**Afoot,** a-foot', *adv.* on foot; stirring.
**Aforesaid,** a-fōr'sed, *adj.* before mentioned.
**Afraid,** a-frād', *adj.* in fear.
**Aft,** *adj.* stern of a vessel; behind.
**Aft'ermath,** *n.* the second mowing.
**Aftermost,** aft'er-mōst, *adj.* hindmost.
**Afterthought,** af'ter-*th*awt, *n.* later reflection.
**Af'ter-wit,** *adj.* wit too late.
**Agapae,** ag'a-pē, *n.* early Christian love feasts.
**Agape,** a-gāp', *adv.* gaping with wonder.
**Agaric,** ag'ar-ik, *n.* of the mushroom genus.
**Agate,** ag'ŭt, *n.* a precious stone.
**Agave,** a-gāv', *n.* the American aloe.
**Age,** āj, *n* measure of human life; mature years.
**Agency,** ā'jen-si, *n.* business of an agent.
**Agenda,** ā-jend'ā, *n.* note of things to be done.
**Agent,** ā'jent, *n.* a person who acts for another; any natural force.
**Agglomerate,** ag-glom'er-āt, *v.* to mass together.
**Agglutinate,** ag-gloo'-tin-āt, *v.* to make adhere.
**Aggrandize,** ag'gran-dīz, *v.* to exalt; to enlarge in power.
**Aggravat,** ag'grā-vāt, *v.* to provoke; to make worse.
**Aggregate,** ag'gri-gāt, *v.* to collect; *n.* the sum total.
**Aggressive,** ag'gres'siv, *adj.* making the first attack.
**Aggressor,** ag-gres'or, *n.* one who makes the first attack.
**Aggrieve,** ag-grēv', *v.* to pain.
**Aghast,** ag-hast', *adj.* horrified.
**Agio,** ā'ji-o, *n.* the difference between nominal and real money.
**Agitate,** aj-i-tāt', *v.* to disturb.; to discuss.
**Agitator,** aj-i-tā'tor, *n.* one who excites public attention.
**Aglow,** ā-glō, *adj.* warm, glowing.
**Agnail,** ag'nāl, *n.* a whitlow.
**Agnate,** ag'nāt, *adj.* related on the paternal side.
**Agno'men,** *n.* an additional surname.
**Agnostic,** ag-nōz'tik, *n.* one who believes only in
**Agog,** a-gog', *adj.* alert. [material evidences.
**Agony,** ag'o-ni, *n.* extreme pain.
**Agrarian,** ag-rā'ri-an, *adj.* connected with land.
**Agreeable,** a-grē'abl, *adj.* pleasant; favourable to.
**Agriculture,** ag-ri-cul'ŭr, *n.* the art of land cultivation.
**Agriculturist,** ag-ri-kult'ŭr-ist, *n.* one who follows agriculture.
**Agrimony,** ag'ri-mun-i, *n.* a plant of the rose order.
**Aground,** a-grownd', *adj.* stranded.
**Ague,** ā'gū, *n.* a shivering fever.
**Ahead,** ā-hĕd', *adv.* in advance.
**Aid,** ād, *v.* to assist.
**Aide-de-camp,** ād'dĕh-kong, an officer who conveys a general's orders.
**Aigrette,** ā'gret, *n.* small heron ornament.
**Ailment,** āl'ment, *n.* affliction, disease.
**Aim,** ām, *v.* to point at with weapon; to endeavour.
**Air,** ār, *n.* the atmosphere; the fluid we breathe.
**Airing,** ār'ing, *n.* exposure to the air.
**Air-pump,** *n.* an apparatus for pumping the air from a vessel.
**Airy,** ār'i, *adj.* open to the air; light; unsubstantial.
**Aisle,** īl, lateral division of any part of a church; passage between pews.
**Akin,** a-kin', *adj.* related.
**Alabaster,** al-a-bas'ter, *n.* a kind of gypsum.
**Alacrity,** al-ak'rit-ē, *n.* readiness; willingness.
**A-la-mode,** a-la-mōd', *adv.* in the fashion.
**Alarm,** al-ā'rm, *n.* notice of danger; surprise and fear.
**Alarmist,** al-arm'ist, *n.* one who causes alarm.
**Alarum,** al-ā'rum, *n.* contrivance by which a clock rings loudly at a given hour.
**Alb,** *n.* a clerical vestment.
**Albeit,** awl-bē'it, *adv.* notwithstanding.
**Albino,** al-bī'no, *n.* human being or animal with white skin and hair and pink eyes.
**Album,** al'bum, *n.* white tablet used by the Romans; book for extracts, etc.
**Albumen,** al-bū'men, *n.* white of eggs.
**Alburnum,** al-bûrn'um, the white parts of wood below the bark.
**Alchemy,** al'-ki-mi, *n.* occult chemistry.
**Alcohol,** al'ko-hol, *n.* pure intoxicating spirit.
**Alcoran,** al-kō'ran, *n.* the Koran.
**Alcove,** al'kōv, *n.* a recess
**Alder,** awl'der, *n.* a tree of the birch genus.
**Alderman,** awl'der-man, *n.* a civic dignitary;
**Ale,** āl, *n.* a malt beverage. [lation.
**Alembic,** al-em'bik, *n.* ancient vessel used in distil-
**Alert,** al'ert, *adj.* ready, watchful.
**Alexandrine,** al-ex-an'drin, *n.* rhymed verse in lines of twelve syllables.
**Alfalfa,** al-fal'fa, a species of grass.
**Algebra,** al'je-bra, *n.* arithmetic by symbols.
**Algerine,** al'je-reen, *adj.* pertaining to Algeria; *n.* a native of Algeria.
**Alias,** ā'li-as, *adv.* otherwise; *n.* an assumed name.
**Alibi,** al'i-bī, *n.* plea that a person was elsewhere than in place named.
**Alien,** ā'lien, *adj.* foreign.
**Alienate,** a'lien-āt, *v.* to transfer; *adj.* estranged.
**Alight,** a-lit', *v.* to descend from.
**Alike,** a-lik', *adj.* resembling.
**Aliment,** al'i-ment, *n.* nourishment; support.
**Alimony,** al'i-mun-i, *n.* money allowed for support of separated wife.
**Aliquant,** al'ikwŏnt, *adj.* such part of a number that will not divide it without a remainder.
**Alkali,** al'ka-lī, *n.* a substance which neutralises and combines with an acid.
**Alkaline,** al'ka-līne, *adj.* possessing the properties
**Allah,** al'lā, *n.* Arabic name for God. [of an alkali.
**Allay,** al-lā', *v.* to lighten, relieve, or calm.
**Allegation,** al-le-gā'shun, *n.* an assertion.
**Allege,** al-lej', *v.* to assert.
**Allegiance,** al-lē'jē-ans, *n.* duty to head of State.
**Allegory,** al'lē-gor-i, *n.* a figurative description.
**Allegro,** al'lē-grō, *adv.* a quick movement in music.

**Alleviate,** al-lē'vē-āt, *v.* to lighten, or mitigate.
**Alley,** al'lī. *n.* walk or narrow passage.
**All-hail,** awl-hāl, *excl.* health salutation.
**Alliance,** al-lī'ăns, *n.* being allied; marriage.
**Alligator,** al-lī'gā-tor, *n.* a large amphibious animal.
**Alliteration,** al-lit-er-ā'shun, *n.* the repetition of the same letter at the beginning of successive words.
**Allocation,** al-lō-kā'shun, *n.* the act of placing or assigning.
**Allocution,** al-lō-kū'shun, *n.* formal address.
**Allodial,** al-lō'dī-al, *adj.* held free from superior.
**Allopathy,** al-lŏp'ă-*thi*, *n.* orthodox medical practice.
**Allotment,** al-lot'ment, *n.* the act of allotting; part
**Allow,** al-lŏw, *v.* to permit. [allotted.
**Allowance,** al-lŏw'ăns, *n.* the thing allowed; a stated portion of money granted.
**Alloy,** al-loĭ', *v.* to mix a superior metal with an inferior.
**Allurement,** al-lūr'ment, *n.* enticing.
**Allusion,** al-lū'zhun, *n.* a slight mention.
**Alluvial,** al-lū'vī-al, *adj.* matter deposited by water.
**Ally,** al-lī', *v.* to form a union or treaty.
**Alma-mater,** al'mē-mā'ter, *n.* college where educated.
**Almanac,** al'mē-nak, *n.* calendar of days, weeks, and months.
**Almond,** ä'mund, *n.* fruit of the almond tree.
**Almoner,** al'mun-er, *n.* one who distributes alms.
**Almost,** awl'mōst, *adv.* nearly.
**Alms,** ämz, *n.* gifts to the poor.
**Aloe,** al'ō, *n.* a semi-tropical plant.
**Alone,** al-ōn', *adj.* single, solitary.
**Aloof,** a-loof', *adv.* apart.
**Aloud,** a-lowd', *adv.* loudly.
**Alp,** *n.* a high mountain.
**Alpaca,** al-pak'ă, *n.* Peruvian sheep; cloth made from wool of alpaca.
**Alpenstock,** al'pen-stŏk, *n.* Alpine climbing staff.
**Alpha,** al'fă, *n.* first letter of the Greek alphabet.
**Alphabet,** al'fă-bet, *n.* the letters of a language.
**Alpine,** al'pin, *adj.* pertaining to Alps.
**Already,** awl-red'ī, *adv.* previously.
**Alsatian,** al-sā'shi-an, appertaining to Alsatia.
**Altar,** awl'ter, *n.* an elevated place where sacrifices were offered; communion table.
**Alter,** awl'ter, *v.* to make different; to change.
**Alterable,** awl'ter-abl, *adj.* that can be altered.
**Alterative,** awl'ter-a-tiv, *adj.* possessing power to
**Altercate,** awl'ter-kāt, *v.* to dispute. [alter.
**Altercation,** awl-ter-kā'shun, *n.* contention.
**Alternate,** awl'ter-nāt, *v.* to follow by turns.
**Alternately,** awl-ter'nāt-lī, *adj.* in turns.
**Alternative,** awl-ter'na-tiv, *adj.* a choice of two things.
**Although,** awl-thō', *conj.* notwithstanding.
**Altimeter,** al-tī-mē'ter, *n.* instrument for measuring heights.
**Altitude,** al'tī-tūd, *n.* height.
**Alto,** al'to, *n.* male voice of high pitch.
**Altruism,** al'troo-izm, *n.* acting for others.
**Aluminous,** al-lū'mī-nŭs, *adj.* containing alum.
**Alumnus,** al-um'nus, *n.* one educated at a college.
**Amain,** a-mān', *adv.* with main force.
**Amalgam,** a-mal'gam, *n.* a combination of differing
**Amagamate,** a-mal'găm-āt, *v.* to blend. [elements.
**Amanuensis,** a-man-ū-en'sis, *n.* one who writes to dictation; a secretary.
**Amaranth,** am'er-anth, *n.* a species of plants with richly coloured flowers.
**Amass,** a-mās', *v.* to collect in large numbers.
**Amasthenic,** am-as-*then*'ik, *adj.* union of rays of
**Amateur,** am'ăt-ūr, *n.* a non-professional. [light.
**Amative,** am'ă-tiv, *adj.* relating to love.
**Amatory,** am'at-ūrī, *adj.* pertaining to love; affectionate. [apparent cause.
**Amaurosis,** am-aw-rō'sis, *n.* total blindness without
**Amaze,** a-māz', *v.* to surprise; *n.* astonishment.
**Amazon,** am'a-zon, *n.* female, warrior; masculine woman.
**Ambassador,** am-bas'a-dūr, *n.* a diplomatic functionary sent by one power to another.
**Amber,** am'ber, *n.* a yellow fossil resin.
**Ambidexter,** am-bi-deks'tūr, *adj.* and *n.* able to use both hands alike.
**Ambient,** am'bi-ent, *adj.* going round; surrounding.
**Ambiguous,** am-big'ū-us, *adj.* doubtful, uncertain.
**Ambit,** am'bit *n.* a circuit.
**Ambition,** am-bish'un, *n.* desire of power, fame,
**Amble,** am'bûl, *v.* to go at an easy pace. [success.
**Ambulance,** am'bū-lăns, *n.* carriage for the conveyance of wounded.
**Ambuscade,** am'bush-kād, *n.* troops concealed for attack.
**Ambush,** am'boosh, *n.* concealment ready for at-
**Ameliorate,** am-ē'li-o-rāt, *v.* to improve. [tack.
**Amen,** ā-men', *excl.* so let it be.
**Amenable,** a-mē'nābl, *adj.* easy to handle.
**Amend',** *v.* to improve; to correct.
**Amende,** ā-mend', *n.* a fine; penalty.
**Amenity,** am-en'ī-tī, *n.* pleasantness.
**Amerce,** a-mĕrs', *v.* to fine.
**Amethyst,** am'ī-*thist*, *n.* a kind of quartz of a bluish-violet colour.
**Amiable,** ā'mē-abl, *adj.* lovable, gentle.
**Amicable,** am'ik-abl *adj.* friendly.
**Amid,** ā-mid', *prep.* in the middle of; among.
**Amiss,** a-mis', *adj.* wrong; in error.
**Amity,** am'ī-ti, *n.* friendship. [smelling salts.
**Ammonia,** am-mō'ni-ā, *n.* a gas produced from
**Ammunition,** am-mûn-ish'un, *n.* objects used in military service.
**Amnesty,** am'nest-ī, *n.* political pardon.
**Amoeba,** a'mē'ba, *n.* the simplest of living creatures.
**Amorous,** am'ūr-us, *adj.* inspired with love.
**Amorphous,** am-or'fŭs, *adj.* of irregular shape.
**Amount,** a-mownt', *v.* to sum up to; to result in; *n.* the total sum.
**Ampere,** ahm'pair, *n.* unit of electrical current.
**Amphibian,** am-fib'ī-an, *n.* pertaining to amphibian animals.
**Amphitheatre,** am-fith-ē'atr, *n.* an oval or circular edifice or open space for public performances.
**Amphora,** am-fō'ra, *n.* a Greek vessel for holding
**Ample,** am'pl, *adj.* sufficient, spacious. [liquids.
**Amplify,** am'pli-fī, *v.* to extend; to increase.
**Amplitude,** am'pli-tūd, *n.* largeness; abundance.
**Amuck,** ā-mŭk, *adv.* madly.
**Amulet,** am'ū-let, *n.* an article carried as a charm.
**Amuse,** a-mūz, *v.* to divert; to entertain.
**Anabaptist,** ana-bapt'ist, *n.* one who believes in adult baptism only.
**Anachronism,** an-ak'rŏn-izm, *n.* a mistake in time, whereby a thing is allotted to a wrongful date.
**Anacoluthon,** an-ak-o-lū'*thon*, *n.* absence of word sequence.
**Anaconda,** an-a-kon'da, *n.* a water snake.
**Anacreontic,** an-ak-rē-on'tik, *adj.* in the style of Anacreon. [wreath of flowers.
**Anadem,** an'-a-dem, *n.* a band for the head; a
**Anæmia,** an-ē'mia, *n.* condition of blood weakness.
**Anæsthetic,** an-ēs-*thet*'ik, *adj.* producing insensibility to pain.
**Anagram,** an'a-gram, *n.* words or sentences formed by changing the order of the letters.
**Analogous,** an-al'ō-gus, *adj.* bearing resemblance
**Analyst,** an'ă-list, *n.* one who analyses. [to.
**Analytic,** an-ă-lit'ik, *adj.* pertaining to analysis.
**Analyze,** an'ă-līz, *v.* to resolve into elements.
**Anapest,** an'ă-pest, *n.* a term in verse signifying a foot of three syllables, two short and the third long.
**Anarchy,** an'ar-kī, *n.* governmental confusion.
**Anathema,** an-ăth'ī-ma, *n.* solemn denunciation.
**Anathematize,** an-ăth'im-at-īz, *v.* to pronounce accursed.
**Anatomy,** an-at'o-mi, *n.* the art of physical dissection; science of the bodily structure.
**Ancestry,** an'ses-trī, *n.* line of ancestors.
**Anchor,** ang'kūr, *n.* for holding ships attached to a certain spot. [anchor in.
**Anchorage,** ang'kūr-ij. *n.* spot convenient to
**Anchorite,** ang'kūr-īt, *n.* a religious recluse.
**Anchovy,** an-chŏ'vi, *n.* a small sea fish.
**Ancillary,** an'sil-ūr-ī, *adj.* subservient.
**Andante,** an-dan'tē, *adj.* a slow even movement in music.
**Andean,** an'dē-an, *adj.* of the nature of the Andes.
**Androgynous,** an-droj'ī-nus, *adj.* having both male and female characteristics.
**Anecdote,** an'ek-dōt, *n.* a brief story.
**Anemometer,** an-em'ŏm-e-tr, *n.* a wind measuring instrument.
**Anemone,** a-nem'ŏ-nī, *n.* a plant of the crowfoot
**Anent,** a-nent', *prep.* concerning. [genus.
**Aneroid,** an'ē-roid, *adj.* a mechnical barometer.
**Aneurism,** an'ūr-izm, *n.* a tumour of an artery.
**Angel,** ān'jel, *n.* heavenly messenger.
**Angelus,** an'jel-us, *n.* the "Ave Maria": the bell rung in Roman Catholic churches to command the Angelic Salutation.
**Anger,** angĕr, *n.* strong resentful emotion.

**Angina,** an-jī'na, *n.* throat inflammation.
**Angle,** ang'ûl, *n.* a corner; the meeting point of two lines.
**Anglican,** ang'lik-an, *adj.* English.
**Anglicize,** ang'li-sīz, *v.* to render in English form.
**Anglophobia,** ang-glo-fō'bi-a, *n.* dislike of England.
**Angora,** ang-ō'ra, *n.* cloth made from angora wool.
**Anguish,** ang'wish, *n.* extreme mental or physical
**Angularity,** ang-ū-lar'it-i, *n.* with angles. [pain.
**Aniline,** an'il-in, *n.* a coal tar product used in dyeing.
**Animadvert,** an-im-ad-vert', *v.* to blame or censure.
**Animalcule,** an-im-al'kūl, *n.* a very minute animal.
**Animalism,** an'im-al-izm, *n.* the condition of having animal appetites.
**Animate,** an'im-āt, *v.* to enliven.
**Animosity,** an-im-os'it-i, *n.* hatred.
**Animus,** an'im-us, *n.* intention; prejudice.
**Anise,** an'is, *n.* aromatic plant.
**Ankle,** ang'kul, *n.* the joint connecting the foot
**Anna,** an'na, *n.* an Indian coin. [with the leg.
**Annals,** an'ûlz, *n.* records of events according to years. [great heat and gradual cooling.
**Anneal,** an-ēl', *v.* to temper glass or metals by
**Annex,** an-neks, *v.* to add to, or take possession of.
**Annexation,** an-neks-ā'shun, *n.* act of adding to or joining.
**Annihilate,** an-nī'hil-āt, *v.* to reduce to nothing.
**Anniversary,** an-ni-ver'sār-i, *adj.* an annual happening, or celebration.
**Annotate,** an'no-tāt, to make notes upon.
**Announce,** an-nowns', *v.* to notify; to make known.
**Annoyance,** an-noy'ăns, *n.* that which vexes.
**Annual,** an'nū-al, *adj.* yearly.
**Annuity,** an-nū'it-i, *n.* a yearly fixed payment.
**Annul,** an-nūl, *v.* to make void.
**Annular,** an'nū-lar, *adj.* ring-shaped.
**Annulose,** an'nū-lōs, *adj.* having rings.
**Annunciation,** an-nun-si-ā'shun, *n.* the act of announcing. [current.
**Anode,** an'ōd, *n.* the positive pole of a galvanic
**Anodyne,** an'o-din, *n.* a medicine that relieves pain.
**Anoint,** an-oint', *v.* to spread with ointment or oil.
**Anomalous,** an-om'ā-lus, *adj.* irregular; contrary
**Anomaly,** an-om'ā-li, *n.* irregularity. [to rule.
**Anon,** a-non', *adv.* immediately, instantly.
**Anonymous,** a-non'im-us, *adj.* without name.
**Anserine,** an'ser-in, *adj.* pertaining to geese; silly.
**Answer,** an'ser, *v.* to reply to.
**Answerable,** an'ser-abl, *adj.* accountable; able to
**Ant,** *n.* a small insect. [be answered.
**Antagonist,** an-tag'-o-nist, *n.* an opponent; one who contends with another.
**Antagonistic,** an-tag-o-nis'tik, *adj.* opposed.
**Antarctic,** ant-ārk'-tik, *adj.* opposite the arctic; the south polar region.
**Antarthritic,** an-ar-*thrit*'ik, *adj.* against gout.
**Ante,** an'tē [*prefix*].
**Antecedent,** an-tē-sē'dent, *adj.* previous in time.
**Antechamber,** an'te-chām-ber, *n.* small room leading to a larger.
**Antedate,** an'te-dāt, *v.* to assign to an earlier date.
**Antediluvian,** an-te-dil-ū'vian, *adj.* before the Flood.
**Antelope,** an'te-lōp, *n.* a hollow-horned ruminant.
**Antennæ,** an-ten'ē, feelers of insects, crustaceans, etc.
**Antepenult,** an-te-pen-ult', *n.* the last syllable but two of a word.
**Anterior,** an-tē'ri-or, *adj.* prior, before.
**Anthem,** an'*them*, *n.* a sacred song.
**Anther,** an'*ther*, *n.* the top of a flower stamen, containing pollen.
**Anthology,** an-*thol*'-o-ji, *n.* a collection of flowers, poems, hymns or epigrams.
**Anthracite,** an'*thra*-sīt, *n.* coal composed mostly of carbon.
**Anthrax,** an'*thraks*, *n.* an infectious disease caused by bacilli, common in sheep and cattle.
**Anthropography,** an-*throp*-og'raf-i, *n.* the science of the distribution of the human race.
**Anthropology,** an-*throp*-ol'o-ji, *n.* the science of man.
**Anthropoid,** an'*thro*-poid, *adj.* resembling man.
**Anthropomorphism,** an-*throp*-o-morf'izm, the ascribing of human form to the Deity.
**Anthropophagy,** an-*thro*-pof'a-ji, *n.* cannibalism.
**Anti,** ant-i, *pfx.* against, opposed.
**Antic,** anti'k, *adj.* odd; grotesque.
**Antichrist,** an'ti-krist, *n.* an opposer of Christ and Christianity.
**Anticipate,** an-tis'-i-pāt, *v.* to forestall.
**Antiolimax,** an-ti-kli'māks, *n.* the opposite of climax.
**Antidote,** an'ti-dōt, *n.* a counteracting substance.
**Antifebrile,** anti-feb'ril, *adj.* against fever.
**Antimony,** an'ti-mun-i, *n.* a brittle crystalline metal. [for chairs.
**Antimacassar,** an-ti-ma-kăs'er, *n.* a loose covering
**Antipathy,** an-tip'ă-*thi*, *n.* dislike; repugnance.
**Antiphony,** an-tif'o-ni, *n.* singing or chanting in alternation.
**Antipyrin,** an-ti-pī'rin, *n.* a white powder obtained from coal tar products.
**Antiquarian,** an-ti-kwār'i-an, *n.* pertaining to antiquities. [evidence.
**Antiquary,** an'ti-kwar-i, *n.* one who studies ancient
**Antiquated,** an-ti-kwāt'ed, *adj.* old or out of
**Antique,** an-tēk', *adj.* ancient. [fashion.
**Antiquity,** an-tik'wit-i, *n.* times long past.
**Antiscorbutic,** an-ti-skor-bū'tik, *adj.* a remedy for scurvy.
**Antiseptic,** an-ti-sep'tik, *adj.* against putrefaction.
**Antithesis,** an-tith'-ē-sis, *n.* opposite meanings.
**Antithetic,** an-ti-*thet*'ik, *adj.* opposite; opposed.
**Antitype,** an'ti-tīp, *n.* corresponding to a type.
**Antler,** an'tler, *n.* the branch of a stag's horn.
**Anvil,** an'vil, *n.* an iron block for hammering metal upon.
**Anxious,** ank'shus, *adj.* uneasy; doubtful; con-
**Any,** en'i, *adj.* one indefinitely [cerned.
**Aorta,** ā-or'ta, *n.* the main artery.
**Apace,** a-pās', *adv.* quickly.
**Apart,** ă-pārt', *adv.* separate.
**Apathetic,** ap-a-*thet*'ik, *adj.* without feeling.
**Apathy,** ap'ă-*thi*, *n.* indifference.
**Ape,** āp, *n.* monkey.
**Aperient,** ap-ē'ri-ent, *adj.* opening; purgative.
**Aperture,** ap'er-tūr, *n.* an opening.
**Apex,** ā-peks, *n.* the top or point of anything.
**Aphelion,** a-fē'li-on, *n.* the point of a planet's orbit most distant from the sun.
**Aphonia,** af-ō'ni-ā, *n.* dumbness.
**Aphorism,** af'o-rizm. *n.* a brief statement of a scientific principle; a pithy saying or maxim.
**Apiary,** ā'pi-ar-i, *n.* place where bees are kept.
**Apiculture,** ā-pi-kul-tūr, *n.* bee keeping.
**Apocalypse,** ă-pok'ă-lips, *n.* the last book of the New Testament.
**Apocrypha,** a-pok'rif-ă, *n.* doubtful or uninspired religious writings.
**Apocryphal,** a-pok'rif-al, *adj.* of doubtful origin.
**Apogee,** ap'o-jee, *n.* the point of an orbit most distant from the earth.
**Apollyon,** ap-ol'-i-on, *n.* Satan.
**Apologetic,** ap-ol-o-jet'ik, *adj.* excusing.
**Apologue,** ap'ol'og, *n.* a fable or parable.
**Apoplexy,** ap-o-plek-si, *n.* loss of control.
**Apostasy,** ap-ost'ă-si, *n.* abandonment of faith.
**Apostate,** ap-ost'āt, *n.* one who forsakes hisreligion.
**Apostatise,** ap-ost'āt-īz, *v.* to fall away from.
**Apostle,** ap-os'ûl, *n.* one sent to preach a doctrine.
**Apostrophe,** ap-os'trō-fē, *n.* breaking away from the current of speech to address some person apart. [drugs.
**Apothecary,** ap-*oth*'ik-ar-i, *n.* one who deals in
**Apothegm,** ap'*oth*-em, *n.* a short, pithy saying.
**Apotheosis,** ap-*oth*-ē-o'sis, *n.* a deification or glorification.
**Appanage,** ap'pan-āj, *n.* a provision for younger sons; an adjunct or attribute.
**Apparatus,** ap-par-ā'tus, *n.* instruments or materials.
**Apparel,** ap-par'el, *n.* body covering; dress.
**Apparent,** ap-pār'ent, *adj.* visible; evident.
**Apparition,** ap-par-ish'un, *n.* a ghostly appearance.
**Appeal,** ap-pēl', *v.* to call upon; to remove to a higher court.
**Appear,** ap-pēr', *v.* to become visible.
**Appearance,** ap-pēr'ăns, *n.* the act of appearing; outward show.
**Appease,** ap-pēz', *v.* to pacify; to allay.
**Appellant,** ap-pel'ant, *n.* one who appeals.
**Appellate,** ap-pel'āt, *adj.* pertaining to appeals.
**Appellative,** ap-pel'ā-tiv, *n.* a name general to all of the same kind.
**Append,** ap-pend', *v.* to attach one thing to another.
**Appendage,** ap-pen'dij, *n.* something attached.
**Appendicitis,** ap-pen-di-sī'tis, *n.* inflammation of the vermiform appendix.
**Appendix,** ap-pend'iks, *n.* a supplement.
**Appertain,** ap-per-tān', *v.* to connect with, or belong to.

**Appetite,** ap'pi-tit, *n.* desire for food; hunger, thirst.
**Appetising,** ap-pet-tiz'ing, *adj.* tempting to the appetite.
**Applaud,** ap-plawd', to praise by hand-clapping or
**Applause,** ap-plawz', *n.* loud praise. [cheering.
**Apple,** ap'l, *n.* fruit of the apple-tree.
**Appliance,** ap-pli'ăns, *n.* a thing applied.
**Applicable,** ap-plik-abl, *adj.* that which may be ap-
**Applicant,** ap'plik-ănt, *n.* one who applies. [plied.
**Apply,** ap-pli, *v.* to put to; to study; to administer.
**Appoggiatura,** ap-pod-ja-tū'ra, *n.* the introduction of notes of embellishment in a melody.
**Appoint,** ap-point', *v.* to fix; to settle; to equip.
**Apportionment,** ap-pōr'shun-ment, *n.* share of proportion allotted.
**Apposite,** ap'po-zit, *adj.* in agreement with.
**Appraise,** ap-prāz', *v.* to value. [mated.
**Appreciable,** ap-prē'shi-able, *adj.* that can be esti-
**Appreciate,** ap-prē'shi-āt, *v.* to esteem properly; to advance the price of.
**Apprehend,** ap-prē-hend', *v.* to seize; to know; to fear.
**Apprehensive,** ap-prē-hen'siv, *adj.* quick to note; fearful.
**Apprentice,** ap-pren'tis, *n.* one bound to learn a
**Apprise,** ap-priz', *v.* to inform. [trade or art.
**Approach,** ap-prōch, *v.* to draw near.
**Approbation,** ap-pro-bā'shun, *n.* sanction, approval.
**Appropriate,** ap-prō'pri-āt, *v.* to take as one's own.
**Appropriateness,** ap-prō'pri-āt-ness, *n.* suitability.
**Appropriation,** ap-prō-pri-ā'shun, *n.* application to special use.
**Approval,** ap-proo'val, *n.* the act of approving.
**Approve,** ap-proov', *v.* to like; to sanction.
**Approximate,** ap-proks'im-āt, *adj.* about or near.
**Appurtenance,** ap-pūr'tē-nans, *n.* that which belongs to something else.
**Apron,** ā'prun, *n.* a protective piece of cloth or leather worn in front.
**Apropos,** ap-ro-pō', *adv.* appropriately; in reference
**Apse,** aps, part of the choir of a church. [to.
**Apt,** *adj.* ready; adaptable.
**Apterous,** ap'ter-us, *adj.* without wings.
**Apteryx,** ap'ter-iks, a wingless New Zealand bird.
**Aptitude,** apt'it-ūd, *n.* fitness.
**Apyretic,** a-pir-et'ik, feverless.
**Aquafortis,** ak-wā-for'tis, *n.* nitric acid. [colour.
**Aquamarine,** ā-kwa-ma-rēn', *n.* the beryl; *adj.* sea-
**Aquarium,** ak-wā'ri-um, *n.* a place for keeping aquatic animals and plants in.
**Aquatic,** ak-wot'ik, *adj.* pertaining to water.
**Aquatint,** ā'kwa-tint, *n.* copper etching.
**Aqueduct,** ak'wi-dūkt, *n.* an artificial channel for the conveyance of water.
**Aqueous,** ā'kwi-us, *adj.* watery; deposit left by water.
**Aquiline,** ak'wil-in, *adj.* curved like the eagle's beak.
**Arabic,** ar'ă-bik, *adj.* relating to the language of the Arabs.
**Arable,** ar'abl, *adj.* suitable for ploughing.
**Arbiter,** ar'bi-ter, *n.* one chosen to decide a dispute.
**Arbitrator,** ar-bi-trā'tor, *n.* same as *arbiter.*
**Arbitrament,** ar-bit'ra-ment, *n.* the decision of the arbiter or arbitrator.
**Arbitrary,** ar'bi-trer-i, *adj.* despotic; wilful.
**Arbitrate,** ar'-bi-trāt, *v.* to act as arbitrator.
**Arbour,** ar'bur, *n.* an enclosed seat or recess in a
**Arc,** ark, *n.* a segment of a circle. [garden.
**Arcadian,** ark-ā'dian, *adj.* pastoral.
**Arcanum,** ark-ā'num, *n.* a secret or mystery.
**Archæology,** ark-ē-ol'o-ji, *n.* the science of antiquities.
**Archaism,** ark'ā-izm, *n.* something obsolete.
**Archangel,** ark-ānj'el, *n.* a superior angel.
**Archbishop,** arch-bish'up, *n.* the higher form of bishop.
**Archdeacon,** arch-dē'kŭn, *n.* a chief deacon.
**Archer,** arch'er, *n.* one who shoots arrows.
**Archetype,** ark'i-tip, *n.* an original model.
**Archiepiscopal,** ark-i-ep-is'ko-pal, *adj.* pertaining to an archbishopric.
**Archipelago,** ark-i-pel'a-go, *n.* a group of islands.
**Architect,** ark'i-tekt, *n.* a designer of buildings.
**Architecture,** ark'i-tekt'ur, *n.* the science of building.
**Architrave,** ark'it-rāv, *n.* the part surrounding a door or window.
**Archives,** ark'ivs, *n.* repository for public records; also the records themselves.
**Archness,** arch'ness, *n.* cunning.
**Arctic,** ark'tik, *adj.* relating to the north polar
**Arcuate,** ar-kū-āt, *adj.* bent like a bow. [regions.
**Ardent,** ar'dent, *adj.* passionate; earnest.
**Arduous,** ar'dū-us, *adj.* difficult; laborious.
**Area,** ā'ri-ā, *n.* surface; an open space.
**Areca,** ar'ē-ka, *n.* a nut-bearing palm.
**Arena,** a-rē'na, *n.* place or floor where public exhibitions are given.
**Arenaceous,** ar-i-nā'seus, *adj.* dry, sandy, arid.
**Argent,** ar'jent, *n.* silver, or silver-like.
**Argillaceous,** ar-jil-ā'shē-us, *adj.* of the nature of clay.
**Argol,** ar'gol, *n.* the crust that forms on wine vessels and from which tartaric acid is obtained.
**Argon,** ar'gon, *n.* a constituent element of the atmosphere. [valuable products.
**Argosy,** ar'go-si, *n.* a ship of olden times laden with
**Argot,** ah'-go, *n.* French slang.
**Argument,** ar'gū-ment, *n.* the proof or reason ad-
**Argus,** ar'gus, *n.* a quick-eyed person. [vanced.
**Arian,** ā'ri-ăn, *adj.* pertaining to Arius, who denied
**Arid,** ar'id, *adj.* dry; parched. [Christ's divinity.
**Aries,** ā'ri-ēz, *n.* the first sign of the zodiac, the Ram.
**Arise,** a-riz', *v.* to rise up.
**Aristarch,** ar-is-tārk', *n.* a severe critic, from Aristarchus.
**Aristocracy,** ar-is-tok'rā-si, *n.* nobility.
**Aristocrat,** ar'is-to-krat, *n.* one of the aristocracy.
**Arithmetic,** ar-ith'mē-tik, *n.* the science of numbers.
**Ark,** *n.* a chest or coffer; a floating vessel.
**Arles,** ārlz, earnest money.
**Armada,** ar-mā'dă, *n.* a fleet of warships.
**Armament,** ar'mă-ment, *n.* armed forces; munitions of war.
**Armillary,** ar'mil-ār-i, *adj.* in rings or circles.
**Arminian,** ar-min'i-an, *n.* a believer in the doctrine of Arminius, who opposed Calvin's theory of predestination.
**Armistice,** ārm'is-tis, *n.* a truce.
**Armour,** ārm'ur, *n.* defensive arms or dress; plating of warships. [or family arms.
**Armorial,** ārm'ō'ri-al, *adj.* pertaining to armour,
**Armoury,** ārm'ō-ri, *n.* the place in which arms are made or stored.
**Armpit,** ārm'pit, *n.* the hollow under the shoulder.
**Arms,** ārmz, *n.* weapons of war.
**Army,** ar'mi, *n.* body of men trained for war.
**Army-corps,** ar'mi-kōr, *n.* a complete division of an army.
**Aroma,** ā-rō'mă, *n.* odour.
**Arrack,** ar'rak, *n.* an Eastern fermented juice.
**Arraignment,** ar-rān'ment, *n.* a calling to account.
**Arrangement,** ā-rānj'ment, *n.* the act of putting in
**Arrant,** ar'rant, *adj.* downright. [order.
**Arras,** ar'ras, *n.* a kind of tapestry.
**Array,** ar-rā', *n.* order, dress.
**Arrears,** ar-rērs', *n.* what is left behind; unpaid dues.
**Arrest,** ar-rest', *v.* to seize; to attract the atten-
**Arrive,** a-riv', *v.* to get to a place. [tion.
**Arrogant,** ar'rō-gant, *adj.* overbearing.
**Arrogate,** ar'rō-gāt, *v.* to make claim.
**Arrondisement,** ar-rond'ēs-mǎng, *n.* a section of a French geographical department.
**Arsenal,** ar'se-năl, *n.* place for naval stores, or for their manufacture.
**Arsenic,** ar'se-nik, *n.* a mineral poison.
**Arson,** ar'son, *n.* wilful burning.
**Art,** art, *n.* skill in painting, music, etc.
**Artery,** ar'ter-ē, *n.* a blood-vessel conveying blood from the heart; a main thoroughfare.
**Artesian,** ar-tē'zi-an, *adj.* applied to wells made by sinking a shaft in the ground until water is reached.
**Arthritis,** ar-*thri*'tis, *n.* joint inflammation, gout.
**Artichoke,** ar'ti-chōk, *n.* an eatable plant.
**Article,** ar'tikl, *n.* a distinct element or part; a clause of a document; a literary composition.
**Articulate,** ar-tik'ū-lāt, *adj.* clear, distinct; *v.* to joint; to sound distinctly.
**Artifice,** ar'ti-fis, *n.* the work of an artificer; a trick.
**Artificer,** ar'ti-fi-ser, *n.* a workman.
**Artificial,** ar'ti-fish'al, *adj.* not natural.
**Artillery,** ar-til'ūr-i, *n.* the heavier weapons of war; the men who work them.
**Artisan,** ārt'i-zan, *n.* a mechanic.
**Artist,** ar'tist, *n.* one who practices an art.
**Artless,** ārt'less, *adj.* simple, unsophisticated.
**Aryan,** ā'ri-an, *adj.* pertaining to the main body of the Indo-European races.
**Asafœtida,** as-ă-fē'ti-dă, *n.* a gum-resin.

**Asbestos,** az-bes'tŏs, *n.* an incombustible mineral substance.
**Ascend,** as-send', *v.* to climb or mount.
**Ascendency,** as-send'en-si, *n.* having control.
**Ascertain,** as-sĕr-tān', *v.* to obtain information of.
**Ascetic,** as-set'ik, *n.* one who denies himself ordinary worldly pleasures.
**Asceticism,** as-set'i-sism, *n.*-the practice of self-denial.
**Ascribe,** ă-skrīb', *v.* to assign, or impute.
**Ascription,** ă-skrip'shun, *n.* act of ascribing.
**Aseptic,** a-sep'tik, *adj.* not liable to putrefy.
**Ashamed,** ă-shāmd', *adj.* made to feel shame.
**Ashes,** ăsh'ez, *n.* burnt remains.
**Ashlar,** ăsh'lĕr, *n.* plain dressed stone.
**Aside,** a-sīd', *adv.* on one side, apart; *n.* words said
**Asinine,** as'-i-nīn, *adj.* ass-like. [to oneself.
**Ask,** *v.* to inquire, to seek.
**Askance,** ă-skăns', *adv.* sideways.
**Askew,** ă-skū, *adv.* crooked, obliquely.
**Asparagus,** as-par'ă-gus, *n.* a culinary plant.
**Aspect,** as'pekt, *n.* view, appearance, situation.
**Aspen,** as'pen, *n.* the trembling poplar.
**Asperity,** as-per'it-ē, *n.* harshness.
**Asperse,** as-pĕrs', *v.* to slander.
**Aspersion,** as-per'shun, *n.* slander.
**Asphalt,** as-falt', *n.* a bituminous substance used for paving.
**Asphyxia,** as-fik'si-a, *n.* suffocation.
**Aspirant,** as'pir-ant, *n.* one who aspires.
**Aspirate,** as'pir-āt, *v.* to utter with full breath.
**Assail,** as-sāl', *v.* to attack.
**Assailant,** as-sāl'ant, *n.* one who attacks.
**Assassin,** as-as'in, *n.* one who suddenly murders.
**Assassinate,** as-as'in-āt, *v.* to kill suddenly.
**Assault,** as-sawlt', *n.* a sudden attack.
**Assay,** as-sā', *v.* to assess the elements of metal in an ore or alloy.
**Assayer,** as-sā'er, *n.* one who assays.
**Assemblage,** as-sem'blij, *n.* a gathering of persons or things.
**Assembly,** as-sem'bli, *n.* the art of assembling; the
**Assent,** as-sent', *v.* to agree. [persons assembled.
**Assert,** as-sert', *v.* to declare.
**Assess,** as-ses', *v.* to fix a sum, tax, or value.
**Assessment,** as-ses'ment, *n.* act of assessing; valua-
**Assessor,** as-ses'or, *n.* one who assesses. [tion.
**Assets,** as'sets, *n.* property or things divisible of a deceased person or debtor.
**Asseveration,** as-sever-ā'shun, *n.* solemn declaration.
**Assiduity,** as-sid-ū'it-i, *n.* diligence, application.
**Assiduous,** as-sid'ū-us, *adj.* unwearying. [transfer.
**Assign,** as-sīn', *v.* to particularise; to appoint; to
**Assignment,** as-sīn'ment, *n.* the thing assigned; document of transfer.
**Assimilate,** as-sim'il-āt, *v.* to become like.
**Assimilation,** as-sim-il-ā'shun, *n.* rendering similar.
**Assistant,** as-sis'tant, *n.* one who helps; lending aid.
**Assize,** as-sīz', *v.* to assess; *n.* a statute of regulation of prices, etc.; county sittings of judges.
**Assizer,** as-siz'er, an officer of weights and measures.
**Associate,** as-so'shi-āt, *v.* to join with; *n.* companion; partner.
**Assonance,** as'son-ăns, *n.* of kindred sound.
**Assort,** as-sort', *v.* to separate into classes.
**Assortment,** as-sort'ment, *n.* a collection of things selected.
**Assuage,** as-swāj', to soften, reduce, allay.
**Assuagement,** as-swāj'ment, *n.* abatement.
**Assuetude,** as'wē-tud, *n.* habit.
**Assume,** as-sūm', *v.* to take for granted. [rogant.
**Assuming,** as-sūm'ing, *adj.* haughty, affected, ar-
**Assurance,** as-sūr'ăns, *n.* confidence; insurance.
**Assure,** as-sūr', *v.* to make certain.
**Asterisk,** as'ter-isk, *n.* a star sign [*] in printed matter, referring to a note at foot or in margin.
**Asteroid,** *n.* one of the inferior planetary bodies.
**Asthma,** ast'ma, *n.* an affection of the breathing organs.
**Asthmatic,** ast-măt'ik, *adj.* pertaining to asthma.
**Astir,** a-stĕr', *prep.* in motion; out of bed
**Astonish,** as-ton'ish, *v.* to cause surprise.
**Astound,** as-townd', *v.* to amaze.
**Astragal,** *n.* semicircular moulding round a
**Astral,** *adj.* pertaining to stars. [column.
**Astringent,** as-trin'jent, *adj.* binding, contracting.
**Astrology,** as-trol'ŏ-ji, *n.* the science of prediction by the position of the stars.
**Astronomy,** as-tron'ŏ-mi, *n.* the study of the stars.
**Astuteness,** as-tūt'ness, *n.* craftiness, cleverness.
**Asunder,** a-sun'der, *adv.* separately.
**Asylum,** as-ī'lum, *n.* a place of refuge.
**Asymmetry,** ă-sim'i-tri, *n.* want of proportion.
**Atavism,** at'ă-vism, *n.* recurrence of ancestral characteristics.
**Atelier,** at-el'yā, *n.* studio or workshop.
**Atheism,** ā'the-izm, *n.* disbelief in God.
**Athenæum,** ath-ē-nē'um, *n.* temple of learning.
**Athlete,** ath'lēt, *n.* a contender in muscular feats.
**Athletic,** ath-lēt'ik, *adj.* concerning athletics.
**Athwart,** ă-thwawrt', *prep.* across.
**Atlantic,** ă-tlan'tik, *adj.* pertaining to Atlas or to the Atlantic Ocean.
**Atlas,** at'lăs, *n.* a collection of maps; the upper part of the vertebral column.
**Atmosphere,** at'mos-fēr, *n.* the air.
**Atom,** at'om, *n.* the unit of material substance.
**Atomic,** ăt-om'ik, *adj.* pertaining to atoms.
**Atone,** ăt-ōn', *v.* to make reparation for.
**Atrocious,** ă-trō'shus, *adj.* abominable, wicked.
**Atrabilious,** ăt-ra-bil'i-us, *adj.* melancholic, acrimonious. [house.
**Atrium,** ā'tri-um, *n.* the entrance hall of a Roman
**Atrophy,** ā'tro-fi, *n.* a stoppage of functional action. [seize.
**Attach,** at-tach', *v.* to bind to; to connect; to
**Attaché,** ă-tă-shā', *n.* a junior diplomatist.
**Attack,** ă-tak', *v.* to assault.
**Attain,** ă-tān', *v.* to obtain; to reach.
**Attainder,** ă-tān'der, *n.* the act of attainting; deprival of civil rights.
**Attaint,** ă-tānt', *v.* to convict; to deprive of rights.
**Attempt,** at-tempt', *v.* to try.
**Attend,** at-tend', *v.* to accompany; to be present.
**Attendant,** at-tend'ant, *adj.* accompanying; *n.* one who attends. [careful.
**Attentive,** at-tent'iv, *adj.* courteous; solicitous;
**Attenuate,** at-ten'ū-āt, *v.* to make thin; lengthen out.
**Attestation,** at-test-ā'shun, *n.* act of attesting.
**Attic,** at'tik, *n.* elegant; pertaining to Athens; a
**Atticism,** at'ti-sism, *n.* dry wit. [garret.
**Attire,** at-tīr', *v.* to dress; to array.
**Attitude,** at'tit-ūd, *n.* posture; position.
**Attorney,** at-tūr'ni, *n.* a lawyer; one who acts for
**Attract,** a-trakt', *v.* to draw; allure. [another.
**Attraction,** at-trak'shun, *n.* act of attracting.
**Attractive,** at-trakt'iv, *adj.* alluring; open to admiration.
**Attribute,** at-trib'ūt, *v.* to assign or ascribe.
**Attribute,** at'trib-ūt, *n.* a characteristic.
**Attrition,** at-tri'shun, *n.* friction.
**Attune,** at'tūn', *v.* to put in tune.
**Auburn,** aw'burn, *adj.* reddish-brown.
**Auction,** awk'shun, *n.* a public sale.
**Audacious,** aw-dā'shus, *adj.* bold, impudent.
**Audacity,** aw-das'it-i, *n.* daring, impudence.
**Audible,** aw'dibl, *adj.* to be heard.
**Audience,** aw'di-ens, *n.* an assembly of listeners; the act of hearing; a ceremonial interview.
**Audit,** aw'dit, *n.* an inspection of accounts.
**Auditor,** aw'dit-or, *n.* one who audits; a hearer.
**Augean,** aw-jē'an, *adj.* difficult; filthy.
**Auger,** aw'gĕr, *n.* a carpenter's boring tool.
**Augment,** awg-ment', *v.* to add to.
**Augur,** aw'gur, *n.* a diviner.
**Augury,** aw'gur-i, *n.* an omen.
**August,** aw'gust, *n.* the eighth month.
**August,** aw-gust', *adj.* imposing, majestic.
**Aulic,** aw'lik, *adj.* connected with a royal court.
**Aunt,** ănt, a father's or a mother's sister.
**Aural,** aw'ral, *adj.* connected with the ear.
**Aureola,** aw-rī'ō-lă, *n.* halo of golden colour.
**Auric,** aw'rik, *adj.* pertaining to gold.
**Auricula,** aw-rik'ū-lă, *n.* a kind of primrose.
**Auricular,** aw-rik'ū-lar, *adj.* by hearing or report.
**Auriculate,** aw-rik'ū-lāt, *adj.* ear-shaped.
**Auriferous,** aw-rif'er-us, *adj.* gold-bearing.
**Aurist,** aw'rist, *n.* an ear specialist.
**Aurora Borealis,** aw-rō'ră bō-rē-ă'lis, *n.* the northern lights.
**Auspices,** aws'pis-ez, *n.* patronage; protection.
**Auspicious,** aws-pish'us, *adj.* of good omen.
**Austere,** aw-stĕr', *adj.* stern; haughty; severe.
**Austerity,** aw-stĕr'it-i, *n.* severity of manner.
**Austral,** aws'rtal, *adj.* southern.
**Authentic,** aw-*then*'tik, *adj.* genuine.
**Authenticate,** aw-*then*'tik-āt, *v.* to give validity to.
**Authenticity,** aw-*then*'tis'it-i, *n.* the quality of being authentic. [of books.
**Author,** aw'*thur*, *n.* one who originates; a writer
**Authoritative,** aw-*thor*'it-āt-iv, *adj.* having proper
**Authority,** aw-*thor*'it-ē, *n.* legal right. [sanction.

**Authorization,** aw'*th*or-ī-zā'shun, *n.* sanction by
**Authorize,** aw'*th*or-īz, *v.* to sanction. [authority.
**Autobiography,** aw-to-bī-og'raf-ī, self-written biography. [steam, electricity, or petrol.
**Auto-car,** o'to-kär, *n.* a road vehicle propelled by
**Autocrat,** aw'to-krat, *n.* an absolute ruler.
**Autocratic,** aw-to-krăt'ik, *adj.* in the manner of an autocrat.
**Auto-da-fe,** aw'to-dă-fā', *n.* act of faith; the punishment accorded to heretics by the Inquisition.
**Autograph,** aw'to-grăf, *n.* one's own writing.
**Automatic,** aw-to-mat'ik, *adj.* self-acting; *n.* a motor-car.
**Automaton,** aw-tom'ă-ton, *n.* a self-moving machine.
**Automobile,** o-to-mō'bil, or o-to-mō-bil', *adj.* self-moving; a motor-car.
**Autonomous,** aw-ton'o-mus, *adj.* pertaining to self-government.
**Autumn,** aw'tŭm, *n.* the fall of the year.
**Auxiliary,** awg-zil'ī-ar-ī, *adj.* subsidiary.
**Avail,** ă-vāl', *v.* to be of use to; to take advantage of.
**Avalanche,** ăv'ă-lansh, *n.* a falling mass of snow or ice.
**Avarice,** ăv'ă-ris, *n.* keen desire for money or property.
**Ave-Maria,** ā'vă-ma-rē'ă, *n.* the salutation to the Virgin.
**Avenge,** ă-venj', *v.* to take vengeance upon.
**Avenue,** av'en-ū, *n.* an approach; a tree-bordered road; a main thoroughfare.
**Aver,** a-ver', *v.* to assert.
**Average,** av'er-ij, *n.* the mean value.
**Averse,** ă-vers', *adj.* contrary to; disliking.
**Aversion,** ă-ver'shun, *n.* dislike; hatred; repugnance.
**Avert,** a-vert', *v.* to divert or prevent. [
**Aviary,** ā'vi-ar-ī, *n.* a place for keeping birds.
**Aviate,** ā'vi-āt, *v.* to fly by aeroplane.
**Avidity,** av-id'it-ī, *n.* eagerness.
**Avocation,** av-o-kā'shun, *n.* occupation.
**Avoid,** a-void', *v.* to shun, to escape from.
**Avoidance,** ă-voi'dăns, *n.* the act of shunning.
**Avoirdupois,** av-or-dū-poiz', *n.* weights system in which 16 oz. go to the pound.
**Avouch,** ă-vowch', *v.* to assert.
**Avow,** ă-vow', *v.* to declare.
**Avowedly,** ă-vow'ed-lī, *adv.* openly.
**Avuncular,** a-vung'kū-lar, *adj.* relating to an uncle.
**Await,** a-wāt', *v.* to wait for.
**Awaken,** ă-wā'ken, *v.* to rouse from sleep; to excite interest.
**Award,** ă-wôrd', *n.* a judgment or decision.
**Aware,** ă-wār, *adj.* conscious.
**Away,** a-wā', *adv.* onward.
**Awful,** aw'-ful, *adj.* dreadful; causing awe.
**Awkward,** awk'wûrd, *adj.* clumsy.
**Awl,** *n.* a tool for making holes in leather.
**Awning,** awn'ing, *n.* a covering from the sun.
**Awry,** ă-rī', *adj.* twisted; distorted.
**Axillary,** aks-il'ar-ī, *adj.* relating to the armpit.
**Axiom,** aks'ī-om, *n.* a self-evident truth.
**Axis,** aks'is, *n.* the point or line on which a thing revolves.
**Axle,** aks'ŭl, *n.* the rod on which a wheel revolves.
**Ayah,** ā'ya, *n.* an Indian woman servant.
**Ay,** or **Aye,** I, *adv.* yea, or yes.
**Azotic,** az-ōt-ik, *adj.* nitrogenous.
**Azure,** azh'ûr, *adj.* sky-blue.

## B

**Babble,** bab'bl, *v.* childish prattle; murmuring
**Babel,** bā'bl, *n.* confused sounds. [sounds.
**Baby,** bā-bī, *n.* an infant; one under age.
**Babyish,** bā'bī-ish, *adj.* babylike.
**Baccarat,** bak-ar-ā', *n.* a card game.
**Bacchanalia,** bak-an-ā'lī-a, *n.* drinking revels.
**Bacchanalian,** bak-an-ā'lī-an, *adj.* pertaining to drunken feasting.
**Bachelor,** batch'el-or, *n.* an unmarried man.
**Bacillus,** ba-sil'us, *n.* disease germ.
**Backbite,** bak'bīt, *v.* to slander in the absence of the slandered.
**Background,** bak'ground, *n.* the back of a scene or picture; obscurity.
**Backslide,** bak-slīd', *v.* to lapse from faith or principle.
**Backward,** bak'werd, *adv.* towards the back or past.
**Badge,** badj, *n.* something worn or carried as distinguishing mark.
**Badinage,** bad'in-āzh, *n.* banter, chaff.
**Baffle,** baf'fl, *v.* to hinder.
**Bag,** *n.* a sack or pouch.
**Bagatelle,** bag-ă-tel', *n.* a mere nothing; a game with board, balls, and cue.
**Baggage,** bag'ij, *n.* an army's necessaries; personal luggage.
**Bagpipe,** bag'pip, *n.* a wind instrument, blown with air bag.
**Bail,** bāl, *n.* security for an accused person.
**Bailee,** bāl-ē', *n.* one who holds goods in trust.
**Bailie,** bāl'ī, *n.* a Scotch municipal officer.
**Bailiff,** bā'liff, *n.* a court official.
**Bailiwick,** bāl'ī-wik, *n.* a bailiff's territory.
**Bait,** bāt, *n.* food to lure fish; temptation.
**Baize,** bāz, *n.* coarse cloth used for coverings.
**Bake,** bāk, *v.* to cook by heat in oven.
**Bakery,** bā'kur-ī, *n.* a bakehouse.
**Balance,** bal'ans, *n.* a weighing apparatus; amount required to equalise two sides of an account.
**Bald,** bawld, *adj.* hairless.
**Balderdash,** bal'der-dash, *n.* senseless talk.
**Baleen,** bā-lēn, *n.* whalebone.
**Balk,** bawk, *n.* a beam of rafter; *v.* to check, to disappoint.
**Ball,** bawl, *n.* any round substance; an assembly of
**Ballad,** bal'ăd, *n.* a simple song. [dancers.
**Ballast,** bal'ăst, *n.* weight added to a ship of light cargo to keep her steady. [a stage dance.
**Ballet,** bal'lā, *n.* a dance with pantomimic action;
**Ballistite,** bal'is-tīt, *n.* an explosive powder.
**Balloon,** bal-loon', *n.* an inflated bag of paper or silk that floats in the air.
**Ballot,** bal'ŭt, *n.* a voting ticket; secret voting; *v.* to select by balloting.
**Balm,** bâm, *n.* an ointment.
**Balmy,** bâm'ī, *adj.* fragrant, soothing.
**Balsam,** bawl'săm, *n.* genus of herbaceous plants; an ointment.
**Balustrade,** bal-us-trād', *n.* a row of balusters.
**Bamboo,** bam-boo', *n.* a hollow Asiatic reed.
**Bamboozle,** bam-boozl', *v.* to confuse.
**Ban,** *n.* proclamation of banishment; *v.* to banish.
**Banal,** ban'ŭl, *adj.* trifling, absurd. [lands.
**Banana,** ban-ă'neh, *n.* a nutritious fruit of tropical
**Band,** band', *n.* any material used to bind things with; a body of musicians; a company associated for any set purpose. [purposes.
**Bandage,** ban'dij, *n.* strip of cloth for binding
**Bandana,** ban-dan'ă, *n.* an Oriental handkerchief of silk or cotton.
**Bandbox,** band'boks, *n.* a light receptacle for hats,
**Bandit,** ban'dit, *n.* a robber, an outlaw. [etc.
**Bandoleer,** ban-do-lēr', *n.* ammunition belt.
**Bandoline,** ban'do-lin, *n.* hair stiffening substance.
**Bandy,** ban'dī, *n.* a bent club used in a ball game; crooked.
**Bang,** *n.* a sudden noise or blow.
**Banian,** ban'yăn, *n.* an Indian tree whose branches take root.
**Banish,** ban'ish, *v.* to expel; to order into exile.
**Banister,** ban'is-ter, same as baluster.
**Banjo,** ban'jo, *n.* a stringed instrument of the guitar order.
**Bank,** bangk, *n.* a mound; a place where money is deposited. [and current as money.
**Bank-note,** bank-nōt, *n.* note issued by a bank
**Bankrupt,** bank'rupt, *n.* one who becomes insolvent.
**Bankruptcy,** bank'rupt-sī, *n.* the condition of being
**Banner,** ban'ûr, *n.* military flag. [bankrupt.
**Banns,** bâns, *n.* proclamation of intended marriage.
**Banquet,** bank'wet, *n.* a feast.
**Banshee,** ban'shē, *n.* an Irish female fairy.
**Bantam,** ban'tam, *n.* a variety of small fowl.
**Banter,** ban'ter, *n.* raillery.
**Baptism,** bap'tizm, *n.* a religious ceremony by sprinkling of, or immersion in, water.
**Baptist,** bap'tist, *n.* one who believes in baptism.
**Baptistery,** bap'tis-tûr-ī, *n.* the place where baptisms are performed.
**Barb,** bārb, *n.* a jagged point.
**Barbarian,** bar-bā'rī-an, *n.* a savage.
**Barbarism,** bar'ber-izm, *n.* savage life.
**Barbarous,** bar'ber-us, *adj.* savage, cruel.
**Barbecue,** bar'bī-kew, *v.* to roast whole.
**Barber,** barb'ûr, *n.* one who shaves and dresses
**Bard,** bârd, *n.* a poet, a singer. [hair.
**Bardic,** bard'ik, *adj.* pertaining to bards.
**Bare,** bār, *adj.* uncovered.
**Barege,** bar-ăzh', *n.* a light silky fabric.
**Bargain,** bar'gen, *n.* a contract; a favourable pur-
**Barge,** barj, *n.* a flat-bottomed boat. [chase.

**Baritone,** bar'i-tōn, *n.* voice between tenor and
**Bark,** bârk, *n.* the rind of a tree. [bass.
**Barley,** bar'li, *n.* grain from which malt is made.
**Barleycorn,** bar'li-korn, *n.* a barley grain.
**Barn,** bârn, *n.* building for storage of grain, etc.
**Barnacle,** bar'nakl, *n.* a shellfish that sticks to ships' bottoms and rocks; irons put on horses' noses to keep them quiet.
**Barometer,** bar-om'i-tûr, *n.* an instrument for measuring the pressure of the atmosphere.
**Baron,** bär'un, *n.* the lowest title of rank in the House of Peers.
**Baronage,** bär'un-âj, *n.* the whole of the barons.
**Baronet,** bär'ō-net, *n.* the lowest British hereditary
**Baronetcy,** bär'un-net-si, *n.* rank of baronet. [title.
**Barony,** bar'un-i, *n.* the territory of a baron.
**Barque,** bârk, *n.* a small ship.
**Barrack,** bär'uk, *n.* a building for soldiers.
**Barrage,** bär-âj, *n.* an artificial bar for deepening a river; mass firing in war.
**Barratry,** bär'rà-trē, *n.* fraudulent practices in connection with ships.
**Barrel,** bär'ul, *n.* a cylindrical cask.
**Barrenness,** bär'un-ness, *n.* unfruitfulness.
**Barricade,** bär'i-kād, *n.* temporary fortification.
**Barrier,** bär'i-ur, *n.* a defence; a boundary.
**Barrister,** bär'is-tur, *n.* a member of the legal bar.
**Barter,** bär'tur, *v.* to exchange.
**Basalt,** bās-awlt, *n.* an igneous rock.
**Base,** bās, *n.* foundation; the chief ingredient.
**Base-ball,** bās'bawl, an American game of the rounders.
**Basement,** bās'ment, *n.* the lowest storey of a
**Bashful,** bash'ful, *adj.* shy. [building.
**Basil,** bāz'il, an aromatic plant.
**Basin,** bās'in, *n.* an open dish; a dock.
**Basis,** bās'is, *n.* foundation.
**Bask,** bāsk, *v.* to lie in the sun. [rushes.
**Basket,** bāsk'et, *n.* a receptacle made of cane or
**Bas-relief,** bā-ri-leef, *n.* figures sculptured or carved in low relief.
**Bassinet,** bās-si-net', *n.* a light kind of cradle.
**Bassoon,** bā-soon', a wind instrument.
**Bastard,** bas'tard, *n.* a child born out of wedlock.
**Baste,** bāst, *v.* to beat; to pour fat over meat.
**Bastille,** bās-teel', *n.* an old Paris prison destroyed in 1789.
**Bastinado,** bās-tin-ā-dō, *v.* punishment by beating the soles of the feet. [fortified building.
**Bastion,** bās'ti-on, *n.* a tower at the angles of a
**Bat,** *n.* a winged animal with a mouse-like body.
**Batch,** *n.* a set; a collection of things.
**Bathos,** bā'thos, *n.* ludicrous writing or speech
**Baton,** bāt'on, *n.* a conductor's wand; a staff or truncheon.
**Battalion,** bătal'yun, *n.* a body of soldiers.
**Batten,** bāt'tun, *v.* to get fat.
**Batter,** bāt'er, *v.* to beat; *n.* ingredients beaten into paste.
**Battery,** bāt'er-i, *n.* an equipment of cannon.
**Battledore,** bătl'dōr, *n.* a bat for playing shuttlecock.
**Battlement,** bătl'ment, *n.* an embrasured wall.
**Battue,** bāt-too', *n.* game driving for convenience of shooting.
**Bauble,** baw'bl, *n.* a trifle; a plaything.
**Bawd,** *n.* a procurer or procuress.
**Bay,** bā, *adj.* a reddish-brown colour; an inlet of the sea; the space between two columns.
**Bayonet,** bā'o-net, a stabbing instrument fixed to the muzzle of a rifle.
**Bay-window,** bā'win-dō, *n.* a projecting window.
**Bazaar,** bā-zär', *n.* an oriental market place; a
**Beach,** bēch, *n.* the shore. [fancy fair.
**Beacon,** bē'kun, *n.* a signal fire on a hill.
**Bead,** bēd, *n.* a little pierced ball through which a string can be threaded.
**Beadroll,** bēd'rōl, *n.* a list of names.
**Beadsman,** bēdz'man, *n.* formerly an official employed to pray for others.
**Beagle,** bē'gl, *n.* a small hound.
**Beak,** bēk, *n.* a bird's bill.
**Beaker,** bē'ker, *n.* a drinking cup.
**Beam,** bēm, *n.* a supporting piece of timber or iron.
**Bean,** bēn, *n.* the name of several varieties of plants bearing pods and seeds.
**Bear,** bär, *v.* to support or endure.
**Beard,** bērd, *n.* the hair of the chin.
**Bear-garden,** bär'gard-un, *n.* the place where bears are confined; a noisy assembly.
**Bearing,** bär'ing, *n.* behaviour; attitude.
**Beast,** bēst, *n.* any four-footed animal; a vulgar
**Beat,** bēt, *v.* to strike. [person.

**Beatific,** bē-at-if'ik, *adj.* making blessed or happy.
**Beatification,** bē-at-if-ik-ā'shun, *n.* act of beatify-
**Beatitude,** bē-at'it-ūd, *n.* divine happiness. [ing.
**Beau,** bō, *n.* a man of fashion; a dandy; a lover.
**Beau-ideal,** bō-i-dē'al, *n.* an ideal standard of excellence.
**Beauteous,** bū'ti-us *adj.* abounding in beauty.
**Beautiful,** bū'ti-ful, *adj.* fair; pleasing; admirable.
**Beautify,** bū'ti-fi, *v.* to render beautiful.
**Beauty,** bū'ti, *n.* a combination of attractive qualities.
**Beaver,** bē'ver, *n.* an amphibious rodent.
**Becalm,** bi-kâm', *v.* to make calm.
**Because,** bi-kawz', *adv.* and *conj.* by reason of.
**Beckon,** bek'un, *v.* to signal to.
**Bed,** *n.* a place to sleep on; a garden plot.
**Bedchamber,** bed'chām-ber, *n.* sleeping room.
**Bedding,** bed'ing, *n.* materials for the bed.
**Bedridden,** bed'ridn, *adj.* confined to bed.
**Bedstead,** bed'stēd, *n.* frame of a bed.
**Bee,** *n.* a honey-making insect.
**Beech,** bēch, *n.* a forest tree with smooth bark.
**Beef,** *n.* ox or cow flesh.
**Beef-eater,** bēf'ē-tur, *n.* a yeoman of the guard.
**Bee-hive,** bē'hīv, *n.* receptacle for keeping bees.
**Beer,** bēr, *n.* liquor made from barley and hops.
**Beeves,** bēvs, *n.* cattle.
**Befitting,** bi-fit'ing, *adj.* suitable.
**Befogged,** bi-fogd', *adj.* obscured in fog; confused.
**Befool,** bi-fool', *v.* to deceive, or make look foolish.
**Before,** bi-fōr', *prep.* in front of or in presence of.
**Beget,** bi-get', *v.* to produce or generate.
**Beggar,** beg'ar, *n.* one who begs.
**Beggarly,** beg'ur-li, *adj.* mean, poor.
**Beggary,** beg'ur-i, *n.* poverty.
**Begin,** bi-gin', *v.* to commence.
**Beguilement,** bi-gil'ment, *n.* allurement.
**Begum,** bē'gum, *n.* an Indian princess.
**Behalf,** bi-hâf, *n.* favour or benefit.
**Behave,** bi-hāv', *v.* to bear or conduct properly.
**Behaviour,** bi-hā'vi-or, *n.* conduct; good manners.
**Behest,** bi-hest', *n.* command.
**Behind,** bi-hind, *prep.* at the rear of.
**Behoof,** bi-hoof', *n.* benefit.
**Behove,** bi-hoov', *v.* to be fit for.
**Beknown,** bi-nōn', *adj.* known.
**Belabour,** bi-lā'br, *v.* to beat.
**Belated,** bi-lā'ted, *adj.* too late.
**Belaud,** bi-lawd', *v.* to praise.
**Belch,** belch, *v.* to void wind by the mouth.
**Beleaguer,** bi-lē'gur, *v.* to besiege.
**Belfry,** bel'fri, *n.* tower where bells are kept.
**Belie,** bi-lī', *v.* to contradict; falsify.
**Belief,** bi-lēf', *n.* faith.
**Belittle,** bi-lit'l, *n.* to make small. [shade.
**Belladonna,** bel'la-don'nā, *n.* the deadly night-
**Belles-lettres,** bel-let'r, *n.* choice literature.
**Bellicose,** bel'i-kōs, *adj.* contentious.
**Belligerent,** bel-lij'ur-ent, *adj.* carrying on warfare; *n.* a Power or person waging war.
**Bell-metal,** bel'metl, *n.* metal from which bells are
**Bellow,** bel'ō, *v.* to cry out violently. [made.
**Bellows,** bel'ōz, *n.* an instrument for blowing the fire.
**Bell-wether,** bel'wethr, *n.* the leader of a flock of sheep.
**Belly,** bel'i, *n.* the lower part of the body.
**Belong,** bi-long', *v.* to pertain to.
**Bench,** bensh, *n.* a long seat. [Inns of court.
**Bencher,** bensh'ur, *n.* a senior member of one of the
**Beneath,** bi-nēth, *prep.* under, or lower.
**Benedict,** ben'i-dikt, *n.* a newly-married man.
**Benediction,** ben-i-dik'shun, *n.* a blessing.
**Benefaction,** ben-i-fāk'shun, *n.* a good deed.
**Beneficed,** ben'i-fist, *adj.* owning a benefice.
**Beneficent,** ben-ef'i-sent, *adj.* charitable.
**Beneficial,** ben-i-fish'ul, *adj.* advantageous.
**Beneficiary,** ben-i-fish'ur-i, *n.* one who enjoys or expects to enjoy an estate held in trust.
**Benefit,** ben'i-fit, *n.* a favour.
**Benevolent,** ben-ēvo'-lent, *adj.* charitable; generous.
**Benighted,** bi-nīt'ed, *adj.* overtaken by night;
**Benignity,** ben-ig'nit-i, *n.* kindness. [ignorant.
**Benison,** ben'i-sun, *n.* blessing.
**Bent,** *n.* tendency; bias; *adj.* curved.
**Benzoin,** ben'zō-in, *n.* an aromatic gum.
**Bepraise,** bi-prāz', *v.* to praise excessively.
**Bequeath,** bi-kwēth', *v.* to will personal property.
**Bequest,** bi-kwest', *n.* the thing bequeathed.
**Berate,** be'rāt', *v.* to scold. [bereaved.
**Bereavement,** bi-rēv'ment, *n.* the state of being
**Berth,** bērth, *n.* a sleeping place on board ship.
**Beryl,** ber'il, *n.* a precious stone.

**Beseech,** bi-seech', *v.* to implore.
**Beseeming,** bi-sē'ming, *n.* worthy.
**Beset,** bi-set', *v.* to besiege; to assail.
**Besetting,** bi-set'ing, *adj.* perplexing.
**Beshrew,** bi-shroo', *v.* to curse.
**Beside,** bi-sīd', *prep.* near.
**Besides,** bi-sīdz', *prep.* in addition.
**Besiege,** bi-sēj', *v.* to lay siege to.
**Besmear,** bi-smēr', *v.* to bedaub.
**Besom,** bē'zum, *n.* a sweeping implement.
**Besot,** bi-sot', *v.* to render sottish.
**Bespeak,** bi-spēk', *v.* to engage beforehand.
**Bestial,** bes'ti-al, *adj.* beastlike; rude.
**Bestir,** bi-ster', *v.* to become active.
**Bestowal,** bi-stow'al, *n.* the act of bestowing.
**Bestrew,** bi-stroo' *v.* to scatter loosely.
**Bet,** *n.* a wager.
**Betake,** bi-tāk', *v.* to take oneself to.
**Bethink,** bi-*th*ingk', *v.* to recall.
**Betimes,** bi-tīms', *adv.* in good time.
**Betoken,** bi-tō'kn, *v.* to give sign of.
**Betray,** bi-trā', *v.* to deceive.
**Betroth,** bi-trō*th*', *v.* to become affianced.
**Better,** bet'r, *adj.* comparative of good.
**Betterment,** bet'ir-ment, *n.* improvement.
**Between,** bi-twēn', *prep.* in the middle of.
**Bevel,** bev'ul, *n.* a slanting edge.
**Beverage,** bev'er-idj, *n.* liquid refreshment.
**Bevy,** bev'i, *n.* a brood, flock or company.
**Bewail,** bi-wāl', *v.* to mourn.
**Bewilder,** bi-wil'der, *v.* to perplex.
**Bewitching,** bi-witch'ing, *adj.* charming.
**Bey,** bā, *n.* a Turkish governor.
**Beyond,** bi-yond', *prep.* farther; out of reach.
**Bezel,** bez'l, *n.* the setting of a precious stone.
**Bezique,** bi-zēk, *n.* a card game.
**Bias,** bī'as, *n.* a leaning to one side.
**Bib,** *n.* a cloth placed beneath an infant's chin.
**Bible,** bī'bl, *n.* the Old and New Testaments.
**Biblical,** bib'lik-al, *adj.* relating to the Bible.
**Bibliography,** bib-lē-og'raf-i, *n.* knowledge of books.
**Bibliolatry,** bib-lē-ol'-ō-tri, *n.* superstitious regard for the Bible.
**Bibliomaniac,** bib-lē-o-mā'ni-ak, *n.* a person possessed of a mania for books.
**Bibulous,** bib'ū-lus, *adj.* pertaining to drink.
**Biceps,** bī-seps, *n.* the muscle of the upper part of the arm.
**Bicker,** bik'ur, *v.* to contend querulously.
**Bicycle,** bī-sikl, *n.* a two-wheeled cycle.
**Bid,** *v.* to propose; to offer.
**Bide,** bīd, *v.* to wait for.
**Biennial,** bī-en'i-al, *adj.* every two years.
**Bier,** bēr, *n.* carriage or frame for conveying the dead.
**Bifacial,** bī-fā'shi-al, *adj.* having two similar faces.
**Bifidate,** bif'id-āt, *adj.* cloven in two.
**Bifurcation,** bī-fur-kā'shun, *n.* two-forked division.
**Big,** *adj.* large.
**Bigamy,** big'a-mi, *n.* being doubly married.
**Bight,** bīt, *n.* a small bay.
**Bigot,** big'ut, *n.* a blind supporter.
**Bigotry,** big'ō-tri, *n.* excess of zeal.
**Bilateral,** bī-lāt'er-al, *adj.* with two sides.
**Bilbo,** bil'-bō, *n.* a rapier.
**Bile,** bīl, *n.* a bitter fluid secreted by the liver.
**Bilge,** bilj, bulging part of a ship.
**Bilious,** bil'i-us, *adj.* affected by bile.
**Bilingual,** bi-ling'wal, *adj.* concerning two languages.
**Bill,** *n.* a hatchet; a bird's beak; an account.
**Billet,** bil'et, *n.* a small log; a little note.
**Billiards,** bil'i-urds, *n.* a table game with cue and
**Billion,** bil'i-on, *n.* a million millions. [balls.
**Billow,** bil'ō, *n.* a sea wave. [human species.
**Bimanous,** bim'an-us, *adj.* pertaining to the
**Bimetallism,** bī-met'al-izm, *n.* a monetary system in which silver and gold are on equal footing.
**Binary,** bī'nar-i, *adj.* two-fold.
**Binnacle,** bin'ikl, *n.* the case in which the ship's compass is kept.
**Binocle,** bin'o-kl, *n.* a telescope for both eyes.
**Binocular,** bin-ok'ū-ler, *adj.* two-eyed.
**Binomial,** bī-nōm'i-al, *adj.* consisting of two parts.
**Biogenesis,** bī-ō-jen'ēs-is, *n.* natural generation.
**Biograph,** bī-ō-graf, *n.* an apparatus by which photographed objects are shown in motion.
**Biography,** bī-og'raf-i, *n.* personal history.
**Biology,** bī-ol'o-ji, *n.* the science of life.
**Bipartite,** bipart'it, *adj.* in two equal parts.
**Biped,** bī'ped, *n.* a two-footed animal.
**Biplane,** bī'plān, *n.* a flying machine with two
**Birch,** *n.* a tree, *v.* to whip. [planes.

**Bird,** berd, *n.* a feathered animal with wings.
**Birdseye,** berds'ī, *n.* a kind of tobacco.
**Biretta,** bir-et'a, *n.* a square cap worn by ecclesiastics.
**Birth,** ber*th*, *n.* the act of bearing offspring.
**Biscuit,** bis'kit, *n.* small cake of dried bread.
**Bisect,** bī-sekt', *v.* to divide into two parts.
**Bishop,** bish'up, *n.* an ecclesiastic having direction of a diocese.
**Bismuth,** biz'muth, *n.* a reddish-white metal.
**Bison,** bī'son, *n.* a wild animal of the buffalo species.
**Bistre,** bis'ter, *n.* a warm brown pigment.
**Bite,** bīt, *v.* to seize with the teeth.
**Bitters,** bit'erz, *n.* extract of bitter herbs.
**Bitumen,** bi-tū'men, *n.* inflammable mineral substances.
**Bivalve,** bī'valv, *n.* an animal with two shells.
**Bivouac,** biv'oo-ak, *n.* soldiers' camping place at night in the open.
**Bizarre,** biz-ār', *adj.* odd, extravagant.
**Blab,** *v.* to tell secrets.
**Blackball,** blāk'bawl, *v.* to reject on a ballot.
**Blackguard,** blā'gārd, *n.* vulgar fellow.
**Blackleg,** blāk'leg, *n.* a swindler: a man who works for wages against which others have struck.
**Blackletter,** blāk'letr, *n.* old English type.
**Blackmail,** blāk'māl, forced tribute; hush money.
**Black-rod,** blāk'rod', *n.* a Parliamentary official.
**Blacksmith,** blāk'smith, *n.* a worker in iron.
**Bladder,** blādr, *n.* the bag which holds the urine.
**Blade,** blād, *n.* a leaf of grass; the cutting part of a knife.
**Blamable,** blām'abl, *adj.* deserving of blame.
**Blame,** blām, *v.* to censure, to find fault with.
**Blanch,** blansh, *v.* to whiten.
**Blanc-mange,** blā-mawngzh', *n.* a jelly prepared with flour and milk.
**Blandishment,** blan'dish-ment, *n.* flattery.
**Blandness,** bländ'ness, *adj.* gentleness.
**Blank,** *adj.* empty; without marks; vacant.
**Blanket,** blangk'et, *n.* a woollen bed covering.
**Blare,** blār, *v.* to make a loud noise.
**Blaspheme,** blas-fēm', *v.* to swear.
**Blasphemy,** blas'fi-mi, *n.* profane speaking.
**Blast,** *n.* a gust of wind.
**Blatant,** blā'tant, *adj.* noisy.
**Blazon,** blā'zn, *v.* to notify publicly.
**Blazonry,** blāz'on-ri, *n.* the drawing of coats of
**Bleach,** bleetch, *v.* to whiten. [arms.
**Bleak,** blēk, *adj.* cold, cheerless.
**Bleakness,** blēk'ness, *n.* the condition of being
**Blear,** blēr, *adj.* dim, blurred. [bleak.
**Bleat,** blēt, *v.* a sheep's cry.
**Bleb,** *n.* a blister.
**Blemish,** blem'ish, *n.* defect, stain.
**Blench,** blensh, *v.* to shrink or flinch.
**Blend,** *v.* to mix.
**Bless,** *v.* to invoke happiness upon.
**Blessing,** bless'ing, *n.* a wish for happiness.
**Blight,** blit, *n.* a withering disease in plants.
**Blind,** blind, *adj.* without sight.
**Blindfold,** blind'fold, *adj.* with the eyes bandaged.
**Blindside,** blind'side, *n.* the side on which a person
**Blink,** *v.* to wink. [sees no risk.
**Bliss,** *n.* supreme happiness.
**Blister,** blis'ter, *n.* a watery bubble on the skin.
**Blithe,** blith, *adj.* gay, happy.
**Blizzard,** bliz'erd, *n.* a severe snowstorm.
**Bloated,** blō'ted, *adj.* puffed out.
**Bloater,** blō'ter, *n.* a cured herring.
**Blob,** *n.* a drop of liquid.
**Block,** *n.* a mass of wood or stone; an obstruction.
**Blockade,** blōk-ād', *n.* a state of siege.
**Blockhead,** blōk-hēd, *n.* a stupid person.
**Block-system,** blōk'sist-em, *n.* a signalling method by which two trains cannot be in one section at once.
**Blonde,** blond, *n.* a fair-complexioned person.
**Bloody,** blūd'i, *adj.* of the nature of blood; blood-stained, murderous.
**Bloom,** *v.* to come into flower; to flourish.
**Bloomer,** bloom'er, *n.* a divided skirt; an error.
**Bloomery,** bloom'er-i, *n.* a forge for iron.
**Blot,** *n.* a stain; an obliteration.
**Blotch,** blotsh, *n.* a spot on the skin.
**Blotter,** blot'ur, *n.* a blotting book.
**Blouse,** blowz, *n.* a loose outer bodice.
**Blow,** *n.* a knock; a sudden calamity; a current of air.
**Blower,** blō'er; *n.* a machine for creating air blasts.
**Blow-pipe,** blō'pip, *n.* a pipe through which air is
**Blubber,** blub'ur, *n.* the fat of whales. [blown.

**Bludgeon,** blud'jun, *n.* a cudgel.
**Blue,** bloo, *n.* sky-colour.
**Blue-book,** bloo'book, *n.* Parliamentary papers.
**Blues,** blooz, *n.* depression of spirits.
**Blue-stocking,** bloo'stock-ing, a literary lady of
**Bluff,** bluf, *adj.* blustering. [pedantic style.
**Blunder,** blun'der, *v.* to make an error; *n.* a mistake.
**Blunderbuss,** blun'der-bŭs, *n.* an old-fashioned
**Blunt,** *adj.* rough-edged. [hand-gun.
**Blur,** blŭr, *n.* a stain, spot, or blemish.
**Blurt,** *v.* to speak abruptly.
**Blushing,** blush'ing, *n.* the act of turning red.
**Bluster,** blus'tr, *v.* to swagger noisily; *n.* boastfulness.
**Boa,** bō-ă, *n.* a garment of fur or feathers worn round the neck by ladies.
**Boar,** bō-ĕr, *n.* a male pig.
**Board,** bawrd, *n.* a thin sheet of timber; food.
**Boarder,** bawrd'ur, *n.* a person who is boarded.
**Boast,** bōst, *v.* to brag.
**Boat,** bōt, *n.* a small ship.
**Boatswain,** bō'sun, *n.* a ship's petty officer.
**Bob,** *v.* to move jerkily up and down.
**Bobbin,** bob'in, *n.* a reel on which thread is wound.
**Bobtail,** bob'tāl, *n.* a short tail.
**Bode,** bōd, *v.* to foreshadow.
**Bodge,** bŏj, *v.* to do deficient work.
**Bodice,** bŏd'is, *n.* a woman's garment covering the
**Boding,** bō'ding, *n.* an omen. [bust.
**Bodkin,** bod'kin, *n.* instrument for pricking holes.
**Body,** bod'i, *n.* the human frame; the middle part of an animal.
**Bodyguard,** bod'i-gārd, *n.* a personal guard.
**Boggle,** bogl, *v.* to hesitate, or start.
**Boggy,** bog'i, *adj.* marshy.
**Bogus,** bō'gus, *adj.* sham.
**Bohemian,** bō-hē'mi-an, *n.* and *adj.* a person of irregular habits.
**Boil,** *v.* to heat to bubbling point.
**Boisterous,** bois'ter-us, *adj.* turbulent; noisy; wild.
**Boll,** bōl, *n.* a pod or seed vessel.
**Bolster,** bōl'ster, *n.* a long pillow.
**Bolt,** *n.* a bar; an arrow; a thunderbolt; *v.* to fasten
**Bolus,** bō'lus, *n.* a large pill. [with a bolt.
**Bomb,** bŏm, *n.* an explosive projectile. [bombs.
**Bombardment,** bom-bard'ment, *n.* attacking with
**Bombast,** bom'bast, *n.* pompous language.
**Bombastic,** bom-bas'tik, *adj.* inflated.
**Bombazine,** bom-bă-zēn', *n.* a twilled fabric.
**Bonanza,** bon-an'za, *n.* a rich mine.
**Bond,** *n.* that which binds; connecting link; a document covenanting to pay.
**Bondage,** bon'dij, *n.* captivity.
**Bondsman,** bondz'man, *n.* a slave or surety.
**Bone,** bōn, *n.* substance of the skeleton.
**Bonfire,** bon'fīr, *n.* an open-air fire.
**Bonnet,** bon'et, *n.* a head covering.
**Bonny,** bon'i, *adj.* handsome; pleasing.
**Bonus,** bō'nus, *n.* a sum in excess of the usual interest or salary.
**Bony,** bō'ni, *adj.* thin of flesh.
**Bonze,** bonz, *n.* a Buddhist priest.
**Booby,** boo'bi, *n.* a stupid fellow. [gether.
**Book,** book, *n.* written or printed matter bound to-
**Book-keeping,** book'keep-ing, *n.* the art of accounts.
**Bookmaker,** book'mākr, *n.* one who bets by a system.
**Bookworm,** book'wurm, *n.* a man devoted to read-
**Boom,** *n.* a sail-bearing pole; *v.* a rush. [ing.
**Boomerang,** boom'er-ang, *n.* a missile used by Aus-
**Boon,** *n.* gift, benefit. [tralian natives.
**Boor,** *n.* a rough peasant.
**Boorish,** boor'ish, *adj.* awkward.
**Boot,** *n.* a covering for the foot and lower part of
**Booth,** *n.* a covered temporary erection. [leg.
**Bootless,** boot'less, *adj.* useless.
**Boot-tree,** boot-tree, *n.* a last.
**Booty,** boot'i, *n.* plunder.
**Border,** bawr'der, *n.* an edge, margin, or boundary.
**Bore,** bōr, *v.* to pierce; *n.* one that wearies.
**Boreal,** bō'ri-al, *adj.* relating to the north wind.
**Born,** bawrn, *v.* brought into life.
**Borough,** bur'ō, *n.* a corporate town.
**Bosh,** *n.* nonsense.
**Bosky,** *adj.* woody.
**Bosom,** booz'um, *n.* the breast.
**Boss,** *n.* manager or foreman.
**Bossy,** bos'i, *adj.* knobby.
**Botany,** bot'ă-ni, *n.* the science of plants.
**Botch,** *n.* a swelling; badly performed work.
**Both,** *adj.* and *pron.* the two.
**Bother,** both'er, *v.* to perplex.
**Bottle,** bot'l, *n.* a vessel for holding liquids.
**Bottom,** bot'om, *n.* the lowest part.
**Bottomry,** bot'omr-i, *n.* mortgage of a ship.
**Boudoir,** boo-dwawr', *n.* a lady's private room.
**Bough,** bow, *n.* a branch of a tree.
**Boulder,** bōl'der, *n.* a large stone.
**Boulevard,** boo'li-vār, *n.* a promenade bordered with trees.
**Bounce,** bowns, *v.* to rebound; *n.* swagger.
**Bound,** bownd, *v.* to leap; held together; *n.* limit.
**Boundary,** bown'der-i, *n.* a defined limit.
**Bounden,** bown'den, *adj.* obligatory.
**Bounty,** bown'ti, *n.* a gift.
**Bouquet,** boo-kā', *n.* a bunch of flowers.
**Bourgeois,** bur-jois', *n.* a kind of printing type; one of the middle class.
**Bourn,** boorn, *n.* a limit or goal.
**Bourse,** boorse, *n.* an exchange.
**Bout,** bowt, *n.* a turn or round.
**Bovine,** bō'vin, *adj.* connected with cattle.
**Bow,** *v.* to bend; to submit.
**Bowels,** bow'ĕlz, *n.* the entrails.
**Bower,** bow'er, *n.* a shady recess.
**Bowl,** bōl, *n.* a domestic basin; a wooden ball.
**Bowline,** bō'lin, *n.* a certain ship's-rope.
**Bowsprit,** bō-sprit, *n.* a spar at the head of a ship.
**Bowstring,** bō'string, *n.* the string of a bow; string used in Turkey for strangling criminals.
**Box,** boks, *n.* a tree of very hard wood; a case.
**Boxer,** boks'er, *n.* one who boxes with gloves or
**Boy,** *n.* a male child. [fists.
**Boycott,** boy'kot, *v.* to refuse dealings with.
**Boyhood,** boy'hood, *n.* the state of being a boy.
**Brace,** brās, *n.* what draws together; a carpenter's
**Bracelet,** brās'let, *n.* a wrist ornament. [tool.
**Bracken,** brāk'en, *n.* fern.
**Bracket,** brāk'et, *n.* a support fastened to the wall.
**Brackish,** brāk'ish, *adj.* saltish.
**Brad,** *n.* a small nail.
**Brag,** *v.* to boast.
**Braggadocio,** brag-ga-dō'si-ō, *n.* a boaster.
**Braggart,** brag'ert, *n.* a boaster.
**Brahmin,** brā'min, *n.* a Hindu priest.
**Braid,** brād, *v.* to plait; *n.* plaited cord.
**Brain,** brān, *n.* the centre of the nervous system; the intellect.
**Brake,** brāk, *n.* a contrivance for slackening the speed of vehicles.
**Bramble,** bram'bl, *n.* a prickly shrub.
**Bran,** brăn, *n.* the refuse of grain.
**Brand,** brănd, *n.* a piece of burnt wood; a particular mark.
**Brandish,** brand'ish, *v.* to wave or flourish.
**Brandy,** brand'i, *n.* a spirit distilled from wine.
**Brasier,** brā'zi-er, *n.* a vessel for holding fire.
**Brass,** *n.* an alloy of copper and zinc.
**Bravado,** brā-vā'do, *n.* a swaggerer.
**Brave,** brāv, *adj.* courageous.
**Bravery,** brā'ver-i, *n.* courage.
**Bravo,** brā'vo, *n.* a hired assassin.
**Bravura,** brā-vū'rā, *n.* florid music.
**Brawl,** *n.* a noisy quarrel.
**Brawny,** braw'ni, *adj.* strong, muscular.
**Bray,** brā, *v.* to pound; *n.* a donkey's cry.
**Braze,** brāz, *v.* to solder.
**Brazen,** brā'zun, *adj.* pertaining to brass; impudent.
**Breach,** brēch, *n.* an opening; law breaking.
**Bread,** bred, *n.* food made from flour or meal.
**Breadth,** bredth, *n.* width.
**Break,** brāk, *v.* to snap; to crush; to tame.
**Breakage,** brā'kij, *n.* the action of breaking.
**Breaker,** brā'ker, *n.* a wave that breaks on the shore.
**Breakfast,** brek'fust, *n.* the morning meal.
**Breakwater,** brāk'waw-ter, *n.* an erection to break the force of water.
**Bream,** brēm, *n.* a small fresh-water fish.
**Breast,** brēst, *n.* the part of the body next below the neck.
**Breastwork,** brēst'work, *n.* an earthwork.
**Breath,** breth, *n.* the air passing through the lungs.
**Breathe,** brēth, *v.* to respire.
**Bred,** *v.* brought forth; brought up.
**Breech,** brēch, *n.* the hind part of a thing.
**Breeches,** brē'chez, *n.* a garment worn by men on the lower limbs.
**Breeching,** brē'ching, *n.* part of a horse's harness.
**Breech-loader,** brēch'lō-der, *n.* a fire-arm loaded at
**Breed,** brēd, *v.* to generate; to train. [the breech.
**Breeding,** brēd'ing, *n.* the act of producing; bring-
**Breese,** brēz, *n.* a wind. [ing up.

**Brethren,** breth'ren, *n.* plural of brother.
**Brevet,** brev'et, *n.* extra rank above an officer's pay.
**Breviary,** brev'i-ar-i, *n.* book of the Roman service.
**Brevier,** brev-ēr', *n.* a kind of printing type.
**Brevity,** brev'i-ti, *n.* shortness.
**Brew,** broo, *v.* to make a liquor.
**Brewery,** broo'er-i, *n.* a brew-house.
**Bribe,** brīb, *n.* a corrupt gift.
**Brickbat,** brik'bat, *n.* a piece of brick.
**Bridal,** brīd'al, *n.* a marriage.
**Bride,** brīd, *n.* a woman about to be or newly-married.
**Bride-cake,** brīd'kāk, *n.* wedding cake. [ried.
**Bridegroom,** brīd-groom, *n.* a man about to be or newly-married.
**Bridesmaid,** brīdz'mād, *n.* a woman who attends the bride.
**Bridge,** brīdj, *n.* a structure spanning a river, stream, or canal.
**Bridle,** brīd'l, *n.* an instrument worn on horses' heads.
**Brief,** brēf, *n.* short; statement of case for counsel.
**Brier,** brī'er, *n.* a prickly shrub.
**Brig,** brig, *n.* a two-masted vessel.
**Brigade,** brig-ād', *n.* a body of troops.
**Brigadier,** brig-a-dēr', *n.* an officer in command of
**Brigand,** brig'and, *n.* a robber. [a brigade.
**Brigantine,** brig'an-tēn, *n.* a small two-masted
**Brill,** *n.* a fish. [vessel.
**Brilliant,** bril'yant, *adj.* glittering, sparkling, splendid; *n.* a fine diamond.
**Brim,** *n.* the brink of a stream or lake; the edge of a vessel; the rim of a hat.
**Brimful,** brim'fool, *adj.* completely full.
**Brimstone,** brim'ston, *n.* sulphur.
**Brindled,** brind'dled, *adj.* marked with spots or
**Brine,** brin, *n.* salt water. [streaks.
**Brink,** bringk, *n.* the edge.
**Briny,** brin-i, *adj.* salty.
**Brisk,** *adj.* quick, active.
**Brisket,** bris'ket, *n.* the part next to the ribs.
**Bristle,** bris-tl, *n.* short, stiff hair.
**Brittle,** brit'l, *adj.* easily broken, fragile.
**Broach,** brōch, *n.* a boring instrument; *v.* to pierce
**Broad,** brawd, *adj.* wide. [or tap.
**Broadside,** brawd'sīd, *n.* the side of a ship; a discharge of guns from it.
**Brocade,** bro-kād', *n.* a figured silk fabric.
**Broccoli,** brok'ō-li, *n.* a kind of cauliflower.
**Brocket,** brok'et, *n.* a two-year-old red deer.
**Brogue,** brōg, *n.* a thick coarse shoe ; dialect.
**Broil,** broil, *n.* a disturbance; a form of cooking.
**Bronchial,** brongk'i-al, *adj.* relating to the bronchiæ.
**Bronchitis,** brongk-ī'tis, *n.* inflammation of the bronchiæ.
**Broncho,** brongk'-ō, *n.* an untamed horse.
**Bronze,** bronz, *n.* an alloy of copper and tin.
**Brooch,** brōch, *n.* an ornamental pin.
**Brood,** brood, *v.* to meditate; to cover as with
**Brook,** brook, *n.* a small stream. [wings.
**Broom,** broom, *n.* a sweeping implement; the name of a class of wild shrubs.
**Broth,** *n.* thick soup.
**Brother,** brūth'er, *n.* a male of the same parents.
**Brow,** *n.* the forehead; the ridge over the eyes; the
**Browbeat,** brow'bēt, *v.* to bully. [edge of a hill.
**Brown,** *n.* a dark reddish colour.
**Brownie,** brow'ni, *n.* a Scotch domestic fairy.
**Browse,** browz, *v.* to feed on leaves or shoots of
**Bruise,** brooz, *v.* to crush. [plants.
**Bruiser,** brooz'er, *n.* one who bruises.
**Brunette,** broo-net', *n.* a dark-complexioned
**Brunt,** brunt, *n.* the shock of contest. [woman.
**Brush,** *n.* an instrument for dispersing dust.
**Brushwood,** brush'wood, *n.* a thicket.
**Brusque,** brusk, *adj.* abrupt.
**Brutality,** broo-tal'i-ti, *n.* being brutal.
**Brute,** broot, *n.* one of the lower animals; *adj.* rude.
**Bryony,** brī'ō-ni, *n.* a hedge-row plant. [vulgar.
**Bubble,** bub'l, *n.* an air bladder of water; a fraudulent scheme.
**Buccaneer,** buk-a-nēr', *n.* a pirate.
**Buck,** buk, *n.* the male of deer and other animals; a dashing fellow.
**Bucket,** buk'et, *n.* a vessel for holding water.
**Buckle,** buk'l, *n.* an ornament or instrument for fastening things.
**Buckler,** buk'ler, *n.* a small shield.
**Buckram,** buk'ram, *n.* a coarse cotton fabric.
**Bucolic,** bū-kol'ik, *adj.* rustic.
**Bud,** *n.* the first shoot of a tree or plant.
**Budge,** buj, *v.* to move.
**Budget,** buj'et, *n.* a collection of things; ministerial financial statement
**Buff,** buf, *n.* a light yellow colour; a kind of leather.
**Buffalo,** buf'a-lō, *n.* a wild ox.
**Buffer,** buf'er, *n.* a contrivance for lessening the force of concussion.
**Buffet,** buf'et, *n.* a blow; *v.* to strike.
**Buffoon,** buf-oon', *n.* one who makes fun.
**Buffoonery,** buf-oon'er-i, the practice of fun-mak-
**Bug,** *n.* a noxious insect. [ing.
**Bugbear,** bug'bār, *n.* an object of fright.
**Buggy,** bug'i, *n.* a light vehicle.
**Bugle,** bū'gl, *n.* a horn.
**Build,** bild, *v.* to erect; to depend upon.
**Builder,** bild'er, *n.* one who erects.
**Bulb,** *n.* a plant with an onion-like root
**Bulbous,** bulb'us, *adj.* bulb-like.
**Bulge,** bulj, *n.* a protuberance.
**Bulimy,** būl'i-mi, *n.* excessive hunger.
**Bulk,** *n.* size, magnitude; the chief part.
**Bulkhead,** bulk'hēd, *n.* a partition in a ship.
**Bull,** bool, *n.* the male of the cow ; a Papal letter.
**Bullet,** bool'et, *n.* a projectile fired from a gun.
**Bulletin,** bool'ēt-in, *n.* official report.
**Bull-finch,** bool'finsh, *n.* a kind of singing finch.
**Bullion,** bool'yun, *n.* uncoined gold and silver.
**Bullseye,** boolz'ī, *n.* the centre of a target.
**Bully,** bool'i, *n.* a blustering ruffian.
**Bulrush,** bool'rush, *n.* a large rush that grows in
**Bulwark,** bool'werk, *n.* a fortification. [water.
**Bumper,** bump'er, *n.* a large glass or cup.
**Bumpkin,** bump'kin, *n.* a country clown.
**Bumptious,** bump'shus, *adj.* boastful, self-assertive.
**Bunch,** *n.* things tied or growing together.
**Bundle,** bun'dl, *n.* things loosely held together.
**Bungalow,** bung'a-lō, *n.* an Indian house, one-
**Bungle,** bung'l, *n.* a clumsy blunder. [storeyed.
**Bunion,** bun'yun, *n.* a swelling on the big toe.
**Bunk,** *n.* a sleeping berth.
**Bunkum,** bunk'um, *n.* clap-trap.
**Bunting,** bunt'ing, *n.* cloth for flags. [navigation.
**Buoy,** boi, *n.* a floating mark indicating danger to
**Buoyancy,** boi'an-si, *n.* power of floating; lightheartedness.
**Bur,** bur, *n.* the prickly seed-case of certain plants.
**Burden,** ber'den, *n.* a load.
**Bureau,** bū-rō, *n.* a writing table; a room or department for business. [of business.
**Bureaucracy,** būr-ok'ras-I, *n.* a centralised system
**Burgess,** bur'jess, *n.* an inhabitant of a borough.
**Burgher,** burg'her, *n.* same as burgess.
**Burglar,** burg'ler, *n.* a housebreaker.
**Burgomaster,** bur'go-mās-tr, *n.* the chief magistrate of a German town.
**Burial,** bĕr'i-al, *n.* the act of interment.
**Burlesque,** bur-lesk', *n.* a comic performance.
**Burly,** bur'li, *adj.* large, strong, bluff.
**Burn,** bern, *n.* a small stream; *v.* to consume by
**Burnish,** bur'nish, *v.* to polish. [fire.
**Burr,** bur, same as bur.
**Burrow,** bur'ō, *n.* ground shelter for animals.
**Bursar,** burs'ar, *n.* treasurer.
**Bursary,** burs'ar-i, *n.* a scholarship.
**Burst,** *v.* to break open suddenly.
**Bury,** bĕr'i, *v.* to inter; to hide; to cover.
**Bush,** boosh, *n.* a thick shrub.
**Bushel,** boosh'el, *n.* a measure of eight gallons.
**Business,** biz'ness, *n.* trade; employment.
**Buskin,** busk'in, *n.* a short boot worn by tragic actors.
**Bust,** *n.* the head and upper part of the human body.
**Bustle,** bus'l, *v.* to be busy; *n.* pad worn by ladies.
**Busy,** biz'i, *adj.* actively employed.
**Busybody,** biz'i-bod-i, *n.* a meddling person.
**Butcher,** booch'er, *n.* one who slaughters animals
**Butchery,** booch'er-i, *n.* slaughter. [for food.
**Butler,** but'ler, *n.* a male servant having charge of wine, plate, etc.
**Butt,** *n.* a large cask; *v.* to strike with the head.
**Butt-end,** but'end, *n.* the heavy end.
**Butter,** but'er, *n.* a substance made from cream by churning.
**Buttery,** but'er-i, *n.* domestic store-room.
**Buttress,** but'res, *n.* an outside support to a wall.
**Buxom,** buk'som, *adj.* lively, hearty, jolly.
**Buy,** bī, *v.* to purchase.
**Buzz,** *n.* a humming noise.
**Buzzard,** buz-erd, *n.* a bird of prey.
**Byre,** bīr, *n.* a cow-house.
**By-word,** bī-werd, *n.* an object of common remark.
**Byzantine,** biz-an'tin, *adj.* relating to Byzantium.

# C

**Cabal, ka-bal'**, *n.* a party of secret plotters.
**Cabinet, kab'i-net**, *n.* small room,; private consulting room; a case of drawers; the Cabinet is a body consisting of the chief Ministers.
**Cable, kā'bl**, *n.* a rope or chain.
**Caboose, ka-boos'**, *n.* a ship's cooking place.
**Cabriolet, kab-ri-o-lā'**, *n.* a one-horse vehicle.
**Cacao, ka-kā'o**, *n.* a tropical plant bearing seeds from which cocoa and chocolate are made.
**Cache, kash**, *n.* a hiding-place.
**Cachexy, ka-kek'si**, *n.* an impoverished body or mind.
**Cachinnation, kak-in-ā'shun**, *n.* loud laughter.
**Cachou, ka-shoo'**, *n.* a sweetmeat. [fowls.
**Cackle, kak'l**, *n.* peculiar noise made by geese and
**Cacophony, kak-ŏf'o-ni**, *n.* discordant sounds.
**Cactus, kak'tus**, *n.* a hard prickly plant.
**Cad, kad**, *n.* a low fellow.
**Cadaverous, ka-dav'er-us**, *adj.* sickly-looking.
**Caddie, kad'i**, *n.* a golf attendant.
**Caddy, kad'i**, *n.* a small box.
**Cadence, kā'dens**, *n.* rhythmical fall of the voice.
**Cadet, kā-det'**, *n.* a younger son; a naval or military
**Cadge, kadj**, *v.* to beg. [student.
**Cadi, kā'di**, *n.* a Mahommedan judge.
**Cairn, kārn**, *n.* a pile of stones.
**Caitiff, kā'tiff**, *n.* a low fellow.
**Cajole, ka-jōl'**, *v.* to coax by flattery.
**Calamity, kal-am'i-ti**, *n.* misfortune.
**Calcareous, kal-kā're-us**, *adj.* containing chalk.
**Calcimine, kal'si-min**, *v.* to whitewash.
**Calcination, kal-sin-ā'shun**, *n.* reduction to chalky powder.
**Calcium, kal'si-um**, *n.* the mineral in chalk.
**Calculable, kal'kū-labl**, *adj.* capable of calculation.
**Calculate, kal'kū-lāt**, *v.* to reckon.
**Calculator, kal'-kūlā-tor**, *n.* one who calculates.
**Calculus, kal'kū-lus**, *n.* stone; an advanced branch of mathematics.
**Caldron, kawl'dron**, *n.* large kettle for boiling liquids.
**Calendar, kal'en-der**, *n.* table of days, months, etc.
**Calender, kal'end-er**, *n.* a press for dressing cloth.
**Calibre, kal'i-ber**, *n.* size, strength.
**Calico, kal'i-kō**, *n.* cotton cloth.
**Caligraph, kal'i-graf**, *n.* a writing machine.
**Caligraphy, kal-lig'ra-fi**, *n.* pemanship.
**Calipers, kal'ip-ers**, *n.* compasses.
**Caliphate, kal'if-āt**, *n.* the office of caliph.
**Calisthenics, kal-is-*then*'iks**, *n.* athletics.
**Calk, kawk**, *n.* the point of a horse-shoe; *v.* to fill up. [name.
**Call, kawl**, *v.* to cry out; to pay a short visit, to
**Callous, kal'us**, *adj.* unfeeling.
**Callow, kal'ō**, *adj.* featherless; beardless.
**Calm, kām**, *adj.* quiet, still.
**Calomel, kal'o-mel**, *n.* a compound of mercury and
**Caloric, kal'o-rik**, *n.* heat. [chlorine.
**Calorific, kal-or-if'ik**, *adj.* causing heat.
**Calotype, kal'o-tip**, *n.* a kind of photography.
**Calumet, kal'ū-met**, *n.* the pipe of peace.
**Calumniate, kal-um'ni-āt**, *v.* to slander.
**Calumny, kal'um-ni**, *n.* a slanderous statement.
**Calvinism, kal'vin-izm**, *n.* the doctrines of Calvin.
**Calyx, kal'iks**, *n.* the outer cup of a flower.
**Cambrian, cam'brian**, *adj.* connected with Wales.
**Cambric, kam'brik**, *n.* fine linen.
**Camel, kam'el**, *n.* a humped Asiatic or African
**Cameo, kam'ē-o**, *n.* a gem carved in relief. [animal.
**Camera, kam'erā**, *n.* apparatus for taking photo-
**Camisade, kam'i-sād**, *v.* a night attack. [graphs.
**Camlet, kam'let**, *n.* a fine cloth.
**Camomile, kam'o-mil**, *n.* a bitter plant.
**Camouflage, kam'oo-flāj**, *v.* to disguise. [tents.
**Camp, kamp**, *n.* place where troops pitch their
**Campaign, kam-pān'**, *n.* a plain; military operations.
**Campanile, kam-pan-ē'lā**, *n.* a bell-tower.
**Campanology, kam-pan-ol'o-ji**, *n.* the art of bell-making, or bell-ringing. [an army.
**Camp-follower, kamp'foll'ō-er**, *n.* one who follows.
**Camphorated, kam'for-ā-ted**, *adj.* imbued with camphor.
**Can, kan**, *v.* to be able; *n.* a vessel for holding liquids.
**Canal, kānal'**, *n.* an artificial waterway.
**Canard, kā-nār'**, *n.* a false story.
**Canary, ka-nā'ri**, *n.* a yellow bird; canary colour.
**Cancel, kan'sel**, *v.* to erase.
**Cancellated, kan'sel-ā-ted**, *adj.* reticulated.
**Cancer, kan'ser**, *n.* a malignant tumour.
**Candelabrum, kan-del-ā'brum**, *n.* frame for branching lights.
**Candescence, kan-des'ens**, *n.* a white heat.
**Candid, kan-did**, *adj.* frank; ingenuous.
**Candidate, kan'did-āt**, *n.* one who offers himself.
**Canine, ka-nin'**, *adj.* relating to the dog.
**Canister, kan'is-ter**, *n.* a box of wood or tin.
**Canker, kangk'er**, *n.* anything that corrupts; gangrene.
**Cankerous, kangk'er-us**, *adj.* corroding.
**Canker-worm, kangk'er-werm**, *n.* a worm that cankers plants.
**Cannel, kan'-el**, *n.* bituminous coal. [flesh.
**Cannibal, kan'i-bal**, *n.* a savage who eats human
**Cannonade, kan'o-nād**, *n.* an attack with cannon.
**Canny, kan'i**, *adj.* shrewd, knowing.
**Canoe, ka-noo'**, *n.* a small boat.
**Canon, kan'on**, *n.* a church dignitary; a law or regulation.
**Cañon, kan-yun**, *n.* a gorge or ravine.
**Canonical, kan-on'ik-al**, *adj.* according to canon.
**Canonicals, kan-on'ik-als**, *n.* regulation clerical attire.
**Canonise, kan'on-īz**, *v.* to enroll among the saints.
**Canon-law, kan'on-law**, *n.* ecclesiastical law.
**Canopy, kan'o-pi**, *n.* an overhead covering.
**Cant, kánt**, *n.* hypocritical speech.
**Cantaloupe, kan'tā-loop**, *n.* a kind of melon.
**Cantankerous, kan-tangk'er-us**, *adj.* perverse.
**Cantata, kan-tā'ta**, *n.* a choral composition.
**Canteen, kan-tēn'**, *n.* a soldier's tavern; a soldier's
**Canter, kan'ter**, *v.* an easy gallop. [liquor vessel.
**Cantharides, kan-*thar*'i-dēz**, *n.* Spanish flies.
**Canticle, kan'tik'l**, *n.* a church song.
**Cantilever, kan'ti-lē-ver**, *n.* projection for bearing bridges, &c.
**Canto, kan'tō**, *n.* a division of a poem.
**Canton, kan'ton**, *n.* a division of a province.
**Cantonment, kan-ton'ment**, *n.* troops' quarters.
**Cantrip, kan'trip**, *n.* a wild antic.
**Canvas, kan'vas**, *n.* a coarse cloth.
**Canvass, kan'vas**, *v.* to solicit votes; to sift; to discuss.
**Caoutchouc, kow'tchuk**, *n.* india-rubber.
**Capable, kā'pā-bl**, *adj.* possessing ability.
**Capacious, ka-pā'shus**, *adj.* having capacity of holding.
**Cap-à-pie, kap-a-pē'**, *adv.* from head to foot.
**Cape, kāp**, *n.* a shoulder-covering; a point of land.
**Caper, kā'per**, *v.* to skip round; *n.* the pickled bud of the caper shrub.
**Capillary, ka-pil'er-i**, *adj.* with the fineness of hair.
**Capital, kap'it-al**, *adj.* chief, principal; *n.* a chief city; money invested.
**Capitalise, kap'it-al-īz**, *v.* to convert into capital.
**Capitalist, kap'it-al-ist**, *n.* one who owns capital.
**Capitally, kap'it-al-i**, *adj.* finely. [heads.
**Capitation, kap-it-ā'shun**, *n.* the numbering of
**Capitol, kap'it-ol**, *n.* the temple of Jupiter at Rome; the Congress house in the United States.
**Capitular, kap-it'ū-lar**, *n.* a statute of an ecclesiastical chapter; a member of chapter.
**Capitulate, kap-it'ū-lāt**, *v.* to yield.
**Capon, kā'pon**, *n.* a young castrated cock.
**Caprice, ka-prēs'**, *n.* a changeful mood.
**Capricious, ka-prish'us**, *adj.* changeable.
**Capricorn, kap'ri-korn**, *n.* one of the zodiac signs.
**Capstan, kap'stan**, *n.* an apparatus for winding
**Capsular, kap'sū-lar**, *adj.* capsule-like. [cable.
**Capsule, kap'sūl**, *n.* a seed vessel.
**Captain, kap-tin**, *n.* a chief officer.
**Caption, kap'shun**, *n.* an arrest.
**Captious, kap-shus**, *adj.* critical.
**Captivate, kap'ti-vāt**, *v.* to fascinate; to subdue.
**Captive, kap'tiv**, *n.* a prisoner.
**Captivity, kap-tiv'it-i**, *n.* imprisonment.
**Capture, kapt'ūr**, *n.* an arrest.
**Capuchin, kap-ū-chin'**, *n.* a Franciscan monk.
**Caracal, kar'-ā-kal**, a lynx.
**Carafe, ka-raf'**, *n.* a water-bottle.
**Caramel, kar'a-mel**, *n.* burnt sugar.
**Carat, kar'at**, *n.* a weight of four grains; 1-24th part of pure gold.
**Caravan, kar'a-van**, *n.* a company of travellers.
**Caravansary, kar-a-van'ser-i**, *n.* a rude wayside
**Caraway, kar'a-wā**, *n.* an aromatic plant. [inn.
**Carbine, kār'bin**, *n.* a short musket.
**Carbon, kār'bon**, *n.* an element of which charcoal is a pure example.
**Carbonise, kār'bon-īz**, *v.* to make into carbon.
**Carboy, kār'boi**, *n.* a glass bottle in frame.
**Carbuncle, kār'bungk'l**, *n.* a bright red precious
**Carcass, kār'kas**, *n.* a dead body. [stone.

**Cardiac,** kär'di-ak, *adj.* pertaining to the heart.
**Cardinal,** kär'din-al, *adj.* principal; *n.* a dignitary of the Church of Rome; an American bird.
**Care,** kär, *n.* anxiety; responsibility.
**Careen,** ka-rēn', *v.* to move a ship on to her side.
**Career,** kä-rēr', *n.* a course; mode of life; *v.* to move rapidly.
**Caress,** ka-res', *v.* to fondle.
**Caret,** ka'ret, *n.* a sign denoting a word left out.
**Cargo,** kär'go, *n.* freight. [ness.
**Caricature,** kar'ik-at-ure, *n.* an exaggerated like-
**Caries,** kā'ri-ēz, *n.* decayed bone.
**Carillon,** kar'il-on, *n.* chime of bells.
**Cariole,** kar'i-ōl, *n.* a light vehicle.
**Carious,** kā'ri-us, *adj.* decayed.
**Carmelite,** kär-mel-lit, *n.* a monk of that order.
**Carmine,** kär'min, *n.* crimson colour.
**Carnage,** kär'nāj, *n.* slaughter.
**Carnal,** kär'nal, *adj.* sensual.
**Carnation,** kär-nā'shun, *n.* a favourite flower; flesh colour.
**Carnelian,** kär'-nē'll-an, *n.* fine chalcedony.
**Carnival,** kär'niv-al, *n.* open-air revelry.
**Carnivorous,** kär-niv'er-us, *adj.* flesh-eating.
**Carol,** kär'ul, *n.* a song,; *v.* to sing.
**Carotid,** ka-rot'id, *adj.* pertaining to the arteries of the neck.
**Carousal,** ka-roo'zal, *n.* a drinking bout.
**Carouse,** kä-rowz', *v.* to revel.
**Carp,** kärp, *v.* to cavil; *n.* a common fish.
**Carpenter,** kär'pen-ter, *n.* a worker in timber for buildings.
**Carriage,** kär-ij, *n.* a vehicle; behaviour.
**Carrier,** kar'i-er, *n.* one who conveys goods for the
**Carrion,** kar'i-on, *n.* putrid flesh. [public.
**Carte-blanche,** kärt-blansh', *n.* blank paper; freedom to do what one pleases.
**Carte-de-visite,** kärt-de-vis-ēt', *n.* a small photo-
**Cartel,** kärt'el, *n.* a challenge. [graph.
**Cartesian,** kär'tēz-'yan, *adj.* relating to the philosophy of Descartes.
**Cartilage,** kär'til-āj, *n.* gristle. [making.
**Cartography,** kärt-og'raf'i, *n.* the science of map-
**Cartoon,** kär-toon', *n.* a large sketch or design.
**Cartouche,** kär-toosh', *n.* a cartridge case.
**Cartridge,** kär'trij, *n.* a paper-covered charge for a gun.
**Caruncle,** kär-ungk'l, *n.* a fleshy excrescence.
**Carve,** kärv, *v.* to cut.
**Cascade,** kās'kād, *n.* a waterfall.
**Case,** kās, *n.* a box. [hardening to malleable iron.
**Casehарden,** kās'hard-en, *v.* to give a steel surface
**Case-knife,** kās'nif, *n.* a knife kept in a case.
**Casemate,** kās'māt, *n.* a bomb-proof chamber.
**Casement,** kās'ment, *n.* window frame.
**Cash, kash,** *n.* money.
**Cashier,** kash-ēr', *n.* a cash-keeper; *v.* to dismiss.
**Cashmere,** kash-mēr', *n.* cloth made from Cashmere
**Casing,** kās'ing, *n.* covering. [goat's wool.
**Casino,** kas-ē'no, *n.* a public assembly room.
**Cask,** kask, *n.* a small barrel.
**Casket,** kas'ket, *n.* a small case.
**Cassia,** kas'ya, *n.* a plant.
**Cassimere,** kas-i-mēr', *n.* fine twilled cloth.
**Cassock,** kas'ok, *n.* a black clerical robe.
**Cast,** kast, *v.* to throw or fling.
**Castanet,** kast-a-net', *n.* a time-tapping instrument held in the hand by dancers.
**Caste,** kast, *n.* class distinction.
**Castellan,** kas'tel-an, *n.* the governor of a castle.
**Castellated,** kast'el-ā-ted, *adj.* castle-like.
**Caster,** kast'er, *n.* a small wheel on legs of furniture.
**Castigate,** kast'ti-gāt, *v.* to beat; to chastise.
**Casting-vote,** kast'ing-vōt, *n.* a chairman's deciding vote when other votes are equal.
**Castle,** kās'l, *n.* a fortified mansion.
**Castrate,** kas'-trāt, *v.* to deprive of generative power.
**Casual,** kazh'ū-al, *adj.* occasional, accidental.
**Casualty,** kaz'ū-al-ti, *n.* an accident.
**Casuist,** kaz'ū-ist, *n.* a student of conscience.
**Casuistry,** kaz'ū-is-tri, *n.* the science of conscience.
**Cataclysm,** kat'a-klism, *n.* a deluge, a revolution.
**Catacomb,** kat'a-kōm, *n.* a subterranean burying place. [echoes.
**Catacoustics,** kat-a-koo'stiks, *n.* the science of
**Catafalque,** kat-ā-falk', *n.* a bier.
**Catalepsy,** kat'a-lep-si, *n.* an atrophy of the limbs.
**Catalogue,** kat'ā-log, *n.* a list.
**Cataplasm,** kat'ā-plasm, *n.* a poultice.
**Catapult, kat'a-pult,** *n.* an apparatus for throwing stones, arrows, etc.
**Cataract, kat'ā-rākt,** *n.* a great waterfall.
**Catarrh,** kā-tär, *n.* discharge of mucus.
**Catastrophe,** kā-tas'tro-fi, *n.* a calamity.
**Catch, katch,** *v.* to seize; to clutch; to overtake; *n.* a tripping song for several voices.
**Catchpenny,** katch'pen-i, *n.* something worthless offered for sale.
**Catchup,** katch'up, *n.* a flavouring sauce; also ketchup.
**Catch-word,** katch'werd, *n.* an oft-repeated word.
**Catechetical,** kat-i-ket'ik-al, *adj.* pertaining to
**Catechise,** kat'i-kiz, *v.* to question. [catechism.
**Catechism,** kat'i-kizm, *n.* a religious summary.
**Catechu,** kat'e-shoo, *n.* a substance obtained from trees and used in tanning.
**Catechumen,** kat-e-kū'men, *n.* one who is taught the principles of Christianity.
**Categorical,** kat-e-gor'ik-al, *adj.* positive.
**Category,** kat'i-gor-i, *n.* a class or order.
**Catena,** kat-ē'na, *n.* a connected series.
**Catenary,** kat-ē'nar-i, *adj.* chain-like.
**Cater,** kā'ter, *v.* to provide for.
**Caterpillar,** kat'er-pil-er, *n.* a grub.
**Caterwaul,** kat'er-wawl, *n.* a cat's cry.
**Catfish,** kat'fish, *n.* a large sea fish.
**Catgut,** kat'gut, *n.* string made from animals' intes-
**Cathartic,** kath-ärt'ik, *adj.* purgative. [tines.
**Cathedral,** kath-ē'dral, *n.* the church to which a bishop is attached.
**Cathode,** kath'ōd, *n.* the negative pole of an electric battery. [ing to Roman Catholics.
**Catholic,** kath'ō-lik, *adj.* general, orthodox; relat-
**Catholicism,** kath-ol'is-izm, *n.* universality; Roman Catholic doctrine.
**Catholicity,** kath-o-lis'it-i, *n.* liberality of view.
**Catkin,** kat'kin, *n.* a tuft of small unisexual flowers.
**Catseye,** kats'ī, a species of quartz.
**Catspaw,** kats'paw, *n.* a dupe.
**Cattle,** kat'l, *n.* animals of pasture; bovines.
**Caucus,** kaw'kus, *n.* a private political body
**Caudal,** kaw'dal, *adj.* pertaining to the tail.
**Caudle,** kaw'dl, *n.* a spiced drink.
**Caul,** kawl, *n.* a membrane covering the head of some children when born.
**Cauliflower,** kaw'li-flowr, *n.* a kind of cabbage.
**Causality,** kawz-al'i-ti, *n.* the working of a cause.
**Cause,** kawz, *n.* motive; lawsuit.
**Causeway,** kawz'wā, *n.* a raised pathway.
**Caustic,** kaws'tik, *adj.* burning.
**Cauterize,** kaw'ter-īz, *v.* to burn with caustic.
**Cautery,** kaw'ter-i, *n.* cauterizing instrument.
**Cautious,** kaw'shus, *adj.* wary. [on horseback.
**Cavalcade,** kav'al-kād, *n.* a procession of people
**Cavalier,** kav-ā-lēr', *n.* one in attendance on a lady;
**Cavalry,** kav'āl-ri, *n.* horse soldiers. [a knight.
**Caveat,** kā'vi-at, *n.* a formal notice.
**Cavern,** kav'ern, *n.* a hollow in the ground; a cave.
**Cavernous,** ka'ver-nus, *adj.* hollow.
**Caviare,** kav-i-är', *n.* food made from salted roes.
**Cavil,** kav'il, *v.* to make trifling objections.
**Caw, kaw,** *n.* the cry of a crow.
**Cayenne,** kā-ēn', *n.* red pepper.
**Cazique,** ka-zēk, *n.* an Indian chief.
**Cease,** sēs, *v.* to stop.
**Ceaseless,** sēs'les, *adj.* without ceasing.
**Cede,** sēd, *v.* to yield.
**Cedilla,** se-dil'a, *n.* a mark under the letter c, to indicate the *soft* sound.
**Ceiling,** sē'ling, *n.* the roof of a room.
**Celandine,** sel'an-dīn, *n.* swallow-wort.
**Celebrant,** sel'e-brant, *n.* an officiating priest.
**Celebrate,** sel'e-brāt, *v.* to commemorate.
**Celebrity,** sel-eb'ri-ti, *n.* fame; an eminent person.
**Celerity,** sel-er'it-i, *n.* swiftness.
**Celery,** sel'er-i, *n.* a kitchen vegetable.
**Celestial,** sel-est'i-al, *adj.* heavenly.
**Celibacy,** sel'i-bas-i, *n.* the unmarried state.
**Cell,** sel, *n.* a small room; a small hollow place.
**Cellar,** sel'ar, *n.* a room below the ground floor.
**Cellular,** sel'ū-ler, *adj.* containing cells.
**Celluloid,** sel'ū-loid, *n.* an elastic material obtained from pyroxilin.
**Celt,** *n.* one of a primitive race now represented by the Bretons, the Welsh, the Irish, and the Scotch Highlanders.
**Celtic,** selt'ik, *adj.* according to Celtic customs.
**Cement,** se-ment':, *n.* cohesive substance.
**Cemetery,** sem'i-ter-i, *n.* burying ground.
**Cenotaph,** sen'o-taf, *n.* monument to one buried elsewhere.
**Censer, sen'sor,** *n.* pan in which incense is burnt.
**Censor, sen'sor,** *n.* one who examines books, plays, or papers, for the protection of public morals.
**Censorious,** sen-sō'ri-us, *adj.* expressing censure.

**Censure,** sens'ūr, *n.* blame.
**Census,** sens'us, *n.* the numbering of the people.
**Centaur,** sen'tawr, *n.* a mythological monster, with a man's head and a beast's body.
**Centenary,** sen'tin-ăr-i, *n.* a hundred.
**Centennial,** sen-ten'i-al, *adj.* hundredth anniversary.
**Centesimal,** sen-tes'i-mal, *adj.* hundredth.
**Centigrade,** sen'ti-grād, *adj.* possessed of a hundred degrees.
**Central,** sen'tral, *adj.* pertaining to the centre.
**Centralisation,** sen-tral-i-zā'shun, *n.* concentration
**Centre,** sen'tr, *n.* the middle. [of government.
**Centrifugal,** sen-trif'ū-gal, *adj.* tending from centre.
**Centripetal,** sen-trip'it-al, *adj.* with a force impelling centrewards.
**Centuple,** sen'tū-pl, *adj.* hundredfold.
**Centurion,** sen-tū'ri-on, *n.* the captain of a Roman
**Century,** sent'ū-ri, *n.* a hundred. [hundred.
**Cephalic,** se-fal'ik, *adj.* pertaining to the head.
**Ceraceous,** ser-ā'shus, *adj.* wax-like.
**Ceramic,** se-ram'ik, *adj.* relating to fine pottery.
**Cereal,** sē'-re-al, *adj.* relating to grain; *n.* grain.
**Cerebral,** ser'e-bral, *adj.* pertaining to the brain.
**Cerebration,** ser-e-brā'shun, *n.* brain-action.
**Cerement,** sēr'ment, *n.* grave clothes.
**Ceremonial,** ser-e-mō'ni-al, *n.* outward form.
**Ceremonious,** ser-e-mō'ni-us, *adj.* with ceremony.
**Ceremony,** ser'e-mun-i, *n.* a formal rite or function.
**Certain,** ser'tin, *adj.* sure.
**Certainty,** ser'tin-ti, *n.* fixed state: without doubt.
**Certificate,** ser-tif'i-kāt, *n.* written proof.
**Certify,** ser'ti-fi, *v.* to make known; to declare by
**Certitude,** ser'ti-tūd, *n.* certainty. [writing.
**Cerulean,** ser-ū'li-an, *adj.* dark blue.
**Cervical,** ser'vik-al, *adj.* pertaining to the neck.
**Cessation,** ses-ā'shun, *n.* ceasing.
**Cession,** sesh'un, *n.* a giving up.
**Cesspool,** ses'pool, *n.* pool in which drainage matters are collected.
**Chaconne,** shak-on', *n.* an old slow dance.
**Chafe,** chāf, *v.* to rub against.
**Chaffer,** chaf'er, *v.* to bargain.
**Chafing-dish,** chāf'ing-dish, *n.* a heated metal dish in which hot viands are served.
**Chagrin,** sha-grōn', *n.* annoyance, vexation.
**Chain,** chān, *n.* a connection of links; a train of events.
**Chairman,** chār'man, *n.* a presiding officer; one who presides at a meeting.
**Chaise,** shāz, *n.* a light open vehicle.
**Chalcedony,** kal-sed'o-ni, *n.* a mineral of the quartz order.
**Chaldron,** chawl'dron, *n.* a measure of 36 bushels.
**Chalice,** chal'is, *n.* a cup.
**Challenge,** chal'enj, *v.* to defy; to invite to a contest.
**Chalybeate,** kal-ib'e-āt, *adj.* containing iron.
**Chamber,** chām'ber, *n.* an upper room.
**Chamberlain,** chām'ber-lin, *n.* an officer of state.
**Chambermaid,** chām'ber-mād, *n.* a bedroom servant.
**Chameleon,** kam-ē'li-un, *n.* a lizard that changes
**Chamfer,** cham'fer, *n.* a bevel. [its colour.
**Chamois,** sha-moi', *n.* a kind of antelope.
**Chamomile,** kam'o-mil, *n.* a bitter plant.
**Champ,** champ, *v.* to chew.
**Champagne,** sham-pān', *n.* a sparkling French
**Champaign,** sham-pān', *n.* a open country. [wine.
**Champion,** cham'pi-on, *n.* a defender; a contestant who has defeated all others of the same class.
**Chancel,** chan'sel, *n.* the eastern part of a church.
**Chancellor,** chan'sel-or, *n.* a judge or state official.
**Chancery,** chan'ser-i, *n.* a high court.
**Chandelier,** shan-de-lēr', *n.* a branching framework for lights.
**Chandler,** chand'ler, *n.* a general dealer.
**Change,** chānj, *n.* alteration; petty cash; *v.* to alter; to exchange.
**Changeable,** chānj'abl, *n.* fickle.
**Changeling,** chānj'ling, *n.* a child changed for another.
**Channel,** chan'el, *n.* a passage; sea current; strait.
**Chanticleer,** chan'ti-klēr, *n.* a cock.
**Chaos,** kā'os, *n.* confusion.
**Chaotic,** kā-ot'ik, *adj.* confused
**Chap,** chap, *v.* to crack.
**Chapel,** chap'el, *n.* a place of worship.
**Chaperon,** shap'e-rōn, *n.* one who protects a lady.
**Chapiter,** chap'i-ter, *n.* the head of a column.
**Chaplain,** chap'lin, *n.* a clergyman appointed to special duties.
**Chapter,** chap'ter, *n.* a division of a book.
**Char,** chār, *n.* a small fish.
**Character,** kar'ak-ter, *n.* a sign or distinctive mark; moral qualities.
**Characterize,** kar'ak-ter-īz, *v.* to describe by special
**Charade,** sha-rād', *n.* a kind of riddle. [qualities.
**Charcoal,** chār'-kōl, *n.* charred wood.
**Charge,** chārj, *v.* to accuse; to set a price.
**Chargeable,** chārj'abl, *adj.* liable to be charged.
**Charger,** chārj'er, *n.* a war horse.
**Charily,** chār'il-i, *adj.* warily.
**Charitable,** char'it-abl, *adj.* benevolent.
**Charity,** char'it-i, *n.* generosity; kindness.
**Charivari,** shā'ri-vā-ri, *n.* wild tumult.
**Charlatan,** shār'lā-tan, *n.* a quack; a pretender.
**Charlatanry,** shār'lā-tan-ri, *n.* pretence.
**Charnel-house,** chār'nel-hows, *n.* a place for the bones of the dead.
**Chart,** chārt, *n.* a map of the sea.
**Charter,** chār'ter, *n.* a deed conferring rights.
**Charwoman,** chār'woom-an, *n.* a woman hired by the day for domestic work.
**Chary,** chā'ri, *adj.* cautious.
**Chase,** chās, *v.* to pursue; to hunt.
**Chasm,** kazm, *n.* a cleft.
**Chassis,** shahs'-cē, *n.* under-part of a motor
**Chaste,** chāst, *adj.* pure; virtuous. [vehicle.
**Chasten,** chās'n, *v.* to punish; to purify.
**Chastise,** chas'-tīz, *v.* to punish.
**Chastity,** chas'-tit-i, *n.* purity.
**Chasuble,** chaz'ū-bl, *n.* an ecclesiastical vestment.
**Chat,** chat, *v.* to talk; *n.* talk.
**Chatelain,** shat'ē-lān, *n.* a lady's chain ornament.
**Chattel,** chat'l, *n.* property.
**Chatter,** chat'er, *v.* to talk idly; *n.* idle talk.
**Chatty,** chat'i, *adj.* talkative.
**Chauffeur,** shof-er', *n.* a motor-car driver.
**Chauvinism,** shō'vin-izm, *n.* extravagant patriot-
**Cheat,** chēt, *v.* to deceive; to defraud. [ism.
**Check,** chek, *v.* to restrain.
**Checker,** chek'er, *v.* to variegate.
**Checkers,** chek'erz, *n.* game of draughts.
**Checkmate,** chek'māt, *n.* defeat.
**Cheek,** chēk, *n.* side of face; impudence.
**Cheer,** chēr, *n.* comfort; good things; meat and drink; *v.* to comfort.
**Cheerful,** chēr'ful, *adj.* lively.
**Cheerless,** chēr'les, *adj.* gloomy.
**Cheese,** chēz, *n.* food made from curded milk.
**Chef,** shef, *n.* a head cook.
**Chemical,** kem'ik-al, *adj.* relating to chemistry.
**Chemise,** she-mēz', *n.* a woman's undergarment.
**Chemistry,** kem'is-tri, *n.* the science of substances.
**Cheque,** chek, *n.* an order on a bank.
**Cherish,** cher'ish, *v.* to treat kindly; to nourish.
**Cheroot,** she-root', *n.* a cigar without point.
**Cherry,** cher'i, *n.* a fruit.
**Chersonese,** ker'so-nēz, *n.* a peninsula.
**Cherub,** cher'ub, *n.* a winged spirit.
**Cherubic,** cher'ū-bik, *adj.* angelic.
**Cherubim,** cher'ū-bim, *n.* plural of cherub.
**Chess,** ches, *n., see* "Sports and Pastimes."
**Chest,** chest, *n.* a large box; the thorax.
**Chestnut,** ches'nut, *n.* a forest tree; the nut thereof. [frame.
**Cheval-glass,** she-val'glas, *n.* a large mirror on a
**Cheveril,** chev'er-il, *n.* a kid or kid-skin leather.
**Cheviot,** chev'i-ot, *n.* a kind of cloth.
**Chew,** choo, *v.* to masticate.
**Chiaro-oscuro,** kyār'os-kū'ro, *n.* light and shade.
**Chicanery,** she-kan'er-i, *n.* trickery.
**Chicken,** chik'en, *n.* a young fowl.
**Chide,** chid, *v.* to censure; to blame.
**Chieftain,** chēf'ten, *n.* the head of a clan.
**Chiffonier,** shif-o-nēr', *n.* a decorated cupboard.
**Chilblain,** chil'blān, *n.* a local inflammation.
**Child,** child, *n.* a son or daughter.
**Child's-play,** childz'plā, *n.* something easy.
**Childhood,** child'hood, *n.* infancy.
**Chill,** chil, *n.* coldness; *v.* to depress.
**Chime,** chīm, *n.* the sound of bells.
**Chimerical,** kim-er'ik-al, *adj.* wild, fanciful.
**Chimney,** chim'ni, *n.* a channel for letting out smoke.
**Chimpanzee,** chim-pan'zē, *n.* a large kind of ape.
**China,** chī'na, *n.* porcelain.
**Chine,** chīn, *n.* the spine.
**Chink,** chingk, *v.* to jingle.
**Chintz,** chintz, *n.* glazed calico.
**Chip,** chip, *v.* to cut off small pieces.
**Chirography,** ki-rog'raf-i, *n.* penmanship.
**Chirology,** ki-rol'o-ji, *n.* talking by hand-signs.
**Chiromancy,** ki'ro-man-si, *n.* fortune-telling.

**Chiropodist,** ki-rop'o-dist, *n.* a hand and foot
**Chirp,** chirp, *n.* a bird-note. [doctor.
**Chirrup,** chir'up, *n.* sound made by birds and
**Chisel,** ch.z'l, *n.* an iron or steel tool. [insects.
**Chit,** chit, *n.* a babe.
**Chivalrous,** shiv'al-rus, *adj.* gallant.
**Chivalry,** shiv'al-ri, *n.* the feudal knighthood system; courtesy.
**Chive,** chiv, *n.* a small bulb of the onion kind.
**Chloral,** klō'ral, *n.* a colourless oily liquid.
**Chloric,** klō'rik, *adj.* of or from chlorine.
**Chlorine,** klō'rin, *n.* a kind of gas.
**Chlorite,** klō'rit, *n.* a soft green mineral.
**Chloroform,** klō'ro-form, *n.* a volatile liquid used as anæsthetic.
**Chlorosis,** klo-rō'sis, *n.* green sickness.
**Chocolate,** chok'o-lāt, *n.* a preparation made from
**Choice,** chois, *adj.* select. [cacao seeds.
**Choir,** kwir, *n.* a body of singers.
**Choke-damp,** chōk'damp, *n.* gas which accumulates in mines.
**Choler,** kol'er, *n.* anger; bile.
**Cholera,** kol'er-a, *n.* an infectious disease.
**Choleric,** kol'er-ik, *adj.* angry; petulant.
**Chop,** chop, *v.* to cut suddenly; *n.* a piece of meat.
**Choral,** kō'ral, *adj.* pertaining to a chorus.
**Chord,** kord, *n.* union of sounds.
**Chorister,** kor'is-ter, *n.* a member of a chorus.
**Chorus,** kō'rus, *n.* a company of singers; a piece of
**Chouse,** chows, *v.* to cheat. [music sung in parts.
**Chowder,** chow'der, *n.* a compound of fish and
**Chrism,** krizm, *n.* holy oil. [biscuits.
**Christen,** kris'en, *v.* to baptise.
**Christendom,** kris'en-dom, *n.* the regions where Christianity prevails.
**Christian,** krist'i-an, *n.* a believer in Christ.
**Christianity,** krist-i-an'it-i, *n.* the religion of Christ.
**Christmas,** kris'mas, *n.* festival to commemorate the birth of Christ.
**Christmas-box,** kris'mas-boks, *n.* a Christmas present.
**Chromatic,** krō-mat'ik, *adj.* pertaining to colours.
**Chromite,** krō'mīt, *n.* a mineral compound.
**Chromo-lithograph,** krō-mo-lith'o-graf, *n.* a lithograph in colours.
**Chronic,** kron'ik, *adj.* lasting; deep-seated.
**Chronicle,** kron'ik'l, *n.* a record. [time.
**Chronological,** kron-o-loj'ik-al, *adj.* in order of
**Chronology,** kron-ol'o-ji, *n.* the science of time.
**Chronometer,** kron-om'ē-ter, *n.* a time-measuring instrument.
**Chrysalis,** kris'a-lis, *n.* the pupa of an insect.
**Chrysanthemum,** kris-an'the-mum, *n.* a genus of large flowering plants.
**Chrysolite,** kris'o-līt, *n.* a precious stone.
**Chub,** *n.* a small plump river fish.
**Chuck,** *n.* the cluck of a hen.
**Chuckle,** chuck'l, *n.* a low laugh; the cry of a hen.
**Chuffy,** chuf'i, *adj.* surly.
**Chum,** chum, *n.* a comrade.
**Chump,** chump, *n.* an end of wood.
**Chunk,** chungk, *n.* a short thick piece.
**Church,** church, *n.* an edifice devoted to worship.
**Churchman,** church'man, *n.* a member of a church.
**Churchwarden,** church'wawrd-en, *n.* a church
**Churl,** churl, *n.* a clown; a rude fellow. [official.
**Churlish,** chur'lish, *adj.* rude.
**Churn,** churn, *n.* a machine used for butter-making.
**Chyle,** kil, *n.* a fluid drawn from food while in the intestines.
**Chyme,** kim, *n.* food pulp in the stomach.
**Cicatrix,** sik-ā'trix, *n.* a scar over a wound.
**Cicerone,** chich-er-ō'ni, *n.* a guide.
**Cider,** si-der, *n.* a beverage made from apples.
**Cigar,** si-gär', *n.* tobacco leaves rolled for smoking.
**Ciliary,** sil'i-ar-i, *adj.* pertaining to the eye-lids.
**Cimolite,** sim'ō-lit, *n.* a kind of clay.
**Cincture,** singk'tūr, *n.* a girdle.
**Cinematograph,** sin-e-mat'o-graf, *n.* an apparatus for exhibiting "animated photographs."
**Cinerary,** sin'er-ar-i, *adj.* relating to ashes.
**Cingalese,** sing'ga-lēz, *n.* native of Ceylon.
**Cinnamon,** sin'a-mon, *n.* a spice.
**Cinquefoil,** singk'foil, *n.* an architectural term for a five-petaled flower.
**Cipher,** si-fer, *n.* in arithmetic 0: nothing.
**Circle,** sirk'l, *n.* within a circumference; *v.* to move
**Circlet,** sirk'let, *n.* a small circle. [round.
**Circuit,** sir'kit, *n.* a district.
**Circuitous,** sir-kū'it-us, *adj.* roundabout.
**Circular,** sir'kū-lar, *adj.* round; *n.* a note sent
**Circulate,** sir'kū-lāt, *v.* to spread. [round.
**Circulation,** sir-kū-lā'shun, *n.* act of circulating; number of copies sold of a newspaper or periodical.
**Circumambient,** sir-kum-am'-bi-ent, *adj.* going round.
**Circumcise,** sir'kum-sīz, *v.* to cut off the foreskin.
**Circumference,** sir-kum'fer-ens, *n.* the outer circle, or area of a thing. [vowel (^).
**Circumflex,** sir'kum-fleks, *n.* sound sign over a
**Circumlocution,** sir-kum-lo-kū'shun, *n.* roundabout mode of speaking.
**Circumscribe,** sir'kum-skrīb, *v.* to limit, to enclose.
**Circumspect,** sir'kum-spect, *adj.* prudent, cautious.
**Circumstantial,** sir-kum-stan'shal, *adj.* in detail.
**Circumvallation,** sir-kum-val-ā'shun, *n.* a surrounding wall.
**Circumvent,** sir-kum-vent', *v.* to deceive; to outwit.
**Circus,** sir'kus, *n.* a circular building for entertainments.
**Cisalpine,** sis-al'pin, *adj.* on this side of the Alps.
**Cisatlantic,** sis-at-lan'tik, *adj.* on this side of the
**Cist,** sist, *n.* a stone tomb. [Atlantic.
**Cistercian,** sis-ter'si-an, *n.* an order of monks.
**Cistern,** sis'tern, *n.* a receptacle for water.
**Citadel,** sit'ā-del, *n.* a city fortress.
**Citation,** si-tā'shun, *n.* a summons; a quotation.
**Cite,** sit, *v.* to quote; to summon.
**Citizen,** sit'i-zen, *n.* a resident of a city.
**Citrate,** sit'rāt, *n.* a salt.
**Citric,** sit'rik, *adj.* acid.
**Citron,** sit'ron, *n.* a fruit.
**City,** sit'i, *n.* a large town.
**Civet,** siv'et, *n.* a perfume from the civet-cat.
**Civic,** siv'ik, *adj.* relating to a city.
**Civil,** siv'il, *adj.* non-military; secular.
**Civilian,** siv-il'i-an, *n.* one engaged in civil pur-
**Civility,** siv-il'it-i, *n.* politeness. [suits.
**Civilization,** siv-il-i-za'hun, *n.* state of being
**Civilize,** siv'il-īz, *v.* to refine. [civilized.
**Civilly,** siv'il-i, *adv.* politely.
**Claim,** klām, *v.* to demand; *n.* the thing claimed.
**Claimant,** klā'mant, *n.* one who claims.
**Clairvoyance,** klār-voi'ans, *n.* supposed mesmeric power of divining things.
**Clam,** klam, *n.* a small bivalve shell-fish.
**Clamant,** klam'ant, *adj.* loud calling.
**Clammy,** klam'i, *adj.* moist; sticky.
**Clamour,** klam'or, *n.* uproar.
**Clamp,** klamp, *n.* iron or timber fastening contriv-
**Clan,** klan, *n.* a family; a tribe. [ance.
**Clandestine,** klan-des'tin, *adj.* secret.
**Clang,** klang, *n.* a sharp sound.
**Clangour,** klang'ŏr, *n.* a harsh sound.
**Clannish,** klan'ish, *adj.* clan-like.
**Clapper,** klap'er, *n.* a bell tongue.
**Clap-trap,** klap'trap, *n.* tricky speech.
**Claret,** klār'et, *n.* red wine.
**Clarify,** klar'i-fi, *v.* to make clear.
**Clarion,** klār'i-on, *n.* a kind of trumpet.
**Clarionet,** klār-i-o-net', *n.* a reed instrument.
**Clash,** klash, *v.* to collide.
**Clashing,** klash'ing, *n.* a collision; opposition.
**Clasp,** klasp, *v.* to clutch; to grasp; to embrace.
**Classic,** klas'ik, *adj.* pertaining to the ancient literature of Greece and Rome; of the best literature.
**Classification,** klas-if-ik-ā'shun, *n.* forming into classes.
**Classify,** klas'i-fi, *v.* to arrange according to
**Clatter,** klat'er, *n.* a rattling noise. [classes.
**Clause,** klawz, *n.* a paragraph.
**Claustral,** klawz'tral, *adj.* secluded.
**Clavicle,** klav'ikl, *n.* the collar-bone.
**Clavier,** klā'vi-er, *n.* a musical keyboard.
**Claw,** klaw, *n.* nail of an animal; *v.* to scratch.
**Clay,** klā, *n.* a kind of earth.
**Clean,** klēn, *adj.* free from dirt.
**Clearance,** klēr'ans, *v.* the act of clearance or removal.
**Clearing,** klēr'ing, *n.* land cleared from wood.
**Clearing-house,** klēr'ing-hows, *n.* a place of banking or business exchange.
**Cleavage,** klēv'ij, *n.* a breakage in rocky strata.
**Cleave,** klēv, *v.* to hold fast to; to separate by force.
**Cleaver,** klē'ver, *n.* one who cleaves; a butcher's
**Clef,** klef, *n.* a musical sign. [chopper.
**Cleft,** kleft, *n.* a crack, a fissure.
**Cleg,** kleg, *n.* the horse-fly.
**Clematis,** klem-ā'tis, *n.* a creeping plant.
**Clemency,** kleme'n-si, *n.* leniency.
**Clement,** klem'ent, *adj.* gentle; merciful.

**Clerestory**, klēr'stō-ri, *n.* the upper row of windows in the nave of churches.
**Clergy**, kler'ji, *n.* ministers of a church.
**Clergyman**, kler'ji-man, *n.* a church minister.
**Clerical**, kler'ik-al, *adj.* connected with clerking.
**Clerk**, klärk, *n.* a clergyman; a person employed in
**Clever**, klev'er, *adj.* able; skilful. [an office.
**Clew**, *see* Clue.
**Client**, klī'ent, *n.* one for whom a lawyer or other professional man acts.
**Cliff**, klif, *n.* a precipice.
**Climacteric**, klī-mak'ter-ik, *n.* a critical time.
**Climate**, klī'māt, *n.* atmospheric condition.
**Climatic**, klī-mat'ik, *adj.* pertaining to climate.
**Climatology**, klī-mat-ol'o-ji, *n.* the science of
**Climax**, klī'max, *n.* a culmination. [climates.
**Climb**, klīm, *v.* to ascend.
**Clime**, klīm, *n.* climate; country.
**Clinch**, klinsh, *v.* to fasten firmly.
**Cling**, kling, *v.* to hold to.
**Clinic**, klin'ik, *adj.* relating to a bed; *n.* the teaching of surgery at the bedside.
**Clinker**, kling'k'er, *n.* scales of oxide of iron.
**Clip**, klip, *v.* to curtail; to cut with scissors.
**Clipper**, klip'er, *n.* a fast sailing vessel; one who clips.
**Clique**, klēk, *n.* a party or group of persons.
**Cloak**, klōk, *n.* an outer garment; that which conceals; *v.* to conceal.
**Clock**, klok, *n.* a time-keeper.
**Clockwork**, klok'werk, *n.* clock machinery.
**Clod**, klod, *n.* a lump of earth.
**Cloister**, kloi'ster, *n.* a covered arcade of a monastic
**Clonic**, klon'ik, *adj.* spasmodic. [institution.
**Close**, klōs, *adj.* shut, confined, narrow; *n.* a small field; *v.* to make close.
**Closet**, klos'et, *n.* a small private room.
**Closure**, klōs'ūr, *n.* act of closing.
**Clot**, klot, *n.* coagulated matter.
**Cloth**, klo*th*, *n.* textile material.
**Clothe**, klōth, *v.* to dress.
**Clothes**, klōthz, *n.* attire, raiment.
**Clothier**, klō'thi-er, *n.* a maker or vendor of cloth.
**Clothing**, klō'thing, *n.* garments. [gloomy.
**Cloudy**, klowd-i, *adj.* made dark by clouds;
**Clout**, klowt, *n.* a piece of material used for mending; a blow.
**Clove**, klōv, *n.* a spice.
**Cloven**, klō'ven, *adj.* divided, split.
**Clover**, klō'ver, *n.* a species of grassy plants.
**Clown**, klown, *n.* a rustic; a fool.
**Clownish**, klown'ish, *adj.* clown-like.
**Cloy**, kloi, *v.* to satiate.
**Club**, klub, *n.* a heavy stick; an association.
**Club-footed**, klub'foot-ed, *adj.* with deformed feet.
**Clue**, kloo, *n.* thread; link of connection.
**Clump**, klump, *n.* a cluster of trees.
**Clumsy**, klum'si, *adj.* awkward, ill-shaped.
**Cluster**, klus'ter, *n.* a bunch.
**Clutch**, klūch, *v.* to seize; to grip.
**Coach**, kōch, *n.* a large carriage; *v.* to bring forward educationally.
**Coadjutor**, kō-ad-jū'tor, *n.* a helper.
**Coagulate**, kō-ag'ū-lāt, *v.* to thicken.
**Coagulation**, kō-ag-ū-la'shun, *n.* curdling; clot.
**Coal**, kōl, *n.* a combustible mineral substance.
**Coalesce**, kō-al-ēs, *v.* to unite.
**Coalition**, kō-al-ish'un, *n.* the act of uniting.
**Coarse**, kors, *adj.* gross, unrefined.
**Coarseness**, kōrs'ness, *n.* roughness.
**Coast**, kōst, *n.* shore.
**Coaster**, kōs'ter, *n.* a coasting vessel.
**Coast-guard**, kōst-gārd, *n.* a body of men who guard the coast.
**Coat**, kōt, *n.* an outer garment; *v.* to cover.
**Coax**, kōks, *v.* to persuade.
**Cob**, kob, *n.* a horse for heavy weights; a head of maize.
**Cobalt**, kō'bawlt, *n.* a metal; a blue pigment.
**Cobble**, kob'l, *v.* to mend.
**Coble**, kob'l, *n.* a small boat.
**Cobra**, kō'bra, *n.* a serpent.
**Cobweb**, kob'web, *n.* the web of the spider.
**Coccyx**, kok'siks, *n.* the lower bone of the vertebral column. [insect.
**Cochineal**, koch'i-nēl, *n.* scarlet dye-stuff from an
**Cockade**, kok-ād', *n.* a badge worn in the hat.
**Cockatoo**, kok-a-too', *n.* a kind of parrot.
**Cockatrice**, kok'a-tris, *n.* a fabulous serpent.
**Cockerel**, kok'er-el, *n.* a young cock.
**Cocket**, kok'et, *n.* a Customs-house seal.
**Cock-eye**, kok'ī, *n.* a squinting eye.
**Cock-horse**, kok'hors, *n.* a rocking-horse.
**Cockle**, kok'l, a ribbed bivalve.
**Cock-loft**, kok'loft, *n.* a loft near the roof.
**Cockney**, kok'ni, *n.* a Londoner.
**Cockpit**, kok'pit, *n.* space for cock-fights; a room for the wounded on a war-ship.
**Cockroach**, kok'rōch, *n.* blackbeetle. [a boat.
**Cockswain**, kok'swān, *n.* a petty officer who steers
**Cocoa**, kō'kō, *n.* the seed of the cacao tree; the beverage from the prepared seed.
**Cocoon**, ko-koon', *n.* silken sheath spun by silk-worms.
**Codex**, kō'deks, *n.* a code.
**Codicil**, kod'is-il, *n.* supplement to a will.
**Codification**, kōd-if-ik-ā'shun, *n.* the act of codifying.
**Codify**, kō'di-fi, *v.* to classify laws. [fying.
**Coefficient**, kō-eff-ish'ent, *n.* that which acts together with another thing.
**Coequal**, kō-ē'kwal, *adj.* jointly equal.
**Coerce**, kō-ers', *v.* to compel.
**Coercive**, kō-er'siv, *adj.* possessing power of coercion.
**Co-essential**, kō-es-en'shal, *adj.* like in essence.
**Coeval**, kō-ē'val, *adj.* of the same age; contemporary.
**Co-existent**, ko'egz-is'tent, *adj.* existing together.
**Coextensive**, kō-eks-ten'siv, *n.* extending equally.
**Coffer**, kof'er, *n.* a chest.
**Coffin**, kof'in, *n.* case in which bodies are buried.
**Cog**, kog, *n.* the tooth of a wheel.
**Cogency**, kō'jen-si, *n.* convincing power.
**Cogent**, kō'jent, *adj.* convincing.
**Cogitate**, koj'it-āt, *v.* to reflect.
**Cogitation**, koj-it-ā'shun, *n.* meditation.
**Cognac**, kō'nl-ak, *n.* brandy.
**Cognate**, kog'nāt, *adj.* of similar kind.
**Cognition**, kog-nish'un, *n.* sure knowledge.
**Cognizance**, kon'i-zans, *n.* judicial or private recognition.
**Cognizant**, kon'i-zant, *adj.* possessing knowledge of.
**Cognomen**, kog-nō'men, *n.* a surname; a nickname.
**Cohabit**, kō-hab'it, *v.* to live as married people.
**Coheir**, kō-ār', *n.* joint heir.
**Cohere**, kō-hēr', *v.* to stick together.
**Coherent**, ko-hē'rent, *adj.* connected; consistent.
**Cohesive**, kō-hē'siv, *adj.* of sticking quality.
**Coiffure**, koif'ūr, *n.* a head-dress.
**Coil**, koil, *v.* to wind; *n.* a ring of rope.
**Coin**, koin, *n.* money; *v.* to invent, stamp.
**Coinage**, koin'ij, *n.* the money currency.
**Coincide**, kō-in-sīd', *v.* to agree with.
**Coincidence**, kō-in'sid-ens, *n.* act of coinciding.
**Coke**, kōk, *n.* fuel made from coal.
**Coleoptera**, kol-ē-op'ter-a, *n.* a species of double-winged insects.
**Colic**, kol'ik, *n.* a severe pain in the bowels.
**Collaboration**, kol-ab-o-rā'shun, *n.* united labour.
**Collapse**, kō-laps', *n.* a breakdown; failure.
**Collar**, kol'er, *n.* a thing worn about the neck.
**Collate**, kol-āt', *b.* to bring together.
**Collateral**, kol-lat'er-al, *adj.* parallel.
**Collation**, kol-ā'shun, *n.* the act of collating repast.
**Colleague**, kol'ēg, *n.* one associated with others.
**Collect**, kol'ekt', *v.* to get together.
**Colleen**, kol-ēēn, *n.* an Irish girl.
**College**, kol'ij, *n.* an educational institution.
**Collegiate**, kol-ē-jī-āt, *adj.* relating to a college.
**Collet**, kol'et, *n.* the prominent part of a ring.
**Collie**, kōl'iy, *n.* a sheep-dog.
**Collier**, kol'i-er, *n.* a coal miner.
**Colliery**, kol'i-er-i, *n.* a coal mine.
**Collimation**, kol-im-ā'shun, *n.* the line of sight.
**Collision**, kol-izh'un, *n.* state of being crashed together.
**Collocation**, kol-ō-kā'shun, *n.* the act of arranging.
**Collop**, kol'op, *n.* a slice of meat.
**Colloquialism**, kol-ō'kwi-al-izm, *n.* a familiar phrase.
**Colloquy**, kol'o-kwi, *n.* conversation.
**Collusion**, kol-ū'zhun, *n.* a secret understanding.
**Collusive**, kol-ū'siv, *adj.* with collusion.
**Colon**, kō'lon, the punctuation mark (:)
**Colon**, kō'lon, *n.* part of intestines.
**Colonel**, kur-nal, *n.* a commanding officer.
**Colonisation**, kol-on-i-za'shun, *n.* the act of colonizing.
**Colonnade**, kol-o-nād, *n.* a range of columns.
**Colony**, kol'o-ni, *n.* a dependent country; a settlement.
**Colossal**, kol-os'al, *adj.* gigantic.
**Colosseum, Coliseum**, kol-os-ē'um, *n.* Vespasian's amphitheatre; any colossal place of entertainment.
**Colossus**, kō-los'us, *n.* gigantic statue.
**Colour**, kul'er, *n.* hue; appearance.
**Colourable**, kul'er-abl, *adj.* seemingly fair.
**Colour-blind**, kul'er-blind, *adj.* blind as to certain colours.

**Colporteur,** kol'port-er, *n.* a pedlar of tracts.
**Colt,** kōlt, *n.* a young horse.
——, *n.* the front iron of a plough.
——um, kol'um, *n.* an upright support of a building; a body of troops; a row of printed lines.
**Colza,** kol'za, *n.* a plant from whose seeds colza oil
**Coma,** kō'ma, *n.* sleep; stupor. [is prepared.
**Comatose,** kōm'a-tōz, *adj.* drowsy.
**Comb,** kōm, *n.* a toothed instrument for straightening the hair.
**Combat,** kom'bat, *n.* an encounter; a fight; a struggle.
**Combative,** kom'ba-tiv, *n.* quarrelsome.
**Combine,** kom-bīn', *v.* to unite.
**Combustible,** kom-bus'tibl, *adj.* capable of burning.
**Combustion,** kom-bust'yūn, *n.* burning.
**Comedian,** kom-ē'di-an, *n.* an actor.
**Comedy,** kom'i-di, *n.* a humorous play.
**Comely,** kum'li, *adj.* graceful.
**Comestibles,** kum-est'i-blz, *n.* eatables.
**Comet,** kom'et, *n.* a nebulous heavenly body with a
**Comfit,** kum'fit, *n.* a sweetmeat. [tail.
**Comfort,** kum'furt, *n.* enjoyment, ease; *v.* to cheer.
**Comfortable,** kum'fur-tabl, *adj.* feeling comfort.
**Comity,** kom'it-i, *n.* courtesy.
**Comma,** kom'ă, a punctuation mark (,).
**Command,** kom-mând', *v.* to order; to take charge of; to lead.
**Commandant,** kom-mân'dant, *n.* an officer having command. [the chief general.
**Commander,** kom-mân'der, *n.* one who commands;
**Commandment,** kom-mând'ment, *n.* a precept.
**Commemoration,** kom-mem-ō-rā'shun, *n.* a celebration.
**Commemorative,** kom-mem'ō-ra-tiv, *adj.* tending to celebrate.
**Commence,** kom-mens', *v.* to begin.
**Commend,** kom-mend', *v.* to praise. [measure.
**Commensurate,** kom-mens'-ūr-āt, *adj.* of equal
**Comment,** kom'ment, *n.* note of explanation; re-
**Commentary,** kom'ment-ar-i, *n.* comment. [mark.
**Commentator,** kom-men-tā'tur, *n.* one who makes comments. [trade.
**Commerce,** kom'ers, *n.* international or individual
**Commercial,** kom-ĕrsh'al, *adj.* relating to commerce.
**Commination,** kom-in-ā'-shun, *n.* denunciation.
**Commingle,** kom-ing'l, *v.* to blend.
**Commiseration,** kom-iz-er-ā'shun, *n.* pity.
**Commissariat,** kom-is-ā'ri-at, *n.* victualling department of an army.
**Commissary,** kom'is-ar-i, *n.* one having charge.
**Commission,** kom-ish'un, *n.* act of committing; a percentage. [soldier.
**Commissionaire,** comm'issi-on-āire, *n.* ex-regular
**Commit,** kom-it', *v.* to give in charge; to entrust.
**Committal,** kom-it'al, *n.* commitment.
**Committee,** kom-it'ē, *n.* a body charged with direction or investigation. [head-dress.
**Commode,** ko-mōd', *n.* a sideboard; a box; a
**Commodious,** kom-ō'di-us, *adj.* roomy; convenient.
**Commodity,** kom-od'it-i, *n.* article; profit; convenience.
**Commodore,** kom'o-dōr, *n.* a naval officer.
**Common,** kom'un, *adj.* ordinary; *n.* open land.
**Commonage,** kom'un-ij, *n.* right of pasturage.
**Commonalty,** kom'un-al-ti, *n.* the general body of the people.
**Commoner,** kom'un-er, *n.* one of the people.
**Commonplace,** kom'on-plās, *n.* an ordinary saying.
**Commons,** kom'unz, *n.* House of Commons.
**Commonweal,** kom'un-wēl, *n.* the common good.
**Commonwealth,** kom'un-welth, *n.* the government of a free state; the public good.
**Commotion,** ko-mō'shun, *n.* disorder, confusion,
**Commune,** kom-ūn', *v.* to converse. [excitement.
**Communicant,** kom-ū'ni-kant, *n.* a partaker of the Holy Communion.
**Communicate,** kom-ū'ni-kāt, *v.* to impart.
**Communicative,** kom-ū'ni-kā-tiv, *adj.* inclined to communicate.
**Communion,** kom-ū'-ni-on, *n.* mutual intercourse.
**Communism,** kom'ū-nizm, *n.* the theory of equal rights in property. [the public.
**Community,** kom-mū'nit-i, *n.* a body of persons;
**Commutation,** kom-mū-tā'shun, *n.* exchange; substitution. [another.
**Commute,** kum-ūt', *v.* to exchange one thing for
**Compact,** kom'pakt, *n.* an agreement; a league.
**Compact,** kom-pakt', *adj.* close, fine.
**Companionable,** kom-pan'yun-abl, *adj.* sociable.
**Company,** kum'pan-i, *n.* persons assembled together; trading body.
**Comparable,** kom'per-abl, *adj.* that may be compared.
**Comparative,** kom-păr'ă-tiv, *adj.* by comparison.
**Compare,** kom-păr, *v.* to examine one against another. [ing.
**Comparison,** kom-par'is-on, *n.* the act of compar-
**Compartment,** kom-pārt'ment, *n.* a separate division.
**Compass,** kum'pas, *n.* a circle; space; magnetic needle; *v.* to obtain; to surround.
**Compasses,** kum'pas-es, *n.* instruments for drawing circles and for guiding ships.
**Compassion,** kum-pash'on, *n.* commiseration, sympathy, pity. [agreeing or harmonising.
**Compatibility,** kom-pat-i-bil'i-ti, *n.* the quality of
**Compatible,** kom-pat'i-bl, *adj.* consistent with.
**Compatriot,** kom-pā'tri-ot, *n.* of the same country.
**Compeer,** kom-pēr', *n.* an equal, companion.
**Compel,** kom-pel', *v.* to force.
**Compendious,** kom-pen'di-us, *adj.* brief, short.
**Compendium,** kom-pen'di-um, *n.* summary, abridgment.
**Compensate,** kom-pens'āt, *v.* to recompense.
**Compensation,** kom-pen-sā'shun, *n.* recompense.
**Compete,** kom-pēt', *v.* to strive. [to live upon.
**Competence,** kom'pi-tens, *n.* a sufficiency; enough
**Competent,** kom'pi-tent, *adj.* able, suitable, sufficient.
**Competition,** kom-pē-tish'-un, *n.* rivalry.
**Competitor,** kom-pet'it-or, *n.* one who competes.
**Compilation,** kom-pi-lā'shun, *n.* act of compiling, or work compiled.
**Compile,** kom-pīl', *v.* to collect; to gather from books.
**Complacence,** kom-plā'sens, *n.* satisfaction, pleasure.
**Complacent,** kom-plā'sent, *adj.* with willingness; satisfied.
**Complain,** kom-plān', *v.* to grumble; to lament.
**Complainant,** kom-plā'nant, *n.* one who complains; a plaintiff.
**Complaint,** kom-plānt', *n.* a complaining; fault-finding.
**Complaisance,** kom-plā'zans, *n.* obligingness.
**Complaisant,** kom-plā'zant, *adj.* ready to please.
**Complement,** kom'pli-ment, a filling up.
**Complemental,** kom-pli-ment'al, *adj.* completing.
**Complex,** kom'pleks, *adj.* intricate. [appearance.
**Complexion,** kom-plek'shun, *n.* colour; general
**Complexity,** kom-pleks'it-i, *n.* state of being com-
**Compliant,** kom-pli'ant, *adj.* yielding. [plex.
**Complicate,** kom'pli-kāt, *v.* to render confused.
**Complication,** kom-pli-kā'shun, *n.* an entanglement.
**Complicity,** kom-plis'it-i, *n.* being an accomplice.
**Compliment,** kom'pli-ment, *n.* an expression of regard. [ing praise.
**Complimentary,** kom-pli-ment'ar-i, *adj.* express-
**Compline,** kom'plin, *n.* the last canonical service of the day.
**Component,** kom-pō'nent, *n.* an element.
**Compose,** kom-pōz', *v.* to originate in music, art, or literature; to settle. [author; a musician.
**Composer,** kom-pōz'er, *n.* one who composes; an
**Compos mentis,** kom'pos ment'is, *adj. phrase,* sane.
**Composite,** kom'po-sit, *adj.* made up of parts.
**Composition,** kom-po-zish'un, *n.* a mixture; a thing written or composed.
**Compositor,** kom-poz'it-er, *n.* one who sets type.
**Compost,** kom'pōst, *n.* a mixture of soil or plaster.
**Composure,** kom-pō'zūr, *n.* calmness.
**Compound,** kom-pownd', *v.* to mix; to settle.
**Compound,** kom'-pownd, *n.* a mass; a mixture.
**Comprehend,** kom-prē-hend, *v.* to understand.
**Comprehensible,** kom-prē-hens'ibl, *adj.* that may be understood.
**Comprehension,** kom-prē-hen'shun, *n.* intelligence to understand.
**Comprehensive,** kom-prē-hens'iv, *adj.* extensive.
**Compress,** kom-press', *v.* to force together; to concentrate.
**Compression,** kom-presh'un, *n.* the act of com-
**Comprise,** kom-priz', *v.* to include. [pressing.
**Compromise,** kom'prō-miz, *n.* an agreement by mutual concession.
**Comptroller,** kom-trō'ler, *n.* one who controls.
**Compulsion,** kom-pul'shun, *n.* force.
**Compulsive,** kom-pul'siv, *adj.* coercive.
**Compulsory,** kom-pul'sor-ri, *adj.* compelling.
kom-pungk'shun, *n.* remorse; mis-
, kom-pūt'abl, *adj.* calculable.
, kom-pū-tā'shun, *n.* calculation.

**Comrade,** kom-rād, *n.* companion.
**Con,** kon, *v.* to study.
**Concatenation,** kon-kat-in-ā'shun, *n.* united links.
**Concause,** kon'kawz, *n.* a co-operating cause.
**Concave,** kon'kāv, *adj.* curved, as applied to the inner or hollow side of an object.
**Concavity,** kon-kav'it-i, *n.* being concave.
**Conceal,** kon-sēl', *v.* to hide.
**Concede,** kon-sēd', *v.* to surrender; to admit.
**Conceit,** kon-sēt', *n.* excessive self-esteem.
**Conceited,** kon-sēt'ed, *adj.* vain.
**Conceivableness,** kon-sēv'abl-ness, *n.* capability of being conceived.
**Conceive,** kon-sēv', *v.* to form; to understand.
**Concentrate,** kon-sen'trāt, *v.* to bring close together; to compress.
**Concentration,** kon-sen-trā'shun, *n.* the act of bringing together.
**Concentric,** kon-sen'trik, *adj.* with a common
**Concept,** kon'sept, *n.* an idea; a notion. [centre.
**Concern,** kon-sern', *v.* to relate to.
**Concert,** kon'sert, *n.* a musical entertainment;
**Concert,** kon-sert', *v.* to plan. [union.
**Concerted,** kon-sert'ed, *adj.* planned, arranged.
**Concertina,** kon-ser'tē'na, *n.* a musical instrument, with bellows.
**Concession,** kon-sesh'un, *n.* a conceding; the thing conceded.
**Conch,** kongk, *n.* a shell.
**Conchoid,** kong'koid, *n.* a plain curve.
**Conchology,** kong-kol'o-ji, *n.* the science of shells.
**Conciliar,** kon-sil'i-er, *adj.* relating to a council.
**Conciliate,** kon-sil'i-āt, *v.* to gain favour.
**Concise,** kon-sīs', *adj.* terse, short.
**Conclave,** kon'klāv, *n.* meeting-place of cardinals.
**Conclude,** kon-klūd', *v.* to finish.
**Conclusion,** kon-klū'zhun, *n.* end, inference.
**Conclusive,** kon-klū'siv, *adj.* final.
**Concoct,** kon-kokt', *v.* to make up.
**Concoction,** kon-kok'shun, *n.* a mixture; a plot.
**Concomitant,** kon-kom'it-ant, *adj.* joined with.
**Concordance,** kon-kōrd'ans, *n.* accord; an index to leading passages of a book.
**Concordant,** kon-kōrd'ant, *adj.* harmonious.
**Concordat,** kon-kōrd'at, *n.* a treaty between the Pope and some secular power.
**Concourse,** kon'kōrs, *n.* an assembly of people.
**Concrete,** kon'krēt, *adj.* brought together under one
**Concubine,** kon'kū-bin, *n.* a mistress. [mass.
**Concur,** kon-kur', *v.* to go together; to agree.
**Concurrence,** kon-kur'ens, *n.* union; agreement.
**Concurrent,** kon-kur'ent, *adj.* running together; agreeing.
**Concussion,** kon-kush'un, *n.* a violent clashing together.
**Condemn,** kon-dem', *v.* to blame; to declare guilty.
**Condensation,** kon-den-sā'shun, *n.* consolidation.
**Condense,** kon-dens', *v.* to compress.
**Condenser,** kon-dens'er, *n.* one who, or that which, condenses.
**Condescend,** kon-dē-send', *v.* to be affable to inferiors.
**Condescending,** kon-dē-send'ing, *adj.* courteous to inferiors.
**Condign,** kon-dīn', *adj.* adequate.
**Condiment,** kon'di-ment, *n.* seasoning.
**Condition,** kon-dish'un, *n.* the existing state; rank; arrangement.
**Conditional,** kon-dish'un-al, *adj.* depending on condition.
**Conditioned,** kon-dish'und, *adj.* possessing a certain quality.
**Condole,** kon-dōl', *v.* to sympathise.
**Condolence,** kon-dō'lens, *n.* sympathy to one in
**Condone,** kon-dōn', *v.* to forgive. [grief.
**Condor,** kon'dor, *n.* a large vulture.
**Conduce,** kon-dūs', *v.* to contribute.
**Conducive,** kon-dū'siv, *adj.* tending.
**Conduct,** kon'dukt, *n.* behaviour.
**Conduct,** kon-dukt', *v.* to guide; to lead.
**Conductor,** kon-dukt'or, *n.* one who conducts; a manager. [water.
**Conduit,** kon'dit, *n.* a channel for conducting
**Cone,** kōn, *n.* a pointed substance with a circular base; fruit of cone shape.
**Confabulation,** kon-fab-ū-lā'shun, *n.* a familiar
**Confection,** kon-fek'shun, *n.* a sweetmeat. [chat.
**Confederacy,** kon-fed'er-ā-si, *n.* a leagued body.
**Confederate,** kon-fed'er-āt, *n.* an accomplice; *adj.* banded together. [a league.
**Confederation,** kon-fed-er-ā'shun, *n.* an alliance;
**Confer,** kon-fer', *v.* to talk together; to bestow.
**Conference,** kon'fer-ens, *n.* the act of conferring.
**Confess,** kon-fes', *v.* to admit.
**Confessedly,** kon-fes'ed-li, *adv.* admittedly.
**Confessional,** kon-fesh'un-al, *n.* the place where a priest hears confessions.
**Confessor,** kon-fes'-or, *n.* a priest who hears confessions. [confided.
**Confidant,** kon'fi-dant, *n.* one to whom secrets are
**Confide,** kon-fīd', *v.* to trust; to tell privately.
**Confidence,** kon'fid-ens, *n.* trust, belief.
**Confident,** kon'fi-dent, *adj.* sure, positive.
**Confidential,** kon-fi-den'shal, *adj.* in confidence.
**Configuration,** kon-fig-ū-rā'shun, *n.* external out-
**Confine,** kon'fin, *n.* border, limit. [line.
**Confine,** kon-fin', *v.* to imprison.
**Confinement,** kon-fin'ment, *n.* imprisonment, detention; *n.* a "lying in."
**Confirm,** kon-firm', *v.* to make certain; to sanction.
**Confirmatory,** kon-firm'at-or-i, *adj.* confirming.
**Confiscate,** kon'fis-kāt, *v.* to annex; to attach.
**Confiscation,** kon-fis-kā'shun, *n.* the act of taking over or annexing.
**Conflagration,** kon-fla-grā'shun, *n.* a destructive
**Conflict,** kon'flikt, *n.* struggle, contest. [fire.
**Conflict,** kon-flikt', *v.* to oppose; to contend.
**Confluence,** kon'flū-ens, *n.* a flowing together.
**Confluent,** kon'flū-ent, *adj.* joining, merging.
**Conform,** kon-form', *v.* to render similar; to adapt.
**Conformable,** kon-form'abl, *adj.* suitable.
**Conformation,** kon-form-ā'shun, *n.* special shape.
**Conformity,** kon-form'it-i, *n.* likeness.
**Confound,** kon-fownd', *v.* to confuse; to abash.
**Confraternity,** kon-frā-tern'it-i, *n.* a brotherhood.
**Confront,** kon-frunt', *v.* to face. [Confucius.
**Confucianism,** kon-fū-shi-an-izm, *n.* the doctrines of
**Confuse,** kon-fūz', *v.* to bewilder; to abash.
**Confusion,** kon-fū'zhun, *n.* the condition of being confused.
**Confutation,** kon-fū-tā'shun, *n.* the act of confut-
**Confute,** kon-fūt', *v.* to disprove. [ing.
**Congé d'elire,** kon-zhā'del-ēr, *v.* permission to
**Congeal,** kon-jēl', *v.* to freeze. [elect.
**Congelation,** kon-jel-ā'shun, *n.* the act of congealing.
**Congener,** kon-jē'ner, *n.* of the same nature.
**Congenial,** kon-jē'ni-al, *adj.* similar in spirit.
**Congenital,** kon-jen'it-al, *adj.* so born.
**Conger,** kong'ger, *n.* a large sea eel.
**Congeries,** kon-jē'ri-ēz, *n.* a collection of particles.
**Congest,** kon-jest', *v.* to accumulate.
**Conglomerate,** kon-glom'er-āt, *adj.* gathered in a mass.
**Congratulate,** kon-grat'ū-lāt, *v.* to express gladness on some happy event.
**Congregate,** kong'grē-gāt, *v.* to assemble.
**Congregation,** kong-grē-gā'shun, *n.* an assemblage.
**Congregationalism,** kon-grē-gā'shun-al-izm, *n.* the independent form of worship.
**Congress,** kong'gress, *n.* a conference; the U.S. legislative body.
**Congruity,** kong-grū'it-i, *n.* suitability.
**Congruous,** kong'grū-us, *adj.* suitable.
**Conic,** kon'ik, *adj.* in the form of a cone.
**Conics,** kon'iks, *n.* the cone section of geometry.
**Coniferæ,** kon-if'er-ē, *n.* cone-bearing plants.
**Conjectural,** kon-jekt'ū-ral, *adj.* involving supposition.
**Conjecture,** kon-jekt'ūr, *n.* a guess; to surmise.
**Conjoin,** kon-join', *v.* to unite.
**Conjoint,** kon-joint', *adj.* united.
**Conjugal,** kon'jū-gal, *adj.* relating to marriage.
**Conjugate,** kon'-jū-gāt, *v.* to express the parts of a
**Conjunct,** kon-jungkt', *adj.* conjoined. [verb.
**Conjunction,** kon-jungk'shun, *n.* a meeting; a connecting word. [events.
**Conjuncture,** kon-jungkt'ūr, *n.* combination of
**Conjuration,** kon-jū-rā'shun, *n.* enchantment.
**Conjure,** kun'jer, *v.* to practise sleight-of-hand.
**Conjure,** kon-jūr', *v.* to solemnly implore.
**Conjurer,** kun'jer-er, *n.* one who practises *leger-de-*
**Connate,** kon'āt, *adj.* inborn; congenital. [*main.*
**Connect,** kon-ekt', *v.* to join together; to associate.
**Connexion or Connection,** kon-nek'shun, *n.* that which connects.
**Connivance,** kon'ī'vans, *n.* a secret understanding.
**Connive,** kon-īv', *v.* to wink at a fault; to combine.
**Connoisseur,** kon-nē-sēr', *n.* a critical expert.
**Connubial,** kon-ū'bi-al, *adj.* relating to marriage.
**Conquer,** kong'ker, *v.* to subdue; to overcome.
**Conqueror,** kong'ker-er, *n.* one who conquers.
**Conquest,** kong'kwest, *n.* the act of conquering.
**Consanguineous,** kon-sang-gwin'ē-us, *adj.* related by blood.
**Conscience,** kon'shens, *n.* an inner sense of duty.

**Conscientious,** kon-shi-en'shus, *adj.* scrupulous.
**Conscious,** kon'shus, *adj.* having perception of.
**Consciousness,** kon'shus-ness, *n.* self-perception.
**Conscript,** kon'skript, *n.* a compulsory soldier.
**Conscription,** kon-skrip'shun, *n.* compulsory enlistment.
**Consecrate,** kon'sĕ-krāt, *v.* to make sacred.
**Consecration,** kon-sĕ-krā'shun, *n.* the act of devoting to holy purpose. [order.
**Consecutive,** kon-sek'-ū-tiv, *adj.* succeeding in
**Consensus,** kon-sen'sus, *n.* unanimity.
**Consent,** kon-sent', *v.* to agree; to comply.
**Consequence,** kon'sĕ-kwens, *n.* result.
**Consequent,** kon'sĕ-kwent, *adj.* resulting.
**Consequential,** kon-sĕ-kwen'shal, *adj.* casual; pompous.
**Conservation,** kon-ser-vā'shun, *n.* act of conserving.
**Conservative,** kon-serv'ā-tiv, *adj.* tending to conserve; the name of a political party.
**Conservatory,** kon-serv'ā-tor-i, *n.* greenhouse.
**Conserve,** kon-serv', *v.* to retain.
**Conserve,** kon'serv, *n.* fruit or other preserve.
**Consider,** kon-sid'er, *v.* to ponder.
**Considerable,** kon-sid'er-abl, *n.* important; large.
**Considerate,** kon-sid'er-āt, *adj.* thoughtful.
**Consideration,** kon-sid-er-ā'shun, *n.* importance; deliberation.
**Consign,** kon-sīn', *v.* to transfer; to entrust.
**Consignee,** kon-sin-ē', *n.* one to whom anything is consigned.
**Consigner,** kon-sī'ner, *n.* one who consigns.
**Consignment,** kon-sīn'ment, *n.* the thing consigned; act of consignment.
**Consist,** kon-sist', *v.* to exist; to agree.
**Consistency,** kon-sist'en-si, *n.* substance; degree of density.
**Consistent,** kon-sist'ent, *adj.* uniform.
**Consistory,** kon-sist'o-ri, *n.* a place of assembly.
**Consolation,** kon-so-lā'shun, *n.* comfort; sym-
**Console,** kon-sōl', *v.* to comfort. [pathy.
**Consolidate,** kon-sol'i-dāt, *v.* to make solid.
**Consols,** kon'sols, *n.* short for consolidated annuities.
**Consonance,** kon'so-nans, *n.* agreement.
**Consonant,** kon'so-nant, *adj.* consistent; any letter except a vowel.
**Consort,** kon'sort, *n.* companion.
**Consort,** kon-sort', *v.* to associate.
**Conspicuous,** kon-spik'ū-us, *adj.* prominent.
**Conspiracy,** kon-spir'ā-si, *n.* a banding together.
**Conspirator,** kon-spir'a-tor, *n.* one who conspires.
**Conspire,** kon-spīr', *v.* to plot.
**Constable,** kon'-stabl, *n.* an officer; a policeman.
**Constabulary,** kon-stab'ū-lar-i, *n.* a body of con-
**Constancy,** kon'stan-si, *n.* fidelity. [stables.
**Constant,** kon'stant, *adj.* fixed.
**Constellation,** kon-stel-ā'shun, *n.* a group of stars.
**Consternation,** kon-ster-nā'shun, *n.* terror.
**Constipation,** kon-stip-ā'shun, *n.* costiveness.
**Constituency,** kon-stit'ū-en-si, *n.* a body of voters.
**Constituent,** kon-stit'ū-ent, *n.* a voter; *adj.* an ele-
**Constitute,** kon'stit-ūt, to establish. [ment.
**Constitution,** kon-stit-ū'shun, *n.* the governmental system; man's physical state.
**Constrain,** kon-strān', *v.* to compel.
**Constraint,** kon-strānt', *n.* confinement; compulsion.
**Constrict,** kon-strikt', *v.* to contract or bind close.
**Constriction,** kon-strik'shun, *n.* contraction.
**Construct,** kon-strukt', *v.* to build.
**Constructive,** kon-strukt'iv, *adj.* capable of constructing.
**Construe,** kon-stroo', *v.* to interpret; to explain.
**Consubstantial,** kon-sub-stan'shal, *adj.* of the same nature. [doctrine of the substantial presence.
**Consubstantiation,** kon-sub-stan-shi-ā'shun, *n.* the
**Consul,** kon'sul, *n.* a government representative abroad.
**Consulate,** kon'sūl-āt, *n.* office of consul.
**Consultation,** kon-sult-ā'shun, *n.* an interview between a professional man and his client or patient.
**Consume,** kon-sūm', *v.* to destroy; to burn up.
**Consummate,** kon-sum'āt, *v.* to perfect.
**Consumption,** kon-sum'shun, *n.* the act of consuming; a pulmonary disease.
**Contact,** kon'takt, *n.* touch.
**Contagion,** kon-tā'jun, *n.* infection.
**Contagious,** kon-tā'jus, *adj.* capable of infection.
**Contaminate,** kon-tam'-in-āt, *v.* to pollute.
**Contemn,** kon-tem', *v.* to despise.
**Contemplate,** kon'tem-plāt, *v.* to reflect; to study.
**Contemporaneous,** kon-tem-po-rā'nē-us, *adj.* existing at the same time.
**Contemporary,** kon-tem'po-rā-ri, *n.* one who exists at the same time; a co-existing publication.
**Contempt,** kon-tempt', *n.* scorn.
**Contemptible,** kon-tempt'ibl, *adj.* despicable.
**Contend,** kon-tend', *v.* to struggle; to oppose.
**Content,** kon-tent', *adj.* satisfied, pleased; *n.* satis-
**Contention,** kon-ten'shun, *n.* strife. [faction.
**Contentious,** kon-ten'shus, *adj.* quarrelsome.
**Contentment,** kon-tent'ment, *n.* satisfaction.
**Contents,** kon-tents', *n.* things contained; index.
**Conterminous,** kon-ter'min-us, *adj.* co-extensive.
**Contest,** kon-test', *v.* to dispute.
**Contest,** kon'test, *n.* conflict.
**Context,** kon'tekst, *n.* connecting passages.
**Contexture,** kon-tekst'ūr, *n.* the structure of a
**Contiguity,** kon-ti-gū'it-i, *adj.* nearness. [thing.
**Continence,** kon'tin-ens, *n.* self-restraint.
**Continent,** kon'tin-ent, *n.* mainland; a large division of the earth's surface. [pening.
**Contingency,** kon-tin'jen-si, *n.* an accidental hap-
**Contingent,** kon-tin'jent, *adj.* dependent upon something happening; *n.* a band or company.
**Continual,** kon-tin'ū-al, *adj.* unceasing.
**Continuation,** kon-tin-ū-ā'shun, *n.* unbroken succession.
**Continue,** kon-tin'ū, *v.* to remain; to persist.
**Continuity,** kon-tin-ū'it-i, *n.* condition of being con-
**Contort,** kon-tort', *v.* to distort. [tinuous.
**Contour,** kon'toor, *n.* an outline.
**Contra,** kon'tra, *adv.* against. [hibited goods.
**Contraband,** kon'tra-band, *adj.* illegal; *n.* pro-
**Contrabandist,** kon'tra-band-ist, *n.* a smuggler.
**Contrabass,** kon'tra-bās, *n.* the double bass viol.
**Contract,** kon-trakt', *v.* to draw together; to bar-
**Contract,** kon'trakt, *n.* an agreement. [gain.
**Contraction,** kon-trak'shun, *n.* the act of contracting.
**Contractor,** kon-trakt'or, *n.* one who contracts.
**Contradict,** kon-tra-dikt', *v.* to assert to the contrary. [consistent.
**Contradictory,** kon-tra-dikt'or-i, *adj.* contrary; in-
**Contradistinction,** kon-tra-dis-tink'shun, *n.* distinctly contrasted.
**Contralto,** kon-tral'to, *n.* the alto voice.
**Contraries,** kon'tra-riz, *n.* things opposed.
**Contrary,** kon'tra-ri, *adj.* opposite; at variance.
**Contrast,** kon-trast', *v.* standing or putting in opposition.
**Contravene,** kon-tra-vēn', *v.* to oppose.
**Contravention,** kon-tra-ven'shun, *n.* opposition.
**Contretemps,** kon-tr-tang', *n.* an inopportune incident. [literary composition.
**Contribute,** kon-trib'ūt, *v.* to give; to supply a
**Contributory,** kon-trib'ū-to-ri, *adj.* helping.
**Contrite,** kon'trīt, *adj.* penitent.
**Contrition,** kon-trish'un, *n.* grief; remorse.
**Contrivance,** kon-trī'vans, *n.* a thing contrived.
**Contrive,** kon-trīv', *v.* to project; to invent.
**Control,** kon-trōl', *v.* to command; to direct.
**Controller,** kon-trōl'er, *n.* a checker of accounts.
**Controversialist,** kon-tro-ver'shal-ist, *n.* one who indulges in controversy.
**Controversy,** kon'tro-ver-si, *n.* written discussion.
**Controvert,** kon-tro-vert', *v.* to refute; to deny.
**Contumacy,** kon'tū-ma-si, *n.* resistance to author-
**Contumelious,** kon-tū-mēl'i-us, *adj.* insolent. [ity.
**Contumely,** kon'tū-mel-i, *n.* insolence; reproach.
**Contusion,** kon-tū'zhun, *n.* a bruise.
**Conundrum,** ko-nun'drum, *n.* a riddle.
**Convalescence,** kon-val-es'ens, *n.* recovery of health.
**Convalescent,** kon-val-es'ent, *n.* one recovering.
**Convection,** kon-vek'shun, *n.* transmission of electricity or heat by currents. [assemble.
**Convene,** kon-vēn', *v.* to summon together; to
**Convenient,** kon-vē'ni-ent, *adj.* suitable, near.
**Convent,** kon'vent, *n.* a nunnery, or monastery.
**Conventicle,** kon-vent'ikl, *n.* place of worship.
**Convention,** kon-ven'shun, *n.* common usage; an assembly. [established by usage.
**Conventionalism,** kon-ven'shun-al-izm, *n.* what is
**Conventual,** kon-vent'ū-al, *adj.* pertaining to a convent.
**Converge,** kon-verj', *v.* to tend to one point.
**Conversant,** kon-vers'ant, *adj.* familiar with.
**Conversation,** kon-vers-ā'shun, *n.* familiar talk.
**Conversazione,** kon-ver-sat-si-ō'ne, *n.* a meeting for discussion. [intercourse with.
**Converse,** kon-vers', *v.* to talk with; to have
**Conversely,** kon-vers'li, *adv.* in reverse order.
**Conversion,** kon-ver'shun, *n.* change of view.

**Convert**, kon-vert', *v.* to alter from one opinion to another; to apply.
**Convertible**, kon-vert'ibl, *adj.* that may be converted. [ness.
**Convex**, kon'veks, *adj.* inclining to external round-
**Convey**, kon-vā', *v.* to carry; to transmit; to steal.
**Conveyance**, kon-vā'ens, *n.* any vehicle; deed transferring property.
**Conveyancer**, kon-vā'ens-er, one who draws up deeds relating to property.
**Convict**, kon-vikt', *v.* to prove or declare guilty.
**Convict**, kon'vikt, *n.* a prisoner condemned for crime. [of being convinced.
**Conviction**, kon-vik'shun, *n.* proof of guilt; state
**Convince**, kon-vins', *v.* to satisfy.
**Convivial**, kon-viv'i-al, *adj.* jovial.
**Convocation**, kon-vo-kā'shun, *n.* act of convoking; a synod.
**Convoke**, kon-vōk', *v.* to summon together.
**Convolvulus**, kon-vol'vū-lus, *n.* bindweed.
**Convoy**, kon'voi, *v.* to accompany for protection.
**Convulse**, kon-vuls', *v.* to agitate.
**Cony**, kō'ni, *n.* a rabbit.
**Coo**, koo, *v.* sound made by doves.
**Cook**, kook, *v.* to prepare food; *n.* one who cooks.
**Cookery**, kook'er-i, *n.* the science of cooking.
**Cool**, kool, *adj.* slightly cold; calm; *v.* to make cool.
**Coolie**, kool'i, *n.* an Oriental labourer.
**Coop**, koop, *n.* a tub or box; *v.* to confine.
**Cooperage**, koop'er-ij, *n.* a cooper's workshop.
**Co-operate**, ko-op'er-āt, *v.* to work with.
**Co-operative**, ko-op'er-at-iv, *adj.* working together.
**Co-optation**, ko-opt-ā'shun, *n.* the act of election into an association by its own members.
**Co-ordinate**, ko-awr'din-āt, *adj.* ranking the same.
**Co-ordinates**, ko-awr'din-āts, *n.* similar elements.
**Coot**, koot, *n.* a water-fowl.
**Copal**, kō'pal, *n.* a resinous substance.
**Co-partnership**, *n.* sharing of employers and employees. [match.
**Cope**, kōp, *n.* a covering; *v.* to engage with; to
**Coping**, kō'ping, *n.* the top course of a wall.
**Copious**, kō'pi-us, *adj.* abundant.
**Copper**, kop'er, *n.* a red-brown metal; a copper
**Copperas**, kop'er-as, *n.* sulphate of iron. [vessel.
**Coppice**, kop'is, *n.* a copse.
**Coprolite**, kop'ro-lit, *n.* fossilised excrement.
**Copse**, kops, *n.* a small wood.
**Copt**, kopt, *n.* a descendant of the ancient Egypt-
**Copula**, kop'ū-la, *n.* that which connects. [ians.
**Copulate**, kop'ū-lat, *v.* to unite sexually.
**Copy**, kop'i, *n.* an imitation.
**Copyhold**, kop'i-hold, *n.* land held of a manor.
**Copyist**, *n.* one who copies.
**Copyright**, kop'i-rit, *n.* right in an original pro-
**Coquette**, kō-ket', *n.* a flirt. [duction.
**Cor**, kor, *n.* a Jewish measure.
**Coracle**, kor'ā-kl, *n.* a small row-boat.
**Coral**, kor'al, *n.* a substance found in the sea.
**Corbel**, kor'bel, *n.* a projection from a wall.
**Cordage**, kord'āj, *n.* a ship's rigging.
**Cordial**, kor'di-al, *n.* a beverage; *adj.* hearty.
**Cordon**, kor'don, *n.* a badge; a guarding line of soldiers.
**Corduroy**, kor'du-roi, *n.* a kind of fustian.
**Cordwainer**, kord'wā-ner, *n.* a shoemaker; a worker in cordwain.
**Core**, kōr, *n.* the heart; the inner part.
**Co-respondent**, ko-res-pon'dent, *n.* a co-defendant in a divorce suit.
**Cork**, kork, *n.* a tree or its bark; a bottle stopper.
**Cormorant**, kor'mo-rant, *n.* a web-footed sea-bird.
**Corn**, korn, *n.* grain.
**Cornea**, kor'nē-a, *n.* the front membrane of the eye.
**Cornelian**, kōr-nē'li-an, *n.* a chalcedonic, precious
**Corner**, korn'er, *n.* an angle. [stone.
**Cornet**, korn'et, *n.* a brass instrument
**Cornetcy**, kor'net-si, *n.* a cornet rank.
**Cornice**, korn'is, *n.* moulding close to ceiling.
**Cornucopia**, korn-ū-kō'pi-a, *n.* horn of plenty.
**Cornute**, korn-ūt', *v.* to make a cuckold of.
**Corolla**, kor-ol'ā, *n.* the inner whorl of a flower.
**Corollary**, kor-ol'ar-i, *n.* an inference from facts.
**Corona**, kor-ō'na, *n.* the projecting part of a cornice; the moon's halo.
**Coronach**, kor'o-nah, *n.* funeral dirge.
**Coronation**, kor-o-nā'shun, *n.* the crowning of a monarch.
**Coroner**, kor'o-ner, *n.* one who presides at inquests.
**Coronet**, kor'o-net, *n.* a small crown worn by nobles.
**Corporal**, kor'po-ral, *n.* a petty officer; *adj.* relating to the body. [poration.
**Corporate**, kor'po-rāt, *adj.* pertaining to a cor-
**Corporation**, kor-po-rā'shun, *n.* a corporate body.
**Corporeal**, kor-pō'rē-al, *adj.* material.
**Corps**, kōr, *n.* a body of soldiers.
**Corpse**, korps, *n.* a dead body.
**Corpulence**, kor'pū-lens, *n.* fatness; obesity.
**Corpuscle**, kor-pus'l, *n.* a minute particle.
**Corpuscular**, kor-pus'kū-lar, *adj.* relating to corpuscles.
**Corral**, kor-ăl', *v.* to surround; *n.* cattle enclosure.
**Correct**, kor-ekt', *v.* to make accurate; *n.* right.
**Correlate**, kor'e-lāt, *v.* to be mutually akin.
**Correspond**, kor-es-pond', *v.* to agree with; to exchange letters. [written letters.
**Correspondence**, kor-es-pond'ens, *n.* suitability;
**Correspondent**, kor-res-pond'ent, *adj.* agreeing with; *n.* one who writes letters.
**Corridor**, kor'i-dōr, *n.* a passage-way.
**Corrigenda**, kor-i-jend'ā, *n.* corrections.
**Corroborate**, kor-ob'ō-rāt, *v.* to confirm.
**Corrode**, kō-rōd', *v.* to rust; to eat away.
**Corrosive**, kor-ō'siv, *adj.* having the quality of corrosion.
**Corrugate**, kor'ū-gat, *v.* to draw into folds.
**Corrupt**, kor-upt', *v.* to defile, to bribe; *adj.* debased. [tion, perishable.
**Corruptible**, kor-upt'ibl, *adj.* capable of corrup-
**Corruption**, kor-up'shun, *n.* impurity.
**Corsage**, kor'sāj, *n.* bodice.
**Corsair**, kor'sār, *n.* a pirate.
**Corselet**, kors'let, *n.* a cuirass.
**Corset**, kors'et, *n.* stays.
**Cortège**, kor-tāzh', *n.* a procession.
**Cortes**, kor'tēz, *n.* Spanish parliament.
**Coruscate**, kor'us-kāt, *v.* to flash.
**Corvette**, kor-vet', *n.* a small war vessel.
**Cosmetic**, koz-met'ik, *n.* a preparation for the com-
**Cosmic**, koz'mik, *adj.* of the universe. [plexion.
**Cosmogony**, koz-mog'-o-ni, *n.* the theory of origin.
**Cosmography**, koz-mog'raf-i, *n.* science of the earth's constitution. [world as a whole.
**Cosmology**, koz-mol'o-ji, *n.* the science of the
**Cosmopolitan**, koz-mo-pol'it-an, *n.* one who is at home anywhere.
**Cosmos**, koz'mos, *n.* the physical world.
**Costal**, kost'al, *adj.* pertaining to the ribs.
**Costermonger**, kost'er-mung-ger, *n.* an itinerant vendor of eatables.
**Costive**, kost'iv, *adj.* constipated.
**Costume**, kost'ūm, *n.* dress.
**Cosy**, kō'zi, *adj.* snug; *n.* a teapot cover.
**Cot**, kot, *n.* a small cottage; a child's crib.
**Coterie**, kō'ter-i, *n.* a group of persons with similar
**Cotillion**, ko-til'yun, *n.* a kind of dance. [aims.
**Cotton**, kot'un, *n.* the produce of the cotton plant; cloth made therefrom.
**Couch**, kowch, *n.* a seat; a bed; *v.* to stoop down; to hide.
**Cough**, kof, *n.* noise made by throwing off phlegm.
**Couleur-de-rose**, kool'er-de-rōz, *adj.* rosy.
**Council**, kown'sil, *n.* a deliberative assembly.
**Councillor**, kown'sil-er, *n.* a member of a council.
**Counsel**, kown'sel, *n.* advice; an advocate.
**Counsellor**, kown'sel-or, *n.* one who counsels.
**Count**, kownt, *v.* to number; *n.* esteem; a foreign title.
**Countenance**, kown'ten-ans, *n.* the face; *v.* to favour.
**Counter**, kown'ter, *adv.* against; *n.* a shop table.
**Counteract**, kown-ter-akt', *v.* to go against.
**Counterbalance**, kown-ter-bal'ans, *v.* to weigh against. [thing false.
**Counterfeit**, kown'ter-fēt, *v.* to imitate; *n.* some-
**Countermand**, kown'ter-mând, *v.* to revoke.
**Countermarch**, kown'ter-mârch, *v.* to mark back.
**Countermark**, kown'ter-mârk, *n.* a mark of ownership put on goods. [motion.
**Countermotion**, kown'ter-mō-shun, *n.* an opposing
**Counterpane**, kown'ter-pān, *n.* a bed covering.
**Counterpart**, kown'ter-pârt, *n.* a part that corresponds to another. [a plot.
**Counterplot**, kown'ter-plot, *v.* to plot to thwart
**Counterpoint**, kown'ter-point, *n.* the art of combining melodies.
**Counterpoise**, kown'ter-poiz, *v.* to weigh against.
**Counterscarp**, kown'ter-scârp, *n.* the opposite side of a ditch to that occupied by the besieged.
**Countersign**, kown'ter-sin, *n.* an authorising mark.
**Counterstroke**, kown'ter-strōk, *n.* a return stroke.
**Countervail**, kown-ter-vāl', *v.* to avail against.
**Countess**, kown'tess, *n.* wife or widow of an earl or
**Countless**, kownt'les, *adj.* innumerable. [count.
**Country**, kun'tri, *n.* a kingdom; any land; a rural
**County**, kown'ti, *n.* a shire. [region.

**Couple,** kup'l, *n.* a pair; *v.* to join.
**Couplet,** kup'let, *n.* two lines of rhyme.
**Coupling,** kup'ling, *n.* a connection.
**Coupon,** koo'pong, *n.* a certificate to be cut off.
**Courage,** kur'āj, *n.* bravery.
**Courier,** koo'ri-er, *n.* a messenger.
**Course,** kōrs, *n.* progress; career; race-ground; *v.* to run; to hunt.
**Coursing,** kōrs'ing, *n.* hunting over a course.
**Court,** kōrt, *n.* an enclosed space; a hall of justice; the surroundings of a sovereign; *v.* to solicit.
**Courteous,** kurt'ē-us, *adj.* polite.
**Courtesan,** kur'tē-zan, *n.* a lewd woman.
**Courtesy,** kur'ti-si, *n.* civility.
**Courtier,** kōrt'i-er, *n.* a frequenter of court.
**Courtly,** kōrt'li, *adj.* elegant.
**Court-martial,** kōrt'mar-shal, *n.* a court of officers.
**Courtship,** kōrt'ship, *n.* the act of wooing.
**Cousin,** kuz'n, *n.* the son or daughter of an uncle or
**Cove,** kōv, *n.* a small inlet. [aunt.
**Covenant,** kuv'ĕn-ant, *n.* a mutual agreement.
**Cover,** kuv'er, *v.* to spread over; to conceal; *n.* a wrapping; a lid; a retreat of game.
**Coverlet,** kuv'er-let, *n.* a bed covering.
**Covert,** kūv'ert, *adj.* secret; concealed.
**Coverture,** kūv'ert-ūr, *n.* shelter; the condition of being a married woman.
**Covet,** kūv'et, *v.* to desire.
**Covetousness,** kūv'et-us-ness, *n.* eager desire.
**Covey,** kūv'i, *n.* a brood of game.
**Coward,** kow'ard, *n.* one lacking in courage.
**Cower,** kow'er, *v.* to shrink down; to crouch.
**Cowl,** kowl *n.* a monk's hood.
**Coxcomb,** koks'kōm, *n.* a fop.
**Coy,** koi, *adj.* shy.
**Cozen,** kuz'en, *v.* to cheat.
**Cozenage,** kūz'en-āj, *n.* fraud in bartering.
**Crabbed,** krab'd, *adj.* ill-natured, harsh.
**Crack,** krak, *v.* to split; to emit a sharp sound; *n.* a cleavage.
**Crack-brained,** krak'brānd, *adj.* crazy.
**Cracker,** krak'er, *n.* a firework; a biscuit.
**Cradle,** krā'dl, *n.* a small bed for infants; a frame.
**Craft,** kraft, *n.* cunning; trade.
**Craftsman,** krafts'man, *n.* one engaged in a craft.
**Crafty,** kraft'i, *adj.* deceitful; with skill.
**Crag,** krag, *n.* a high rock.
**Cram,** kram, *v.* to crowd; to stuff.
**Cramp,** kramp, *n.* a spasm; *v.* to hinder; to confine.
**Cran,** kran, *n.* a Scotch measure for herrings.
**Cranberry,** kran'ber-i, *n.* an evergreen berry-bearing shrub.
**Crane,** krān, *n.* a kind of bird; an apparatus for lifting heavy weights.
**Cranial,** krā'ni-al, *adj.* pertaining to the skull.
**Craniology,** krān-i-ol'o-ji, *n.* the study of skulls.
**Cranium,** krā'ni-um, *n.* the skull.
**Crank,** krangk, *n.* a crook or bend; a whim.
**Cranny,** kran'i, *n.* a chink; a fissure.
**Crape,** krāp, *n.* a kind of black cloth used for mourning wear.
**Crash,** krash, *v.* to dash into.
**Crass,** kras, *adj.* coarse.
**Crate,** krāt, *n.* a wicker case.
**Crater,** krā'ter, *n.* the mouth of a volcano.
**Cravat,** kra-vat', *n.* a kind of neckcloth.
**Crave,** krāv, *v.* to ask for; to beg; to seek.
**Craven,** krā'ven, *n.* a coward; *adj.* cowardly.
**Craw,** kraw, *n.* the crop of fowls.
**Crawl,** krawl, *v.* to creep.
**Crayon,** krā'on, *n.* a chalk pencil for drawing.
**Craze,** krāz, *n.* a passion; *v.* to confuse; to impair
**Craziness,** krā'zi-ness, *n.* silliness. [mentally.
**Crazy,** krāz'i, *adj.* deranged.
**Cream,** krēm, *n.* oily substance formed on milk.
**Crease,** krēs, *n.* mark made by folding.
**Create,** krē-āt', *v.* to originate.
**Creation,** krē-ā'shun, *n.* formation.
**Creator,** krē-ā'tor, *n.* one who creates; the Supreme Being.
**Crèche,** krāsh, *n.* a public nursery.
**Credence,** krē'dens, *n.* belief.
**Credentials,** kre-den'shals, *n.* letters of personal testimony.
**Credible,** kred'ibl, *adj.* to be believed.
**Credit,** kred'it, *n.* esteem, trust.
**Creditable,** kred'it-a'bl, *adj.* trustworthy.
**Creditor,** kred'it-or, *n.* one to whom money is due.
**Credulity,** kred-ū'lit-i, *n.* easiness of belief.
**Creed,** krēd, *n.* an exposition of belief.
**Creek,** krēk, *n.* a small inlet or bay.
**Creeper,** krē'per, *n.* a climbing plant.
**Cremation,** krē-mā'shun, *n.* the burning of the
**Crenated,** krē-nā'ted, *adj.* scalloped. [dead.
**Crenelated,** kren-el-ā'ted, *adj.* indented, battlemented.
**Creole,** krē'ōl, *n.* a person of European descent born in South America or the West Indies.
**Creosote,** krē'o-sōt, *n.* oil obtained from tar.
**Crepuscular,** krep-usk'ū-lar, *adj.* relating to twilight.
**Crescent,** kres'ent, *adj.* shaped like the new moon.
**Cress,** kres, *n.* a plant used as a salad.
**Cresset,** kres'et, *n.* an iron vessel for holding fire.
**Crest,** krest, *n.* the summit; a cock's comb; the surmounting symbol of a coat of arms.
**Crestfallen,** krest'fawl-en, *adj.* disheartened.
**Cretaceous,** krē-tā'shus, *adj.* chalk-like.
**Cretinism,** krē'tin-izm, *n.* mental and physical inferiority.
**Cretonne,** kre-tŏn', *n.* a figured cotton fabric used for furniture coverings, etc.
**Crevasse,** kre-vas', *n.* a crack or opening in a
**Crevice,** krev'is, *n.* a crack. [glacier.
**Crewel,** kroo'el, *n.* a kind of woollen yarn.
**Crib,** krib, *n.* a child's bed; *v.* to shut in; to steal.
**Crick,** krik, *n.* a spasm.
**Cricket,** krik'et, *n.* a kind of grasshopper; a game.
**Crier,** kri'er, *n.* a court officer; a bellman.
**Crime,** krim, *n.* offence against the law.
**Criminal,** krim'in-al, *n.* one guilty of crime; *adj.* pertaining to crime.
**Criminality,** krim-in-al'it-i, *n.* guilt.
**Crimp,** krimp, *v.* to plant; *n.* a decoy.
**Crimple,** krimp'l, *v.* to curl.
**Crimson,** krim'zn, *n.* a deep red colour.
**Cringe,** krinj, *v.* to bend fawningly.
**Crinkle,** kringk'l, *v.* to wrinkle.
**Cripple,** krip'l, *n.* one who is lame.
**Crisis,** kri'sis, *n.* a critical time.
**Crisp,** krisp, *adj.* brittle, brisk.
**Criterion,** kri-tē'ri-on, *n.* a standard of judging.
**Critical,** krit'ik-al, *adj.* discriminating.
**Criticise,** krit'i-sīz, *v.* to pass judgment on.
**Criticism,** krit'i-sism, *n.* the act of criticising.
**Critique,** krit-ēk', *n.* a printed criticism.
**Croak,** krōk, *v.* to grumble; *n.* the cry of a frog.
**Crochet,** krō'shā, *n.* a kind of fancy work.
**Crocodile,** krok'o-dil, *n.* a large reptile.
**Crocus,** krō'kus, *n.* a plant.
**Crone,** krōn, *n.* an old woman.
**Crony,** krō'ni, *n.* a familiar friend.
**Crook,** krook, *n.* a curve; a staff.
**Croon,** kroon, *v.* to hum.
**Cross,** kros, *n.* a gibbet; the instrument on which Christ was crucified; emblem of the Christian religion.
**Crotchety,** kroch'ĕ-ti, *adj.* whimsical, faddy.
**Croton-oil,** krō'ton-oil, *n.* a purgative oil.
**Croup,** kroop, *n.* a throat disease.
**Croupier,** kroo'pi-er, *n.* an assistant chairman.
**Crow,** krō, *n.* a bird; the cry of the cock; *v.* to
**Crowbar,** krō'bār, *n.* an iron lever. [boast.
**Crowd,** krowd, *n.* a collection of people; a mob.
**Crown,** krown, *n.* a regal head adornment; the top
**Crucial,** kroo'shi-al, *adj.* testful. [of anything.
**Crucible,** kroo'sibl, *n.* a melting-pot.
**Crucifix,** kroo'si-fiks, *n.* a cross; the sacred emblem of the Cross.
**Crucifixion,** kroo-si-fik'shun, *n.* death on the Cross.
**Cruciform,** kroo'si-form, *adj.* in the form of a cross.
**Crucify,** kroo'si-fi, *v.* to put to death by nailing to a
**Crude,** krood, *adj.* rough, raw. [cross.
**Crudity,** krood'it-i, *n.* unfinished, rude.
**Cruel,** kroo'el, *adj.* hard-hearted, stern, inhuman.
**Cruelty,** kroo'el-ti, *n.* harshness; brutality.
**Cruet,** kroo'et, *n.* stand for condiments.
**Cruise,** krooz, *v.* to sail about.
**Crumb,** krumb, *n.* a fragment.
**Crumble,** krumb'l, *v.* to break in small pieces.
**Crumpet,** krump'et, *n.* a kind of muffin.
**Crumple,** krump'l, *v.* to crease or wrinkle.
**Crunch,** krunsh, *v.* to crush with the teeth.
**Crupper,** krup'er, *n.* the leather that passes under a horse's tail.
**Crusade,** kroo-sād', *n.* a military expedition to the Holy Land; any daring combined undertaking. [crusade.
**Crusader,** kroo-sā'der, *n.* one taking part in a
**Cruse,** krooz, *n.* an earthen pot.
**Crush,** krush, *v.* to break by pressure; to ruin.
**Crust,** krust, *n.* outer covering.
**Crustaceous,** krus-tā'shus, *adj.* relating to shell-
**Crusty,** krust'i, *adj.* with a crust; surly. [fish.

**Crutch,** kruch, *n.* a support for one who is lame.
**Crux,** kruks, *n.* a cross; a difficulty.
**Crypt,** kript, *n.* an underground chapel.
**Cryptogamy,** kript-og'ă-mi, *n.* the science of flowerless plants.
**Cryptography,** kript-og'raf-i, *n.* secret writing.
**Crystal,** krist'al, *adj.* transparent; glassy.
**Crystalline,** krist'al-in, *adj.* clear, transparent.
**Crystallise,** krist'al-iz, *v.* to form into crystals.
**Crystallography,** krist-al-og'-raf-i, *n.* the science of
**Cube,** kūb, *n.* a solid square. [crystals.
**Cubic,** kū'bik, *adj.* relating to a cube.
**Cubiform,** kū'bi-form, *adj.* in cube shape.
**Cubit,** kū'bit, *n.* an ancient measure.
**Cuckold,** kuk'old, *n.* a man deceived by his wife.
**Cuckoo,** kōōk'oo, *n.* a well-known bird.
**Cucumber,** kū'kum'ber, *n.* an oblong green fruit.
**Cud,** kud, *n.* food that is re-chewed by ruminants.
**Cuddy,** kud'i, *n.* a ship's cabin.
**Cudgel,** kuj'el, *n.* a staff.
**Cue,** kū, *n.* a hint; the tail; a rod used in billiards.
**Cuff,** kuf, *n.* a blow ; wrist covering; *v.* to strike.
**Cuirass,** kwe-ras', *n.* a breast covering.
**Cuirassier,** kwe'ras-ēr', *n.* a soldier armed with a cuirass.
**Cuisine,** kwe-zēn', *n.* cooking department.
**Cul-de-sac,** kul-de-sak', *n.* a blind alley.
**Culinary,** kū'lin-ar-i, *adj.* relating to cooking.
**Cull,** kul, *v.* to select.
**Cullender,** kul'en-der, *n.* a strainer.
**Culm,** kulm, *n.* stalk of corn or grass.
**Culminate,** kul'min-āt, *v.* to get to the extreme
**Culpable,** kul'pā-bl, *adj.* guilty. [point.
**Culprit,** kul'prit, *n.* one to blame, or accused.
**Cult,** kult, *n.* system.
**Cultivate,** kul'ti-vāt, *v.* to till.
**Culture,** kul'tūr, *n.* refinement; learning.
**Culvert,** kul'vert, *n.* a covered water channel.
**Cumbersome,** kum'ber-sum, *adj.* burdensome.
**Cumbrous,** kum'brus, *adj.* heavy.
**Cumin,** kum'in, *n.* an umbelliferous plant.
**Cumulate,** kū'mū-lāt, *v.* to heap together.
**Cumulative,** kūm'ū-lā-tiv, *adj.* regularly increas-
**Cumulus,** kū'mū-lus, *n.* a kind of cloud. [ing.
**Cuneiform,** kū-nē'i-form, *adj.* in the style of the ancient Babylonian writing characters.
**Cuniform,** kū'ni-form, *adj.* wedge-shaped.
**Cunning,** kun'ing, *adj.* sly, crafty; *n.* skill.
**Cupboard,** kub'erd, *n.* a storing-place for usable and eatable things.
**Cupid,** kū'pid, *n.* the god of love.
**Cupidity,** kū-pid'it-i, *n.* greed.
**Cupola,** kū'po-la, *n.* a spherical vault, or concave ceiling.
**Cur,** kur, *n.* a common dog; a bearish fellow.
**Curable,** kūr'abl, *adj.* healable.
**Curacoa,** koo-rā-sō'a, *n.* a liquenr.
**Curacy,** kū'ra-si, *n.* the benefice of a curate.
**Curate,** kū'rāt, *n.* an under clergyman.
**Curative,** kū'ra-tiv, *adj.* tending to cure.
**Curator,** kū-rā'tor, *n.* a care-taker.
**Curb,** kurb, *v.* to check.
**Curbstone,** kerb'stone, *n.* a stone placed on the edge of a street footway.
**Cure,** kūr, *n.* a remedy; *v.* to restore to health.
**Curfew,** kur'fū, *n.* an evening bell.
**Curiosity,** kū-ri-os'it-i, *n.* inquisitiveness.
**Curioso,** kū-ri-ō'so, *n.* a curio collector.
**Curious,** kūr'ri-us, *adj.* strange; rare; inquisitive.
**Curl,** kurl, *v.* to twist; *n.* a ringlet.
**Curlew,** kur'lū, *n.* a wading bird.
**Curmudgeon,** kur-mud'jen, *n.* an ill-disposed per-
**Currant,** kur'ant, *n.* a kind of fruit. [son.
**Currency,** kur'en-si, *n.* the coinage.
**Current,** kur'ent, *adj.* running; *n.* a stream.
**Curricle,** kur'ikl, *n.* a two-wheeled vehicle.
**Curriculum,** kur-ik'ū-lum, *n.* a course of study.
**Currier,** kur'i-er, *n.* one who curries leather.
**Curry,** kur'i, *v.* to dress leather; *n.* a peppery sauce. [invoked evil.
**Curse,** kurs, *v.* to denounce; to execrate; *n.* the
**Cursed,** kurs'ed, *adj.* despicable, hateful.
**Cursive,** kurs'iv, *adj.* flowing [of writing].
**Cursory,** kurs'ō-ri, *adj.* superficial.
**Curt,** kurt, *adj.* short.
**Curtail,** kur-tāl', *v.* to shorten.
**Curtain,** kur'tin, *n.* enclosing drapery; a screen.
**Curvature,** kurv'ă-tūr, *n.* a bending.
**Curvet,** kur-vet', *n.* a curving leaping movement of a horse. [lines.
**Curvilinear,** kur-vil-in'ē-ar, *adj.* bounded by curved
**Cushion,** koosh'un, *n.* a pillow or stuffed
**Cusp,** kusp, *n.* a point.
**Custard,** kust'ard, *n.* a baked compound of milk
**Custodian,** kust-ō'di-an, *n.* a guardian. [and eggs.
**Custody,** kus'to-di, *n.* a keeping in charge; im-
**Custom,** kus'tom, *n.* use; habit. [prisonment.
**Customary,** kust'om-ar-i, *adj.* according to usage.
**Customer,** kust'om-er, *n.* a purchaser.
**Custom-house,** kust'om-hows, *n.* a building where customs are collected.
**Customs,** kust'oms, *n.* duties on exports or imports.
**Cutaneous,** kū-tā'ne-us, *adj.* pertaining to the skin.
**Cuticle,** kū'tik-l, *n.* the outer skin.
**Cutlass,** kut'las, *n.* a broadsword.
**Cutler,** kut'ler, *n.* one who deals in cutlery.
**Cutlery,** kut'ler-i, *n.* articles made by cutlers.
**Cutter,** kut'er, *n.* a small ship.
**Cycle,** si'kl, *n.* a circle; a round of time; a bicycle.
**Cycloid,** si'kloid, *n.* a figure like a circle.
**Cyclone,** si'klōn, *n.* a rotary storm.
**Cyclopædia,** si-klō-pē'di-a, *n.* a work of general in-
**Cyclopean,** si-klō'pi-an, *adj.* gigantic. [formation.
**Cyclops,** si'klops, *n.* a fabled race of one-eyed giants.
**Cygnet,** sig'net, *n.* a young swan. [diameter.
**Cylinder,** sil'in-der, *n.* a circular body of equal
**Cylindrical,** sil-in'drik-al, *adj.* in cylinder form.
**Cymbal,** sim'bal, *n.* a clashing musical instrument.
**Cynic,** sin'ik, *n.* a morose sneerer.
**Cynical,** sin'ik-al, *adj.* surly, sattrical.
**Cynicism,** sin'is-izm, *n.* heartlessness.
**Cynosure,** sin'o-shoor, *n.* that which arrests
**Cypress,** si'pres, *n.* an evergreen. [attention.
**Cyst,** sist, *n.* a bag of morbid matter in animal bodies.
**Cytherean,** *sith*-er-ē'an, *adj.* relating to Venus.
**Czardas,** zär'das, *n.* a Hungarian dance.
**Czech,** tshek, *n.* a branch of the Slav family.

**Dab,** dab, *v.* to strike lightly; to pat.
**Dabble,** dab'l, *v.* to play in water; to meddle with.
**Dace,** dās, *n.* a small river fish.
**Dactyl,** dak'til, *n.* in poetry, a foot of three syllables.
**Dado,** dā'do, *n.* the lower section of a wall-space; body of a pedestal.
**Daffodil,** daf'o-dil, *n.* a yellow flower of the lily
**Daft,** däft, *adj.* crazy. [order.
**Dagger,** dag'er, *n.* a short sword.
**Daguerrotype,** da-gero-tip, *n.* an old form of photograph.
**Dahlia,** dā'li-ă, *n.* a flowering garden plant.
**Dainty,** dān'ti, *adj.* delicate; pleasing.
**Dais,** dā'is, *n.* the raised part of a floor.
**Dale,** dāl, *n.* a valley.
**Dalesman,** dālz'man, *n.* a dale dweller.
**Dalliance,** dal'i-ans, *n.* trifling.
**Dally,** dal'i, *v.* to lose time.
**Dam,** *n.* confined water; mother [of animals].
**Damage,** dam'āj, *n.* injury.
**Damask,** dam'ask, *n.* a figured fabric.
**Damaskeen,** dam'as-kēn, *v.* to decorate metal.
**Dame,** dām, *n.* matron ; lady.
**Damn,** dam, *v.* to condemn.
**Damper,** dam'per, *n.* an apparatus for regulating currents; a check.
**Damsel,** dam'sel, *n.* a young woman.
**Damson,** dam'son, *n.* a kind of plum.
**Dandelion,** dan'de-li-on, *n.* a common yellow
**Dandle,** dan'dl, *v.* to fondle, or toss up. [flower.
**Dandruff,** dan'druf, *n.* scurf on the hair.
**Dandy,** dan'di, *n.* a fop.
**Dangerous,** dān'jer-us, *adj.* unsafe.
**Dangle,** dang'l, *v.* to suspend slackly; to hang around.
**Dangler,** dang'ler, *n.* one who follows.
**Dank,** dangk, *adj.* damp.
**Dapper,** dap'er, *adj.* quick, handy, neat.
**Dapple,** dap'l, *adj.* spotted.
**Dare,** dār, *v.* to be venturous, bold.
**Darksome,** därk'sum, *adj.* gloomy.
**Darling,** där'ling, *n.* a loved one.
**Darn,** därn, *v.* to mend with threads.
**Darnel,** dar'nel, *n.* a kind of grass.
**Dart,** därt, *n.* a short lance; *v.* to thrust; to rush.
**Darwinism,** där'win-izm, *n.* the Darwinian theory of evolution.
**Dash,** *v.* to throw hastily; *n.* a blow; a flourish; a slight infusion; a punctuation mark [—].
**Dastard,** das'terd, *n.* a coward.
**Data,** dā'ta, *n.* a collection of facts. [the day.
**Date,** dāt, *n.* a fruit; a precise period; *v.* to write
**Daub,** dawb, *v.* to smear.

**Dauby**, dawb'ĭ, *adj.* sticky, smeary.
**Daughter**, daw'ter, *n.* a female child.
**Daunt**, dawnt, *v.* to frighten.
**Dauntless**, dawnt'less, *adj.* fearless.
**Davenport**, dăv'en-port, a standing writing desk.
**Davit**, da'vit, *n.* the projecting bar of a ship.
**Davy Jones**, da'vi-jōns', *n.* in sailor lingo, the spirit of the deep.
**Dawdle**, daw'dl, *v.* to trifle; to waste time.
**Dawk**, dawk, *n.* Indian post.
**Dawn**, *n.* the light of daybreak; *v.* to loom in view.
**Day**, *n.* the period of daylight; 24 hours.
**Daybreak**, dā'brāk, *n.* dawn.
**Daysman**, dāz'man, *n.* one who appoints a day.
**Daze**, dāz, *v.* to astound.
**Dazzle**, daz'l, *v.* to confuse by light or brilliance.
**Deacon**, dē'kon, *n.* a church or chapel officer.
**Deaden**, ded'en, *v.* to impair. [space in a ship.
**Dead-freight**, ded-frāt, *n.* payment for unoccupied
**Dead-lift**, ded'lift, *n.* a lift made without aid.
**Dead-lights**, ded'lights, *n.* storm-shutters.
**Deadliness**, ded'li-ness, *n.* condition of being deadly.
**Dead-lock**, ded'lŏk, *n.* a complete standstill.
**Deadly**, ded'li, *adj.* fatal.
**Dead-reckoning**, ded'rek'on-ing, *n.* log-book reck-
**Deaf**, def, *adj.* deprived of hearing. [oning.
**Deafen**, def'n, *v.* to render deaf.
**Deaf-mute**, def'mūt, *n.* one deaf and dumb.
**Deal**, dēl, *n.* a great quantity; a bargain; a kind of wood; *v.* to distribute.
**Dealer**, dēl'er, *n.* a trader.
**Dean**, dēn, *n.* a church dignitary.
**Deanery**, dēn'er-i, *n.* the office or house of a dean.
**Dearth**, der*th*, *n.* scarcity.
**Death**, de*th*, *n.* the end of life.
**Death-warrant**, de*th*'wor-ant, *n.* an order for exe-
**Debar**, de-bār', *v.* to exclude. [cution.
**Debark**, de-bârk', *v.* to land from a ship.
**Debase**, de-bās', *v.* to degrade.
**Debasement**, de-bās'ment, *n.* degradation.
**Debate**, de-bāt', *v.* to argue; *n.* a discussion.
**Debauch**, de-bawch', *v.* to pervert.
**Debauchery**, de-bawch'er-i, *n.* lewdness.
**Debenture**, de-bent'ūr, *n.* an acknowledgment of
**Debilitate**, de-bil'i-tāt, *v.* to weaken. [debt.
**Debility**, de-bil'it-i, *n.* weakness.
**Debit**, deb'it, *n.* something due.
**Debonair**, deb-o-nār', *adj.* gay; elegant.
**Debouch**, de-boosh', *v.* to march out from.
**Debris**, de-brē', *n.* rubbish; ruins.
**Debt**, dĕt, *n.* what is owing.
**Debtor**, dĕt'or, *n.* one who owes.
**Debut**, de-boo', *n.* a first appearance.
**Decade**, dek'ād, *n.* ten years.
**Decadence**, de-kā'dens, *n.* decay. [sides.
**Decahedron**, dek-ā-hē'dron, *n.* a solid figure of ten
**Decalogue**, dek'a-log, *n.* the ten commandments.
**Decameron**, de-kam'er-on, *n.* Boccaccio's hundred
**Decamp**, de-kamp', *v.* to steal away. [tales.
**Decanal**, dek'an-al, *adj.* relating to a dean or deanery.
**Decant**, de-kănt', *v.* to pour off, as into a decanter.
**Decanter**, de-kan'ter, *n.* a vessel for holding liquor.
**Decapitate**, de-kap'it-āt, *v.* to behead.
**Decay**, de-kā', *v.* to fall off; to wither; *n.* corrup-
**Decease**, de-sēs', *n.* death. [tion.
**Deceit**, de-sēt', *n.* fraud; artifice.
**Decency**, dē'sen-si, *n.* modesty; propriety.
**Decennial**, de-sen'ĭ-al, *adj.* happening every ten years.
**Decent**, dē'sent, *adj.* decorous; proper; good.
**Decentralisation**, de-sen-tral-ĭ-zā'shun, *n.* the act of withdrawing from central government.
**Deception**, de-sep'shun, *n.* imposition.
**Deceptive**, de-sep'tiv, *adj.* tending to deceive.
**Decide**, de-sīd', *v.* to determine; to resolve.
**Decimal**, des'ĭ-mal, *n.* a tenth; *adj.* by tens.
**Decimate**, des'ĭ-māt, *v.* to kill every tenth man; to take a tenth part.
**Decipher**, de-sī'fer, *v.* to make out.
**Decision**, de-sizh'un, *n.* a determination; a conclusion.
**Declaim**, de-klām', *v.* to harangue.
**Declamation**, dek-lam-ā'shun, *n.* rhetorical speaking.
**Declamatory**, de-klam'ā-to-rĭ, *adj.* noisily rhetori-
**Declare**, dē-klār', *v.* to avow; to publish. [cal.
**Declension**, de-klen'shun, *n.* a falling off.
**Declinable**, dē-klī'nā-bl, *adj.* capable of declination.
**Decline**, de-klīn', *v.* to refuse; *n.* a falling off.
**Declivity**, de-kliv'it-i, *n* a downward slope.
**Decoct**, de-kokt', *v.* to boil.
**Decoction**, de-kok'shun, *n.* an extract obtained by
**Decollate**, de-kol'āt, *v.* to behead. [boiling.
**Decoloration**, de-kul-er-ā'shun, *n.* removal or absence of colour.
**Decompose**, de-kom-pōz', *v.* to separate into original components; to decay.
**Decompound**, de-kom-pownd', *v.* to compound again.
**Decorative**, dek'o-ra-tiv, *adj.* ornamental.
**Decorous**, dek'o-rus, *adj.* proper; becoming.
**Decorum**, de-kō'rum, *n.* becoming behaviour.
**Decoy**, de-koi', *v.* to allure; *n.* the thing used to lure.
**Decree**, de-krē', *n.* a judicial order or judgment.
**Decrepit**, de-krep'it, *adj.* broken down.
**Decrepitate**, de-krep'ĭ-tāt, *v.* to crackle with heat.
**Decretal**, de-krē'tal, *adj.* relating to a decree.
**Decry**, de-krī', *v.* to discredit.
**Decumbent**, de-kŭm'bent, *adj.* lying down.
**Decuple**, dek'ū-pl, *adj.* tenfold.
**Decussate**, de-kus'āt, *v.* to cross.
**Dedalous**, ded'ā-lus, *adj.* cleverly intricate.
**Dedicate**, ded'ĭ-kāt, *v.* to devote to.
**Dedication**, ded-i-kā'shun, *n.* consecration; a dedicatory inscription in a book.
**Deduce**, de-dūs', *v.* to infer.
**Deduction**, de-duk'shun, *n.* what is deducted.
**Deed**, dēd, *n.* exploit; document.
**Deem**, dēm, *v.* to suppose; to infer.
**Deepen**, dē'pen, *v.* to increase in depth.
**Deer**, dēr', *n.* an animal.
**Deer-stalking**, dēr'stawk-ing, *n.* deer-hunting.
**Deface**, dē-fās', *v.* to disfigure.
**Defacement**, de-fās'ment, *n.* the act of disfiguring.
**Defalcation**, de-fal-kā'shun, *n.* embezzlement.
**Defamation**, def-ā-mā'shun, *n.* slander.
**Defamatory**, de-fam'ā-to-rĭ, *adj.* slanderous.
**Defame**, dē-fām', *v.* to slander.
**Default**, de-fawlt', *n.* failure.
**Defeasance**, de-fēz'ans, *n.* defeat.
**Defecation**, def-ē-kā'shun, *n.* purification.
**Defect**, de-fekt', *n.* fault; omission.
**Defection**, de-fek'shun, *n.* falling away; revolt.
**Defective**, de-fek'tiv, *adj.* faulty.
**Defence**, de-fens', *n.* protection.
**Defend**, de-fend', *v.* to protect.
**Defendant**, de-fend'ant, *n.* a defender.
**Defer**, de-fer', *v.* to postpone; to submit to.
**Deference**, def'er-ens, *n.* respect.
**Deferential**, def-er-en'shal, *adj.* showing respect.
**Defiance**, de-fī'ans, *n.* bold opposition.
**Defiant**, de-fī'ant, *adj.* bold; showing defiance.
**Deficiency**, de-fish'en-si, *n.* imperfection; shortcoming; loss.
**Deficit**, def'is-it, *n.* that which is wanting.
**Defile**, de-fīl', *n.* a narrow pass; *v.* to file off.
**Define**, de-fin', *v.* to particularise; to explain.
**Definite**, def'in-it, *adj.* defined.
**Definitely**, def'in-it-li, *adv.* fixedly; finally.
**Definition**, def-in-ish'un, *n.* a precise explanation.
**Definitive**, def-in'it-iv, *adj.* limiting.
**Deflect**, de-flekt', *v.* to turn aside.
**Deflection**, de-flek'shun, *n.* deviation.
**Defoliation**, de-fō-li-ā'shun, *n.* the shedding of
**Deforce**, de-fōrs', *v.* to resist. [leaves.
**Deform**, de-form', *v.* to disfigure.
**Deformity**, de-form'it-i, *n.* the condition of being
**Defray**, de-frā', *v.* to pay. [deformed.
**Daft**, *n.* neat; dexterous.
**Defunct**, de-fungkt', *adj.* dead.
**Defy**, def-ī', *v.* to challenge; to oppose.
**Degeneracy**, de-jen'er-ā-si, *n.* deterioration.
**Degenerate**, de-jen'er-āt, *v.* to become inferior.
**Deglutition**, de-gloo-tish'un, *n.* swallowing.
**Degrade**, de-grād', *v.* to lower.
**Degree**, de-grē', *n.* rank, quality.
**Deify**, dē'if-i, *v.* to make a god of.
**Deign**, dān, *v.* to condescend.
**Deism**, dē'izm, *n.* belief in God, but not religion.
**Deist**, dē'ist, *n.* a freethinker.
**Deity**, dē'it-i, *n.* the Supreme Being.
**Deject**, de-jekt', *v.* to afflict; to cast down.
**Deleble**, del'ē-bl, *adj.* capable of being blotted out.
**Delectable**, de-lekt'a-bl, *adj.* pleasing, delightful.
**Delectation**, de-lek-tā'shun, *n.* delight.
**Delegate**, del'ē-gāt, *v.* to depute; *n.* a deputy.
**Delegation**, del-ē-gā'shun, *n.* persons deputed.
**Delete**, de-lēt', *v.* to take out; erase.
**Deleterious**, del-ē-tē'rĭ-us, *adj.* hurtful.
**Delf**, *n.* Dutch pottery: Delft.
**Deliberate**, de-lib'er-āt, *adj.* well thought out.
**Deliberate**, de-lib'er-āt, *v.* to weigh carefully.

**Delicacy,** del'i-kă-si, *n.* refinement; daintiness.
**Delicate,** del'i-kăt, *adj.* dainty; tender; nice.
**Delicious,** de-lish'us, *adj.* highly pleasing.
**Delight,** de-lit', *n.* joy; pleasure; *v.* to please.
**Delineate,** de-lin'ē-at, *v.* to portray.
**Delineation,** de-lin-ē-ā'shun, *n.* something de-
_____y, de-ling'kwen-si, *n.* failure in duty.
**Delinquent,** de-ling'kwent, *n.* one who fails in duty.
**Deliquesce,** del-i-kwes', *v.* to render liquid.
**Deliquescence,** del-i-kwes'ens, *n.* liquefaction in
**Delirious,** de-lir'i-us, *adj.* light-headed. [the air.
**Delirium,** de-lir'i-um, *n.* insanity; excessive excitement.
**Deliver,** de-liv'er, *v.* to free; to hand over.
**Deliverance,** de-liv'er-ans, *n.* liberation.
**Delivery,** de-liv'er-i, *n.* the act of delivering.
**Dell,** del, *n.* a dale.
**Delphic,** del'fik, *adj.* oracular.
**Delta,** del'ta, *n.* the fourth letter of the Greek alphabet [Δ]; a tract of land of that form.
**Deltoid,** del'toid, *n.* a triangular shoulder muscle.
**Delude,** de-lūd', *v.* to mislead.
**Deluge,** del'ūj, *n.* a flood.
**Delusion,** del-ū'zhun, *n.* a false belief.
**Delusive,** del-ū'siv, *adj.* tending to deceive.
**Delusory,** de-lū'so-ri, *adj.* fallacious.
**Delve,** delv, *v.* to dig.
**Demagnetise,** de-mag'net-īz, *v.* to deprive of magnetism.
**Demagogue,** dem'ă-gog, *n.* a popular leader.
**Demand,** de-mând', *v.* to require; to ask for.
**Demandant,** de-mând'ant, *n.* one who demands.
**Demarcation,** de-mârk-ā'shun, *n.* the act of mark-
**Demean,** de-mēn', *v.* to lower. [ing out.
**Demeanour,** de-mēn'ur, *n.* conduct; appearance.
**Dementia,** de-men'shia, *n.* lunacy.
**Demerit,** de-mer'it, *n.* fault.
**Demesne,** de-mēn', *n.* a manorial estate.
**Demigod,** dem'i-god, *n.* half a god.
**Demijohn,** dem'i-jon, *n.* a large bottle.
**Demi-monde,** dem-i-mongd', *n.* lewd women.
**Demise,** de-mīz', *n.* death.
**Demission,** de-mish'un, *n.* lowering.
**Democracy,** de-mok'-ră-si, *n.* government by the people.
**Democrat,** dem'o-krat, *n.* one who supports demo-
**Demolish,** de-mol'ish, *v.* to destroy. [cracy.
**Demolition,** dem-o-lish'un, *n.* destruction.
**Demon,** dē'mon, *n.* a devil. [value.
**Demonetise,** de-mon'ē-tīz, *v.* to deprive of money
**Demoniac,** de-mō'ni-ak, *adj.* relating to evil spirits.
**Demonism,** dē'mon-izm, *n.* belief in demons.
**Demonolatry,** de-mon-ol'ă-tri, *n.* demon-worship.
**Demonology,** dē-mon-ol'o-ji, *n.* the study of
**Demonstrable,** de-mon'stra-bl, *adj.* capable of proof.
**Demonstrate,** de-mon'strāt, *v.* to make clear; to
**Demotic,** de-mot'ik, *adj.* popular. [prove.
**Demulcent,** de-mul'sent, *adj.* soothing.
**Demur,** de-mûr', *v.* to object; to hesitate.
**Demure,** de-mūr', *adj.* modest.
**Demurrage,** de-mûr'ij, *n.* an allowance for delay.
**Demurrer,** de-mûr'er, *n.* one who demurs; a law
**Demy,** de-mī', *n.* a size of paper. [plea.
**Den,** den, *n.* a cave; a wild beast's lair or cage.
**Denaturalise,** de-nat'ur-al-īz, *v.* to deprive of natural rights.
**Denial,** de-nī'al, *n.* refusal; rejection.
**Denigrate,** den'i-grāt, *v.* to blacken.
**Denizen,** den'i-zen, *n.* an inhabitant.
**Denominate,** de-nom'in-āt, *v.* to designate.
**Denomination,** de-nom-in-ā'shun, *n.* the act of naming; a title; a sect.
**Denominator,** de-nom-in-ā'tor, *n.* one who names; a term in fractions.
**Denote,** de-nōt', *v.* to indicate.
**Denouement,** den-oo'mong, *n.* the ending.
**Denounce,** de-nowns', *v.* to accuse; to expose.
**Dense,** dens, *adj.* close; heavy.
**Density,** dens'it-i, *n.* the quality of being dense.
**Dental,** dent'al, *adj.* pertaining to the teeth.
**Dentate,** dent'āt, *adj.* toothed.
**Denticulate,** den-tik'ū-lāt, *adj.* toothed.
**Dentiform,** dent'i-form, *adj.* in tooth shape.
**Dentifrice,** dent'i-fris, *n.* a tooth preparation.
**Dentist,** den'tist, *n.* a tooth doctor.
**Dentistry,** dent'is-tri, *n.* the business of a dentist.
**Dentition,** dent-ish'un, *n.* the cutting of teeth.
**Denude,** de-nūd', *v.* to lay bare; to unclothe.
de-nun-si-ā'shun, *n.* arraignment.
de-nun'-si-ă-to-ri, *adj.* threatening.
**Deny,** de-nī', *v.* to contradict; to disown.
**Deodand,** dē'o-dand, *n.* a chattel forfeited to the Crown.
**Deodorise,** dē-ō'der-īz, *v.* to deprive of smell.
**Depart,** de-part', *v.* to leave.
**Department,** de-part'ment, *n.* a section.
**Departure,** de-part'ūr, *n.* the act of leaving.
**Dependence,** de-pend'ens, *n.* reliance, trust.
**Dependent,** de-pend'ent, *n.* a subordinate; *adj.* re-
**Depict,** de-pikt', *v.* to portray. [lying upon.
**Depilatory,** de-pil'ă-to-ri, *n.* a preparation for removing superfluous hair.
**Deplete,** de-plēt, *v.* to reduce; to lessen.
**Depletion,** de-plē'shun, *n.* the act of emptying.
**Deplore,** dē-plōr', *v.* to regret; to lament.
**Deploy,** de-ploi', *v.* to open out.
**Depolarise,** de-pō'ler-īz, *v.* to take away polarity.
**Deponent,** de-pō'nent, *n.* one who testifies on oath.
**Depopulate,** de-pop'ū-lāt, *v.* to dispeople.
**Depopulation,** de-pop-ū-lā'shun, *n.* act of depopulation.
**Deport,** de-pōrt', *v.* to carry; to exile; to behave.
**Deportation,** de-port-ā'shun, *n.* transportation.
**Deportment,** de-port'ment, *n.* behaviour.
**Depose,** de-pōz', *v.* to remove from; to testify.
**Deposit,** depoz'it, *v.* to place; to set down.
**Depositary,** de-poz'it-ār-i, *n.* a person entrusted with the safe keeping of anything; the place of deposit.
**Deposition,** dep-o-zish'un, *n.* act of testifying.
**Depositor,** de-poz'it-or, *n.* one who deposits.
**Depository,** de-poz'it-or-i (same as *Depositary*).
**Depot,** dep-ō', *n.* a station; storehouse.
**Depravity,** de-prav'it-i, *n.* wickedness.
**Deprecate,** dep're-kāt, *v.* to argue against.
**Depreciate,** de-prē'shi-āt, *v.* to disparage.
**Depredation,** dep're-dā-tion, *n.* act of plundering.
**Depress,** de-pres', *v.* to make sad; to press down.
**Depression,** de-presh'un, *n.* grief; sadness.
**Deprive,** de-priv', *v.* to take from.
**Deputation,** dep-ū-tā'shun, *n.* persons acting for others.
**Depute,** de-pūt', *v.* to appoint a deputy.
**Deputy,** dep'ū-ti, *n.* one deputed to act for another.
**Derange,** de-rānj', *v.* to confuse; to disorder.
**Derangement,** de-rānj'ment, *n.* disorder; insanity.
**Derelict,** der'e-likt, *n.* a thing abandoned.
**Dereliction,** de-re-lik'shun, *n.* the act of forsaking.
**Deride,** de-rīd', *v.* to laugh at; to scorn.
**Derision,** de-rizh'un, *n.* mockery.
**Derisive,** de-rī'siv, *adj.* mocking.
**Derivation,** de-ri-vā'shun, *n.* act of deriving.
**Derivative,** de-riv'ă-tiv, *adj.* derived from something else.
**Derive,** dē-rīv', *v.* to deduce; to trace; to obtain.
**Dermal,** der'mal, *adj.* relating to the skin.
**Dermatology,** der-mât-ol'ō-ji, *n.* science of skin treatment.
**Derogate,** der'o-gāt, *v.* to depreciate.
**Derogatory,** de-rog'ă-to-ri, *adj.* detracting.
**Derrick,** der'ik, *n.* a lifting machine.
**Dervish,** der'vish, *n.* a Mahommedan monk.
**Descant,** des-kănt', *v.* to discourse.
**Descend,** de-send', *v.* to move down; to alight.
**Descendant,** de-send'ant, *n.* offspring.
**Descendent,** de-send'ent, *adj.* going down.
**Descent,** de-sent', *n.* declivity; lineage.
**Describe,** de-skrīb', *v.* to explain; to represent.
**Description,** de-skrip'shun, *n.* act of describing.
**Descriptive,** de-skrip'tiv, *adj.* containing descrip-
**Descry,** de-skrī', *v.* to discover; to see. [tion.
**Desecrate,** des'ē-krāt, *v.* to profane.
**Desert,** dez'ert, *n.* a wilderness.
**Desert,** de-zert', *n.* merit; reward; *v.* to leave.
**Deserve,** de-zerv', *v.* to merit.
**Deshabille,** see *Dishabille.*
**Desiccate,** de-sik'āt, *v.* to dry up.
**Desideratum,** de-sid-er-ā'tum, *n.* a thing desired.
**Design,** de-zīn', *v.* to draw; *n.* a drawing or scheme.
**Designate,** des'ig-nāt, *v.* to name.
**Designation,** des-ig-nā'shun, *n.* act of pointing out; name.
**Designing,** de-zīn'ing, *adj.* artful; scheming.
**Desirable,** de-zī'ra-bl, *adj.* worthy of desire.
**Desire,** de-zīr', *v.* to long for.
**Desist,** de-zist', *v.* to forbear.
**Desolate,** des'o-lat, *v.* to lay waste; *adj.* uninhabited.
**Desolation,** des-o-lā'shun, *n.* waste place; ruin.
**Despair,** des-pār', *v.* to despond; *n.* hopelessness.
**Despatch,** des-pach', *v.* to send away.
**Desperado,** des-per-ā'do, *n.* a reckless fellow.

**Desperate,** des'per-ăt, *adj.* hopeless; rash.
**Despicable,** des'pik-abl, *adj.* contemptible.
**Despise,** des-pīz', *v.* to scorn.
**Despite,** de-spīt', *v.* to scorn; *prep.* in spite of.
**Despoil,** de-spoil', *v.* to spoil; to rob.
**Despondency,** des-pond'en-si, *n.* dejection.
**Despondent,** des-pond'ent, *adj.* dejected.
**Despot,** des'pot, *n.* a tyrant; an absolute ruler.
**Despotic,** des-pot'ik, *adj.* tyrannical.
**Despotism,** des'pot-izm, *n.* tyranny.
**Desquamation,** des-kwă-mā'shun, *n.* a scaling off.
**Dessert,** de-zert', *n.* an after-course of fruits, etc.
**Destination,** des-tin-ā'shun, *n.* the appointed end; purpose.
**Destine,** des'tin, *v.* to design.
**Destiny,** des'tin-i, *n.* the appointed purpose; fate.
**Destitute,** des'tit-ūt, *adj.* needy; in want; lacking.
**Destitution,** des-tit-ū'shun, *n.* extreme poverty.
**Destroy,** de-stroi', *v.* to pull down; to ruin.
**Destructible,** des-truct'ibl, *adj.* liable to destruction.
**Destruction,** de-struk'shun, *n.* demolition; ruin.
**Destructive,** des-truct'iv, *adj.* causing destruction; [ruinous.
**Desuetude,** des'wet-ūd, *n.* disuse.
**Desultory,** des'ŭ-l-tor-i, *adj.* rambling.
**Detach,** de-tach', *v.* to separate.
**Detachment,** de-tach'ment, *n.* condition of separation; a body of troops.
**Detail,** de-tāl', *v.* to particularise; *n.* a small part.
**Detain,** de-tān', *v.* to hold back.
**Detect,** de-tekt', *v.* to discover; to expose.
**Detective,** de-tek'tiv, *n.* one of the secret police.
**Detent,** de-tent', *n.* a check; a catch in a clock.
**Detention,** de-ten'shun, *n.* confinement; act of [detaining.
**Deter,** de-ter', *v.* to hinder.
**Detergent,** de-ter'jent, *adj.* cleansing; purging.
**Deteriorate,** de-tē'ri-o-rāt, *v.* to make worse.
**Determent,** de-ter'ment, *n.* that which hinders.
**Determinable,** de-ter'min-abl, *adj.* in condition to be decided.
**Determinate,** de-ter'min-ăt, *adj.* fixed; limited.
**Determination,** de-ter-min-ā'shun, *n.* fixed resolve.
**Determine,** de-ter'min, *v.* to limit; to decide.
**Determinism,** de-ter'min-ism, *n.* the theory that motives determine.
**Deterrent,** de-ter'ent, *adj.* helping to deter; *n.* a [preventive.
**Detest,** de-test', *v.* to hate.
**Detestable,** de-test'abl, *adj.* odious.
**Dethrone,** de-*th*rōn', *v.* to depose.
**Detonate,** det'o-nāt, *v.* to explode.
**Detonation,** de-to-nā'shun, *n.* an explosion.
**Detour,** de-toor', *n.* a winding; a turning.
**Detract,** de-trakt', *v.* to take from; to defame.
**Detraction,** de-trak'shun, *n.* depreciation.
**Detractive,** de-trakt'iv, *adj.* tending to depreciate.
**Detrain,** de-trān', *v.* to quit a railway train.
**Detriment,** det'ri-ment, *n.* damage; injury.
**Detritus,** de-trī'tus, *n.* a substance worn away from solid bodies.
**Deuce,** dūs', *n.* an exclamation.
**Deuteronomy,** dū-ter-on'o-mi, *n.* the fifth book of the Pentateuch.
**Devastate,** dev'as-tāt, *v.* to lay waste; to destroy.
**Devastation,** de-vast-ā'shun, *n.* the act of laying [improve.
waste.
**Develop,** de-vel'op, *v.* to extend; to expand; to
**Development,** de-vel'op-ment, *n.* a gradual ex-
**Deviate,** dē'vi-āt, *v.* to swerve. [panding.
**Deviation,** dē-vi-ā'shun, *n.* a turning aside.
**Device,** de-vīs', *n.* a design; a contrivance.
**Devilry,** dev'il-ri, *n.* fiendish conduct.
**Devil-worship,** dev'il-wer'ship, *n.* worship of devils.
**Devious,** dē'vi-us, *adj.* roundabout; erring.
**Devise,** de-vīz', *v.* to plan or plot; to bequeath.
**Devisee,** dev-iz-ē', *n.* one to whom property is left.
**Deviser,** de-vīz'er, *n.* one who contrives.
**Devisor,** de-vīz'or, *n.* one who bequeaths.
**Devoid,** de-void', *adj.* free from.
**Devolve,** de-volv', *v.* to roll down; to fall by succession.
**Devolution,** dev-o-lū'shun, *n.* a passing from.
**Devote,** de-vōt', *v.* to set apart.
**Devotee,** de-vō-tē', *n.* one religiously devoted.
**Devotion,** de-vō'shun, *n.* consecration; religious feeling; attachment.
**Devout,** de-vowt', *adj.* pious.
**Dew,** dū, *n.* atmospheric moisture. [animals.
**Dewlap,** dū'lap, *n.* flesh beneath the throat of
**Dewpoint,** dū'point, *n.* the temperature at which dew falls.
**Dexter,** deks'ter, *adj.* on the right-hand side.
**Dexterity,** deks-ter'it-i, *n.* cleverness; quickness.
**Dexterous,** deks'ter-us, *adj.* skilful; expert.
**Dey,** dā, *n.* a pasha.
**Dhow,** dow, *n.* a small Asiatic vessel.
**Diabetes,** dī-ă-bē'tēz, *n.* a disease of the urinary
**Diabolical,** dī-ă-bol'ik-al, *adj.* devilish. [organs.
**Diaconal,** dī-ak'o-nal, *adj.* relating to a deacon.
**Diaconate,** dī-ak'o-nāt, *n.* the office of deacon.
**Diadem,** dī'ă-dem, *n.* a crown.
**Diæresis,** dī-ēr'ē-sis, *n.* the mark ["] over one of two vowels to indicate separate pronunciation.
**Diagnosis,** dī-ag-nō'sis, *n.* tracing a disease by its symptoms.
**Diagonal,** dī-ag'onal, *adj.* from angle to angle.
**Diagram,** dī'ă-gram, *n.* a figure or plan.
**Diagraph,** dī'ă-graf, *n.* a drawing instrument for perspective.
**Dial,** dī'al, *n.* the face of a watch or clock.
**Dialect,** dī'ă-lekt, *n.* local language; *patois.*
**Dialectical,** dī'ă-lek'tik-al, *adj.* relating to discourse.
**Dialectics,** dī-ă-lek'tiks, *n.* the art of discussion.
**Dialogue,** dī'a-log, *n.* conversation.
**Diameter,** dī-am'ēt-er, *n.* the measure through the centre of a circle.
**Diametrical,** dī-ă-met'rik-al, *adj.* relating to diameter.
**Diapason,** dī-ă-pā'zon, *n.* an octave; correct pitch.
**Diaper,** dī'a-per, *n.* linen with geometric design.
**Diaphanous,** dī-af'an-us, *adj.* transparent.
**Diaphoretic,** dī-af-ō-ret'ik, *adj.* inducing perspiration.
**Diaphragm,** dī'a-fram, *n.* the midriff.
**Diarist,** dī'ar-ist, *n.* a diary writer.
**Diarrhœa,** dī-a-rē'ă, *n.* looseness of the bowels.
**Diary,** dī'ar-i, *n.* a daily record.
**Diathermal,** dī-ă-*ther*'mal, *adj.* permeation of heat.
**Diatonic,** dī-ă-ton'ik, *adj.* by tones.
**Diatribe,** dī'ă-trib, *n.* a persistent discourse.
**Dibbling,** dib'bling, *v.* making holes in earth.
**Dichotomy,** dī-kot'o-mi, *n.* division into two.
**Dicker,** dik'er, *v.* to barter.
**Dickey,** dik'i, *n.* a driver's seat; a gig apron.
**Dictate,** dik-tāt', *v.* to order; to speak words for another to write down. [ive command.
**Dictation,** dik-ta'shun, *n.* act of dictating; assert-
**Dictatorial,** dik-tā-tō'ri-al, *adj.* authoritative.
**Diction,** dik'shun, *n.* manner of speaking; style.
**Dictionary,** dik'shun-ar-i, *n.* a work setting forth words in alphabetical order, with meanings.
**Dictum,** dik'tum, *n.* a saying.
**Didactic,** di-dak'tik, *adj.* instructive.
**Die,** dī, *v.* to cease to live; to wither; *n.* a stamp for engraving from.
**Diet,** dī'et, *n.* food.
**Dietary,** dī'et-er-i, *n.* rules of diet; *adj.* relating to
**Dietetics,** dī-et-et'iks, *n.* the science of diet. [diet.
**Differ,** dif'er, *v.* to vary; to disagree.
**Difference,** dif'er-ens, *n.* dissimilarity.
**Different,** dif'er-ent, *adj.* unlike; separate.
**Differential,** dī-fer-en'shal, *adj.* pertaining to small variations. [describing differences.
**Differentiation,** dif-er-en-shi-ā'shun, *n.* the act of
**Difficult,** dif'i-kult, *adj.* arduous.
**Difficulty,** dif'i-kult-i, *n.* obstacle; objection.
**Diffidence,** dif'id-ens, *n.* modesty; hesitation.
**Diffuse,** dif-ūz', *v.* to spread.
**Diffuse,** dif-ūs', *adj.* wordy; scattered.
**Digest,** dī-jest', *v.* to dissolve in the stomach; to consider.
**Digestive,** dī-jest'iv, *adj.* promoting digestion.
**Dight,** dīt, *adj.* disposed; called.
**Digit,** dij'it, *n.* a finger or finger's-breadth.
**Diglyph,** dī'glif, *n.* a double-grooved ornament.
**Dignify,** dig'ni-fī, *v.* to honour; to exalt.
**Dignitary,** dig'nit-ar-i, *n.* a person of rank.
**Digraph,** dī'graf, *n.* two letters with but one sound.
**Digress,** dī-gres', *v.* to deviate.
**Dike,** *see* Dyke.
**Dilapidate,** dī-lap'i-dāt, *v.* to pull to pieces; to
**Dilate,** dī-lāt', *v.* to expand. [allow to decay.
**Dilatory,** dil'ă-to-ri, *adj.* slow.
**Dilemma,** dil-em'ă, *n.* a position of difficulty.
**Diligence,** dil'i-jens, *n.* industry; attention.
**Diligent,** dil'i-jent, *adj.* assiduous.
**Diluent,** dil'ū-ent, *adj.* diluting.
**Dilute,** dī-lūt', *v.* to weaken.
**Diluvial,** dī-lū'vi-al, *adj.* relating to a flood.
**Diluvium,** dil-ū'vi-um, *n.* a flood; deposit [ water-current.
**Dim,** dim, *adj.* obscure; cloudy; not clear.
**Dimension,** dim-en'shun, *n.* measure; size.
dim'e-ter, *adj.* of two metres.
*v.* to decrease.
shun, *n.* a lessening.

**Diminutive,** dim-in'ū-tiv, *adj.* small.
**Dimissory,** dim'is-o-ri, *adj.* sending away.
**Dimity,** dim'it-i, *n.* a kind of figured cotton.
**Dimorphous,** di-mor'fus, *adj.* pertaining to two forms of flower, etc., on the same plant.
**Dimple,** dimp'l, *n.* a small hollow; a dent.
**Din,** din, *n.* noise; clatter; clamour.
**Dingle,** ding'gl, *n.* a small narrow valley.
**Dingy,** din'ji, *adj.* dim; dull.
**Dint,** *n.* a blow, or the mark of a blow; force.
**Diocesan,** di-os'e-san, *n.* relating to a diocese.
**Diocese,** di'o-sēs, *n.* a bishop's territory. [light.
**Dioptric,** di-op'trik, *adj.* pertaining to refracted
**Diorama,** di-or-am'ä, *n.* an exhibition of moving-pictures.
**Dipetalous,** di-pet'al-us, *adj.* with two petals.
**Diphtheria,** dif-*thē*'ri-a, *n.* a throat disease.
**Diphthong,** dif'*thong*, *n.* two vowels, combined in one sound.
**Diploma,** dip-lō'mä, *n.* a certificate of honour.
**Diplomacy,** dip-lō'mä-si, *n.* international negotiation; skill in political intercourse between states.
**Diplomatic,** dip-lō-mat'ik, *adj.* skilled in negotiation. [macy.
**Diplomatise,** dip-lō'mä-tīz, *v.* to practise diplo-
**Diplomatist,** dip-lō'mä-tist, *n.* one skilled in diplomacy.
**Dipsomaniac,** dip'so-mān-i-ac, *n.* one who craves for intoxicants.
**Diptych,** dip'tik, *n.* folding tablets or pictures.
**Dire,** dīr, *adj.* dreadful.
**Direct,** di-rekt', *v.* to guide; *adj.* straight.
**Direction,** di-rek'shun, *n.* act of direction; management; course; address.
**Director,** di-rek'tor, *n.* one who directs.
**Directory,** di-rek'to-ri, *n.* book of names and addresses; a body of directors.
**Direful,** dīr'ful, *adj.* terrible.
**Dirge,** dirj, *n.* funeral hymn.
**Dirk,** dirk, *n.* a dagger.
**Dirt,** dirt, *n.* mud; mire; filth.
**Disability,** dis-ä-bil'it-i, *n.* lack of power.
**Disable,** dis-ā'bl, *v.* to deprive of power.
**Disabuse,** dis-ä-būz, *v.* to undeceive.
**Disadvantageous,** dis-ad-van-tā'jus, *adj.* without advantage.
**Disaffected,** dis-af-ek'ted, *adj.* disloyal.
**Disagree,** dis-ä-grē', *v.* to differ.
**Disagreeable,** dis-ä-grē'abl, *adj.* unpleasant.
**Disallowance,** dis-al-ow'ans, *n.* something disDisannul, dis-an-ul', *v.* to nullify. [allowed.
**Disappear,** dis-ap-pēr', *v.* to vanish. [view.
**Disappearance,** dis-ap-pēr'ans, *n.* vanishing from
**Disappoint,** dis-ap-point', *v.* to thwart of expectation.
**Disappointment,** dis-ap-point'ment, *n.* grief at failure, or non-realisation of hopes.
**Disapprobation,** dis-ap-pro-bā'shun, *n.* censure;
**Disapprove,** dis-ap-proov', *v.* to condemn. [blame.
**Disarm,** dis-ärm', *v.* to deprive of arms; to quell.
**Disarrangement,** dis-ar-rānj'ment, *n.* disorder.
**Disarray,** dis-ar-rā', *v.* to throw into disorder; *n.*

**Disaster,** diz-as'ter, *n.* calamity, misfortune.
**Disastrous,** diz-as'trus, *adj.* unfortunate.
**Disavowal,** dis-ä-vow'al, *n.* a disclaimer.
**Disband,** dis-band', *v.* to disperse.
**Disbelieve,** dis-be-lēv', *v.* to deny the truth of.
**Disburden,** dis-berd'en, *v.* to unburden.
**Disburse,** dis-bers', *v.* to pay out.
**Disbursement,** dis-bers'ment, *n.* a paying out.
**Disc,** *n.* a quoit; the face of a planet.
**Discard,** dis-kärd', *v.* to throw away; to cast off.
**Discern,** diz-ern', *v.* to perceive.
**Discerning,** diz-ern'ing, *adj.* discriminating.
**Discernment,** diz-ern'ment, *n.* alertness of judgment.
**Discharge,** dis-chârj', *v.* to dismiss; to perform; to
**Disciple,** dis-ī'pl, *n.* a follower. [unload.
**Disciplinarian,** dis-ip-lin-ā'ri-an, *n.* an upholder of discipline. [discipline.
**Disciplinary,** dis'ip-lin-ar-i, *adj.* in the nature of
**Discipline,** dis'ip-lin, *n.* control; regularity; severe training.
**Disclaim,** dis-klām', *v.* to disown; to disavow.
**Disclaimer,** dis-klā'mer, *n.* a renouncing.
**Disclose,** dis-klōz', *v.* to reveal.
**Disclosure,** dis-klō'zūr, *n.* a bringing to light.
**Discolour,** dis-kul'er, *v.* to stain; to change the colour of.
**Discomfiture,** dis-kum'fit-ūr, *n.* a defeating.
**Discomfort,** dis-kum'fert, *n.* lack of comfort.

**Discommode,** dis-kum-ōd', *v.* to put to inconvent-
**Discompose,** dis-kum-pōz', *v.* to disturb. [ence.
**Discomposure,** dis-kum-pō'zūr, *n.* disorder.
**Disconcert,** dis-kon-sert', *v.* to disturb.
**Disconnect,** dis-kon-ekt', *v.* to disunite.
**Disconsolate,** dis-kon'so-lāt, *adj.* sad, comfortless.
**Discontent,** dis-kon-tent', *n.* dissatisfaction.
**Discontinue,** dis-kon-tin'ū, *v.* to cease.
**Discord,** dis'kord, *n.* strife; lack of harmony.
**Discordant,** dis-kord'ant, *adj.* harsh; out of harmony. [interest.
**Discount,** dis'kownt, *n.* a deduction made for
**Discount,** dis-kownt', *v.* to allow discount.
**Discountenance,** dis-kownt'en-ans, *v.* to discourage.
**Discouragement,** dis-kur'ij-ment, *n.* that which dis-
**Discourtesy,** dis-kur'tis-i, *n.* incivility. [favours.
**Discous,** disk'us, *adj.* flat; broad.
**Discover,** dis-kuv'er, *v.* to find out.
**Discovery,** dis-kuv'er-i, *n.* the act of finding out.
**Discredit,** dis-kred'it, *v.* to disbelieve.
**Discreditable,** dis-kred'it-a'bl, *adj.* disgraceful.
**Discreet,** dis-krēt', *adj.* prudent.
**Discrepancy,** dis-krep'an-si, *n.* disagreement.
**Discrete,** dis'creet, *adj.* separate.
**Discretion,** dis-kresh'un, *n.* prudence.
**Discretionary,** dis-kresh'un-ar-i, *adj.* unrestricted.
**Discriminate,** dis-krim'in-āt, *v.* to discern between.
**Discursion,** dis-kur'shun, *n.* desultory talk.
**Discursive,** dis-kurs'iv, *adj.* desultory.
**Discus,** disk'us, *n.* a quoit; a disc.
**Discuss,** dis-kus', *v.* to debate.
**Discussion,** dis-kush'n, *n.* debate.
**Disdain,** dis-dān', *n.* scorn.
**Disease,** diz-ēz', *n.* an ailment.
**Disembark,** dis-em-bârk', *v.* to land from a ship.
**Disembarrass,** dis-em-bar'as, *v.* to free from perplexity.
**Disembody,** dis-em-bod'i, *v.* to divest from the body. [mouth.
**Disembogue,** dis-em-bōg', *v.* to discharge at the
**Disembowel,** dis-embow'el, *v.* to eviscerate.
**Disenable,** dis-en-ā'bl, *v.* to disable.
**Disenchant,** dis-en-chant', *v.* to free from illusion.
**Disencumber,** dis-en-kum'ber, *v.* to disburden.
**Disengage,** dis-en-gāj', *v.* to relieve from engage-
**Disentangle,** dis-en-tang'gl, *v.* to unravel. [ment.
**Disesteem,** dis-es-tēm', *n.* disregard.
**Disfavour,** dis-fā'vor, *n.* lack of favour.
**Disfigure,** dis-fig'ūr, *v.* to spoil the form of.
**Disfranchise,** dis-fran'chiz, *v.* to deprive of citizenship rights.
**Disgorge,** dis-gorj', *v.* to vomit; to throw out.
**Disgrace,** dis-grās', *n.* loss of favour; dishonour.
**Disguise,** dis-gīz', *n.* a false appearance.
**Disgust,** dis-gust', *n.* loathing.
**Dish,** dish, *n.* a food vessel.
**Dishabille,** dis-ä-bēl', *n.* undress.
**Dishearten,** dis-hârt'en, *v.* to discourage; to depress.
**Dishevel,** dish-ev'el, *v.* to disorder the hair.
**Dishonour,** dis-on'er, *n.* shame.
**Disinclination,** dis-in-klin-ā'shun, *n.* unwillingness.
**Disinfect,** dis-in-fekt', *v.* to free from infection.
**Disinfectant,** dis-in-fekt'ant, *n.* a disinfecting agent.
**Disingenuous,** dis-in-jen'ū-us, *adj.* insincere.
**Disinherit,** dis-in-her'it, *v.* to deprive of inheritance. [parts.
**Disintegrate,** dis-in'te-grāt, *v.* to separate into
**Disinter,** dis-in-ter', *v.* to take from the grave.
**Disinterested,** dis-in'ter-est-ed, *adj.* free from self-interest.
**Disjoin,** dis-join', *v.* to separate what is joined.
**Disjointed,** dis-joint'ed, *adj.* incoherent.
**Disjunct,** dis-jungkt', *adj.* disjoined.
**Disjunctive,** dis-jungkt'iv, *adj.* tending to separa-
**Dislike,** dis-lik', *v.* to feel averse to. [tation.
**Dislocation,** dis-lō-kā'shun, *n.* displacement of a joint.
**Disloyalty,** dis-loi'al-ti, *n.* faithlessness.
**Dismal,** diz'mal, *adj.* gloomy.
**Dismantle,** dis-mant'l, *v.* to strip; to tear down.
**Dismast,** dis-mast', *v.* to deprive of masts.
**Dismay,** dis-mā', *v.* to terrify; *n.* loss of courage through fear.
**Dismemberment,** dis-mem'ber-ment, *n.* the act of separating member from member.
**Dismiss,** dis-mis', *v.* to send away. [off a horse.
**Dismount,** dis-mownt', *v.* to descend from; to get
**Disobedience,** dis-o-bē'di-ens, *n.* neglect to obey.
**Disobliging,** dis-o-blīj'ing, *adj.* unwilling to oblige.
**Disorder,** dis-ord'er, *n.* disease; confusion.

**Disorderly,** dis-or'der-li, *adj.* out of order.
**Disorganisation,** dis-or-gan-i-zā'shun, *n.* the act of breaking up.
**Disown,** dis-ōn', *v.* to refuse to acknowledge.
**Disparage,** dis-par'āj, *v.* to speak slightingly of.
**Disparate,** dis'par-āt, *adj.* unequal.
**Disparity,** dis-par'it-i, *n.* inequality.
**Dispassionate,** dis-pash'un-āt, *adj.* calm; without
**Dispatch,** dis-pach', *v.* to send away. [passion.
**Dispel,** dis-pel', *v.* to drive away; to remove.
**Dispensary,** dis-pen'ser-i, *n.* place for dispensing medicines.
**Dispensation,** dis-pen-sā'shun, *n.* an indulgence.
**Dispensatory,** dis-pen'sā-to-ri, *adj.* granting dispensation.
**Dispense,** dis-pens', *v.* to distribute; to make up
**Disperse,** dis-pers', *v.* to scatter. [medicine.
**Dispirit,** dis-pir'it, *v.* to discourage.
**Displace,** dis-plās', *v.* to put out of place.
**Display,** dis-plā', *v.* to exhibit; to parade.
**Displease,** dis-plēz', *v.* to cause displeasure.
**Disport,** dis-port', *v.* to divert; to feel enjoyment.
**Disposal,** dis-pō'zal, *n.* the act of disposing.
**Dispose,** dis-pōz', *v.* to arrange; to give out.
**Disposition,** dis-pō-zish'un, *n.* arrangement.
**Dispossess,** dis-pō-zes', *v.* to deprive of posses-
**Dispraise,** dis-prāz', *n.* blame. [sion.
**Disproportional,** dis-pro-pōr'shun-al, *adj.* out of proportion.
**Disprove,** dis-proov', *v.* to refute.
**Disputant,** dis'pū-tant, *n.* one who disputes.
**Disputatious,** dis-pū-tā'shus, *adj.* disposed to cavil.
**Dispute,** dis-pūt', *v.* to contest; to deny; to discuss.
**Disqualify,** dis-kwol'i-fī, *v.* to disable.
**Disquiet,** dis-kwī'et, *n.* unrest.
**Disquisition,** dis-kwi-zish'un, *n.* an essay; an argumentative inquiry.
**Disregard,** dis-re-gārd', *v.* to neglect.
**Disrelish,** dis-rel'ish, *v.* to dislike.
**Disrepair,** dis-re-pār', *n.* lack of repair.
**Disreputable,** dis-rep'ū-tabl, *adj.* in evil repute.
**Disrepute,** dis-re-pūt', *n.* disgrace.
**Disrespectful,** dis-re-spekt'ful, *adj.* wanting in re-
**Disrobe,** dis-rōb', *v.* to undress. [spect.
**Disruption,** dis-rup'shun, *n.* the act of rending asunder.
**Dissatisfaction,** dis-sat-is-fak'shun, *n.* discontent.
**Dissect,** dis-ekt', *v.* to cut up for examination.
**Dissemble,** dis-sem'bl, *v.* to disguise one's real thoughts.
**Dissembler,** dis-sem'bler, *n.* one who dissembles.
**Dissemination,** dis-sem-in-ā'shun, *n.* the act of scattering.
**Dissension,** dis-sen'shun, *n.* discord.
**Dissent,** dis-sent', *n.* disagreement; *v.* to disagree.
**Dissentient,** dis-sen'shent, *adj.* disagreeing; *n.* one who disagrees.
**Dissertation,** dis-ert-ā'shun, *n.* a treatise.
**Disservice,** dis-ser'vis, *n.* injury.
**Dissever,** dis-sev'er, *v.* to part in two.
**Dissidence,** dis'id-ens, *n.* disagreement.
**Dissimilar,** dis-sim'il-ar, *adj.* unlike.
**Dissimulation,** dis-sim-ūl-ā'shun, *n.* the act of disguising facts.
**Dissipate,** dis-i-pāt', *v.* to scatter; to waste.
**Dissipated,** dis-i-pā'ted, *adj.* addicted to drink or loose living.
**Dissociate,** dis-sō'shi-āt, *v.* to part from.
**Dissoluble,** dis-sōl'ū-bl, *adj.* capable of being dissolved.
**Dissolute,** dis'ō-lūt, *adj.* loose; lewd.
**Dissolution,** dis-o-lū'shun, *n.* the breaking up.
**Dissolve,** di-zolv', *v.* to break up; to melt.
**Dissolvent,** di-zolv'ent, *n.* having the power to
**Dissonance,** dis'o-nans, *n.* discord. [melt.
**Dissuade,** dis-swād', *v.* to persuade against.
**Dissuasion,** dis-swā-zhun, *n.* the act of persuading against.
**Dissyllable,** dis-sil'able, *n.* a word of two syllables.
**Distaff,** dis'taf, *n.* staff used in hand spinning.
**Distance,** dis'tans, *n.* remoteness; reserve.
**Distasteful,** dis-tast'-ful, *adj.* unpleasing.
**Distemper,** dis-temp'er, *n.* a disordered condition disease in young dogs.
**Distend,** dis-tend', *v.* to stretch.
**Distich,** dis'tik, *n.* a couplet.
**Distil,** dis-til', *v.* to flow gently; to extract spirit from. [distilled.
**Distillery,** dis-til'er-i, *n.* place where spirits are
**Distinct,** dis-tingkt', *adj.* different; clear.
**Distinctive,** dis-tingkt'iv, *adj.* showing difference.
**Distinctness,** dis-tingkt'ness, *n.* clearness.
**Distinguished,** dis-ting'gwishd, *adj.* eminent.
**Distortion,** dis-tor'shun, *n.* loss of shape.
**Distract,** dis-trakt', *v.* to confuse.
**Distraction,** dis-trak'shun, *n.* condition of perplexity. [debt.
**Distrain,** dis-trān', *v.* to seize goods for rent or
**Distress,** dis-tres', *n.* suffering; act of distraining goods. [number.
**Distribute,** dis-trib'ūt, *v.* to give away among a
**Distribution,** dis-trib-ū'shun, *n.* classification; allotment.
**District,** dis'trikt, *n.* a defined locality.
**Distrust,** dis-trust', *n.* want of faith.
**Disturb,** dis-turb', *v.* to disquiet; to upset.
**Disturbance,** dis-tur'bans, *n.* tumult.
**Disunion,** dis-ūn'yun, *n.* lack of concord.
**Disunite,** dis-ū-nīt', *v.* to detach what is united.
**Disusage,** dis-ūz'ij, *n.* a falling out of use.
**Disuse,** dis-ūs', *v.* to give up a custom.
**Dithyrambic,** dith-ir-am'bik, *adj.* wild and boister-
**Ditto,** dit'ō, *n.* the same. [ous.
**Ditty,** dit'i, *n.* a song.
**Diuretic,** dī-ū-ret'ik, *adj.* assisting urinal discharge.
**Diurnal,** dī-ur'nal, *adj.* daily. [smoking room.
**Divan,** div-an', *n.* a Turkish council; a sofa; a
**Dive,** dīv, *v.* to plunge into water.
**Diverge,** dī-verj', *v.* to turn apart.
**Divers,** dī'verz, *adj.* sundry.
**Diverse,** dī-vers', *adj.* different.
**Diversiform,** dī-vers'i-form, *adj.* varied in form.
**Diversity,** dī-vers'i-fī, *v.* to make different.
**Diversion,** dī-ver'shun, *n.* amusing.
**Diversity,** dī-vers'it-i, *n.* variety.
**Divert,** dī-vert', *v.* to turn aside.
**Divest,** dī-vest', *v.* to strip off.
**Dividend,** div'i-dend, *n.* a share; interest divided.
**Divination,** div-in-ā'shun, *n.* the art of prediction.
**Divine,** di-vīn', *adj.* holy.
**Diving-bell,** dī'ving-bell, *n.* an apparatus used by divers.
**Divinity,** div-in'it-i, *n.* the nature of God.
**Divisible,** div-iz'ibl, *adj.* capable of being divided.
**Division,** div-izh'un, *n.* act of dividing.
**Divisor,** di-vīz'or, *n.* the number which divides.
**Divorce,** di-vōrs', *n.* separation of husband and wife; *v.* to separate.
**Divulge,** di-vulj', *v.* to reveal.
**Dizen,** diz'en, *v.* to dress or array.
**Dizziness,** diz'i-ness, *n.* giddiness.
**Doch-an-doris,** dok-an-dō'ris, *n.* a stirrup cup.
**Docile,** do-sil', *adj.* teachable.
**Dockage,** dok'ij, *n.* dock accommodation.
**Docket,** dok'et, *n.* a summary; a ticket.
**Dockyard,** dok'yārd, *n.* dock for naval ships.
**Doctor,** dok'ter, *n.* a medical practitioner.
**Doctorate,** dok'ter-āt, *n.* the degree of doctor.
**Doctrinaire,** dok'trin-ār, *n.* a theorist.
**Doctrine,** dok'trin, *n.* theory or principle taught.
**Document,** dok'ū-ment, *n.* an official or legal writing. [documents.
**Documentary,** dok-ū-ment'ar-i, *adj.* relating to
**Dodge,** doj, *v.* to evade.
**Dodo,** dō'dō, *n.* an extinct bird of the turkey
**Doe,** dō, *n.* female deer. [genus.
**Doff,** dof, *v.* to take off; undress.
**Dog,** *n.* a domestic animal; *v.* to follow close.
**Dog-days,** dog'dāz, *n.* the period of the dog-star's prominence (July 3 to Aug. 11).
**Doge,** dōj, *n.* the chief magistrate of ancient Venice.
**Dogged,** dog'ed, *adj.* sullen; obstinate; persistent.
**Doggerel,** dog'er-el, *n.* commonplace verse.
**Dogma,** dog'ma, *n.* a settled doctrine.
**Dogmatics,** dog-mat'iks, *n.* systematic theology.
**Dogmatism,** dog'mā-tizm, *n.* positive assertion.
**Dog-tooth,** dog'tooth, *n.* a kind of ornamental mould.
**Doily,** doi'li, *n.* a kind of woollen fabric; a napkin.
**Doings,** doo'ings, *n.* happenings; events.
**Doit,** doit, *n.* a small Dutch coin; a valueless thing.
**Dole,** dōl, *v.* to deal out; *n.* a charitable donation.
**Doleful,** dōl'ful, *adj.* sad.
**Dollar,** dol'er, *n.* a silver coin.
**Dolmen,** dol'men, *n.* a stone table.
**Dolomite,** dō'lom-īt, *n.* magnesium limestone.
**Dolour,** dol'er, *n.* grief; sadness.
**Dolphin,** dol'fin, *n.* a large sea animal.
**Dolt,** dōlt, *n.* a stupid fellow.
**Doltish,** dōlt'ish, *adj.* foolish.
**Domain,** do-mān', *n.* an estate.
**Dome,** dōm, *n.* a large cupola.
**Domestic,** do-mes'tik, *adj.* pertaining to the home.

**Domesticate,** do-mes'tik-āt, *v.* to make domestic; **Domicile,** dom'is-īl, *n.* a dwelling. [to tame.
**Domiciliary,** dom-i-sil'i-ar-i, *adj.* pertaining to the domicile.
**Dominant,** dom'in-ant, *adj.* prevailing.
**Domination,** dom-in-ā'shun, *n.* government; authority.
**Domineer,** dom-in-ēr', *v.* to command haughtily.
**Dominical,** dom-in'ikl, relating to Our Lord or to Sunday.
**Dominicans,** dom-in'ik-ans, *n.* a religious order.
**Dominion,** do-min'yun, *n.* control; rule.
**Domino,** dom'-i-no, *n.* a hood.
**Dominoes,** dŏm'i-nōz, a game.
**Don,** *v.* to put on; to assume.
**Donation,** do-nā'shun, *n.* a gift.
**Donjon,** dun-jun, *n.* a strong tower of a castle.
**Donor,** dō'nor, *n.* one who gives.
**Doom,** *n.* judgment.
**Doomsday,** dooms'dā, *n.* the day of doom.
**Dor,** *n.* a droning beetle.
**Dormant,** dor'mant, *adj.* sleeping.
**Dormer,** dor'mer, *n.* a roof window.
**Dormitory,** dor'mit-er-i, *n.* a sleeping chamber.
**Dormouse,** dor'mows, *n.* a small rodent.
**Dorsal,** dor'sal, *adj.* relating to the back.
**Dose,** dōs, *n.* a portion.
**Dossil,** dos'il, *n.* a plug.
**Dotage,** dō'tij, *n.* doting; childish.
**Dotard,** dō'tard, *n.* one who is doting.
**Dotation,** dō-tā'shun, *n.* an endowment.
**Dote,** dōt, *v.* to show excessive love.
**Double,** doub'l, *adj.* two-fold; *v.* to make two-fold; to veer round a headland.
**Double-dealing,** dub'l-dēl-ing, *n.* duplicity.
**Double-entendre,** doob'l-ong-tongd'r, *n.* a word of double meaning.
**Doublet,** dub'let, *n.* a garment; a pair. [fold.
**Doubling,** dub'ling, *n.* act of making double; a
**Doubloon,** dub-loon', *n.* an old Spanish coin.
**Doubt,** dowt, *n.* distrust; *v.* to distrust; to hesitate.
**Doubtful,** dowt'ful, *adj.* not clear; uncertain.
**Douceur,** doo-ser', *n.* a present; a tip.
**Douche,** doosh, *n.* water-jet thrown on the body.
**Dough,** dō, *n.* bread in its unbaked form.
**Doughty,** dow'ti, *adj.* strong; hardy.
**Doughy,** dō'i, *adj.* soft; dough-like.
**Douse,** dows, *v.* to extinguish; to plunge into
**Dove,** duv, *n.* a pigeon. [water.
**Dove-cot,** duv'kot, *n.* a pigeon house.
**Dovetail,** duv'tāl, *n.* jointed boards; *v.* to fit one thing into another.
**Dowager,** dow'a-jer, *n.* a dowered widow. [tidy.
**Dowdy,** dow'di, *n.* an unsmart woman; *adj.* un-
**Dowel,** dow'el, *n.* a fastening pin of wood or iron.
**Dower,** dow'er, *n.* a jointure to a widow.
**Dowlas,** dow'las, *n.* a coarse linen fabric.
**Down,** down, *n.* soft hair or feathers; a hill; *adv.* below; dejected; *prep.* along a descent.
**Downcast,** down'kast, *adj.* dejected.
**Downy,** dow'ni, *adj.* soft.
**Dowry,** dow'ri, *n.* dower.
**Doxology,** doks-ol'o-ji, *n.* a hymn of praise.
**Doze,** dōz, *n.* a light sleep.
**Dozen,** duz'n, *n.* twelve.
**Drab,** drab, *n.* a low woman; a dull brown colour.
**Drachm,** dram, *n.* dram.
**Draconic,** drā-kŏ'nik, *adj.* severe.
**Draft,** draft, *n.* anything drawn; an order for
**Drag,** drag, *v.* to draw by force. [money.
**Dragbar,** drag'bār, *n.* an iron bar for coupling railway carriages together.
**Draggle,** drag'l, *v.* to drag through wet.
**Dragnet,** drag'net, *n.* a net for bottom fishing.
**Dragoman,** drag'o-man, *n.* an Eastern guide.
**Dragoon,** dra-goon', *n.* a soldier of the heavy [to drink deep.
_____, *n.* water channel; *v.* to draw off;
_____, drā'nij, *n.* a system of drains.
**Drake,** drāk, *n.* the male of the duck.
**Dram,** *n.* a spirit measure.
**Drama,** drâm'a, *n.* a stage representation; a dramatic work.
**Dramatise,** dram'a-tīz, *v.* to put in play form.
**Dramatis personæ,** dram'a-tis per-sō'né, *n.* the characters in a play.
**Drape,** drāp, *v.* to cover; to clothe.
**Drastic,** dras'tik, *adj.* active; thorough.
**Draught,** draft, *n.* air current; act of drawing; outline; depth to which a ship sinks into the [drawing heavy loads.
**draft'horse,** *n.* horse used for
**Draughtsman,** drafts'man, *n.* one who draws plans.
**Draw,** draw, *v.* to pull; to allure.
**Drawback,** draw'bak, *n.* a disadvantage.
**Drawbridge,** draw'brij, *n.* a bridge that can be let down or drawn up as needed.
**Drawee,** draw-ē', *n.* the person on whom a bill of exchange is drawn.
**Drawing,** draw'ing, *n.* a sketch or picture.
**Drawing-room,** draw'ing-room, *n.* a room in which to entertain company.
**Drawl,** drawl, *v.* to speak slowly.
**Drawn,** drawn, *adj.* undecided; said of battles and
**Dray,** drā, *n.* a cart for heavy burdens. [games.
**Dread,** dred, *n.* fear; awe.
**Dreadnaught,** dred'nawt, *n.* a thick protective garment.
**Dreadnought,** dred'nawt, *n.* a modern type of battleship.
**Dream,** drēm, *n.* fancies in sleep; a reverie.
**Dreamy,** drēm'i, *adj.* full of visions.
**Dreary,** drēr'i, *adj.* dismal; dull; gloomy.
**Dredge,** dredj, *v.* to sprinkle; *n.* an oyster net.
**Dredger,** dredj'er, *n.* a dredging boat; one who fishes with a dredge; a sprinkler.
**Dregs,** *n.* a sediment; grounds; impurities.
**Drench,** drensh, *v.* to make completely wet.
**Dresser,** dres'er, *n.* one who dresses; a kitchen side-
**Dressy,** dres'i, *adj.* fond of dress. [board.
**Dribble,** drib'l, *v.* to fall in drops.
**Dribblet,** drib'let, *n.* a small drop. [tion of aim.
**Drift,** drift, *n.* a mass of driven matter; the direc-
**Driftwood,** drift'wood, *n.* wood loosely floating.
**Drill,** dril, *v.* to bore; to exercise.
**Drill-plough,** dril'plow, *n.* a plough for drill-sowing.
**Drink,** dringk, *v.* to swallow liquor; *n.* liquor.
**Drip,** *v.* to fall in drops.
**Dripping,** drip'ing, *n.* fat dropped from roasting meat.
**Drive,** drīv, *v.* to push forward; *n.* a carriage road.
**Drivel,** driv'el, *n.* nonsense.
**Driveller,** driv'el-er, *n.* a foolish talker.
**Drizzle,** driz'l, *n.* small rain.
**Droll,** drōl, *adj.* comical; odd.
**Drollery,** drōl'er-i, *n.* mirth; fun.
**Dromedary,** drum'e-dar-i, *n.* a one-humped camel.
**Drone,** drōn, *n.* the male bee; an idle fellow.
**Droop,** droop, *v.* to languish; to sink.
**Drop,** drop, *n.* a globule of moisture; *v.* to let fall.
**Dropsical,** drop'sik-al, *adj.* afflicted with dropsy.
**Dropsy,** drop'si, *n.* water in the body.
**Drosky,** dros'ki, *n.* a Russian cab.
**Dross,** dros, *n.* metal refuse.
**Drought,** drowt, *n.* dryness.
**Drove,** drōv, *n.* a number of animals being driven.
**Drover,** drō'ver, *n.* a cattle driver.
**Drowsiness,** drow'zi-ness, *n.* sleepiness.
**Drubbing,** drub'ing, *n.* a beating.
**Drudge,** druj, *v.* to toil hard; *n.* one who works hard
**Drudgery,** druj'er-i, *n.* hard toil. [and long.
**Drug,** drug, *n.* a substance used in medicines; *v.* to secretly administer a drug.
**Drugget,** drug'et, *n.* a coarse carpet.
**Druggist,** drug'ist, *n.* one who sells drugs.
**Druid,** droo'id, *n.* an ancient Celtic priest.
**Drum,** drum, *n.* a musical instrument; part of the ear. [mer.
**Drum-major,** drum'mā-jor, *n.* the sergeant drum-
**Drunkard,** drungk'erd, *n.* an habitual drinker.
**Drunkenness,** drungk'en-nes, *n.* alcoholic intoxica-
**Dry,** drī, *adj.* free from moisture. [tion.
**Dryad,** drī'ad, *n.* a wood-nymph.
**Dryasdust,** drī'az-dust, *n.* a learned pedant.
**Dry-goods,** drī-goodz, *n.* drapery.
**Dry-rot,** drī'rot, *n.* decay of timber by fungoid growths.
**Drysalter,** drī-salt'er, *n.* a dealer in drugs.
**Dual,** dū'al, *adj.* double.
**Dualism,** dū'al-izm, *n.* belief in two gods.
**Dub,** *v.* to name; to confer.
**Dubiety,** dū-bī'et-i, *n.* doubtfulness.
**Dubious,** dū'-bi-us, *adj.* doubtful.
**Ducal,** dū'kal, *adj.* relating to a duke.
**Ducat,** duk'at, *n.* a foreign coin.
**Duchess,** duch'es, *n.* the wife or widow of a duke.
**Duchy,** duch'i, *n.* a dukedom.
**Duct,** dukt, *n.* a tube, or channel.
**Ductile,** duk'til, *adj.* yielding; flexible.
**Dudgeon,** dud'jun, *n.* grudge; resentment; a haft.
**Due,** dū, *adj.* owed; proper; timed to arrive.
**Duel,** dū'el, *n.* an arranged fight between two persons.
**Duellist,** dū'el-ist, *n.* one who fights a duel.

**Duenna,** dū-en'-ä, *n.* an elderly woman guardian.
**Duet,** dū-et', *n.* composition for two instruments or
**Duffel,** duf'l, *n.* a coarse woollen cloth. [voices.
**Duffer,** duf'er, *n.* a useless person.
**Dug,** dug, *n.* nipple; *pa.p.* of dig.
**Dugong,** dū-gong', *n.* an herbivorous whale.
**Duke,** dūk, *n.* the next noble title below prince.
**Dukedom,** dūk'dom, *n.* rank or territory of a duke.
**Dulcet,** dul'set, *adj.* sweet; soft; melodious.
**Dulcify,** dul'si-fī, *v.* to sweeten.
**Dulcimer,** dul'si-mer, *n.* an instrument of wire
**Dull,** dul, *adj.* stupid. [strings.
**Dullard,** dul'erd, *n.* a dunce.
**Duly,** dū'lī, *adv.* fitly.
**Dumb,** dum, *adj.* speechless. [athletic exercise.
**Dumb-bells,** dum'belz, *n.* weighted instrument for
**Dumbfounded,** dum'fownd-ed, *adj.* stricken dumb with amazement.
**Dummy,** dum'ī, *n.* a sham article; an effigy.
**Dumpling,** dump'ling, *n.* a kind of boiled pudding.
**Dumps,** dumps, *n.* mopingness.
**Dumpy,** dump'ī, *adj.* short and fat.
**Dun,** *n.* one who solicits payment.
**Dunce,** duns, *n.* a stupid person.
**Dune,** dūn, *n.* a sandhill.
**Dungeon,** dun'jun, *n.* a dark prison cell.
**Duodecimo,** dū-o-des'i-mō, a sheet of 12 leaves.
**Duodenum,** dū-o-dē'num, *n.* the first part of the small intestines.
**Dup,** *v.* to unfasten.
**Dupe,** dūp, *n.* one who is cheated; *v.* to deceive.
**Duplex,** dū'pleks, *adj.* double. [*v.* to double.
**Duplicate,** dū'plik-āt, *n.* another of the same kind;
**Duplicity,** dū-plis'it-i, *n.* deceit; double-dealing.
**Durable,** dū'rā-bl, *adj.* lasting.
**Durance,** dū'rans, *n.* constraint; imprisonment.
**Duration,** dū-ra'shun, *n.* length of time.
**Durbar,** dur'bar, *n.* a reception of Indian princes.
**Duress,** dū'res, *n.* imprisonment; constraint.
**Dusk,** *n.* twilight; *adj.* dark-coloured.
**Dusky,** dus'kī, *adj.* obscure. [dust.
**Dust,** dust, *n.* dry powdery earth; *v.* to brush off
**Dutiable,** dū'ti-abl, *adj.* liable to customs duty.
**Duty,** dū'tī, *n.* what is due; regard; obedience; tax on goods.
**Dwale,** dwāl, a name for the deadly nightshade.
**Dwarf,** dwawrf, *n.* a diminutive animal or plant.
**Dwell,** dwel, *v.* to inhabit.
**Dwelling,** dwel'ing, *n.* an abode.
**Dwindle,** dwind'l, *v.* to grow less; to decline.
**Dye,** dī, *v.* to colour; *n.* colour.
**Dyeing,** dī'ing, *n.* the art of dyeing.
**Dying,** dī'ing, *adj.* declining; expiring.
**Dyke,** *n.* a ditch. [motion.
**Dynamics,** dī-nam'iks, *n.* the science of matter and
**Dynamite,** dī'nam-it, *n.* a powerful explosive.
**Dynasty,** din'as-tī, *n.* a succession of rulers of the same family.
**Dysentery,** dis'en-ter-i, *n.* a disease of the intestines.
**Dyspepsia,** dis-pep'si-a, *n.* indigestion. [gestion.
**Dyspeptic,** dis-pep'tik, *n.* one afflicted with indi-

## E

**Each,** ēch, *adj.* every one.
**Eager,** ē'ger, *adj.* earnest.
**Eaglet,** ē'glet, *n.* a young eagle.
**Eagre,** ē'ger, *n.* a rising river tide.
**Ear,** ēr, *n.* the organ of hearing; spike of corn.
**Eardrop,** *n.* ēr'drop, earring.
**Earn,** ern, *v.* to gain by labour.
**Earnest,** er'nest, *adj.* determined; eager; *n.* a
**Earnings,** ern'ings, *n.* wages earned. [pledge.
**Earshot,** ēr'shot, *n.* within hearing range.
**Earthen,** *erth'en, adj.* composed of earth.
**Earthenware,** erth'en-wār, *n.* crockery.
**Earthly,** *erth'lī, adj.* worldly.
**Earwig,** ēr'wig, *n.* an insect; a whisperer.
**Easel,** ēz'el, *n.* framework for supporting pictures while being painted.
**Easement,** ēz'ment, *n.* relief; support.
**East,** ēst, *n.* one of the four cardinal points.
**Easter,** ēst'er, *n.* the festival of the Resurrection.
**Easterling,** ēs'ter-ling, *n.* an Eastern native.
**Easterly,** ēs'ter-lī, *adj.* relating to the East.
**Eatable,** ēt'abl, *adj.* fit for eating.
**Eaves,** ēvz, *n.* the edges of a roof.
**Eaves-dropper,** ēvz'drop-er, *n.* a listener.
**Ebb,** eb, *n.* the receding of the tide; *v.* to recede.
**Ebb-tide,** eb'tīd, *n.* the receding tide.
**Ebon,** eb'on, *n.* a hard, dark wood.
**Ebonize,** eb'on-īz, *v.* to darken like ebony.
**Ebullition,** eb-ūl-ish'un, *n.* the act of boiling; effervescence.
**Eburnean,** ē-bur'nī-an, *adj.* ivory-like.
**Eccentric,** ek-sen'trik, *adj.* odd.
**Ecclesiastic,** ek-klē-zi-as'tik, *n.* one consecrated to the Church.
**Echinated,** ek'in-āted, *adj.* prickly.
**Echo,** ek'o, *n.* a repeated sound.
**Eclaircissement,** ek-lār-sis'mong, *n.* the act of
**Éclat,** ā-klā', *n.* with striking effect. [explaining.
**Eclecticism,** ek-lek'ti-sism, *n.* the practice of selecting the best. [body by another.
**Eclipse,** e-klips', *n.* an obscuration of one heavenly
**Ecliptic,** ek-lip'tik, *n.* the sun's path.
**Eclogue,** ek'log, *n.* a short pastoral poem.
**Economical,** ek-o-nom'ik-al, *adj.* frugal, careful.
**Economics,** ek-o-nom'iks, *n.* the science of economy.
**Economy,** e-kon'o-mī, *n.* careful management.
**Ecstatic,** ek-stat'ik, *adj.* rapturous.
**Ecumenical,** ek-ū-men'ik-al, *adj.* pertaining to the Christian Church.
**Eczema,** ek-zē'mā, *n.* a skin disease.
**Edda,** ed'a, *n.* the books of Scandinavian mytho-
**Edder,** ed'er, *n.* wood for stake binding. [logy.
**Eddy,** ed'ī, *n.* a contrary current.
**Edentate,** e-den'tāt, *adj.* toothless.
**Edge-tool,** ej'tool, *n.* a sharp-edged tool.
**Edging,** ej'ing, *n.* bordering.
**Edible,** ed'ibl, *adj.* fit for eating.
**Edict,** ē'dikt, *n.* a proclamation.
**Edification,** ed-if-ik-ā'shun, *n.* instruction.
**Edifice,** ed'if-is, *n.* a large house or building.
**Edify,** ed'if-ī, *v.* to instruct.
**Edit,** ed'it, *v.* to prepare for publication.
**Edition,** e-dish'un, *n.* the number of copies of a book published at one time.
**Education,** ed-ū-kā'shun, *n.* instruction.
**Educator,** ed'ū-kā-tor, *n.* an instructor.
**Educe,** ē-dūs', *v.* to extract.
**Eel,** ēl, *n.* a snake-like fish.
**Eerie,** ē'rī, *adj.* wild; weird.
**Efface,** ef-fās', *v.* to erase; to wipe out.
**Effect,** ef-fekt', *n.* result; *v.* to accomplish.
**Effective,** ef-fek'tiv, *adj.* powerful.
**Effects,** ef-fekts', *n.* goods.
**Effectuate,** ef-fekt'ū-āt, *v.* to achieve.
**Effeminate,** e-fem'i-nāt, *adj.* unmanly.
**Effendi,** ef-fen'dī, *n.* a high Turkish official.
**Effervescence,** ef-fer-ves'ens, *n* a boiling up.
**Effete,** ef-fēt', *adj.* exhausted.
**Efficacious,** ef-ik-ā'shus, *adj.* effectual.
**Efficacy,** ef'ik-ā-sī, *n.* virtue; energy.
**Efficiency,** ef-ish'en-sī, *n.* power; strength; ade-
quacy. [tation.
**Effigy,** ef'i-jī, *n.* a likeness; a dummy represen-
**Efflorescence,** ef-flō-res'ens, *n.* season of blossom-
**Effluence,** ef'floo-ens, *n.* an outflow. [ing.
**Effluent,** ef'floo-ent, *n.* an outflow stream.
**Effluvium,** ef-floo'vi-um, *n.* noxious vapour.
**Effort,** ef'ort, *n.* endeavour.
**Effrontery,** ef-frunt'er-i, *n.* impudence.
**Effulgence,** ef-ful'jens, *n.* lustre; brightness.
**Effusion,** ef-fū'zhun, *n.* that which is poured forth.
**Eft,** *n.* a newt.
**Eglantine,** eg'lan-tīn, *n.* sweet-brier.
**Egoism,** e'go-izm, *n.* the theory of self-interest.
**Egotism,** e'got-izm, *n.* self-absorption.
**Egotistic,** ē-go-tist'ik, *adj.* conceited.
**Egregious,** ē-grē'ji-us, *adj.* foolishly prominent.
**Egress,** ē'gres, *n.* the act of passing out.
**Egret,** ē'gret, *n.* a small white heron.
**Egrette,** e-gret', *n.* feather ornaments.
**Egyptology,** ē-jipt-ol'o-ji, *n.* the science of Egypt-
ian antiquities. [duck.
**Elder-down,** l'der-down, *n.* the down of the elder
**Either,** l'ther, or ē'ther, *adj.* or *pron.* one of two.
**Ejaculation,** e-jak-ū-lā'shun, *n.* a short exclama-
**Eject,** e-jekt', *v.* to throw out. [tion.
**Ejection,** e-jek'shun, *n.* discharge.
**Ejectment,** e-jekt'ment, *n.* expulsion; dispossess-
**Eke,** ēk, *v.* to add to; to extend. [sion.
**Elaborate,** e-lab'o-rāt, *v.* to labour on; to finish with great pains.
**Elan,** ā-long', *n.* dash.
**Eland,** ē'land, *n.* an African antelope.
**Elapse,** e-laps', *v.* to glide away; to pass away.
**Elastic,** ē-las'tik, *adj.* rebounding.
**Elate,** e-lāt', *v.* to exalt.
**Elated,** e-lāt'ed; *adj.* puffed up. [one's
**Elbow,** el'bō, *n.* the bend of the arm; *v.* to
**Elbow-room,** el'bō-room, *n.* room to stir in;
**Eld,** *n.* ancient times.

**…der**, el'der, *adj.* older.
**l Dorado,** el-do-rä'dō, *n.* the golden land.
**lect,** e-lekt', *v.* to choose.
**…, e-lek'shun,** *n.* choice; decision by vote.
**…g,** el-ek-shun-ēr'ing, *n.* the canvassing for votes for an election.
**Elective,** el-ek'tiv, *adj.* relating to the power of choice.
**Elector,** el-ek'tor, *n.* one who has a vote.
**Electric,** e-lek'tric, *adj.* pertaining to electricity.
**Electricity,** e-lek-tris'it-i, *n.* that power in bodies which attracts and repels substances.
**Electrify,** e-lek-tri-fi, *v.* to communicate electricity to. [battery.
**Electrode,** e-lek'trōd, *n.* the pole of a galvanic
**Electro-dynamics,** e-lek'tro-dī-nam'iks, *n.* the science of the action of electricity.
**Electro-kinetics,** e-lek'tro-ki-net'iks, *n.* science of electricity in motion.
**Electrometer,** e-lek-trom'e-ter, *n.* an instrument for measuring electricity.
**Electroplate,** e-lek'tro-plāt, *v.* to cover with silver.
**Electro-statics,** e-lek'tro-stat'iks, *n.* science of electricity at rest.
**Electrotype,** e-lek'tro-tīp, *n.* the art of engraving on a metal deposited by electricity.
**Electuary,** e-lek'tū-er-i, *n.* a medicinal powder with sweetening.
**Eleemosynary,** el-ē-mos'in-ar-i, *adj.* pertaining to
**Elegance,** el'e-gans, *n.* grace. [charity.
**Elegiac, elegiacal,** el-ē-ji'ak, el-ē-ji'ak-al, *adj.*
**Elegy,** el'ē-ji, *n.* a song of mourning. [mournful.
**Element,** el'e-ment, *n.* a substantial part of any substance.
**Elementary,** el-e-ment'ar-i, *adj.* primary.
**Elephant,** el'e-fant, *n.* our largest quadruped.
**Elephantiasis,** el-e-fan-tī'as-sis, *n.* a disease which causes the legs to swell.
**Elephantine,** el-e-fant'in, *adj.* huge.
**Elevate,** el'e-vāt, *v.* to raise.
**Elevator,** el'e-vā-tor, *n.* passenger or grain lift.
**Elf,** elf, *n.* a fairy.
**Elicit,** e-lis'it, *v.* to deduce.
**Elide,** e-lid', *v.* to cut off or out.
**Eligible,** el'ij-ibl, *adj.* duly qualified.
**Eliminate,** e-lim'in-āt, *v.* to remove; to cancel.
**Elision,** e-lizh'un, *n.* a suppressed vowel or syllable.
**Elite, ā-lēt',** *n.* the select portion.
**Elixir,** e-liks'er, *n.* a tincture.
**Elk,** elk, *n.* a kind of stag.
**Ell,** el, *n.* a measure; a yard and a quarter.
**Ellipse,** el-lips', *n.* an oval. [words left out.
**Ellipsis,** el-lip'sis, *n.* a figure implying a word or
**Ellipsoid,** el-lip'soid, *n.* a surface, each plane section of which is an ellipsis.
**Elliptical,** el-lip'tik-al, *adj.* oval. [masts.
**Elmo's fire,** el'mōz-fīr, *n.* electric appearance on
**Elocution,** el-o-kū'shun, *n.* the art of good speaking. [elocution.
**Elocutionist,** el-o-kū'shun-ist, *n.* one who practises
**Elongate,** e-long'gāt, *v.* to extend.
**Elopement,** e-lōp-ment, *n.* a clandestine running away.
**Eloquence,** el'o-kwens, *adj.* forceful speaking.
**Else,** els, *adv.* otherwise.
**Elsewhere,** els'whār, *adv.* in some other place.
**Elucidate,** e-lū'si-dat, *v.* to make clear.
**Elude,** e-lūd', *v.* to escape.
**Elusive,** e-lū'siv, *adj.* eluding; evasive.
**Elysian,** e-lizh'yan, *adj.* delightful.
**Elysium,** e-lizh'yum, *n.* the abode of the blessed.
**Emaciate,** e-mash'i-āt, *v.* to waste, to make lean.
**Emaciation,** ē-mash'i-ā'shun, *n.* thinness of flesh.
**Emanate,** em'an-āt, *v.* to proceed from.
**Emanation,** em-an-ā'shun, *n.* that which flows out.
**Emancipate,** e-man'si-pāt, *v.* to set free.
**Emasculate,** e-mas'kū-lāt, *v.* to castrate.
**Embalm,** em-bām', *v.* to preserve from decay.
**Embank,** em-bangk', *v.* to bank up.
**Embankment,** em-bangk'ment, *n.* a bank or mound; a banked-up roadway.
**Embargo,** em-bār'go, *n.* order to stop.
**Embark,** em-bārk', *v.* to put or go on board.
**Embarrass,** em'bar'as, *v.* to hinder; to perplex.
**Embassy,** em'bas-i, *n.* an ambassador and his retinue; an ambassador's residence.
**Embattle,** em-bat'l, *v.* to make battlements; to place in order of battle.
**Embellish,** em-bel'lish, *v.* to adorn.
**Embers,** em'berz, *n.* smouldering wood or coal.
**Embezzle,** em-bez'l, *v.* to make fraudulent use of.
**Embitter,** em-bit'er, *v.* to make bitter.
**Emblason,** em-blāz'on, *v.* to adorn in colours.
**Emblazonry,** em-blāz'on-ri, *n.* the art of emblazon-
**Emblem,** em'blem, *n.* a symbol. [ing.
**Embolden,** em-bold'en, *v.* to encourage.
**Embolism,** em'bo-lizm, *n.* the filling in of dates in a time record; a blood clot.
**Embonpoint,** ång-bong-pwang', *adj.* stoutness.
**Embosom,** em-booz'um, *v.* to cherish.
**Emboss,** em-bos', *v.* to work raised patterns.
**Embouchure,** ång-boo-shoor', *n.* the mouth of a river.
**Embower,** em-bow'er, *v.* to place in a bower.
**Embrace,** em-brās, *v.* to clasp; to fold lovingly.
**Embrasure,** em-brā'zhūr, *n.* a slanting opening in a wall. [fluid.
**Embrocate,** em'bro-kāt, *v.* to moisten with curative
**Embroider,** em-broi'der, *v.* to adorn with needlework. [work.
**Embroidery,** em-broi'der-i, *n.* ornamental needle-
**Embroil,** em-broil', *v.* to entangle.
**Embryo,** em'bri-ō, *n.* the first stage of animal or plant development. [embryos.
**Embryology,** em-bri'ol'o-ji, *n.* the science of
**Emendation,** em-en-dā'shun, *n.* correction.
**Emerald,** em'er-ald, *n.* a green precious stone.
**Emerge,** e-merj', *v.* to come out of.
**Emergency,** e-mer'jen-si, *n.* a pressing necessity.
**Emeritus,** e-mer'-i-tus, *adj.* honourably discharged from office; *n.* one so discharged.
**Emery,** em'er-i, *n.* a kind of corundum used for polishing.
**Emetic,** e-met'ik, *n.* a potion to cause vomiting.
**Emeute,** em-ūt', *n.* a mob rising.
**Emigrant,** em'i-grant, *n.* one who emigrates.
**Emigrate,** em-i-grāt', *v.* to proceed to another country.
**Eminence,** em'i-nens, *n.* height; distinction.
**Eminent,** em'i-nent, *adj.* distinguished.
**Emissary,** em'is-ar-i, *n.* a person sent out; a spy.
**Emission,** ē-mish'un, *n.* the act of sending forth.
**Emmet,** em'et, *n.* the ant.
**Emollient,** e-mol'yent, *adj.* softening.
**Emolument,** e-mol'ū-ment, *n.* the profit of office or employment; advantage.
**Emotion,** e-mō'shun, *n.* agitation of feelings.
**Empanel,** em-pan'el, *v.* to enter names on a panel.
**Empark,** *see* Impark.
**Emphasis,** em'fas-is, *n.* stress on a word.
**Emphasise,** em'fa-siz, *v.* to give emphasis to.
**Empire,** em'pir, *n.* dominions of an empire; supreme authority.
**Empiric,** em-pir'ik, *adj.* proved by experience.
**Empiricism,** em-pir'i-sism, *n.* a system relying on experience.
**Employé,** em-ploy'ā, *n.* a person employed.
**Employment,** em-ploi'ment, *n.* occupation.
**Emporium,** em-pō'ri-um, *n.* a mart; a large shop.
**Empower,** empow'er, *v.* to sanction.
**Empress,** em'pres, *n.* consort of an emperor.
**Empyreal,** em-pir'e-al, *adj.* the purest heaven; sub-
**Emu,** ē'mū, *n.* a large bird. [limity.
**Emulate,** em'ū-lāt, *v.* to strive to equal; to imitate.
**Emulative,** em'ū-lat-iv, *adj.* tending to emulation.
**Emulsion,** e-mul'shun, *n.* an oily preparation.
**Enable,** en-ā'bl, *v.* to render able; to empower.
**Enact,** en-akt', *v.* to pass a law.
**Enactment,** en-akt'ment, *n.* a law.
**Enamel,** en-am'el, *n.* hard surface coating; *v.* to apply enamel. [enamel.
**Enamelling,** en-am'el-ing, *n.* the art of making
**Enamour,** en-am'ur, *v.* to inspire with love.
**Encamp,** en-kamp', *v.* to form a camp.
**Encampment,** en-kamp'ment, *n.* the place where bodies of troops or others are camped.
**Encaustic,** en-kaws'tik, *adj.* (of pottery), with colours burned in. [pregnant.
**Enceinte,** ång-sångt', *n.* an enclosure; *adj.*
**Enchain,** en-chān', *v.* to put in chains. [enchants.
**Enchantment,** en-chant'ment, *n.* that which
**Encircle,** en-serk'l, *v.* to enclose; to surround.
**Enclitic,** en-klit'ik, *adj.* leaning upon.
**Encomium,** en-ko'mi-um, *n.* high praise, eulogy.
**Encompass,** en-kom'pas, *v.* to surround.
**Encore,** ång-kōr', *adv.* repeat.
**Encounter,** en-kown'ter, *v.* to meet; to oppose.
**Encourage,** en-kur'āj, *v.* to urge; to animate.
**Encroach,** en-krōch', *v.* to intrude.
**Encumber,** en-kum'ber, *v.* to burden; to impede.
**Encumbrance,** en-kum'brans, *n.* that which encumbers. [public questions.
**Encyclical,** en-sī'kli-kal, *n.* a papal letter on
**Encyclopædia,** en-sī-klō-pē'di-a, *n.* a comprehensive work dealing with some or every branch of knowledge.

**Encyst**, en-sist', *v.* to enclose in a cyst.
**Endanger**, en-dān'jer, *v.* to imperil.
**Endear**, en-dēr', *v.* to make dear.
**Endeavour**, en-dev'er, *v.* to strive; to attempt.
**Endemic**, en-dem'ik, *adj.* special to a district or people. [one's tribe.
**Endogamy**, ĕn'dog-ăm'i, marrying only within
**Endogen**, en'do-jen, *n.* a plant that expands by internal growth.
**Endow**, en-dow', *v.* to furnish with funds or dowry.
**Endowment**, en-dow'ment, *n.* that which is endowed. [enduring.
**Endurance**, en-dū'rans, *n.* the condition of
**Endure**, en-dūr', *v.* to last.
**Enema**, en-ĕ'ma, *n.* an injection.
**Energy**, en'er-ji, *n.* force; vigour.
**Enervate**, en-er'vāt, *v.* to weaken.
**Enfeeble**, en-fē'bl, *v.* to make feeble.
**Enfeoffment**, en-fef'ment, *n.* a deed transferring the fee of an estate.
**Enfilade**, en-fi-lād', *n.* rooms opening upon a common corridor; *v.* to rake with shot.
**Enforce**, en-fors', *v.* to compel.
**Enfranchise**, en-fran'chīz, *v.* to set free; to grant civic privileges.
**Engender**, en-jen'der, *v.* to sow; to breed; to beget. [power.
**Engine**, en'jin, *n.* a machine imparting motive
**Engineer**, en-jin-ēr', *n.* an engine maker or con-
**Engird**, en-gird', *v.* to encircle. [troller.
**Engrail**, en-grāl, *v.* to make a border of indented lines.
**Engrain**, en-grān', *v.* to dye permanently.
**Engrave**, en-grāv', *v.* to cut impressions on wood or steel; to print.
**Engraver**, en-grāv'er, *n.* one who engraves.
**Engraving**, en-grāv'ing, *n.* print of a picture.
**Engross**, en-grōs', *v.* to absorb; to write in legal
**Engulf**, en-gulf', *v.* to swallow up. [hand.
**Enhance**, en-hans', *v.* to increase; to heighten.
**Enigma**, en-ig'ma, *n.* a puzzle.
**Enigmatical**, en-ig-mat'ik-al, *adj.* obscure.
**Enjoin**, en-join', *v.* to order.
**Enkindle**, en-kind'l, *v.* to inflame.
**Enlarge**, en-lārj', *v.* to expand.
**Enlighten**, en-lit'en, *v.* to illuminate.
**Enlistment**, en-list'ment, *n.* the act of enlisting.
**Enliven**, en-lī'ven, *v.* to make cheerful.
**Enmity**, en'mit-i, *n.* hostility; unfriendliness.
**Ennoble**, en-nō'bl, *v.* to confer noble rank upon.
**Ennui**, ăng-nwē', *n.* weariness.
**Enormity**, e-nor'mi-ti, *n.* that which is enormous, wicked, or monstrous.
**Enormous**, e-nor'mus, *adj.* excessively large.
**Enrage**, en-rāj, *v.* to make angry.
**Enrapture**, en-rap'tūr, *v.* to cause extreme delight.
**Enrich**, en-rich', *v.* to make rich.
**Enrobe**, en-rōb', *v.* to attire.
**Ensample**, en-sam'pl, *n.* example.
**Ensanguine**, en-sang'gwin, *v.* to stain with blood.
**Ensconce**, en-skons', *v.* to cover; to hide safely.
**Enshield**, en-shēld', *v.* to shield.
**Enshrine**, en-shrīn', *v.* to enclose; to keep in re-
**Enshroud**, en-shrowd', *v.* to cover up. [gard.
**Ensiform**, en'si-form, *adj.* sword-shaped.
**Ensign**, en'sīn, *n.* the flag of a nation or regiment; the officer who carries it.
**Ensilage**, en'sil-āj, *n.* stored fodder.
**Ensnare**, en-snār', *v.* to entangle.
**Ensue**, en-sū', *v.* to follow.
**Entablature**, en-tab'la-tūr, *n.* the part of architecture that surmounts a column.
**Entail**, en-tāl', *v.* to settle in special descent; *n.* an entailed estate.
**Entailment**, en-tāl'ment, *n.* act of entailing.
**Entangle**, en-tang'gl, *v.* to contort into a tangle; to ensnare.
**Entelechy**, en-tel'ĕ-ki, *n.* actual existence.
**Enter**, en'ter, *v.* to proceed inward; to join in.
**Enteric**, en-ter'ik, *adj.* relating to the intestines; *n.* typhoid fever.
**Enterprising**, en'ter-prīz-ing, *adj.* adventurous.
**Entertain**, en-ter-tān', *v.* to amuse; to show hos-
**Enthral**, en-*th*rawl', *v.* to enslave. [pitality.
**Enthrone**, en-*th*rōn', *v.* to place on a throne.
**Enthusiasm**, en-*th*ū'zi-asm, *n.* extreme ardour.
**Enthusiast**, en-*th*ū'zi-ast, *n.* one who feels en-
**Entice**, en-tis', *v.* to allure. [thusiasm.
**Entire**, en-tīr', *adj.* complete.
**Entitle**, en-tī'tl, *v.* to give claim or title to.
**Entity**, en'ti-ti, *n.* existence.
**Entomb**, en-toom', *v.* to bury. [Insects.
**Entomologist**, en-to-mol'o-jist, *n.* one who studies
**Entozoa**, en-to-zō'ă, animal life within other animals.
**Entrails**, en'trālz, *n.* the bowels. [of troops.
**Entrain**, entrān', *v.* to take train, as of bodies
**Entreat**, en-trēt', *v.* to beseech.
**Entrée**, ăng-trā', *n.* entry; a made dish.
**Entrepot**, ăng'tr-pō, *n.* a storehouse; a bonded warehouse.
**Entresol**, ăng'tr-sōl, *n.* a low connecting storey between two main storeys.
**Entry**, en'tri, *n.* entrance.
**Entwine**, en-twīn', *v.* to interlace.
**Entwist**, en-twist', *v.* to twist.
**Enumerate**, e-nū'mer-āt, *v.* to compute the number of. [pronounce clearly.
**Enunciate**, e-nun'si-āt, *v.* to declare formally; to
**Envelop**, en-vel'up, *v.* to invest.
**Envelope**, en'vel-ōp, *n.* a covering.
**Envelopment**, en-vel'up-ment, *n.* that which covers.
**Envenom**, en-ven'om, *v.* to poison; to embitter.
**Enviable**, en'vi-abl, *adj.* fit to be envied.
**Envious**, en'vi-us, *adj.* feeling envy.
**Environ**, en-vī'ron, *v.* to surround.
**Environs**, en-vī'rons, *n.* suburbs.
**Envoy**, en'voi, *n.* a diplomatic messenger.
**Envy**, en'vi, jealousy; *v.* to grudge.
**Eocene**, ē'ō-sēn, *adj.* first of the Tertiary formation.
**Eozoic**, ē-ō-zō'ik, *adj.* relating to certain fossil remains found in Canada.
**Epaulet**, ep'o-let, *n.* shoulder-badge. [table.
**Epergne**, ĕ-pern', *n.* centre dish or ornament for the
**Ephemeral**, ef-em'er-al, *adj.* short-lived; existing for a day only.
**Ephemeris**, ef-em'er-is, *n.* a daily journal.
**Ephod**, ef'od, *n.* a Jewish surplice.
**Epic**, ep'ik, *n.* an heroic poem.
**Epicene**, ep'i-sēn, *adj.* pertaining to both sexes.
**Epicure**, ep'i-kur, *n.* a lover of good things.
**Epicurean**, ep-i-kū're-an, *adj.* given to luxury.
**Epicycle**, ep'i-sī-kl, *n.* a circle whose centre is on a greater circle's circumference. [of people.
**Epidemic**, ep-i-dem'ik, *adj.* affecting large bodies
**Epidermis**, ep-i-der'mis, *n.* the outer covering of the skin. [stomach or belly.
**Epigastric**, ep-i-gas'trik, *adj.* relating to the
**Epiglottis**, ep-i-glot'is, *n.* cartilage at the root of the tongue.
**Epigram**, ep'i'gram, *n.* a smart, pointed saying.
**Epigraph**, ep'igraf, *n.* an inscription.
**Epilepsy**, ep'i-lep-si, *n.* falling sickness.
**Epileptic**, ep-il-ep'tik, *n.* one subjected to epilepsy.
**Epilogue**, ep'il-og, *n.* a supplement part at the end of a play.
**Epiphany**, e-pif'an-i, *n.* a church festival falling on
**Epiphyte**, ep'if-it, *n.* a parasite. [January 6.
**Episcopacy**, ĕ-pis'ko-pă-si, *n.* Church government.
**Episcopal**, e-pis'ko-pal, *adj.* pertaining to bishops.
**Episcopate**, e-pis'ko-pāt, *n.* a bishopric.
**Episode**, ep'i-sōd, *n.* a diverting incident; a short tale apart from a main story.
**Epistle**, ĕ-pist'l, *n.* a letter.
**Epistolary**, e-pis'-to-la-ri, *adj.* pertaining to letters.
**Epistyle**, ep'i-stil, *see* Architrave.
**Epitaph**, ep'i-taf, *n.* an inscription on a tomb or monument. [song.
**Epithalamium**, ep-i-*th*al-ā'mi-um, *n.* a marriage
**Epithet**, ep'i-*th*et, *n.* a short descriptive expression.
**Epitome**, e-pit'o-mē, *n.* a synopsis.
**Epitomize**, e-pit'o-mīz, *v.* to condense.
**Epoch**, ep'ok, *n.* a remarkable period.
**Epode**, ep'ōd, *n.* a kind of lyric poem.
**Eponym**, ep'o-nim, *n.* name derived from an individual.
**Equable**, ē'kwabl, *adj.* equal; even. [or degree.
**Equal**, ē'kwal, *adj.* even; like; of the same quality
**Equanimity**, ek-wa-nim'it-i, *n.* evenness of temper.
**Equation**, e-kwā'shun, *n.* the act of making equal.
**Equator**, e-kwā'ter, *n.* the line encircling the middle of the globe. [equator.
**Equatorial**, ek-wa-tō'ri-al, *adj.* pertaining to the
**Equerry**, ek'wer-i, *n.* an official of the royal household. [a horse rider.
**Equestrian**, e-kwes'tri-an, *adj.* relating to horses;
**Equiangular**, ē-kwi-ang'gū-lar, *adj.* with equal angles.
**Equilateral**, ē-kwi-lat'er-al, *adj.* with all sides equal.
**Equilibrate**, ē-kwil-lī'brāt, *v.* to balance.
**Equilibrium**, ē-kwil-lib'ri-um, *n.* equal balancing.
**Equine**, ē'kwin, *adj.* relating to horses.
**Equinoctial**, e-kwi-nok'shal, *adj.* relating to the equator. [ing the equator.
**Equinox**, ē-kwi-noks, *n.* the time of the sun's cross-

**Equip,** e-kwip', *v.* to fit out; to supply.
**Equipage,** ek'wi-pāj, *n.* a carriage and attendants; anything equipped. [equipping.
**Equipment,** e-kwip'ment, *n.* outfit; the act of
**Equipoise,** ē'kwi-poiz, *n.* equality of weight; balance.
**Equipollence,** ē-kwi-pol'ens, *n.* equality of power.
**Equitable,** ek'wit-abl, *adj.* showing the quality of equity.
**Equity,** ek'wi-ti, *n.* right; justice; fairness.
**Equivalent,** e-kwiv'ā-lent, *adj.* equal.
**Equivocal,** e-kwiv'o-kal, *adj.* doubtful.
**Equivocate,** e-kwiv'o-kāt, *v.* to prevaricate.
**Equivocation,** e-kwiv-o-kā'shun, *n.* ambiguity.
**Era,** ē'ra, *n.* a period of years counted from a dominating date.
**Eradicable,** e-rad'i-kabl, *adj.* capable of being eradicated. [remove.
**Eradicate,** e-rad'i-kāt, *v.* to destroy; to efface; to
**Eradication,** e-rad-ik-ā'shun, *n.* destruction; ex-
**Erase,** ē-rās', *v.* to expunge. [pungement.
**Erastianism,** e-ras'ti-an-ism, *n.* State control of the Church.
**Erasure,** e-rā'sūr, *n.* the act of erasing; the part where erasing has been done.
**Erect,** e-rekt', *adj.* upright; *v.* to build.
**Eremite,** er'e-mīt, *n.* a hermit.
**Ergot,** er'got, *n.* a fungoid disease in plants.
**Ermine,** er'min, *n.* a white fur; the animal from which it is obtained.
**Erode,** e-rōd', *v.* to eat away.
**Erosion,** e-rō'shun, *n.* the process of eating away.
**Erotic,** er-ot'ik, *adj.* amatory.
**Err,** er, *v.* to blunder.
**Errant,** er'ant, *adj.* roving.
**Erratic,** er-at'ik, *adj.* irregular.
**Erratum,** er-ā'tum, *n.* an error in writing or printing.
**Erroneous,** er-ō'nē-us, *adj.* wrong; mistaken.
**Erse, ers,** *n.* a branch of the Celtic language.
**Erst, erst,** *adv.* formerly.
**Eructation,** ē'ruk'-tā-tion, *n.* belching.
**Erudite,** er'ū-dīt, *adj.* learned.
**Erudition,** er-ū-dish'un, *n.* learning.
**Eruginous,** er-ū'jin-us, *adj.* rust-like.
**Eruption,** e-rup'shun, *n.* a bursting forth. [skin.
**Erysipelas,** er-i-sip'e-las, *n.* an inflammation of the
**Escalade,** es-ka-lād', *n.* the scaling of fortified walls by means of ladders.
**Escalop,** es-kal'op, *n.* a shell-fish.
**Escapement,** es-kāp'ment, *n.* the act of escaping; part of the works of a clock or watch.
**Eschatology,** es-ka-tol'o-ji, *n.* the theory of finality.
**Escheat,** es-chēt', *n.* property forfeited to the
**Eschew,** es-chew', *v.* to shun. [State.
**Escort,** es'kort, *n.* guide, attendant, or body of armed attendants.
**Escort,** es-kort', *v.* to accompany for guidance.
**Escritoire,** es-kri-twor', *n.* a writing-desk.
**Esculapian,** es-kū-lā'pi-an, *adj.* relating to healing.
**Esculent,** es'kū-lent, *adj.* eatable.
**Escurial,** es-kū-ri-al, *n.* the royal palace at Madrid.
**Escutcheon,** es-kut'shun, *n.* a family shield or coat
**Esophagus,** ē-sof'ā-gas, *n.* the gullet. [of arms.
**Esoteric,** es-o-ter'ik, *adj.* mysterious; secret.
**Espalier,** es-pal'yer, *n.* lattice-work for fruit-trees.
**Esparto,** es-pār'to, *n.* a strong grass common in Spain.
**Especial,** es-pesh'al, *adj.* peculiar; special.
**Espionage,** es'pi-on-āj, *n.* spying.
**Esplanade,** es-pla-nād', *n.* a prominent level promenade.
**Espousal,** es-pow'zal, *n.* the act of betrothing.
**Espouse,** es-powz', *v.* to affiance; to marry.
**Esprit,** es-prē', *n.* liveliness.
**Espy,** es-pī', *v.* to discern. [courtesy.
**Esquire,** es-kwīr', *n.* a squire; a general title of
**Essay,** es'ā, *n.* an experiment; a short written composition.
**Essence,** es'ens, *n.* the nature of a thing; an
**Essential,** es-sen'shal, *adj.* necessary. [extract.
**Establishment,** es-tab'lish-ment, *n.* settlement; place of business; house.
**Estate,** es-tāt', *n.* property; possession; rank.
**Esteem,** es-tēm', *v.* to value; *n.* respect.
**Esthetic, es-thet'ik,** *see* Æsthetic. [In Russia.
**Esthonian,** esthō-ni-an, *adj.* relating to Esthonia
**Estimate,** es'tim-āt, *v.* to value; *n.* a valuation.
**Estop,** es-top', *v.* to bar.
**Estrange,** es-trānj', *v.* to alienate.
**Estray,** es-trā', *n.* a stray beast.
**Estuary,** es'tū-ar-i, *n.* the lower part of a river.
**Esurient,** es-ū'ri-ent, *adj.* penurious.
**Etch,** ech, *v.* to design on metal with acids.
**Eternal,** e-ter'nal, *adj.* everlasting.
**Etesian,** ē-tē'zhan, *adj.* periodical.
**Ether,** ē'ther, *n.* the upper air.
**Ethereal,** e-thē'rē-al, *adj.* heavenly.
**Ethical,** eth'ik-al, *adj.* pertaining to duty.
**Ethics,** eth'iks, *n.* science of moral duty.
**Ethnical,** eth'nik-al, *adj.* relating to nations or races.
**Ethnography,** eth-nog'raf-i, *n.* the scientific description of the human races.
**Ethnology,** eth-nol'o-ji, *n.* the science of mankind.
**Ethology,** eth-ol'o-ji, *n.* the science of character.
**Etiolate,** ē-ti-o-lāt', *v.* to grow pale from lack of light. [manners.
**Etiquette,** et'i-ket, *n.* the laws of courtesy; good
**Etymology,** et-i-mol'o-ji, *n.* the science of words.
**Etymon,** et'i-mon, *n.* a word root.
**Eucharist,** ū'ka-rist, *n.* the sacrament.
**Euchologion,** ū-ko-lō'ji-on, *n.* prayers of the Greek
**Euchre,** ū'kr, *n.* a card game. [Church.
**Eudemonism,** ū-dē'mon-izm, *n.* a theory of ethics constituting happiness the test of morality.
**Eudiometer,** ū-di-om'e-ter, *n.* an instrument for measuring oxygen.
**Euhemerism,** ū-hē'mer-izm, *n.* a system that claims for mythology a real origin.
**Eulogise,** ū'lo-jiz, *v.* to praise.
**Eulogium,** ū-lō'ji-um, *n.* something spoken or written in praise.
**Eulogy,** ū'lo-ji, *n.* encomium.
**Eunuch,** ū'nuk, *n.* a castrated man.
**Eupepsy,** ū-pep'si, *n.* a healthy digestion.
**Euphemism,** ū'fem-izm, *n.* a word or form of words presenting in a pleasant form what is otherwise unpleasant.
**Euphony,** ū'fon-i, *n.* a pleasing sound.
**Euphuism,** ū'fū-izm, *n.* an inflated expression.
**Euroclydon,** ū-rok'li-don, *n.* the wind which wrecked St. Paul's ship.
**Eurythmy,** ū'rith-mi, *n.* symmetry.
**Eustachian,** ū-stā'ki-an, *adj.* relating to the tube connecting the middle ear and the pharynx.
**Euterpe,** ū-ter'pe, *n.* the muse of music.
**Euthanasia,** ū-thān-ā'zi-a, *n.* easy death.
**Evacuate,** e-vak'ū-āt, *v.* to go out; to throw out; to discharge.
**Evanescent,** ev-an-es'ent, *adj.* fleeting.
**Evangelical,** ev-an-jel'ik-al, *adj.* relating to the gospel. [gospel.
**Evangelist,** e-van'jel-ist, *n.* a preacher of the
**Evaporate,** e-vap'o-rāt, *v.* to escape in vapour; to
**Evasion,** e-vā'zhun, *n.* the act of evading. [vanish.
**Event,** e-vent', *n.* an incident; a happening.
**Eventful,** e'vent'ful, *adj.* full of events.
**Eventual,** e-vent'ū-al, *adj.* occurring as a consequence; final.
**Evict,** e-vikt', *v.* to expel; to dispossess.
**Evidence,** ev'i-dens, *n.* testimony.
**Evident,** ev'i-dent, *adj.* obvious.
**Evidential,** ev-i-den'shal, *adj.* tending to prove.
**Evil,** ē'vil, *n.* wickedness, calamity; *adj.* wicked.
**Evince,** e-vins', *v.* to show; to prove.
**Eviscerate,** e-vis'er-āt, *v.* to disembowel; to gut.
**Evoke,** e-vōk', *v.* to draw forth.
**Evolution,** ev-o-lū'shun, *n.* gradual development.
**Evolutionist,** ev-o-lū'shun-ist, *n.* one who believes in the theory of evolution.
**Evolve,** e-volv', *v.* to disclose; to develop.
**Ewe,** ū, *n.* a female sheep.
**Ewer,** ū'er, *n.* a large water-jug.
**Exacerbation,** egz-as-er-bā'shun, *n.* the increase of irritation.
**Exaction,** egz-ak'shun, *n.* a harsh demand.
**Exaggerate,** egz-aj'er-āt, *v.* to magnify unduly.
**Exalt,** egs-awlt', *v.* to elevate.
**Examine,** egz-am'in, *v.* to inquire into; to investigate.
**Exasperate,** egz-as'per-āt, *v.* to irritate; to anger.
**Excalibur,** eks-kal'i-bur, *n.* King Arthur's sword.
**Excandescent,** eks-kan-des'cent, *adj.* in white heat.
**Excavate,** eks'kā-vāt, *v.* to dig out.
**Excel,** ek-sel', *v.* to surpass.
**Excellence,** ek'sel-lens, *n.* great merit.
**Excellency,** ek'sel-en-si, *n.* a title of honour.
**Excelsior,** ek-sel'si-or, *adj.* higher still.
**Except,** ek-sept', *v.* to take out; to object to.
**Exceptionable,** ek-sep'shun-abl, *adj.* open to objection. [mon.
**Exceptional,** ek-sep'shun-al, *adj.* peculiar; uncom-
**Excerpt,** ek-serpt', *n.* an extract.
**Excess,** ek-ses', *n.* intemperance; going beyond what is right or wise.

**Excessive,** ek-ses'iv, *adj.* immoderate.
**Exchequer,** eks-chek'er, *n.* one of the superior courts; the revenue.
**Excisable,** ek-siz'abl, *adj.* liable to excise duty.
**Excise,** ek'siz, *n.* tax on commodities or trades.
**Exciseman,** ek-siz'man, *n.* a collector of excise.
**Excision,** ek'sizh un, *n.* a cutting away.
**Excitable,** ek-sit'abl, *adj.* liable to excitement.
**Excite,** ek-sit', *v.* to inflame.
**Exclaim,** eks-klām', *v.* to call out.
**Exclamation,** eks-klam-ā'shun, *n.* a loud outcry; a note of punctuation (!).
**Exclamatory,** eks-klam'ā-to-ri, *adj.* expressing exclamation.
**Exclude,** eks-klood', *v.* to shut out.
**Exclusive,** eks-kloo'siv, *adj.* apart; sole.
**Excogitate,** eks-koj'it-āt, *v.* to think slowly.
**Excommunicate,** eks-kom-ū'ni-kāt, *v.* to expel from the Church.
**Excoriate,** eks-kō'ri-āt, *v.* to strip the skin from.
**Excrescence,** eks-kres'ens, *n.* an unnatural outgrowth.
**Excretion,** eks-krē'shun, *n.* matter excreted.
**Excruciating,** eks-kroo'shi-ā-ting, *adj.* torturing.
**Exculpate,** eks-kul'pāt, *v.* to show guiltless; to absolve.
**Excursion,** eks-kur'shun, *n.* a trip; an expedition.
**Excursus,** eks-kurs'us, *n.* a dissertation.
**Excuse,** eks-kūz', *v.* to forgive; to overlook; to free from blame.
**Excuse,** excūs, *n.* a plea.
**Execrable,** eks'ē-kra-bl, *adj.* detestable.
**Execrate,** eks'ē-krāt, *v.* to denounce; to curse.
**Execute,** eks'ē-kūt, *v.* to perform; to finish; to put to death by law.
**Executioner,** eks-ē-kū'shun-er, *n.* one appointed to carry out capital punishment.
**Executive,** egz-ek'ū-tiv, *n.* persons who administer governmental authority.
**Executor,** egz-ek'ū-ter, *n.* one appointed to carry out the directions of a will.
**Exegesis,** eks-e-jē'sis, *n.* the science of interpretation.
**Exemplar,** egz-em'plar, *n.* something worthy of imitation. [example.
**Exemplary,** egz-em'plar-i, *adj.* forming a good
**Exemplify,** egz-em'pli-fi, *v.* to show by example.
**Exempt,** egz-empt', *v.* to release from.
**Exequies,** eks'ē-kwiz, *n.* funeral rites.
**Exercise,** eks'er-siz, *v.* to practise; *n.* task; use; practice.
**Exert,** egz-ert', *v.* to strive; to labour.
**Exertion,** egz-er'shun, *n.* endeavour.
**Exfoliate,** eks-fō'li-āt, *v.* to shed scales.
**Exhalation,** egz-ha-lā'shun, *n.* vapour; steam; what is inhaled.
**Exhaust,** egs-hawst', *v.* to weary; to expend; to drain off.
**Exhaustion,** egz-hawst'yun, *n.* great fatigue.
**Exhibit,** egz-hib'it, *v.* to show; *n.* the thing shown.
**Exhibition,** egz-hi-bish'un, *n.* a display; a public show.
**Exhilarate,** egs-hil'er-āt, *v.* to animate.
**Exhort,** egz-hort', *v.* to preach; to urge.
**Exhortation,** egz-hort-ā'shun, *n.* a religious harangue.
**Exhumation,** egs-hū-mā'shun, *v.* the act of disinterring.
**Exhume,** eks-hūm', *v.* to disinter.
**Exigency,** eks'ij-en-si, *n.* an emergency.
**Exigent,** eks'i-jent, *adj.* urgent.
**Exiguous,** eks-ig'ū-us, *adj.* slender; small.
**Exile,** egz'il, *n.* the condition of being expelled from home or country; *v.* to banish.
**Exist,** egz-ist', *v.* to have life.
**Exit,** eks'it, *n.* departure.
**Exodus,** eks'-o-dus, *n.* a going out.
**Exogamy,** eks-og'am-i, *n.* marrying only outside one's own tribe.
**Exonerate,** egz-on'er-āt, *v.* to acquit.
**Exorbitant,** egz-or'bi-tant, *adj.* excessive.
**Exorcise,** eks'or-siz, *v.* to drive away evil spirits.
**Exorcism,** eks'or-sism, *n.* the act of expelling evil spirits.
**Exordium,** egz-or'di-um, *n.* an introductory portion.
**Exoteric,** eks-o-ter'ik, *adj.* external.
**Exotic,** egz-ot'ik, *n.* anything of foreign origin.
**Expand,** eks-pand', *v.* to extend.
**Expanse,** eks-pans', *n.* a wide open space.
**Expansive,** eks-pan'siv, *adj.* far-extending.
**Ex parte,** eks-par'te, *adj.* on one side.
**Expatiate,** eks-pā'shi-āt, *v.* to enlarge upon.
**Expatriate,** eks-pā'tri-āt, *v.* to banish.
**Expect,** eks-pekt', *v.* to anticipate.
**Expectant,** eks-pekt'ant, *adj.* looking for.
**Expectorant,** eks-pekt'o-rant, *adj.* causing expectoration.
**Expectorate,** eks-pekt'o-rāt, *v.* to spit.
**Expediency,** eks-pē'di-en-si, *adj.* fitness; convenience.
**Expedient,** eks-pē'di-ent, *adj.* advisable.
**Expedite,** eks'pē-dit, *v.* to quicken; to help forward.
**Expedition,** eks-pē-dish'un, *n.* speed; an undertaking for exploration, war, discovery, etc.
**Expeditious,** eks-pē-dish'us, *adj.* quick; prompt.
**Expel,** eks-pel', *v.* to drive out.
**Expend,** eks-pend', *v.* to spend.
**Expenditure,** eks-pen'dit-ūr, *n.* what is expended.
**Expense,** eks-pens', *n.* cost; outlay.
**Expensive,** eks-pen'siv, *adj.* costly.
**Experience,** eks-pēr'i-ens, *n.* knowledge gained; *v.* to undergo; to suffer.
**Experiment,** eks-per'i-ment, *n.* trial; essay.
**Experimental,** eks-per-i-ment'al, *adj.* tentative.
**Experimentalist,** eks-per-i-ment'al-ist, *n.* one who experiments. [a specialist.
**Expert,** eks-pert', *adj.* having special knowledge; *n.*
**Expiable,** eks'pi-abl, *adj.* that may be atoned for.
**Expiate,** eks'pi-āt, *v.* to atone for.
**Expiatory,** eks'pi-a-to-ri, *adj.* having power to atone.
**Expiration,** eks-pir-ā'shun, *n.* termination; end; breathing outwardly.
**Expire,** eks-pir', *v.* to die; to end.
**Expiry,** eks-pir'i, *n.* termination.
**Explain,** eks-plān', *v.* to make clear.
**Explanation,** eks-plan-ā'shun, *n.* act of making plain.
**Explanatory,** eks-plan'a-to-ri, *adj.* with explanation.
**Expletive,** eks'ple-tiv, *adj.* a redundant word; an oath.
**Explicable,** eks'plik-abl, *adj.* capable of being explained.
**Explicit,** eks-pli'sit, *adj.* clear; plain.
**Explode,** eks-plōd', *v.* to burst forth; to reject.
**Exploit,** eks-ploit', *v.* to work up for selfish ends; *n.* a notable achievement.
**Exploration,** eks-plō-rā'shun, *n.* act of exploring.
**Explore,** eks-plōr', *v.* to search for.
**Explosion,** eks-plō'zhun, *n.* act of exploding.
**Explosive,** eks-plō'siv, *n.* a substance that will cause an explosion.
**Exponent,** eks-pō'nent, *n.* one who represents.
**Export,** eks-port', *v.* to send abroad.
**Export,** ex'port, *n.* the thing exported.
**Exportable,** eks-port'abl, *adj.* that can be exported.
**Exportation,** eks-port-ā'shun, *n.* act of exporting.
**Expose,** eks-pōz', *v.* to lay bare; to place in danger.
**Exposition,** eks-po-zish'un, *n.* an explanation; an exhibition; the act of exposing.
**Expositor,** eks-poz'it-or, *n.* one who expounds.
**Expository,** eks-poz'it-o-ri, *adj.* explanatory.
**Expostulate,** eks-pos'tū-lāt, *v.* to remonstrate.
**Exposure,** eks-pō'zūr, *n.* the act of laying bare.
**Expound,** eks-pownd', *v.* to explain.
**Expression,** eks-presh'un, *n.* act of expression; feature; look.
**Expressively,** eks-pres'iv-li, *adv.* with expression.
**Expressly,** eks-pres'li, *adv.* specially.
**Expulsion,** eks-pul'shun, *n.* the act of expelling.
**Expunge,** eks-punj', *v.* to wipe out.
**Expurgate,** eks'pur-gāt, *v.* to cleanse; to cut out.
**Exquisite,** eks'kwiz-it, *adj.* delicate; superior.
**Exsanguious,** eks-sang'gwi-us, *adj.* bloodless.
**Extant,** eks'tant, *adj.* in being.
**Extemporaneous,** eks-tem-pō-rā'ne-us, *adj.* without preparation.
**Extempore,** eks-tem'po-rē, *adv.* without study.
**Extemporize,** eks-tem'po-riz, *v.* to speak off-hand.
**Extend,** eks-tend', *v.* to lengthen.
**Extension,** eks-ten'shun, *n.* a stretching out.
**Extensive,** eks-ten'siv, *adj.* large; broad; comprehensive.
**Extent,** eks-tent', *n.* compass; space.
**Extenuate,** eks-ten'ū-āt, *v.* to palliate.
**Exterior,** eks-tēr'i-or, *adj.* outer.
**Exterminate,** eks-ter'min-āt, *v.* to destroy.
**External,** eks-tern'al, *adj.* outward. [from.
**Externals,** eks-ter'nalz, *n.* things outside or apart
**Extinct,** eks-tingkt', *adj.* extinguished; not living.
**Extincteur,** eks-tingkt'er, *n.* an instrument for extinguishing fire.
**Extinction,** eks-tingk'shun, *n.* an extinguishing.
**Extinguish,** eks-ting'gwish, *v.* to quench.
**Extinguisher,** eks-ting'gwish-er, *n.* that which extinguishes.
**Extirpate,** eks-ter'pāt, *v.* to root out or destroy.

**Extol,** eks-tōl', *v.* to praise.
**Extort,** eks-tort', *v.* to force from.
**Extortion,** eks-torsh'un, *n.* oppression.
**Extortionate,** eks-tor'shun-āt, *adj.* oppressive.
**Extortioner, eks-tor'shun-er,** *n.* one who extorts.
**Extra,** eks'tra, *adj.* beyond what is usual.
**Extract,** eks-trakt', *v.* to draw out.
**Extract,** eks'trakt, *n.* a thing extracted; a copy of a portion of a book.
**Extraction,** eks-trak'shun, *n.* the act of extracting.
**Extradition,** eks-tra-dish'un, *n.* the yielding up of fugitives from justice by one country to another.
**Extrajudicial,** eks-tra-jū-dish'al, *adj.* out of the customary legal course. [material universe.
**Extramundane,** eks-tra-mun'dān, *adj.* beyond the
**Extramural,** eks-tra-mū'ral, *adj.* outside the walls.
**Extraneous,** eks-trā'nē-us, *adj.* external.
**Extraordinary,** eks-tra-or'din-ar-i, *adj.* unusual; wonderful. [penditure.
**Extravagance,** eks-trav'a-gans, *n.* excessive ex-
**Extravagant,** eks-trav'ā-gant, *adj.* lavish, unreasonable.
**Extravaganza,** eks-trav-a-gan'za, *n.* a burlesque.
**Extravasate,** eks-trav'as-āt, *v.* to let out from the original vessel.
**Extreme,** eks-trēm', *adj.* remote, excessive.
**Extremity,** eks-trem'it-i, *n.* the utmost limit.
**Extricable,** eks'trik-abl, *adj.* that may be extricated.
**Extricate,** eks'tri-kāt, *v.* to get out of; to set free.
**Extrinsic,** eks-trin'sik, *adj.* external.
**Extrude,** eks-trood', *v.* to force out.
**Extrusion,** eks-troo'zhun, *n.* the act of expelling.
**Exuberance,** eks-ū'ber-ans, *n.* an overflowing.
**Exuberant,** eks-ū'ber-ant, *adj.* abounding.
**Exudation,** eks-ū-dā'shun, *n.* the act of discharging through the pores.
**Exude,** eks-ūd', *v.* to ooze; to issue forth.
**Exultant,** egz-ult'ant, *adj.* triumphant.
**Eyelet,** ī'let, *n.* a lace-hole.
**Eyesore,** ī'sōr, *n.* something offensive to the eye.
**Eye-tooth,** ī'*tooth*, *n.* one of the two canine teeth.
**Eyry,** ē'ri, *n.* nest of a bird of prey.

## F

**Fabian,** fā'bi-an, *adj.* delaying; relating to the Fabian Society. [ing; a fiction.
**Fable,** fā'bl, *n.* a fictitious narrative of moral teach-
**Fabric,** fab'rik, *n.* textile cloth; a building.
**Fabricate,** fab'ri-kāt, *v.* to put together; to make; to invent.
**Fabrication,** fab'ri-kā'shun, *n.* the thing fabricated.
**Fabulist,** fab'ū-list, *n.* a writer of fables.
**Fabulous,** fab'ū-lus, *adj.* false; wonderful.
**Facade,** fas-ād', *n.* the front of a building.
**Face,** fās, *n.* front part of the head; *v.* to confront.
**Facet,** fā'set, *n.* a small surface or face.
**Facetiæ,** fā-sē'shi-ē, *n.* humorous writings or say-
**Facetious,** fā-sē'shus, *adj.* funny; witty. [ings.
**Facial,** fā'shal, *adj.* connected with the face.
**Facile,** fas'il, *adj.* easy; yielding.
**Facilitate,** fa-sil'it-āt, *v.* to make easy.
**Facility,** fa-sil'it-i, *n.* pliancy, dexterity.
**Facsimile,** fak-sim'i-lē, *n.* an exact copy.
**Faction,** fak'shun, *n.* a contending body of persons.
**Factious,** fak'shus, *adj.* disloyal; turbulent.
**Factitious,** fak-tish'us, *adj.* artificial.
**Factor,** fak'tor, *n.* an agent; a necessary element.
**Factorage,** fak'tor-āj, *n.* factor's commission.
**Factory,** fak'to-ri, *n.* workshop; mill.
**Factotum,** fak-tō'tum, *n.* an agent of all work.
**Facula,** fak'ū-la, *n.* bright spot on the sun.
**Faculty,** fak'ul-ti, *n.* mental power; special aptitude; officers of a university.
**Fæces,** fē-seez, *n.* dregs.
**Fag, fag,** *v.* to become weary; to work hard.
**Fag-end,** fag'end, *n.* the loose end or refuse of a
**Fagot,** fag'ot, *n.* a bundle of sticks. [thing.
**Fagot-voter,** fag'ot-vōt-er, *n.* a voter on a false qualification.
**Faience,** fā'yens, *n.* painted pottery.
**Failure,** fāl'ūr, *n.* defeat; decay; insolvency; stop-
**Fain,** fān, *adj.* joyful; willing. [page.
**Faineant,** fā'nyang, *adj.* inactive; *n.* do-nothing.
**Faint,** fānt, *v.* to swoon; *adj.* weak; feeble; indistinct.
**Fair,** fār, *n.* a periodical market; *adj.* bright; clear.
**Fairy,** fā'ri, *n.* a supernatural being.
**Faith,** fā*th*, *n.* belief; fidelity.
**Faithful,** fā*th*'ful, *adj.* true; loyal.
**Faithless,** fā*th*'les, *adj.* false; disloyal.
**Fakir,** fā'ker, *n.* an Indian religious mendicant.
**Falcate,** fal'kāt, *v.* to bend like a sickle.
**Falchion,** fawl'shun, *n.* a short bent sword.
**Falcon,** faw'kn, *n.* a trained hawk.
**Falconer,** faw'k-ner, *n.* a trainer of falcons.
**Falconry,** fawk'n-ri, *n.* the art of hunting with falcons.
**Faldstool,** fawld'stool, *n.* a folding stool.
**Fallacious,** fal-ā'shus, *adj.* misleading; delusive.
**Fallacy,** fal'ā-si, *n.* something deceptive.
**Fallible,** fal'ibl, *adj.* liable to err.
**Fallow,** fal'ō, *adj.* untilled.
**Falsehood,** fawls'hood, *n.* a lie.
**Falsetto,** fawl-set'o, *n.* a voice above the natural
**Falsify,** fawl'si-fī, *v.* to make false. [compass.
**Falsity,** fawl-sit-i, *n.* a false statement.
**Falter,** fawl'ter, *v.* to hesitate.
**Familiar,** fam-il'yer, *adj.* intimate.
**Familiarity,** fam-il-i-ar'it-i, *n.* intimate intercourse.
**Famine,** fam'in, *n.* extreme scarcity.
**Famish,** fam'ish, *v.* to starve.
**Famous,** fā'mus, *adj.* renowned.
**Fan,** fan, *n.* a hand instrument for cooling; an apparatus for winnowing.
**Fanatic,** fan-at'ik, *n.* a zealot.
**Fanatical,** fan-at'ik-al, *adj.* wild; unreasoning.
**Fanaticism,** fan-at'i-sism, *n.* wild religious enthusiasm.
**Fancy,** fan'si, *n.* imagination; taste; *v.* to imagine.
**Fandango,** fan-dan'go, *n.* a Spanish dance.
**Fane,** fān, *n.* a temple; a weathercock.
**Fanfare,** fan'fār, *n.* flourish of trumpets.
**Fanfaronade,** fan'far-on-ād, *n.* bluster.
**Fang,** fang, *n.* tooth; tusk; claw.
**Fanlight,** fan'lit, *n.* a fan-shaped window.
**Fannel,** fan'l, *n.* a banner.
**Fantasia,** fan-tā'zi-a, *n.* a fanciful musical composition.
**Fantastical,** fan-tas'tik-al, *adj.* whimsical; imagin-
**Fantasy,** fan'ta-si, *n.* a fancy; imagination. [ary.
**Farcical,** far'sik-al, *adj.* ludicrous.
**Fardel,** fār'del, *n.* a pack.
**Fare,** fār, *v.* to get; to happen; *n.* price of transit.
**Farewell,** fār-wel', *n.* a parting good wish.
**Far-fetched,** fār-fecht', *adj.* unnatural; forced
**Farina,** fa-rē'na, *n.* ground corn.
**Farinaceous,** fa-rin-ā'shus, *adj.* mealy.
**Farm,** fārm, *n.* land occupied for cultivation; *v.* to cultivate land; to let for profit.
**Faro,** fā'ro, *n.* a card game.
**Farrago,** far-rā'go, *n.* a disorderly mass.
**Farrier,** far'i-er, *n.* a horse-shoer; a horse doctor.
**Farrow,** fār'ro, *n.* a litter of pigs.
**Farthing,** fār'thing, *n.* small coin, quarter of a penny.
**Farthingale,** fār'thing-gāl, *n.* a hoop for distending a lady's dress.
**Fascicle,** fas'ikl, *n.* a small bundle; a cluster.
**Fascinate,** fas'in-āt, *v* to charm.
**Fascination,** fas-in-ā'shun, *n.* power to charm.
**Fashion,** fash'un, *n.* the prevailing style; custom; cut or form.
**Fashionable,** fash'un-abl, *adj.* in the first mode.
**Fast-day,** fast'dā, *n.* a holy day of fasting.
**Fasten,** fas'n, *v.* to make fast.
**Faster,** fast'er, *n.* one who fasts; *adj.* quicker.
**Fastidious,** fas-tid'i-us, *adj.* hard to please; too exacting.
**Fastness,** fast'ness, *adj.* speed; rapidity.
**Fatal,** fā'tal, *adj.* deadly; according to fate; mortal.
**Fatalism,** fā'tal-izm, *n.* the theory that all things are foreordained.
**Fatality,** fa-tal'it-i, *n.* a fatal occurrence.
**Fate,** fāt', *n.* destiny; the appointed lot; necessity.
**Fated,** fā'ted, *adj.* destined; doomed.
**Father,** fā'ther, *n.* male parent.
**Fatherland,** fā'ther-land, *n.* the land of one's an-
**Fatherly,** fā'ther-li, *adj.* paternal. [cestors.
**Fathom,** fath'om, *n.* a nautical measure (6 feet); *v.* to get to the bottom of.
**Fathomless,** fath'om-les, *adj.* bottomless.
**Fatigue,** fa-tēg', *n.* weariness from exertion.
**Fatling,** fat'ling, *n.* a young fatted animal.
**Fatten,** fat'n, *v.* to make fat.
**Fatty,** fat'i, *adj.* greasy.
**Fatuity,** fa-tū'it-i, *n.* stupidity; mental feebleness.
**Fatuous,** fat'ū-us, *adj.* foolish.
**Fauces,** faw'sēz, *n.* the top part of the throat.
**Faucet,** faw'set, *n.* a pipe, peg, or tap for letting liquor out of a barrel.
**Fault,** fawlt, *n.* error, blemish.

**Faun,** fawn, *n.* a mythological protector of shepherds.
**Fauna,** faw'na, *n.* the animals of a country, district, or period.
**Favour,** fā'ver, *n.* patronage; encouragement; partiality.
**Favourable,** fā'ver-abl, *adj.* advantageous.
**Favourite,** fā'ver-it, *n.* a person or thing in favour.
**Favouritism,** fā'ver-it-izm, *n.* partiality.
**Fawn,** fawn, *v.* to cringe; to flatter; *n.* a young
**Fay,** fā, *n.* a small fairy. [deer.
**Fealty,** fē'al-ti, *n.* fidelity.
**Fear,** fēr, *n.* alarm.
**Feasibility,** fēz-i-bil'it-i, *n.* quality of being practicable.
**Feat,** fēt, *n.* a remarkable achievement.
**Feather,** feth'er, *n.* a growth on a bird; a plume.
**Feathery,** feth'er-i, *adj.* covered with, or similar to, feathers. [alty; the countenance.
**Feature,** fēt'ūr, *n.* prominent external sign; speci-
**Febrifuge,** feb'ri-fūj, *n.* medicine that mitigates fever.
**Febrile,** fē'bril, *adj.* connected with fever.
**Fecial,** fē'si-al, *adj.* relating to heralds.
**Feckless,** fek'less, *adj.* spiritless.
**Fecula,** fek'ū-la, *n.* starchy sediment.
**Fecund,** fek'und, *adj.* fruitful.
**Fecundate,** fek'un-dāt, *v.* to make fruitful.
**Fecundity,** fek-un'di-ti, *n.* fruitfulness.
**Federal,** fed'er-al, *adj.* relating to a league or federation.
**Federalist,** fed'er-al-ist, *n.* a supporter of federalism.
**Federative,** fed'er-ā-tiv, *adj.* leagued together.
**Fee,** fē, *n.* recompense; reward; freehold inherit-
**Feeble,** fē'bl, *adj.* weak. [ance.
**Feel,** fēl, *v.* to perceive by touch; to be affected.
**Feeling,** fē'ling, *n.* the sense of touch; emotion.
**Feign,** fān, *v.* to pretend.
**Feint,** fānt, *n.* a pretence.
**Felicitate,** fe-lis'it-āt, *v.* to congratulate.
**Felicitous,** fe-lis'it-us, *adj.* happy; pleasant; suitable.
**Feline,** fē'līn, *adj.* relating to cats; cat-like.
**Fell,** fel, *n.* a hill; a skin; *v.* to cut down; to strike to the ground; *adj.* savage.
**Fellow,** fel'ō, *n.* an equal; a man of small account; one who enjoys a university or other fellowship.
**Fellowship,** fel'ō-ship, *n.* friendly communion; the condition of being a fellow.
**Felon,** fel'on, *n.* a criminal.
**Felonious,** fel-ō'ni-us, *adj.* with criminal intent.
**Felony,** fel'o-ni, *n.* a serious crime.
**Felucca,** fe-luk'ā, *n.* a Mediterranean boat with sails and oars.
**Female,** fē'māl, *n.* the sex that bears young.
**Feminine,** fem'in-in, *adj.* relating to women; womanly.
**Femoral,** fem'ō-ral, *adj.* relating to the thigh.
**Fen,** fen, *n.* low marshy land.
**Fence,** fens, *n.* hedge or wall round enclosed land.
**Fencer,** fen'ser, *n.* one who fences.
**Fencing,** fen'sing, *n.* the art of sword-play; material for fence construction.
**Fend,** fend, *v.* to ward off.
**Fender,** fen'der, *n.* a metal fire-guard.
**Fennel,** fen'el, *n.* an aromatic plant.
**Fenny,** fen'i, *adj.* marshy.
**Ferial,** fē'ri-al, *adj.* relating to holidays.
**Ferment,** fer'ment, *n.* an internal commotion; tumult.
**Ferment,** fer-ment', *v.* to cause fermentation; to agitate.
**Fernery,** fern'er-i, *n.* a place for keeping ferns.
**Ferocious,** fer-ō'shus, *adj.* savage; fierce.
**Ferrandine,** fer'an-din, *n.* a fabric of silk and wool.
**Ferreous,** fer'e-us, *adj.* made of, or relating to, iron.
**Ferret,** fer'et, *n.* a kind of weasel; *v.* to make close search.
**Ferruginous,** fer-ū'jin-us, *adj.* partaking of iron.
**Ferrule,** fer'ūl, *n.* a metal ring on the end of a staff or stick. [place where people are ferried.
**Ferry,** fer'i, *v.* to transport across water; *n.* the
**Fertilise,** fer'til-iz, *v.* to make fertile.
**Fervent,** fer'vent, *adj.* warm; eager.
**Fervid,** fer'vid, *adj.* ardent.
**Fervour,** fer'vor, *n.* zeal.
**Fescue,** fes'kū, *n.* a kind of grass; a letter pointer.
**Festal,** fes'tal, *adj.* connected with a feast.
**Fester,** fes'ter, *v.* to suppurate; to rankle.
**Festival,** fes'tiv-al, *n.* a rejoicing; a feast.
**Festoon,** fes-toon', *n.* a suspended garland.
**Fetch,** fech, *v.* to go for and get.
**Fête,** fāt, *n.* feast.
**Fetich,** fē'tish, *n.* an object of supposed divine attributes.
**Fetichism,** fē'tish-izm, *n.* fetich-worship.
**Fetid,** fē'tid, *adj.* rancid; stinking. [pastern.
**Fetlock,** fet'lok, *n.* the hair tuft behind a horse's
**Fetter,** fet'er, *n.* a chain for the feet; *v.* to restrain.
**Fettle,** fet'l, *v.* to clean, mend, or improve.
**Feud,** fūd, *n.* continued strife between families.
**Feudalism,** fū'dal-izm, *n.* the mediæval system of holding lands in vassalage. [newspaper.
**Feuilleton,** fē'ye-tong, *n.* the story part of a
**Fever,** fē'ver, *n.* *see* Dictionary of Health Sec-
**Few,** fū, *adj.* a small number. [tion.
**Fewness,** fū'ness, *adj.* smallness of number.
**Fey,** fā, *adj.* fated.
**Fiasco,** fi-as'ko, *n.* failure.
**Fiat,** fī'at, *n.* a solemn command.
**Fibre,** fī'br, *n.* workable tissue, animal or vegetable, as wool, flax, silk, etc.
**Fibril,** fī'bril, *n.* a small fibre.
**Fibrine,** fī'brin, *n.* a fibrous substance in animals and plants.
**Fibrous,** fī'brus, *adj.* made up of fibres.
**Fickle,** fik'l, *adj.* changeable.
**Fictile,** fik'til, *adj.* plastic; pliant.
**Fiction,** fik'shun, *n.* an imaginary story; romance.
**Fictitious,** fik-tish'us, *adj.* imaginary; false
**Fiddle,** fid'l, *n.* a violin.
**Fidelity,** fid-el'it-i, *n.* faithfulness; duty.
**Fidget,** fid'jet, *v.* to move restlessly.
**Fiduciary,** fidū-shi-a'ry, *n.* one who holds in trust.
**Fie,** fī, *excl.* indicating disapproval.
**Fief,** fēf, *n.* a feudal grant. [ground.
**Field,** fēld, *n.* an enclosed piece of land; battle-
**Field-book,** fēld'book, *n.* a book used by land surveyors.
**Fieldfare,** fēld'fār, *n.* a species of thrush.
**Field-piece,** fēld'pēs, *n.* a piece of artillery.
**Fiend,** fēnd, *n.* a devil; a wicked person.
**Fierce,** fērs, *adj.* ferocious.
**Fiery,** fī'er-i, *adj.* hot; ardent.
**Fife,** fif, *n.* a musical pipe.
**Fifer,** fī'fer, *n.* a fife player.
**Fig,** fig, *n.* a tropical fruit.
**Fight,** fit, *n.* a contest; *v.* to contend.
**Figment,** fig'ment, *n.* an invention.
**Figurative,** fig'ū-ra-tiv, *adj.* metaphorical.
**Figure,** fig'ūr, *n.* form; outline; price.
**Figured,** fig'ūrd, *adj.* marked with figures or designs.
**Figurehead,** fig'ūr-hed, *n.* the figure on a ship's prow.
**Filament,** fil'a-ment, *n.* a slender thread.
**Filamentous,** fil-ā-ment'us, *adj.* thread-like.
**Filatory,** fil'ā-to-ri, *n.* a thread-spinning machine.
**Filature,** fil'a-tūr, *n.* the reeling of silk.
**Filbert,** fil'bert, *n.* cultivated hazel nut.
**Filch,** filch, *v.* to steal.
**File,** fil, *n.* a rasping instrument; a receptacle for papers; a line of soldiers; *v.* to work with a file.
**Filibuster,** fil'i-bus-ter, *n.* a lawless adventurer.
**Filigree,** fil'i-grē, *n.* ornamental work in gold and
**Fill,** fil, *v.* to make full. [silver threads.
**Fillet,** fil'et, *n.* a band; thigh of veal.
**Filibeg,** fil'i-beg, *n.* the kilt.
**Fillip,** fil'ip, *v.* to flip; to drive.
**Filly,** fil'i, *n.* a young mare.
**Film,** film, *n.* a thin skin or thread.
**Filter,** fil'ter, *n.* a liquid purifying apparatus; *v.* to
**Filth,** filth, *n.* foul matter. [percolate.
**Filtrate,** fil'trāt, *v.* to filter; *n.* result of filtration.
**Fin,** *n.* the jutting organ by which fish move and balance in the water.
**Final,** fī'nal, *adj.* last; conclusive.
**Finale,** fin-ā'lā, *n.* the last item at a concert.
**Finality,** fi-nal'it-i, *n.* the condition of being final.
**Finance,** fi-nans', *n.* money affairs; revenue.
**Financial,** fin-an'shal, *adj.* relating to finance.
**Financier,** fi-nan'sēr, *n.* one who deals in funds, revenues, etc.
**Finch,** finsh, *n.* a genus of birds.
**Fine,** fin, *n.* penalty; *adj.* elegant, beautiful.
**Finer,** fī'ner, *n.* one who refines metals.
**Finery,** fī'ner-i, *n.* fine attire; jewels, etc.
**Finesse,** fin-es', *n.* artifice; trickery.
**Finial,** fin'i-al, *n.* a terminating bunch of foliage (*arch*).
**Finical,** fin'ik-al, *adj.* fastidious; affected.
**Finis,** fī'nis, *n.* the end.

**Finish,** fin'ish, *v.* to conclude; to perfect.
**Finite,** fi'nīt, *adj.* limited; bounded.
**Finny,** fin'i, *adj.* having fins.
**Fiord,** fyord, *n.* a rock-bound inlet.
**Fir,** fer, *n.* a cone-bearing tree.
**Fire-arms,** fir'ārms, *n.* weapons discharged by explosives. [extinguishing fires.
**Fire-brigade,** fir'brig-ād, *n.* a body organised for
**Fire-damp,** fir'damp, *n.* an explosive gas found in coal mines. [water for putting out fires.
**Fire-engine,** fir'en-jin, *n.* an engine for pumping
**Fireman,** fir'man, *n.* a member of a fire-brigade.
**Fire-plug,** fir'plug, *n.* plug for drawing water in case of fire.
**Fireworks,** fir'werks, *n.* preparations of powder, etc., for display.
**Firkin,** fer'kin, *n.* a quarter barrel.
**Firm,** ferm, *adj.* decided, strong; *n.* a business partnership.
**Firmament,** fer'mā-ment, *n.* the sky.
**Firman,** fer'man, *n.* a Turkish decree.
**Firstling,** ferst'ling, *n.* the first produce of animals.
**First-rate,** ferst'rāt, *adj.* of the first excellence.
**Firth,** ferth, *n.* the mouth of a river.
**Fiscal,** fis'kal, *adj.* relating to revenue.
**Fish,** fish, *n.* an animal existing in water.
**Fishery,** fish'er-i, *n.* the fishing business; place where fish are caught.
**Fishmonger,** fish'mung-er, *n.* a dealer in fish.
**Fishy,** fish'i, *adj.* fish-like; doubtful.
**Fission,** fizh'un, *n.* cleavage.
**Fissure,** fizh'ūr, *n.* a cleft; a chasm.
**Fist,** fist, *n.* the clenched hand.
**Fisticuffs,** fist'i-kufs, *n.* blows; boxing.
**Fistula,** fist'ū-la, *n.* a deep ulcer.
**Fit,** fit, *adj.* qualified; suitable; *n.* a sudden attack of convulsions; a whim.
**Fitchet,** *n.* a polecat.
**Fitful,** fit'ful, *adj.* spasmodic.
**Fitness,** fit'ness, *n.* suitability; condition of being
**Fixity,** fiks'it-i, *n.* state of being fixed. [qualified.
**Fixture,** fiks'tūr, *n.* something fixed; an appointed
**Fizz,** fiz, *v.* to make a hissing sound. [day.
**Flabby,** flab'i, *n.* loose; soft.
**Flaccid,** flak'sid, *adj.* weak; lax.
**Flag,** flag, *v.* to grow weak; to cover with flagstones; *n.* a banner; the iris.
**Flagellants,** flaj'el-ants, *n.* a religious sect who scourged themselves.
**Flagellate,** flaj'el-āt, *v.* to scourge or whip.
**Flageolet,** flaj'o-let, *n.* a reed instrument.
**Flagitious,** fla-jish'us, *adj.* excessively wicked.
**Flagon,** flag'on, *n.* a drinking vessel.
**Flagrance,** flā'grans, *n.* the condition of being flagrant.
**Flagrant,** flā'grant, *adj.* notorious; growing.
**Flag-ship,** flag'ship, *n.* a ship that carries the admiral's flag.
**Flag-staff,** flag'staf, *n.* pole from which a flag flies.
**Flail,** flāl, *n.* a threshing instrument.
**Flake,** flāk, *n.* a small thin layer of anything.
**Flaky,** flā'ki, *adj.* composed of flakes.
**Flambeau,** flam'bō, *n.* a torch.
**Flamboyant,** flam-boi'ant, *adj.* flame-like.
**Flame,** flām, *n.* blaze; *v.* to blaze.
**Flammiferous,** flam-if'er-us, *adj.* flame-engendering.
**Flange,** flanj, *n.* the raised edge of a wheel.
**Flank,** flangk, *n.* the side of anything.
**Flannel,** flan'el, *n.* a warm woollen texture.
**Flap,** *n.* the waving motion of a loose article; *v.* to move with flapping action.
**Flap-jack,** flap'jak, *n.* a pancake.
**Flare,** flār, *v.* to flash unsteadily.
**Flaring,** flā'ring, *adj.* burning fitfully; gaudy.
**Flash,** *v.* to flame suddenly; *n.* a burst of light.
**Flashy,** flash'i, *adj.* showy; dazzling.
**Flask,** flāsk, *n.* a drinking vessel.
**Flasket,** flas'ket, *n.* a flask in which food is served.
**Flatter,** flat'er, *v.* to praise unduly.
**Flatulence,** flat'ū-lens, *n.* wind on the stomach.
**Flaunt,** flawnt, *v.* to display showily; to wave in the wind.
**Flautist,** flaw'tist, *n.* flute-player.
**Flavour,** flā'ver, *n.* relish; taste; *v.* to give flavour to.
**Flaw,** flaw, *n.* a defect; a fault.
**Flax,** flaks, *n.* plant yielding a fibre from which flax
**Flaxen,** flaks'en, *adj.* fair; like flax. [is made.
**Flay,** flā, *v.* to tear off the skin.
**Flea,** flē, *n.* a small irritating insect.
**Fleam,** flēm, *n.* an instrument for bleeding cattle.
**Fleck,** flek, *n.* a spot; *v.* to spot.
**Flection,** flek'shun, *n.* act of bending.
**Fledge,** flej, *v.* to furnish with feathers.
**Fledgling,** flej'ling, *n.* a young bird.
**Flee,** flē, *v.* to rush away.
**Fleece,** flēs, *n.* a sheep's coating of wool.
**Fleecy,** flēs'i, *adj.* woolly.
**Fleer,** flēr, *v.* to mock.
**Fleet,** flēt, *adj.* swift; *n.* a navy.
**Fleeting,** flēt'ing, *adj.* passing.
**Flesh,** flesh, *n.* the substance which covers the bones of animals.
**Fleshly,** flesh'li, *adj.* carnal.
**Flexible,** fleks'i-bl, *adj.* pliant.
**Flexile,** fleks'il, *adj.* pliable.
**Flexion,** flek'shun, *n.* a bend.
**Flexuous,** fleks'ū-us, *adj.* winding; tortuous.
**Flexure,** fleks'ūr, *n.* a bending.
**Flicker,** flick'er, *v.* to flutter; to waver.
**Flight,** flit, *n.* act of flying.
**Flighty,** flī'ti, *adj.* giddy; fanciful.
**Flimsy,** flim'zi, *adj.* weak; spiritless; thin.
**Flinch,** flinsh, *v.* to shrink.
**Fling,** fling, *v.* to throw; *n.* a dance.
**Flint,** *n.* a stone of extreme hardness.
**Flip,** flip, *n.* spiced hot drink; *v.* to fillip.
**Flippant,** flip'ant, *adj.* pert; saucily fluent.
**Flit,** flit, *v.* to fly; to remove.
**Flitch,** flich, *n.* the side of a pig, cured.
**Float,** flōt, *v.* to swim; *n.* a raft.
**Floatage,** flō'tij, *n.* that which floats.
**Flocculent,** flok'kū-lent, *adj.* woolly; tufty.
**Flock,** flok, *n.* a collection of animals; a company; *v.* to congregate.
**Flockmaster,** flok'mās-ter, *n.* a sheep-owner.
**Floe,** flō, *n.* floating ice.
**Flog,** flog, *v.* to lash; to beat.
**Flood,** flud, *n.* an inundation; *v.* to overflow.
**Floor,** flōr, *n.* the part of a room on which people stand; a level area.
**Flop,** flop, *v.* to collapse; to fall limply.
**Floral,** flō'ral, *adj.* pertaining to flowers.
**Florescence,** flor-es'ens, *n.* a bursting into floral bloom.
**Floriculture,** flor-i-kult'ūr, *n.* the art of flower
**Florid,** flor'id, *adj.* bright-coloured. [culture.
**Floriform,** flō'ri-form, *adj.* flower-shaped.
**Florin,** flor'in, *n.* a two-shilling piece.
**Florist,** flor'ist, *n.* a cultivator of flowers.
**Floss,** flos, *n.* loose silk.
**Flotation,** flō-tā'shun, *n.* the act of floating.
**Flotilla,** flō-til'a, *n.* a small fleet. [Section.
**Flotsam,** flot'sam, *n.*, *see* Business Dictionary
**Flounce,** flowns, *n.* a plaited strip round a skirt; *v.* to move impatiently.
**Flounder,** flown'der, *v.* to struggle helplessly.
**Flour,** flowr, *n.* finely ground wheat; any soft powder.
**Flourish,** fler'ish, *v.* to thrive; to display showily; to blow a trumpet; to make ornamental strokes.
**Flout,** flowt, *v.* to mock.
**Flower,** flow'er, *n.* the bloom of a plant.
**Fluctuate,** fluk'tū-āt, *v.* to rise and fall.
**Flue,** flū, *n.* a connecting passage with a chimney.
**Fluency,** floo'en-si, *n.* readiness of speech.
**Fluff,** fluf, *n.* fibrous dust.
**Fluid,** floo'id, *n.* a liquid. [a lucky chance stroke.
**Fluke,** flook, *n.* a fish; the hook part of an anchor;
**Flume,** floom, *n.* an artificial water channel.
**Flummery,** flum'er-i, *n.* nonsense; a sour jelly made from oat husks.
**Flunkey,** flungk'i, *n.* a liveried servant; a fawning
**Flunkeyism,** flunk'i-izm, *n.* servility. [person.
**Flurry,** fler'i, *n.* confused agitation.
**Flush,** flush, *n.* a rush of blood to the cheeks; freshness; *v.* to startle; *adj.* level with what adjoins.
**Fluster,** flus'ter, *n.* confusion; hurry; clatter.
**Flute,** floot, *n.* a musical pipe.
**Fluting,** floot'ing, *n.* fluted articles.
**Flutter,** flut'er, *v.* to move quickly; to excite.
**Fluvial,** floo'vi-al, *adj.* pertaining to a river.
**Flux,** fluks, *n.* the act of flowing.
**Fluxible,** fluks'ibl, *adj.* capable of being melted.
**Fluxion,** fluk'shun, *n.* a discharge.
**Fly,** fli, *v.* to move with wings; to depart suddenly; *n.* a winged insect.
**Fly-blow,** fli'blō, *n.* a fly's egg.
**Fly-boat,** fli-bōt, *n.* a narrow swift boat.
**Fly-wheel,** fli'wheel, *n.* a large wheel for equalising the motion of machinery.
**Foal,** fōl, *n.* the young of a mare or ass.
**Foam,** fōm, *n.* a froth.

**Fob, fob,** *n.* watch-pocket.
**Focal, fō'kal,** *adj.* relating to a focus.
**Focus, fō'kus,** *n.* point to which rays converge.
**Fodder, fod'er,** *n.* cattle food.
**Foe, fō,** *n.* an enemy.
**Fog, fog,** *n.* thick mist; a second crop of grass.
**Fogbank, fog'bangk,** *n.* a mass of sea fog.
**Fogey, fō'gi,** *n.* an old-fashioned dull fellow.
**Foggy, fog'i,** *adj.* misty.
**Foible, foi'bl,** *n.* a moral weakness.
**Foil, foil,** *v.* to defeat; *n.* metal leaf.
**Foist, foist,** *v.* to pass off.
**Fold, fold,** *v.* to enfold; to lay one part on another; *n.* an enclosed space.
**Folder, fold'er,** *n.* a folding instrument.
**Foliaceous, fol-i-ā'shus,** *adj.* pertaining to leaves.
**Foliage, fō'li-āj,** *n.* leaves.
**Foliate, fō'li-āt,** *n.* to make into leaf form.
**Foliation, fō-li-ā'shun,** *n.* the leafing process.
**Folio, fō'li-o,** *n.* a book comprising two leaves to the sheet.
**Folk, fōk,** *n.* people.
**Folklore, fōk'lōr,** *n.* the study of ancient customs.
**Folkmote, fōk'mōt,** *n.* an Anglo-Saxon popular assembly.
**Follicle, fol'i-kl,** *n.* a gland; a seed-vessel.
**Follow, fol'ō,** *v.* to go after; to practise; to imitate.
**Foment, fō-ment',** *v.* apply warm lotions; to incite.
**Fond, fond,** *adj.* foolishly loving.
**Fondle, fond'l,** *v.* to caress.
**Font, font,** *n.* vessel used for baptisms; an equipment of one sort of printing type.
**Fool, fool,** *n.* a weak-minded person; a jester.
**Foolery, fool'er-i,** *n.* folly.
**Foolhardy, fool-hard-i,** *adj.* rash.
**Foolscap, fools'kap,** *n.* paper of a well-known size.
**Foot, foot,** *n.* the extremity of the leg; the part on which a thing stands; 12 inches.
**Footfall, foot'fawl,** *n.* a footstep.
**Footpad, foot'pad,** *n.* a robber on foot.
**Footrule, foot'rool,** *n.* a foot measure.
**Footstep, foot'step,** *n.* a footmark.
**Fop, n.** a dandy.
**Foppery, fop'er-i,** *n.* vanity in dress.
**Forage, for'āj,** *n.* cattle food; *v.* to go in quest of such food.
**Foramen, fō-rā'men,** *n.* a small opening.
**Foray, for'ā,** *n.* a plunder raid.
**Forbear, for-bār',** *v.* to resist; to abstain.
**Forbearance, for-bār'ans,** *n.* clemency; patience.
**Forbid, for-bid',** *v.* to prohibit.
**Forbidding, for-bid'ing,** *adj.* repulsive.
**Force, fōrs,** *n.* strength; power; *v.* to compel.
**Forcemeat, fōrs'mēt,** *n.* meat chopped fine for stuffing.
**Forceps, for'seps,** *n.* a surgical pincers for grasping.
**Forcible, fōrs'ibl,** *adj.* with vigour; by force.
**Ford,** *n.* place where water can be crossed by wading.
**Fore, fōr,** *adj.* in front; *adv.* at the front; previously.
**Forearm, fōr'arm,** *v.* to prepare; to arm in advance. [evil.
**Forebode, fōr-bōd',** *v.* to feel a presentiment of
**Forecast, fōr-kast',** *v.* to foresee; to predict.
**Forecast, fōr'kast,** *n.* a prediction. [of a ship.
**Forecastle, fōr-kā'sl,** *n.* the raised deck at the front
**Foreclose,** *see* Business Dictionary Section.
**Forefather, fōr'fā-ther,** *n.* a male ancestor.
**Forefend, fōr-fend',** *v.* to avert.
**Forego, fōr-gō',** *v.* to give up; to forbear.
**Foregone, fōr-gon',** *adj.* concluded beforehand.
**Foreground, fōr'grownd,** *n.* the front portion of a picture.
**Forehanded, fōr-hand'ed,** *adj.* in advance.
**Forehead, fōr'hed,** *n.* the brow.
**Foreign, for'in,** *adj.* pertaining to another country.
**Foreland, fōr'land,** *n.* a headland. [the brow.
**Forelock, fōr'lock,** *n.* a lock of hair overhanging
**Foreman, fōr'man,** *n.* the leading man; an overseer. [bunals.
**Forensic, fō-ren'sik,** *adj.* pertaining to legal tri-
**Forerunner, fōr-run'ner,** *n.* a harbinger.
**Foresee, fōr-sē',** *v.* to anticipate; to know beforehand. [low water marks.
**Foreshore, fōr'shōr,** *n.* the part between high and
**Foreshortening, fōr-short'en-ing,** *n.* the representation of figures in projection.
**Forest, for'est,** *n.* a large tract of wooded land.
**Forestall, fōr-stawl',** *v.* to anticipate.
**Forester, for'est'er,** *n.* a forest keeper.
**Foretaste, fōr'tāst,** *n.* anticipation.
**Foretell, fōr-tel',** *v.* to predict.
**Forethought, fōr'thawt,** *n.* thought for the future.
**Foretop, fōr'top,** *n.* platform at head of foremast.
**Forewarn, fōr-wawrn',** *v.* to warn beforehand.
**Forfeit, for'fit,** *v.* to lose a right by an offence.
**Forge, fōrj,** *n.* a furnace; blacksmith's shop; *v.* to form; to counterfeit.
**Forger, fōrj'er,** *n.* one guilty of forgery.
**Forgery, fōrj'er-i,** *n.* the crime of counterfeiting.
**Forget, for-get',** *v.* to lose memory of; to neglect.
**Forgive, for-giv',** to overlook; to pardon.
**Forgiveness, for-giv'nes,** *n.* pardon.
**Fork, fork,** *n.* a pronged instrument.
**Forlorn, for-lorn',** *adj.* wretched; forsaken.
**Form,** *n.* shape; outline; mould; system.
**Formal, for'mal,** *adj.* according to form or ceremony.
**Formative, form'ā-tiv,** *adj.* giving form.
**Former, form'er,** *adj.* before in time or order.
**Formic, form'ik,** *adj.* relating to ants.
**Formidable, for'mid-abl,** *adj.* strong; fearful.
**Formula, for'mū-la,** *n.* a prescribed form.
**Formulary, for'mū-lar-i,** *n.* book of forms.
**Formulate, form'ū-lāt,** *v.* to express in precise terms.
**Fornicate, fōrni-kāt,** *v.* to act lewdly.
**Forsake, for-sāk',** *v.* to abandon.
**Forsooth, for-sooth',** *adv.* certainly; truly.
**Forswear, for-swār',** *v.* to deny on oath; to swear
**Fort, fōrt,** *n.* a small fortress. [falsely.
**Forte, fōrt,** *n.* that for which one has a special
**Forte, for'tā,** *adj.* and *adv.* loud. [aptitude.
**Forth,** *adv.* forward, onward.
**Forthcoming, forth-kum'ing,** *adj.* on the point of appearing.
**Forthwith, forth-with',** *adv.* at once.
**Fortification, for-tif-ik-ā'shun,** *n.* defensive works.
**Fortitude, for'ti-tūd,** *n.* strength to endure.
**Fortress, fort'res,** *n.* a fortified position.
**Fortuitous, for-tū'it-us,** *adj.* occurring by chance.
**Fortunate, for'tū-nāt,** *adj.* lucky; successful.
**Fortune, for'tūn,** *n.* one's lot; wealth; success.
**Forum, fō'rum,** *n.* a market place; a court.
**Forward, for'werd,** *adj.* in front; ready; presumptuous. [ness.
**Forwardness, for'werd-ness,** *n.* pertness; readi-
**Foss, fos,** *n.* a moat.
**Fossil, fos'il,** *n.* petrified remains.
**Fossorial, fos-ō'ri-al,** *adj.* burrowing.
**Foster, fos'ter,** *v.* to encourage; to bring up.
**Fosterage, fos'ter-aj,** *n.* the act of fostering.
**Foster-child, fos'ter-child,** *n.* a child brought up by one not its parent. [parents not his own.
**Foster-son,** *fos'ter-son, n.* boy brought up by
**Foul, fowl,** *adj.* impure, unfair, stormy.
**Foumart, foo'mārt,** *n.* the polecat. [metal.
**Found, fownd,** *v.* to originate; to endow; to cast
**Foundation, fownd-ā'shun,** *n.* base; groundwork.
**Founder, fownd'er,** *v.* to sink; *n.* one who establishes.
**Foundling, fownd'ling,** *n.* a deserted child.
**Foundry, fown'dri,** *n.* place where metal castings are made.
**Fountain, fown'tān,** *n.* a natural or artificial spring of water; the source of a thing.
**Fowl, fowl,** *n.* a poultry bird.
**Fowler, fow'ler,** *n.* a hunter or shooter of wild fowl.
**Fowling-piece, fow'ling-pēs,** *n.* gun for small shot.
**Fox, foks,** *n.* a wild animal that is hunted.
**Foxglove, foks'gluv,** *n.* a plant with glove-like
**Foxy, foks'i,** *adj.* cunning. [flowers.
**Fracas, fra-kā',** *n.* a disturbance.
**Fraction, frak'shun,** *n.* a small piece; any part of a
**Fractious, frak'shus,** *adj.* quarrelsome. [unit.
**Fracture, frakt'ūr,** *n.* a breakage of bone; *v.* to break.
**Fragile, fraj'il,** *n.* frail; brittle.
**Fragment, frag'ment,** *n.* a piece.
**Fragrance, frā'grans,** *n.* pleasant to the smell.
**Fragrant, frā'grant,** *adj.* of pleasing odour.
**Frail, frāl,** *adj.* weak.
**Frailty, frāl'ti,** *n.* weakness.
**Frame, frām,** *n.* a border; *v.* to shape.
**Framework, frām'werk,** *n.* an outline; a frame.
**Franc, frangk,** *n.* a French coin.
**Franchise, fran'chiz,** *n.* privilege; right of voting.
**Franciscan, fran-sis'kan,** a Franciscan friar.
**Frank,** *adj.* open; generous; candid.
**Frankincense, frangk'in-sens,** *n.* a sweet-smelling Arabian resin.
**Frantic, fran'tik,** *adj.* mad; raving.
**Frap, frap,** *v.* to strike.
**Fraternal, fra-ter'nal,** *adj.* brotherly.
**Fraternise, fra'ter-niz,** *v.* to associate like brothers.

**Fraternity,** fra-ter'nit-i, *n.* state of brotherhood.
**Fratricide,** frā'tri-sīd, *n.* the murder of a brother; a brother's murderer.
**Fraud,** frawd, *n.* imposture; trickery.
**Fraudulent,** fraw'dū-lent, *adj.* dishonest.
**Fraught,** frawt, *n.* charged with; loaded; full.
**Freak,** frēk, *n.* caprice; a monstrosity.
**Freakish,** frēk'ish, *adj.* capricious.
**Freckle,** frek'l, *n.* a brown skin-spot; *v.* to spot.
**Free,** frē, *adj.* at liberty; untrammelled; generous.
**Freebooter,** frē'boo-ter, *n.* one who robs and pillages.
**Freeborn,** frē'born, *adj.* born of free parents.
**Freedman,** frēd'man, *n.* liberated slave.
**Freedom,** frē'dom, *n.* liberty; licence; undue familiarity. [free from guidance.
**Freehand,** frē'hand, *adj.* drawing with the hand
**Freehold,** frē'hold, *n.* property in absolute ownership.
**Freeholder,** frē'holder, *n.* the owner of a freehold.
**Freeman,** frē'man, *n.* a man enjoying liberty; the holder of a civic privilege.
**Freestone,** frē'ston, *n.* stone that admits of free cutting; sandstone or grit.
**Freethinker,** frē'*th*ingk-er, *n.* a sceptic.
**Freewill,** frē-wil', *n.* freedom to exercise the will.
**Freeze,** frēz, *v.* to harden into ice.
**Freight,** frāt, *n.* cargo; goods in transport.
**Freightage,** frāt'ij, *n.* fee chargeable for freight.
**Frenzy,** fren'zi, *adj.* violent mental agitation.
**Frequency,** frē-kwen-si, *n.* oft repetition.
**Frequent,** frē'kwent, *adj.* often occurring.
**Fresco,** fres'ko, *n.* painting upon plaster.
**Fresh-blown,** *adj.* just budded.
**Freshet,** fresh'et, *n.* a pool, or stream of fresh water.
**Freshman,** fresh'man, *n.* a first year university student. [sea-water.
**Freshwater,** fresh'waw-ter, *n.* inland water, not
**Fret,** fret, *v.* to wear away; to irritate; to sorrow.
**Fretful,** fret'fool, *adj.* peevish.
**Fretwork,** fret'werk, *n.* ornamental perforated work.
**Friable,** frī'abl, *adj.* crumbly.
**Friar,** frī'er, *n.* a mendicant monk.
**Friary,** frī'ar-i, *n.* a monastery.
**Fribble,** frib'l, *v.* to trifle; *n.* one who trifles.
**Fricassee,** frik-as-sē', *n.* a stew of fowl, etc.
**Friction,** frik'shun, *n.* the act of rubbing; unpleasant relations.
**Friend,** frend, *n.* an intimate associate; a Quaker.
**Friendship,** frend'ship, *n.* mutual regard.
**Frieze,** frēz, *n.* a coarse cloth; an ornamented space below the cornice.
**Frigate,** frig'āt, *n.* a two-batteried warship.
**Fright,** frit, *n.* sudden terror; an absurd figure.
**Frighten,** frit'en, *v.* to make afraid.
**Frigid,** frij'id, *adj.* stiff; cold.
**Frill,** fril, *n.* a ruffle.
**Fringe,** frinj, *n.* ornamental bordering; the edge.
**Frippery,** frip'er-i, *n.* tawdry finery.
**Frisk,** frisk, *v.* to play about; to gambol.
**Frisket,** fris'ket, *n.* frame for holding paper while being printed.
**Frisky,** fris'ki, *adj.* lively; frolicsome.
**Frith,** frith, *n.* a narrow inlet; a forest.
**Fritter,** frit'er, *n.* a small pancake; *v.* to waste time.
**Frivolity,** friv-ol'it-i, *n.* heedless gaiety.
**Frivolous,** friv'ul-us, *adj.* trifling.
**Frizzle,** friz'l, *v.* to put in curls.
**Frock,** frok, *n.* a loose outer garment.
**Frog,** frog, *n.* an amphibian; ornamental braiding; part of hoof.
**Frolic,** frol'ik, *adj.* merry; *n.* gaiety.
**Frolicsome,** frol-ik-sum, *adj.* sportive; gay.
**Frond,** frond, *n.* the leafy expansion of palms and ferns. [*v.* to face.
, **frunt,** *n.* the forepart of a thing; boldness;
s, **frunt'āj,** *n.* the front of a building.
**frunt'al,** *adj.* relating to the front.
ir, **fron'tēr,** *n.* verge; border.
**Frontispiece,** fron'tis-pēs, *n.* an illustration at the beginning of a book.
**Frontlet,** front'let, *n.* a band worn on the forehead.
**Froth,** fro*th*, *n.* foam.
**Frothy,** fro*th*'i, *adj.* abounding in foam; empty.
**Frounce,** frowns, *v.* to plait.
**Frousy,** frow'zi, *adj.* tangled; rough.
**Froward,** frō'werd, *adj.* perverse, self-willed.
**Frown,** frown, *v.* to look angry; to knit the brows. [fruit.
**Fructescence,** frukt-es'ens, *n.* ripening time for
**Fructiferous,** frukt-if'er-us, *adj.* fruit-bearing.
**Fructify,** fruk'ti-fi, *v.* to fertilise.
**Frugal,** froo'gal, *adj.* economical.
**Frugality,** froo-gal'it-i, *n.* thrift; economy.
**Frugiferous,** froo-jif'er-us, *adj.* fruit-yielding.
**Fruit,** froot, *n.* produce.
**Fruiterer,** froo'ter-er, *n.* a fruit seller.
**Fruition,** froo-ish'un, *n.* enjoyment; possession.
**Fruitless,** froot'les, *adj.* useless; barren.
**Frumenty,** froo'men-ti, *n.* food made of wheat and milk boiled together.
**Frump,** frump, *n.* a dowdy.
**Frush,** frush, *n.* the frog of a horse's foot.
**Frustrate,** frus-trāt', *v.* to foil; to defeat.
**Fry,** frī, *v.* to cook in a pan over a fire; *n.* swarm of young fish.
**Fuchsia,** fū'shi-ă, *n.* a plant bearing red flowers.
**Fuddle,** fud'l, *v.* to make drunk.
**Fudge,** fudj, *n.* nonsense.
**Fuel,** fu'el, *n.* material for fire.
**Fugacious,** fū-gā'shus, *adj.* fleeting.
**Fugie-warrant,** fū'gi-wor'ant, *n.* writ to arrest an absconder.
**Fugitive,** fū'jit-iv, *n.* one who has escaped; one who flies from justice; *adj.* uncertain; fragmentary.
**Fugleman,** fū'gl-man, *n.* a soldier who acts as leader for others on drill; a ringleader.
**Fugue,** fūg, *n.* a musical composition in which one part follows or answers another.
**Fulcrum,** ful'krum, *n.* a support for a lever.
**Fulfil,** fool-fil', *v.* to achieve; to complete.
**Fulfilment,** fool-fil'ment, *n.* completion.
**Fulgency,** ful'jen-si, *n.* lustre; brightness.
**Full,** fool, *adj.* containing all that can be held; complete; abounding.
**Fuller,** fool'er, *n.* a cloth bleacher.
**Fullness,** fool'nes, *n.* the state of being full.
**Fulmar,** ful'mar, *n.* a species of petrel.
**Fulminate,** ful'min-āt, *v.* to thunder; to explode.
**Fulsome,** ful'som, *adj.* nauseous.
**Fulvous,** ful'vus, *adj.* tawny.
**Fumble,** fum'bl, *v.* to grope about; to handle clumsily.
**Fume,** fūm, *n.* smoke; heat; *v.* to get into a rage.
**Fumigate,** fū'mi-gāt, *v.* to cleanse with smoke.
**Fun,** fun, *n.* drollery; sport.
**Funambulate,** fūn-am'bū-lāt, *v.* to walk on a rope.
**Funambulist,** fūn-am'bū-list, *n.* a rope-walker.
**Function,** fungk'shun, *n.* an office; a ceremony.
**Functional,** fungk'shun-al, *adj.* pertaining to function.
**Functionary,** fungk'shun-ar-i, *n.* one who discharges certain functions. [enterprise.
**Fund,** fund, *n.* capital; money supply for any
**Fundament,** fund'ă-ment, *n.* the seat of the body.
**Fundamental,** fund-ă-ment'al, *adj.* essential; primary.
**Fundus,** fun'dus, *n.* the bottom of a thing.
**Funeral,** fū'ner-al, *n.* burial.
**Funereal,** fū-nē're-al, *adj.* dismal; mournful.
**Fungibles,** fun'ji-blz, *n.* perishable movables.
**Fungoid,** fung'goid, *adj.* like a fungus.
**Fungous,** fung'gus, *adj.* fungus-like.
**Fungus,** fung'gus, *n.* a spongy growth, as mushrooms.
**Funicle,** fū'nikl, *n.* a fibre or cord.
**Funicular,** fū-nik'ū-lar, *adj.* fibrous; *n.* a cable railway.
**Funk,** fungk, *n.* fright; *v.* to shrink from; to fear.
**Funnel,** fun'l, *n.* an instrument through which liquids are passed into closed vessels; a stack or tube for carrying off smoke.
**Funny,** fun'i, *adj.* droll.
**Fur,** fer, *n.* the hair of certain animals.
**Furacious,** fūr-ā'shus, *adj.* thievish.
**Furbelow,** fur'bē-lō, *n.* a flounce.
**Furbish,** fur'bish, *v.* to renovate; to polish.
**Furcate,** fur'kāt, *adj.* forked.
**Furious,** fū'ri-us, *adj.* raging; violent.
**Furl,** furl, *v.* to draw up.
**Furlong,** fur'long, *n.* 40 poles.
**Furlough,** fur'lō, *n.* leave of absence.
**Furnace,** fur'nās, *n.* an enclosed fire for melting substances.
**Furnish,** fur'nish, *v.* to supply; to equip.
**Furniture,** fur'nit-ūr, *n.* movable household fur- **Furrier,** fur'i-er, *n.* a dealer in furs. [nishings.
**Furriery,** fur'yer-i, *n.* fur-trading.
**Furrow,** fur'o, *n.* trench cut by a plough.
**Further,** fur'ther, *adv.* more distant; additional.
**Furtherance,** fur'ther-ans, *adj.* helping forward.
**Furthermost,** fur'ther-most, *adj.* the most distant.

**Furtive,** fur'tiv, *adj.* stolen; stealthy.
**Fury,** fūr'i, *n.* uncontrollable rage.
**Furze,** furz, *n.* prickly gorse.
**Fuscous,** fus'kus, *adj.* brown; faded.
**Fuse,** fūz, *v.* to melt; *n.* combustible substance for firing mines, shells, etc.
**Fusee,** fū-zē', *n.* a match.
**Fusible,** fū'zibl, *adj.* capable of being melted.
**Fusil,** fū'zil, *n.* a light musket.
**Fusileer,** fū-zi-lēr', *n.* formerly a soldier armed with a fusil; now a regimental title only.
**Fusillade,** fū'zil-ād, *n.* simultaneous discharge of
**Fusion,** fū'zhun, *n.* act of melting. [fire-arms.
**Fuss,** fus, *n.* bustle; flurry.
**Fustian,** fus'ti-an, *n.* a kind of cotton cloth.
**Fustic,** fus'tik, *n.* a West Indian wood used in dyeing. [a stick.
**Fustigation,** fus-ti-gā'shun, *n.* a thrashing with
**Fusty,** fus'ti, *adj.* mouldy; bad-smelling.
**Futile,** fū'til, *adj.* useless.
**Future,** fū'tūr, *n.* time to come; *adj.* that will be
**Futurity,** fū-tū'ri-ti, *n.* the time to come.
**Fuzz,** fuz, *v.* to break off in small fragments with a bissing sound.
**Fuzzy,** fuz'i, *adj.* covered with fuzz.

## G

**Gabardine,** gab-er-dēn', *n.* a loose outer garment.
**Gabble,** gab'l, *n.* idle talk; *v.* to jabber.
**Gabion,** gā'bi-on, *n.* a wicker basket filled with earth for defence.
**Gable,** gā'bl, *n.* the triangular part of the end of a
**Gad,** gad, *n.* a pointed bar; *v.* to roam. [house.
**Gadfly,** gad'fli, *n.* a fly that stings cattle.
**Gaelic,** gā'lik, *adj.* relating to the Gauls.
**Gaff,** gaf, *n.* hook for landing fish.
**Gaffer,** gaf'er, *n.* foreman.
**Gag,** gag, *v.* to stop the mouth.
**Gage,** gāj, *n.* a pledge.
**Gaiety,** gā'e-ti, *n.* mirth.
**Gainsay,** gān'sā, *v.* to deny.
**Gait,** gāt, *n.* manner of walking.
**Gaiter,** gā'ter, *n.* ankle covering.
**Gala,** gā'la, *n.* outdoor festivity.
**Galactometer,** gal-ak-tom'e-ter, *n.* an instrument for testing milk.
**Galaxy,** gal'aks-i, *n.* the Milky Way; any brilliant
**Galena,** gal-ē'nā, *n.* lead ore. [assembly.
**Gall,** gawl, *n.* bile; bitterness.
**Gallant,** gal'ant, *adj.* brave.
**Gallantry,** gal'an-tri, *n.* amorous attention; bravery.
**Galleon,** gal'e-on, *n.* an old-time Spanish vessel.
**Gallery,** gal'er-i, *n.* part of hall supported by pillars; an upper floor; a balcony.
**Galley,** gal'i, *n.* a low flat vessel.
**Galliard,** gal'yerd, *n.* a Spanish dance.
**Gallic,** gal'ik, *adj.* connected with France (Gaul).
**Gallicism,** gal'is-izm, *n.* a French expression.
**Gallinaceous,** gal-in-ā'shus, *adj.* pertaining to domesticated birds.
**Gallipot,** gal'i-pot, *n.* a small medicine-pot.
**Gallivant,** gal-i-vant', *v.* to go about in order to be
**Gallon,** gal'un, *n.* 4 quarts. [seen.
**Galloon, ga-**loon', *n.* a kind of ribbon or lace.
**Gallop,** gal-up, *v.* to advance by leaps.
**Galloway,** gal'ō-wā, *n.* a strong pony, originally from Galloway.
**Gallows,** gal'ōz, *n.* scaffold on which criminals are
**Galop,** gal'op, *n.* a dance. [executed.
**Galore,** gal-ōr', *adv.* plentifully.
**Galosh,** gā-losh', *n.* an overshoe.
**Galvanise,** gal'van-īz, *v.* to affect with galvanism.
**Galvanism,** gal'van-izm, *n.* a branch of electrical science.
**Gamble,** gam'bl, *v.* to play games for money; to
**Gambler,** gam'bler, *n.* one who gambles. [bet.
**Gamboge,** gam-bōj', *n.* a yellow pigment.
**Gambol,** gam'bol, *v.* to frisk about.
**Gambrel,** gam'brel, *n.* a horse's hock.
**Gamesome,** gām'sun, *adj.* playful.
**Gamester,** gām'ster, *n.* a gambler.
**Gamin,** gam'in, *n.* a street arab.
**Gammer,** gam'er, *n.* an old woman.
**Gammon,** gam'on, *n.* nonsense; thigh joint of bacon.
**Gamut,** gam'ut, *n.* the musical scale.
**Gander,** gan'der, *n.* a male goose.
**Gang, gang,** *n.* a band; a company; a crew.
**Ganger, gang'er,** *n.* foreman of labourers.
**Ganglion, gang'gli-on,** *n.* a tumour; a centre of nerve action.
**Gangrene,** gang'grēn, *n.* mortification.
**Gangway,** gang'wā, *n.* passage way between a ship and the shore.
**Gannet,** gan'et, *n.* a web-footed sea-bird.
**Gantry,** gan'tri, *n.* stand for barrels; crane plat-
**Gaol,** jāl, *n.* a prison. [form.
**Gape,** gāp, *v.* to yawn.
**Garage,** gar'ūzh, *n.* a storehouse for motor vehicles.
**Garbage,** gārb'āj, *n.* refuse; rubbish.
**Garble,** gārbl', *v.* to corrupt; to alter for selfish ends.
**Gargangtuan,** gār-gan'tū-an, *adj.* enormous.
**Gargle,** gār'gl, *v.* to rinse the throat without swallowing. [in stone.
**Gargoyle,** gār'goil, *n.* grotesque projecting figure
**Garish,** gār'ish, *adj.* showy.
**Garland,** gār'land, *n.* a wreath.
**Garlic,** gār'lik, *n.* a pungent, bulbous plant.
**Garment,** gār'ment, *n.* an article of clothing.
**Garner,** gār'ner, *v.* to store up.
**Garnet,** gār'net, *n.* a red precious stone.
**Garnish,** gār'nish, *v.* to adorn.
**Garniture,** gār'nit-ūr, *n.* that which ornaments.
**Garret,** gar'et, *n.* a top room.
**Garrison,** gar'i-son, *n.* band of soldiers occupying a
**Garrote,** gar'rot', *v.* to strangle. [fortress.
**Garrulity,** gar-ūl'it-i, *n.* loquacity.
**Garrulous,** gar'ū-lus, *adj.* talkative.
**Garter,** gār'ter, *n.* a band for holding the stocking up; badge of the Order of the Garter.
**Gas,** gas, *n.* a vaporous substance, such as that obtained from coal for lighting purposes.
**Gasconade,** gas'kon-ād, *n.* boastfulness.
**Gaseous,** gās'e-us, *adj.* of the nature of gas.
**Gash,** gash, *v.* to cut; *n.* a cut.
**Gasolene,** gas'o-lēn, a petroleum product.
**Gasp,** gasp, *v.* to labour for breath.
**Gastric,** gas'trik, *adj.* connected with the stomach.
**Gastronomic,** gas-tro-nom'ik, *adj.* relating to good eating.
**Gastronomy,** gas-tron'o-mi, *n.* the art of good eat-
**Gather,** gath'er, *v.* to assemble; to collect. [ing.
**Gaudy,** gaw'di, *adj.* showy.
**Gauge,** gāj, *n.* a measure; *v.* to measure.
**Gauger,** gāj'er, *n.* an official who measures excis-
**Gaunt,** gawnt, *adj.* emaciated. [able liquors.
**Gauntlet,** gawnt'let, *n.* a glove of mail; a long glove.
**Gauze,** gawz, *n.* transparent cloth or other open
**Gavel,** gav'el, *n.* a mallet. [material.
**Gawk,** gawk, *n.* a stupid person; *adj.* left, as in
**Gawky,** gawk'i, *adj.* ungainly. [left-handed.
**Gaze,** gāz, *v.* to stare; to look.
**Gazelle,** ga-zel', *n.* a small Arabian antelope.
**Gazette,** ga-zet', *n.* a newspaper; an official record.
**Gazetteer,** gaz-ēt-ēr', *n.* a geographical dictionary.
**Gazing-stock,** gāz'ing-stok, *n.* something set up for
**Gear,** gēr, *n.* dress; harness; tackle. [gazing at.
**Geese,** ges, *n. pl.* of goose. [fice; hell.
**Gehenna,** ge-hen'ā, *n.* the Hinnom valley of sacri-
**Gelatine,** jel'ā-tēn, *n.* a substance that dissolves under heat.
**Geld,** *v.* to castrate; *n.* tribute in olden times.
**Gelid,** jel'id, *adj.* icy.
**Gem,** jem, *n.* a precious stone; a jewel; *v.* to deck with jewels.
**Gemination,** jem-in-ā'shun, *n.* repetition.
**Gemini,** jem'-i-ni, *n.* the Twins, the stars Castor and Pollux.
**Gemmate,** jem'āt, *v.* bearing buds.
**Gender,** jen'der, *n.* sex.
**Genealogical,** jen-ē-al-oj'ik-al, *adj.* relating to lineage.
**Genealogy,** jen-ē-al'o-ji, *n.* study of descents.
**General,** jen'er-al, *n.* a commanding officer; *adj.* universal.
**Generalise,** jen'er-al-īz, *v.* to infer from collected instances.
**Generalissimo,** jen-er-al-is'i-mo, *n.* a leading general.
**Generality,** jen-er-al'it-i, *n.* the chief part.
**Generalship,** jen'er-al-ship, *n.* position of military command; military ability.
**Generate,** jen'er-āt, *v.* to procreate; to originate.
**Generation,** jen-er-ā'shun, *n.* the act of originating; offspring; people of the same period.
**Generative,** jen'er-ā-tiv, *adj.* possessing productive
**Generic,** jen-er'ik, *adj.* relating to a genus. [power.
**Generosity,** jen-er-os'it-i, *n.* kindness; liberality.
**Generous,** jen'er-us, *adj.* liberal; kind; bounteous.
**Genesis,** jen'e-sis, *n.* generation; the first book of the Bible.

**Genet,** jen'et, *n.* an animal of the civet type.
**Genetic,** jen-et'ik, *adj.* pertaining to production.
**Geneva,** jen-ē'va, *n.* a spirit flavoured with juniper.
**Genial,** jē'ni-al, *adj.* cheerful; sprightly.
**Geniculate,** jen-ik'ū-lat, *adj.* knotted.
**Genital,** jen'it-al, *adj.* pertaining to generation.
**Genius,** jē'ni-us, *n.* superior intellectual power.
**Genre,** zhangr, *n.* kind; style; pictures of rural
**Gens,** jenz, *n.* a clan; a tribe. [life.
**Genteel,** jen-tēl', *adj.* well-bred; graceful.
**Gentian,** jen'shan, *n.* a plant with a root used in medicine.
**Gentile,** jen'tīl, *n.* one other than a Jew.
**Gentility,** jen-til'it-i, *n.* good-breeding; politeness.
**Gentleman,** jent'l-man, *n.* one of good birth; a person of position or refinement.
**Gently,** jent'li, *adj.* softly.
**Gentry,** jen'tri, *n.* people of good position.
**Genuflect,** jen-ū-flekt', *v.* to bend the knee in reverence.
**Genuflexion,** jen-ū-flek'shun, *n.* the act of kneeling or curtseying.
**Genuine,** jen'ū-in, *adj.* unadulterated; true.
**Genus,** jē'nus, *n.* a group; a family.
**Geode,** jē'ōd, *n.* a hollow nodule of stone.
**Geodesy,** jē-od'is-i, *n.* the science of measuring the earth.
**Geogony,** jē-og'o-ni, *n.* the science of the formation of the earth.
**Geography,** jē-og'raf-i, *n.* the science of the earth's surface and inhabitants. [structure.
**Geology,** jē-ol'o-ji, *n.* the science of the earth's
**Geometry,** jē-om'ē-tri, *n.* the science of mensuration.
**Geonomy,** jē-on'o-mi, *n.* the science of the earth's physical laws. [terior.
**Georama,** jē-o-ram'ā, *n.* a view of the earth's in-
**Georgian,** jorj'i-an, *adj.* relating to the period of the Georges.
**Geranium,** jer-ā'ni-um, *n.* a favourite bedding plant.
**Germ,** jerm, *n.* a seed-bud; any rudimentary form.
**Germane,** jer-mān', *adj.* relevant; akin.
**Germinal,** jer'min-al, *n.* the seventh month of the calendar of the first French Revolution.
**Germinate,** jer'min-āt, *v.* to grow from a germ.
**Gerund,** jer'und, *n.* the part of a Latin verb representing a verbal noun.
**Gestant,** jest'ant, *adj.* laden.
**Gestation,** jes-tā'shun, *n.* pregnancy.
**Gesticulate,** jes-tik'ū-lāt, *v.* to make gestures.
**Gesture,** jest'ūr, *n.* expressive movement of the hand or body.
**Gewgaw,** gū'gaw, *n.* a showy trifle.
**Geyser,** gī'ser, *n.* a hot spring.
**Ghastliness,** gast'li-ness, *n.* pallor.
**Ghaut,** gawt, *n.* an Indian mountain pass or chain.
**Gherkin,** ger'kin, *n.* a small pickled cucumber.
**Ghetto,** get'ō, *n.* Jews' quarter.
**Ghost,** gōst, *n.* a spirit; the soul.
**Ghoul,** gool, *n.* a demon that devours the dead.
**Giant,** jī'ant, *n.* a man of great bulk; one of great
**Giantess,** jī'ant-es, *n.* a female giant. [powers.
**Giaour,** jowr, *n.* a term applied by the Turks to a person not of their own religion.
**Gib,** jib, *n.* arm of a crane.
**Gibberish,** gib'er-ish, *n.* unmeaning gabble.
**Gibbet,** jib'et, *n.* a gallows.
**Gibbous,** gib'us, *adj.* convex; pouched.
**Gibe,** jīb, *n.* a sneer; *v.* to sneer.
**Giblets,** jib'lets, *n.* eatable internal parts of fowls.
**Giddy,** gid'i, *adj.* unsteady; dizzy.
**Gifted,** gift'ed, *adj.* talented.
**Gigantic,** jī-gan'tik, *adj.* immense; enormous.
**Giggle,** gig'l, *v.* to titter.
**Gigot,** jig'ot, *n.* leg of mutton.
**Gild,** gild, *v.* to coat with gold or gold like substance.
**Gilding,** gild'ing, *n.* that which is gilded; the trade of gilding.
**Gills,** gills, *n.* a fish's breathing organs.
**Gilt,** *adj.* gilded.
**Gimlet,** gim'let, *n.* a boring tool.
**Gimp,** gimp, *n.* a kind of trimming.
**Gin,** jin, a distilled spirit; a machine for cleaning cotton.
**Ginger,** jin'jer, *n.* a pungent Indian root.
**Gingerbread,** jin'jer-bred, *n.* sweet bread flavoured
**Gingerly,** jin'jer-li, *adj.* cautiously. [with ginger.
**Gingham,** ging'ham, *n.* a kind of cloth.
**Gipsy,** jip'si, *n.* a member of a nomadic tribe.
**Girandole,** jir'an-dōl, *n.* a large-branched candlestick.
**Gird,** gerd, *v.* to bind; to encompass; to gibe.
**Girder,** gerd'er, *n.* a supporting piece of timber or
**Girdle,** gerd'l, *n.* a belt for the waist. [iron.
**Girth,** gerth, *n.* the belly-band of a saddle; measure round the waist.
**Gist,** jist, *n.* the chief point; the main tendency.
**Give,** giv, *v.* to bestow; to provide.
**Gizzard,** giz'erd, *n.* a fowl's muscular stomach.
**Glabrous,** glā'brus, *adj.* smooth; hairless; shiny.
**Glacial,** glā'si-al, *adj.* icy; frozen.
**Glacier,** glā'si-er, *n.* a field of snow or ice.
**Glacis,** glā'sis, *n.* the sloping bank of a fortification.
**Glad,** *adj.* joyful; well content.
**Glade,** glād, *n.* an opening in a wood.
**Gladiator,** glad-i-ā'tor, *n.* anciently a professional athlete.
**Glamour,** glam'ōr, *n.* fascination.
**Glance,** glans, *n.* a sudden look.
**Gland,** gland, *n.* a secreting organ of the body.
**Glanders,** gland'ers, *n.* a contagious disease in a horse's nose.
**Glandular,** gland'ū-ler, *adj.* connected with glands.
**Glandule,** gland'ūl, *n.* a small gland.
**Glare,** glār, *v.* to shine with lustre; *n.* a lustrous light; a penetrating look.
**Glaring,** glār'ing, *adj.* bright; notorious.
**Glass,** glās, *n.* a combination of silica and an alkali.
**Glauberite,** glaw'ber-īt, *n.* a mineral found in rock
**Glaucous,** glaw'kus, *adj.* sea-green colour. [salt.
**Glave,** glāv, *n.* a sword.
**Glaze,** glāz, *v.* to cover with glass.
**Glazier,** glāz'ī-ēr, *n.* one who inserts glass in frames.
**Glazing,** glāz'ing, *n.* the act of covering with glass; a vitreous substance used for covering.
**Gleam,** glēm, *n.* a beam of light; *v.* to glow.
**Glean,** glēn, *v.* to gather after reapers.
**Glebe,** glēb, *n.* church land.
**Gledge,** glej, *v.* to squint.
**Glee,** glē, *n.* mirth; a part song.
**Glen,** glen, *n.* a narrow valley.
**Glib,** glib, *adj.* voluble.
**Glimmer,** glim'er, *v.* to shine faintly.
**Glimmering,** glim'er-ing, *n.* a faint shining; an inkling.
**Glimpse,** glimps, *n.* a weak fitful light; a passing
**Glint,** glint, *v.* to shine; *n.* a quick gleam. [view.
**Glisten,** glis'n, *v.* to shine or sparkle.
**Glitter,** glit'er, *v.* to glisten; *n.* brilliance.
**Gloaming,** glō'ming, *n.* twilight.
**Gloat,** glōt, *v.* to look greedily or wickedly.
**Globe,** glōb, *n.* a sphere; the world.
**Globous,** glō'bus, *adj.* like a globe.
**Globule,** glob'ūl, *n.* a small globe.
**Glorify,** glō'ri-fī, *v.* to exalt; to cover with glory.
**Glory,** glō'ri, *n.* fame; renown; honour.
**Gloss,** glos, *n.* lustre.
**Glossary,** glos'er-i, *n.* a vocabulary of meanings.
**Glossitis,** glos-ī'tis, *n.* inflammation of the tongue.
**Glossy,** glos'i, *adj.* smooth and shining.
**Glottal,** glot'al, *adj.* relating to the tongue.
**Glottis,** glot'is, *n.* the opening to the windpipe.
**Gloze,** glōz, *v.* to wheedle; to flatter.
**Glucinum,** gloo-sī'num, *n.* a metal made from beryl.
**Glucose,** gloo'kōs, *n.* syrup obtained from fruits.
**Glue,** gloo, *n.* an adhesive substance obtained from boiled skins, hoofs, etc.
**Glum,** glum, *adj.* gloomy; sullen.
**Glume,** gloom, *n.* calyx of certain grasses.
**Glut,** glut, *v.* to cloy; to saturate.
**Gluten,** gloo'ten, *n.* the nutritive part of grain.
**Glutton,** glut'on, *n.* a greedy eater.
**Gluttonous,** glut'on-us, *adj.* addicted to gluttony.
**Glycerine,** glis'er-ēn, *n.* a neutral sticky liquid.
**Glycogen,** glī-kō'jen, *n.* animal starch.
**Glyph,** glif, *n.* a fluted architectural channel.
**Glyptics,** glip'tiks, *n.* engraving on precious stones.
**Glyptodon,** glip'to-don, *n.* a fossil armadillo.
**Gnarl,** nārl, *n.* a knot in wood.
**Gnarled,** nār'ld, *adj.* knotty.
**Gnash,** nash, *v.* to grind the teeth together.
**Gnat,** nat, *n.* a small stinging insect.
**Gnaw,** naw, *v.* to nibble into pieces; to bite.
**Gneiss,** nis, a kind of hard rock.
**Gnome,** nōm, *n.* a goblin.
**Gnomic,** nō'mik, *adj.* pertaining to the gnomic poets; sententious.
**Gnomon,** nō'mon, *n.* the pin of a dial.
**Gnostics,** nos'tiks, *n.* a sect combining the Christian with other philosophies.
**Gnu,** nū, *n.* a kind of antelope.
**Goad,** gōd, *v.* to stimulate; to urge; *n.* a sharp-pointed stick.

**Goal, gōl,** *n.* an objective; ending-place of a race.
**Goat, gōt,** *n.* a ruminating animal.
**Goatee, gōt-ē′,** *n.* pointed beard at end of chin.
**Gobbet, gob′et,** *n.* a lump; a mouthful.
**Gobelin, gob′e-lin,** *n.* a rich tapestry.
**Go-between, gō′bē-twēn,** *n.* a mediator.
**Goblet, gob′let,** *n.* a drinking cup.
**Goblin, gob′lin,** *n.* an evil spirit.
**God, god,** *n.* the Supreme Being.
**Goddess, god′es,** *n.* a female god.
**Godhead, god′hed,** *n.* divinity.
**Godly, god′li,** *adj.* pious.
**Godparents, god-pā′rents,** *n.* sponsors at baptism.
**Godsend, god′send,** *n.* an unexpected timely gift.
**Godsmith, god′smith,** *n.* an idol maker.
**God-speed, god′spēd,** *n.* a wish for a successful journey or undertaking.
**Godwit, god′wit,** *n.* a kind of snipe.
**Goffer, gof′er,** *n.* to plait.
**—es, gog′lz,** *n.* eye-shields.
**—t, gog′let,** *n.* a water cooler.
**—, gōld,** *n.* a precious mineral; money.
**—beater, gold′bē-ter,** *n.* a maker of gold leaf.
**Goliath, go-lī′ath,** *n.* a giant.
**Gondola, gon′do-la,** *n.* a Venetian boat.
**Gondolier, gon-do-lēr′,** *n.* one who rows a gondola.
**Gonfalon, gon′fa-lon,** *n.* a standard with streamers.
**Gong, gong,** *n.* a kind of drum.
**Good,** *adj.* virtuous; honourable; sound.
**Good-breeding, good-brēd′ing,** *n.* polished manners.
**Goodliness, good′li-nes,** *n.* kindliness.
**Goorkha, goor′ka,** *n.* a native of Nepal. [bird.
**Goosander, goos-an′der,** *n.* goose: web-footed
**Gopher, gō′fer,** *n.* prairie dog; a kind of wood.
**Gordian knot, gōr′di-an not′,** *n.* an inextricable difficulty.
**Gore, gōr,** *n.* blood; a triangular piece of cloth.
**Gorge, gorj,** *n.* a narrow passage; the throat.
**Gorgeous, gorj′e-us,** *adj.* splendid.
**Gorget, gorj′et,** *n.* a throat protection.
**Gorgon, gor′gon,** *n.* a fabled monster.
**Gorgonzola, gor-gon-zō′lā,** *n.* a kind of cheese.
**Gorilla, go-ril′ā,** *n.* a large anthropoid ape.
**Goring, gōr′ing,** *n.* a diagonal cut of cloth.
**Gormandize, gor′mand-īz,** *v.* to eat greedily.
**Gorse, gors,** *n.* a prickly shrub ; furze.
**Goshawk, gos′hawk,** *n.* a small hawk.
**Gosling, goz′ling,** *n.* a young goose. [tidings.
**Gospel, gos′pel,** *n.* the Christian revelation; good
**Gossamer, gos′am-er,** *n.* filmy cobweb.
**Gossip, gos′ip,** *n.* idle talk; a tattler.
**Gothic, *goth′*ik,** *adj.* in architecture, the style of high-pointed arches; romantic.
**Gothicism, *goth′*i-sizm,** *n.* Gothic style.
**Gouda, gow′da,** *n.* a kind of cheese.
**Gouge, gowj,** *n.* a scooping chisel; *v.* to force out.
**Gourd, goord,** *n.* a kind of melon.
**Gousty, gows′ti,** *adj.* dreary.
**Gout, gowt,** *n.* inflammation of the joints.
**Govern, guv′ern,** *v.* to rule; to direct.
**Governance, guv′er-nans,** *n.* government; control.
**Governess, guv′er-nes,** *n.* a female instructor.
**Government, guv′ern-ment,** *n.* the executive power; control; management.
**Grab, grab,** *v.* to seize.
**Grabble, grab′l,** *v.* to grope. [prayers at meals.
**Grace, grās,** *n.* elegance; neatness; mercy; favour;
**Graceful, grās′ful,** *adj.* becoming; elegant
**Graces, grās′ēs,** *n.* the three Greek goddesses, Euphrosyne, Aglaia, and Thalia; refinements.
**Gracile, gras′il,** *adj.* slight; slender.
**Gracious, grā′shus,** *adj.* merciful; benevolent.
**Grade, grād,** *n.* degree of rank; class; the slope of
**Gradient, grā′di-ent,** *n.* an incline. [a road.
**Gradual, grad′ū-al,** *adj.* by degrees.
**Graduate, grad′ū-āt,** *v.* to mark by degrees; one who has graduated at a university. [prosody.
**Gradus, grād′us,** *n.* a dictionary of Latin or Greek
**Graft, graft,** *v.* to incorporate one plant with another; *n.* a young scion.
**Grail, grāl,** *n.* the legendary holy vessel used by Christ at the Last Supper.
**Grain, grān,** *n.* a head of cereal plant; corn.
**Grained, grānd,** *adj.* coated with grains, or imita-
**—ı graining.** [grain in wood.
**—ıg, grān′ing,** *n.* painting in imitation of the
**—ivorous, gram-i-niv′er-us,** *adj.* feeding on grass.
**Grammar, gram′er,** *n.* the science of correct speaking or writing. [and emitting instrument.
**Gramophone, gram′o-fōn,** *n.* a sound-recording
**Grampus, gram′pus,** *n.* a fish of the dolphin
**Granary, gran′er-i,** *n.* storehouse for grain.
**Grand, grand,** *adj.* fine; large; superb; splendid.
**Grandam, gran′dam,** *n.* an old woman; a grand-
**Grandee, gran-dē′,** *n.* a Spanish noble. [mother.
**Grandeur, grand′yer,** *n.* splendour; vastness.
**Grandiloquent, grand-il′o-kwent,** *adj.* bombastic.
**Grandiose, grand′i-ōs,** *adj.* bombastic.
**Grand-jury, grand-jū′ri,** *n.* a first jury that decides whether a case calls for trial or not.
**Grange, grānj,** *n.* a farm-house.
**Granite, gran′it,** *n.* an igneous rock of great hardness.
**Granitic, gran-it′ik,** *adj.* pertaining to granite.
**Granivorous, gran-iv′er-us,** *adj.* grain-eating.
**Grant, grant,** *v.* to give; to bestow; *n.* the thing granted; deed of grant. [made.
**Grantee, grant-ē′,** *n.* the person to whom a grant is
**Granular, gran′ū-ler,** *adj.* consisting of granules.
**Granulate, gran′ū-lāt,** *v.* to break into grains.
**Granule, gran′ūl,** *n.* a grain particle.
**Granulous, gran′ū-lus,** *adj.* grain-like.
**Grape-shot, grāp′shot,** *n.* small shot that scatters when fired.
**Grapestone, grāp′stōn,** *n.* the seed of the grape.
**Graph, graf,** *n.* picture in lines.
**Graphic, graf′ik,** *adj.* well-drawn; vivid.
**Graphite, graf′it,** *n.* black lead.
**Graphoilte, graf′o-llt,** *n.* a kind of slate.
**Grapnel, grap′nel,** *n.* a small anchor.
**Grapple, grap′l,** *v.* to seize.
**Grasp, grasp,** *v.* to seize with the hand.
**Grasping, grasp′ing,** *adj.* greedy.
**Grass, gras,** *n.* green herbage.
**Grass-widow, gras′wid-o,** *n.* a wife temporarily parted from her husband.
**Grate, grāt,** *n.* bars forming place for fire; *v.* to rub against; to make a harsh sound.
**Grateful, grāt′ful,** *adj.* giving pleasure; thankful.
**Grater, grā′ter,** *n.* an instrument for grating.
**Grating, grā′ting,** *n.* the bars of a grate; *adj.* harsh.
**Gratis, grā′tis,** *adj.* for nothing.
**Gratitude, grat′it-ūd,** *n.* thankfulness.
**Gratuitous, gra-tū′it-us,** *adj.* free.
**Gratuity, gra-tū′it-i,** *n.* a present.
**Gravamen, grav-ā′men,** *n.* grievance; ground of complaint.
**Grave, grāv,** *adj.* sober; serious; *n.* spot of burial.
**Gravel, grav′el,** *n.* small stones; a disease of the kidneys.
**Gravely, grāv′li,** *adj.* seriously.
**Graveolent, grav-ē′o-lent,** *adj.* emitting a noxious
**Graver, grāv′er,** *n.* engraving tool. [smell.
**Gravid, grav′id,** *adj.* pregnant.
**Gravitate, grav′i-tāt,** *v.* to tend towards a centre of attraction. [seriousness.
**Gravity, grav′it-i,** *n.* a force which attracts weight;
**Gray, grā,** white mixed with black.
**Graybeard, grā′bērd,** *n.* a graybearded old man.
**Grayling, grā′ling,** *n.* a small fish of the salmon order.
**Graze, grāz,** *v.* to feed on grass; to pass lightly over.
**Grazier, grāz′i-er,** *n.* one who pastures cattle.
**Grazing, grāz′ing,** *n.* the act of feeding on grass.
**Grease, grēs,** *n.* animal fat.
**Great, grāt,** *adj.* large; famed; mighty.
**Grebe, grēb,** *n.* a water bird.
**Greed, grēd,** *n.* strong desire; covetousness.
**Greenback, grēn′bak,** *n.* name given to paper money generally in the United States.
**Greenery, grēn′er-i,** *n.* verdure.
**Greengage, grēn′gāj,** *n.* a kind of plum.
**Greenhorn, grēn′horn,** *n.* a raw youth.
**Greenhouse, grēn′hows,** *n.* a conservatory.
**Greet, grēt,** *v.* to salute.
**Greeting, grēt′ing,** *n.* a welcome.
**Gregarious, gre-gā′ri-us,** *adj.* moving in flocks.
**Gregorian, gre-gō′ri-an,** *adj.* in the manner of the chants introduced by Pope Gregory.
**Grenade, gre-nād′,** *n.* a small explosive shell.
**Grenadier, gren-ā-dēr′,** *n.* a soldier of the foot-guards; formerly a soldier who threw grenades.
**Grenadine, gren-a-dēn′,** *n.* a kind of silky dress fabric.
**Greyhound, grā′hownd,** *n.* a hunting dog.
**Griddle, grid′l,** *n.* a pan for baking cakes.
**Gridiron, grid′i-ern,** *n.* a hand-grate for broiling
**Grief, grēf,** *n.* sorrow; regret. [meats upon.
**Grievance, grēv′ans,** *n.* a burden; cause for grief;
**Grievous, grē′vus,** *adj.* painful. [hardship.
**Griffin, grif′in,** *n.* a fabulous creature.
**Grig, grig,** *n.* a sand-eel.

**Grill**, gril, *n.* a large fixed gridiron; *v.* to broil.
**Grilse**, grils, *n.* a young salmon.
**Grim**, grim, *adj.* forbidding; stern.
**Grimace**, grim-ās', *n.* contortion of the face.
**Grimalkin**, grim-al'kin, *n.* a cat.
**Grime**, grim, *n.* dirt deep-seated.
**Grimy**, grī'mi, *adj.* dirty; sooty.
**Grin**, grin, *n.* to smile with the teeth together.
**Grind**, grind, *v.* to crush to powder; to rub together.
**Grindstone**, grind'stōn, *n.* a stone on which tools are ground.
**Grip**, grip, *v.* to hold firmly; *n.* a small trench.
**Gripe**, grip, *v.* to seize; *n.* a pain in the bowels.
**Grisette**, griz'et', *n.* a gay young French workwoman.
**Grisly**, griz'li, *adj.* frightful.
**Grist**, *n.* corn for grinding.
**Gristle**, gris'l, *n.* cartilage.
**Gristly**, gris'li, *adj.* consisting of, or like, gristle.
**Gritty**, grit'i, *adj.* determined; having hard
**Grizzly**, griz'li, *adj.* grey. [particles.
**Groan**, grōn, *v.* to moan.
**Groat**, grōt, *n.* an old coin worth 4*d.*
**Groats**, grōts, *n.* grain of oats.
**Grocer**, grō'ser, *n.* a dealer in various food provisions.
**Grog**, grog, *n.* spirits and water.
**Grogram**, grog'ram, *n.* a coarse cloth.
**Groin**, grōin, *n.* the part of the body between the belly and the thigh.
**Groined**, groind, *adj.* having arched intersections.
**Groom**, groom, *n.* one who tends horses.
**Groomsman**, grooms'man, *n.* one who attends a bridegroom at his wedding.
**Groove**, groov, *n.* a furrow.
**Grope**, grōp, *v.* to feel for in the dark.
**Gross**, grōs, *adj.* coarse; rough; *n.* in bulk; 12 dozen.
**Grotesque**, grō-tesk', *adj.* fantastic.
**Grotto**, grot'o, *n.* a cool cavern.
**Ground-plot**, grownd'plot, *n.* a site.
**Ground-rent**, grownd'rent, *n.* rent received for ground.
**Grounds**, grownds, *n.* dregs; sediment.
**Groundsel**, grownd'sel, *n.* a plant bearing small yellow flowers. [basis.
**Ground-work**, grownd'werk, *n.* foundation;
**Group**, groop, *n.* persons or things collected together.
**Grouse**, grows, *n.* moor-fowl.
**Grout**, growt, *n.* coarse meal; lees; plaster.
**Grove**, grōv, *n.* a small wood.
**Grovelling**, grov'el-ing, *adj.* mean; abject.
**Grow**, grō, *v.* to develop; to increase by natural force.
**Growl**, growl, *v.* to murmur angrily.
**Growth**, grō*th*, *n.* development; a growing.
**Grub**, grub, *n.* larvæ of insects; *v.* to dig.
**Grubber**, grub'er, *n.* one who grubs; an agricultural implement. [envy; to murmur at.
**Grudge**, gruj, *n.* secret hatred; *v.* to regard with
**Gruel**, groo'el, *n.* meal boiled in water.
**Gruesome**, groo'sum, *adj.* ghastly; grim.
**Gruff**, gruf, *adj.* abrupt; stern.
**Grumble**, grum'bl, *v.* to express dissatisfaction.
**Grume**, groom, *n.* a clot.
**Grumous**, groo'mus, *adj.* thick; clotted.
**Grumpy**, grump'i, *adj.* mean; surly.
**Grunt**, grunt, *v.* to make a guttural sound; such a sound.
**Guano**, goo-ā'no, *n.* dung of sea-birds used as manure.
**Guarantee**, gar-an-tē', *n.* a warrant of surety; *v.* to undertake for another.
**Guard**, gārd, *v.* to watch or protect; *n.* man, men, or other guarding power.
**Guardage**, gārd-āj, *n.* wardship.
**Guardant**, gārd'ant, *adj.* with face to the onlooker.
**Guardian**, gārd'i-an, *n.* one who guards or protects.
**Gubernatorial**, gū-ber-nā-tō'ri-al, *adj.* pertaining to
**Gudgeon**, gud'jun, *n.* a river fish. [rule.
**Guerdon**, ger'don, *n.* a reward.
**Guerilla**, ger-il'ā, *n.* irregular warfare.
**Guess**, ges, *v.* to conjecture.
**Guesswork**, ges'werk, *n.* anything done by guess.
**Guest**, gest, *n.* an invited visitor.
**Guffaw**, guf-aw', *n.* a coarse laugh.
**Guidance**, gīd'ans, *n.* direction; advice.
**Guide**, gīd, *v.* to lead; to direct.
**Guidepost**, gīd'post, *n.* a roadside erection containing guiding hints.
**Guild**, gild, *n.* an association for mutual aid.
**Guildhall**, gild'hawl, *n.* the hall of a guild.
**Guile**, gīl, *n.* deceit; cunning.
**Guileful**, gīl'ful, *adj.* crafty.
**Guileless**, gīl'les, *adj.* free from deceit.
**Guilt**, gilt, *n.* crime; wickedness [for a crime.
**Guilty**, gilt-i, *adj.* wicked; criminal; responsible
**Guinea**, gin'i, *n.* an old gold coin worth 21*s.*
**Guitar**, gi-tär', *n.* a stringed musical instrument.
**Gulch**, gulsh, *n.* a ravine. [coast line; an abyss.
**Gulf**, gulf, *n.* an arm of sea breaking away from the
**Gull**, gul, *n.* a sea fowl; *v.* to deceive.
**Gullet**, gul'et, *n.* the throat passage.
**Gullibility**, gul-i-bil'it-i, *n.* trickery.
**Gully**, gul'i, *n.* a ravine.
**Gulp**, gulp, *v.* to swallow quickly without masticating. [part enclosing the teeth.
**Gum**, gum, *n.* an adhesive substance; the fleshy
**Gumption**, gump'shun, *n.* sagacity.
**Gun**, gun, *n.* a fire-arm; a cannon.
**Gunnery**, gun'er-i, *n.* the science of artillery.
**Gunny**, gun'i, *n.* a kind of sacking.
**Gunwale**, gun'wāl, *n.* the upper edge of a ship's side.
**Gurgle**, gur'gl, *v.* a noisy flow or current.
**Gurnard**, gur'nard, *n.* a kind of fish.
**Gush**, gush, *v.* to flow copiously; *n.* effusive sentiment. [garment.
**Gusset**, gus'et, *n.* an angular piece let into a
**Gust**, gust, *n.* a sudden rush of wind; relish.
**Gustatory**, gust'a-to-ri, *adj.* pertaining to the taste.
**Gusto**, gus'to, *n.* enthusiasm; relish.
**Gusty**, gust'i, *adj.* fitful; stormy.
**Gut**, gut, *n.* the alimentary canal.
**Gutta-percha**, gut'a-perch'a, *n.* the solidified juice of certain trees.
**Gutter**, gut'er, *n.* channel for carrying off water.
**Guttural**, gut'er-al, *adj.* formed in the throat.
**Guy**, gī, *n.* a steadying rope; an outlandish figure.
**Guzzle**, guz'l, *v.* to drink greedily.
**Gymnasium**, jim-nā'zi-um, *n.* place for athletic exercise. [nastics.
**Gymnast**, jim'nast, *n.* one who practises gym-
**Gymnastics**, jim-nas'tiks, *n.* athletics.
**Gyp**, jip, *n.* a Cambridge college servant.
**Gypseous**, jip'sē-us, *adj.* consisting of or like gypsum.
**Gypsum**, jip'sum, *n.* sulphate of lime.
**Gyration**, ji-rā'shun, *n.* whirling round.
**Gyroscope**, ji'ro-skōp, *n.* an instrument for testing
**Gyves**, jīvs, *n.* fetters. [rotary movements.

**Habeas Corpus**, hā'be-as cor'pus, *n.* writ to produce a prisoner and specify reasons for his detention.
**Haberdasher**, hab'er-dash-er, *n.* a seller of drapery smallwares.
**Habiliment**, hab-il'i-ment, *n.* a garment; attire.
**Habit**, hab'it, *n.* custom; appearance; dress.
**Habitable**, hab'it-abl, *adj.* that may be lived in.
**Habitat**, hab'i-tat, *n.* natural abode.
**Habitation**, hab-it-ā'shun, *n.* a dwelling; act of inhabiting.
**Habitual**, ha-bit'ū-al, *adj.* customary.
**Habituate**, ha-bit'ū-āt, *v.* to accustom.
**Hack**, hak, *v.* to cut; *n.* a horse kept for hire; a literary drudge. [cough.
**Hacking**, hak'ing, *adj.* short and broken, as a
**Hackle**, hak'l, *v.* to separate.
**Hackler**, hak'ler, *n.* a flax-dresser.
**Hackney**, hak'ni, *n.* a hack; *v.* to make common.
**Hackneyed**, hak'nid, *adj.* much-used; let for hire.
**Haddock**, had'ok, *n.* a sea fish.
**Hades**, hā'dēz, *n.* hell.
**Haft**, haft, *n.* a handle.
**Haggard**, hag'erd, *adj.* lean; wild-looking.
**Haggis**, hag'is, *n.* a Scotch stew.
**Haggle**, hag'l, *v.* to cavil; to mangle.
**Hagiography**, hag'i-og'ra-fe, *n.* the last of the three Jewish divisions of the Old Testament.
**Hagiology**, hag-i-ol'ō-ji, *n.* lives of saints.
**Hail**, hāl, *v.* to greet; frozen rain.
**Hake**, hāk, *n.* a gadoid fish.
**Halcyon**, hal'si-on, *adj.* happy; calm; *n.* the kingfisher.
**Hale**, hāl, *adj.* hearty; robust; *v.* to drag.
**Half-bred**, hâf'bred, *adj.* underbred.
**Half-caste**, hâf-kast, *n.* one having one parent a Hindu and the other a European; any half-breed.
**Half-pay**, hâf'pā, *n.* an officer's reduced pay.
**Halibut**, hal'i-but, *n.* a large flat sea-fish.

**Hallcore,** hal'ī-kōr, *n.* a dugong.
**Halldom,** hal'ī-dom, *n.* holiness; an Old English oath. [public room.
**Hall,** hawl, *n.* a large entrance passage; large
**Halleluiah,** hal-ē-loo'ya, *n.* praise to God.
**Halloo,** hal-loo', *n.* a cry to draw attention; a hunting call.
**Hallucinate,** hal-ū'sin-āt, *v.* to suffer illusion.
**Hallucination,** hal-lū-sin-ā'shun, *n.* a delusion.
**Halo,** hā'lo, *n.* a luminous circle.
**Halt,** hawlt, *v.* to stop; *n.* the lame.
**Halter,** hawl'ter, *n.* head-rope for horse; hangman's rope.
**Halting,** hawlt'ing, *adj.* holding back.
**Halve,** hāv, *v.* to divide into two equal parts.
**Halyard,** hal'yard, *n.* rope for hoisting sails.
**Ham,** *n.* back of the thigh; a cured pig's thigh.
**Hames,** hāmz, *n.* a sort of horse-collar.
**Hamlet,** ham'let, *n.* a small village.
**Hammer,** ham'er, *n.* a tool for driving or sticking.
**Hammock,** ham'ok, *n.* a swinging resting place.
**Hampered,** ham'perd, *pa.p.* impeded.
**Hamstring,** ham'string, *n.* the tendon of the ham.
**Hanaper,** han'ā-per, *n.* old word for receptacle for papers, treasure, etc.
**Hand, hand,** *n.* the extremity of the arm below the wrist; a worker; *v.* to give to.
**Handcuff,** hand'kuf, *n.* shackles for the wrist.
**Handfast,** hand'fast, *n.* handle; grip; a betrothal.
**Handicap,** hand'ī-kap, *v.* to place at a disadvantage; to equalise by burdening what is superior.
**Handicraft,** hand'ī-kraft, *n.* labour by hand.
**Handiwork,** hand'ī-werk, *n.* work done by the hands. [wiping the nose.
**Handkerchief,** hand'ker-chif, *n.* cloth used for
**Handle,** hand'l, *v.* to lay hold of; to discuss.
**Handmaid,** hand'mād, *n.* a female servant.
**Handsel,** hand'sel, *n.* a first use.
**Handsome,** han'sum, *adj.* attractive; good-looking.
**Handspike,** hand-spīk, *n.* a wooden lever.
**Handstaves,** hand'stāvs, *n.* javelins.
**Handy,** hand'ī, *adj.* ready; dexterous; near.
**Hang,** hang, *v.* to suspend.
**Hangar,** hang'ar, *n.* covered shed for aeroplane.
**Hanger-on,** hang'er-on, *n.* a dependent.
**Hangings,** hang'ings, *n.* hanging draperies.
**Hangman,** hang'man, *n.* public executioner.
**Hank,** hangk, *n.* two or more skeins of thread tied together.
**Hanker,** hangk'er, *v.* to desire eagerly.
**Hanky-panky,** hangk'ī-pangk'ī, *n.* jugglery.
**Hansom,** han'som, *n.* a two-wheeled cab.
**Hap,** hap, *n.* chance; hazard.
**Haphazard,** hap-haz'erd, *n.* mere chance.
**Hapless,** hap'les, *adj.* unlucky.
**Haply,** hap'li, *adv.* by chance.
**Harangue,** ha-rang', *n.* a pompous speech.
**Harass,** har'as, *v.* to torment; to hamper.
**Harbinger,** hār'bin-jer, *n.* a forerunner.
**Harbour,** hār'bur, *n.* shelter for ships.
**Harbourer,** hār'bur-er, *n.* one who harbours.
**Hard,** hārd, *adj.* firm; solid; severe.
**Harden,** hārd'en, *v.* to make hard.
**Hardihood,** hārd'ī-hood, *n.* strength; power of endurance.
**Hardiness,** hārd'ī-ness, *n.* boldness; assurance; capability of resistance to severity.
**Hardly,** hārd'li, *adv.* scarcely; harshly.
**Hardship,** hārd'ship, *n.* severe toil; want.
**Hard-visaged,** hārd'viz'ājd, *adj.* of severe countenance.
**Hardware,** hārd'wār, *n.* iron wares. [ance.
**Hardy,** hārd'ī, *adj.* strong; resolute.
**Hare,** hār, *n.* a wild animal having a divided upper
**Harebrained,** hār'brānd, *adj.* reckless. [lip.
**Harelip,** hār'lip, *n.* a divided upper lip.
**Harem,** hār'em, *n.* part of house allotted to women in Eastern countries.
**Haricot,** har'ī-kō, *n.* a stew of mutton and vegetables; a kidney bean.
**Harlequin,** hār'le-kwin, *n.* a character in a panto-
**Harlot,** hār'lot, *n.* a prostitute. [mime.
**Harm,** hārm, *n.* injury.
**Harmonicon,** hār-mon'ik-on, *n.* a mouth organ.
**Harmonics,** hār-mon'iks, *n.* the science of harmony.
**Harmonious,** hār-mō'nī-us, *adj.* in concord.
**Harmonise,** hār'mon-īz, *v.* to make harmonious.
**Harmonium,** hār-mō'nī-um, *n.* a boxed-keyed and treadled reed instrument of music.
**Harmony,** hār'mon-ī, *n.* accord of sounds; fitness; agreement.
**Harp,** hārp, *n.* a stringed musical instrument; *v.* to dwell insistently on anything.
**Harper,** hārp'er, *n.* a harp player.
**Harpoon,** hār-poon', *n.* a dart to use against whales. [instrument.
**Harpsichord,** hārp'sī-kōrd, *n.* an ancient keyed
**Harpy,** hār'pi, *n.* one who preys on others.
**Harridan,** har'ī-dan, *n.* a hag.
**Harrier,** har'ī-er, *n.* a hound used for hare hunting.
**Harrow,** har'ō, *n.* a toothed instrument for breaking up land.
**Harrowing,** har'ō-ing, *adj.* distressing.
**Harry,** har'ī, *v.* to harass; to plunder.
**Harsh,** hārsh, *adj.* cruel; severe.
**Hart,** hārt, *n.* a full-grown stag.
**Hartebeest,** hār-tī-bēst, *see* Gnu.
**Hartshorn,** hārts'horn, *n.* a solution of ammonia.
**Harum-skarum,** hār'um-skā'rum, *adj.* flighty; rash.
**Harvest,** hār'vest, *n.* the time for gathering crops; the crops gathered.
**Hash,** hash, *v.* to mince; to hack.
**Haslet,** haz'let, *n.* eatable entrails.
**Hasp,** hasp, *n.* a clasp.
**Hassock,** has'sok, *n.* a foot cushion; a kneeling
**Hastate,** hast'āt, *adj.* spear-shaped. [mat.
**Hat,** hat, *n.* a head covering.
**Hatch,** hach, *v.* to produce from eggs; to shade.
**Hatchery,** hach'er-ī, *n.* place for hatching.
**Hatchet,** hach'et, *n.* a small axe.
**Hatchway,** hach'wā, *n.* an opening in a ship's deck.
**Hateful,** hāt'ful, *adj.* odious; detestable.
**Hatred,** hāt'red, *n.* extreme dislike.
**Hatter,** hat'er, *n.* a hat maker.
**Haughty,** haw'ti, *adj.* proud; arrogant.
**Haul,** hawl, *v.* to drag; to pull in.
**Hauler,** hawl'er, *n.* one who hauls.
**Haulm,** hawm, *n.* stubble; straw.
**Haunch,** hawnsh, *n.* the thigh.
**Haunt,** hawnt, *v.* to frequent; to visit.
**Haunted,** hawnt'ed, *adj.* frequented by a ghostly visitant.
**Hautboy,** hō'boi, *n.* a reed instrument.
**Hauteur,** hō-ter', *n.* pride; an arrogant manner.
**Havana,** hav-an'ā, *n.* a cigar of an Havana brand.
**Haven,** hāv'en, *n.* a shelter for ships.
**Haversack,** hav'er-sak, *n.* a soldier's knapsack.
**Havoc,** hav'ok, *n.* general waste; slaughter.
**Haw,** haw, *n.* the seed-vessel of the thorn; hesitant speech. [with goods for sale.
**Hawk,** hawk, *n.* a bird of prey; *v.* to go about
**Hawker,** hawk'er, *n.* one who hawks goods.
**Hawk-eyed,** hawk'īd, *adj.* with hawk-like eyes.
**Hawser,** hawz'er, *n.* a large rope.
**Hawthorn,** haw'thorn, *n.* a hedge shrub.
**Hay,** hā, *n.* dried grass.
**Hazard,** haz'ard, *n.* chance; danger.
**Hazardous,** haz'er-dus, *adj.* dangerous.
**Haze,** hāz, *n.* light mist; obscurity.
**Hazel,** hā'zel, *n.* a shrub bearing nuts.
**Hazy,** hā'zi, *adj.* foggy; misty.
**Headache,** hed'āk, *n.* pain in the head.
**Headland,** hed'land, *n.* a point of land jutting into the sea.
**Headlight,** hed'līt, *n.* light carried in front of a ship.
**Headlong,** hed'long, *adv.* rashly; madly.
**Headquarters,** hed-kwawrt'ers, *n.* the quarters of a commanding officer.
**Headsman,** heds'man, *n.* a public official who beheads.
**Headstall,** hed'stawl, *n.* part of a bridle.
**Headstrong,** hed'strong, *adj.* self-willed; impetuous.
**Headway,** hed'wā, *n.* a ship's progress.
**Heady,** hed'ī, *adj.* rash; headstrong.
**Heal,** hēl, *v.* to cure; to repair; to subdue.
**Healer,** hēl'er, *n.* one who heals; a doctor.
**Health,** helth, *n.* freedom from disease.
**Healthful,** helth'ful, *adj.* in a healthy condition.
**Heap,** hēp, *n.* a pile; a mass; *v.* to amass; to make into a heap. [bend; to listen to.
**Hear,** hēr, *v.* to perceive by the ear; to compre-
**Hearken,** hārk'en, *v.* to listen.
**Hearsay,** hēr'sā, *adj.* common rumour.
**Hearse,** hers, *n.* conveyance for carrying coffins at funerals.
**Heart,** hārt, *n.* the organ that circulates the blood; courage; affection.
**Heartburn,** hārt'bern, *n.* an acid rising at the
**Hearten,** hārt'en, to stimulate. [stomach.
**Hearth,** hārth, *n.* floor for a fire.
**Hearthstone,** hārth'stōn, *n.* the stone or space fronting the fireplace.

**Heartless,** hârt'less, *adj.* devoid of feeling or courage.
**Hearty,** hârt'i, *adj.* warm; generous; healthy.
**Heat,** hēt, *n.* that which gives warmth.
**Heath,** hēth, *n.* barren land; moor.
**Heathen,** hēth'en, *n.* a pagan.
**Heathendom,** hēth'en-dom, *n.* countries where heathenism prevails.
**Heather,** heth'er, *n.* ling; heath.
**Heave,** hēv, *v.* to raise; to pant; to swell.
**Heaven,** hev'n, *n.* the abode of the blessed; the sky.
**Heaven-born,** hevn'bawrn, *adj.* inspired.
**Heaviness,** hev'i-nes, *adj.* dulness; oppressiveness; melancholy.
**Hebdomad,** heb'do-mad, *n.* the number seven.
**Hebdomadal,** heb-dom'a-dal, *adj.* weekly.
**Hebetate,** heb'e-tāt, *v.* to render blunt or dull.
**Hebetude,** heb'ē-tūd, *n.* the act of making blunt.
**Hebraic,** hē-brā'ik, *adj.* pertaining to the Hebrews.
**Hebraise,** hē'brā-īz, *v.* to change to Hebrew.
**Hebraist,** hē'brā-ist, *n.* one learned in Hebrew.
**Hecatomb,** hek'ā'toom, *n.* sacrifice of 100 victims; any great sacrifice.
**Heckle,** hek'l, *v.* to comb; to badger with questions.
**Hectic,** hek'tik, *adj.* a fevered condition.
**Hectogramme,** hek'to-gram, *n.* a weight of 100 grammes.
**Hector,** hek'tor, *v.* to bully.
**Hedge-born,** hedj'bawrn, *adj.* of obscure birth.
**Hedonism,** hē'don-izm, *n.* the theory that happiness is the chief good.
**Heed,** hēd, *v.* to notice; *n.* caution; attention.
**Heft,** heft, *n.* handle; heaving.
**Hegemony,** hē'jem-o-ni', *n.* leadership.
**Heifer,** hef'er, *n.* a young cow.
**Height,** hīt, *n.* a hill.
**Heighten,** hī'ten, *v.* to raise higher; to improve.
**Heinous,** hā'nus, *adj.* wicked; atrocious.
**Heir,** ār, *n.* one who inherits, or is entitled to inherit. [ledged heir.
**Heir-apparent,** ār-ap-pā'rent, *n.* a legally acknow-
**Heirless,** ār'les, *adj.* without heir.
**Heirloom,** ār'loom, *n.* any personal property which descends to the heir-at-law and cannot be sold.
**Heir-presumptive,** ār-pre-zumpt'iv, *n.* one who is heir if no nearer relative be born.
**Heliacal,** hē-lī'-ak-al, *adj.* emerging from or passing into the sun's light.
**Helical,** hel'ik-al, *adj.* spiral.
**Heliograph,** hē'li-o-graf, *v.* to communicate by heliostat or other sun reflector.
**Heliolatry,** hē-li-ol'ā-tri, *n.* sun worship.
**Heliostat,** hē'li-o-stat, *n.* a reflecting instrument.
**Helix,** hē'liks, *n.* a spiral.
**Hell,** *n.* abode of evil spirits; place of torment.
**Hellebore,** hel'e-bōr, *n.* a plant whose root is a purgative. [a Jew practising Greek.
**Hellenist,** hel'len-ist, *n.* one learned in Greek;
**Helm,** helm, *n.* steering apparatus of a ship.
**Helmet,** hel'met, *n.* armour covering for the head.
**Helminthology,** hel-min-*thol*'o-ji, *n.* the study of
**Helot,** hē'lot, *n.* a Spartan slave. [worms.
**Help,** help, *v.* to aid; to assist; *n.* provision.
**Helpmeet,** help'mēt, *n.* a consort or companion.
**Helve,** helv, *n.* the handle of an axe.
**Helvetic,** hel-vet'ik, *adj.* pertaining to Switzerland.
**Hem,** hem, *v.* the stitched or woven border of a garment; *n.* a short cough.
**Hematology,** hē-mat-ol'o-ji, *n.* science of the blood.
**Hemiptera,** hem-ip'ter-ā, *n.* four-winged insects.
**Hemisphere,** hem'is-fēr, *n.* a half globe.
**Hemistich,** hem-i-stik, *n.* an incomplete line of verse.
**Hemlock,** hem'lok, *n.* a poisonous plant.
**Hemorrhage,** hem'or-āj, *n.* loss of blood.
**Hemorrhoids,** hem'or-oids, *n.* piles.
**Hemp,** hemp, *n.* a plant used for cordage making.
**Hen,** hen, *n.* female fowl or bird.
**Henbane,** hen'bān, *n.* a poisonous plant.
**Hencoop,** hen'koop, *n.* a large cage for poultry.
**Henna, hen'ā,** *n.* an Oriental dye pigment.
**Henpecked,** hen'pekt, *adj.* ruled by one's wife.
**Henwife,** hen'wif, *n.* a woman who tends poultry.
**Hepatic,** he-pat'ik, *adj.* pertaining to the liver.
**Heptade,** hep'tād, *n.* number or total of seven.
**Heptagon,** hep'tā-gon, *n.* a figure of seven equal sides. [rulers.
**Heptarchy,** hep'tar-ki, *n.* government by seven
**Herald,** her'ald, *n.* a forerunner; *v.* to proclaim.
**Heraldic,** her-al'dik, *adj.* pertaining to heraldry.
**Heraldry,** her'ald-ri, *n.* the science of heraldic matters.
**Herb,** herb, *n.* a plant whose stem dies every year.
**Herbaceous,** herb-ā'shus, *adj.* pertaining to herbs.
**Herbal,** herb'al, *n.* a book on plants.
**Herbarium,** herb-ā'ri-um, *n.* a collection of plants.
**Herbiferous,** herb-if'er-us, *adj.* bearing herbs.
**Herbivorous,** herb-iv'er-us, *adj.* herb-eating.
**Herborise,** herb'o-riz, *v.* to botanise. [gigantic.
**Herculean,** her-kū'll-an, *adj.* difficult; very strong;
**Herd,** *n.* a collection *of beasts*; a flock; *v.* to run in company.
**Herdsman,** herds'man, *n.* one who tends cattle.
**Here,** heer, *adj.* position.
**Hereditament,** her-e-dit'a-ment, *n.* inheritable property. [heritance.
**Hereditary,** her-ed'it-ā-ri, *adj.* descending by in-
**Heredity,** her-ed'it-i, *n.* transmission of ancestral qualities.
**Heresy,** her'es-i, *n.* unsound doctrine.
**Heretic,** her'e-tik, *n.* an unbeliever.
**Heretical,** her-et'ik-al, *adj.* relating to heresy.
**Heritable,** her'it-abl, *adj.* capable of being in-
**Heritage,** her'it-āj, *n.* an inheritance. [herited.
**Hermaphrodite,** her-maf'ro-dit, *n.* an animal or plant combining the male and female sexual characteristics.
**Hermetic,** her-met'ik, *adj.* perfectly close.
**Hermit,** her'mit, *n.* one who lives in solitude.
**Hermitage,** her'mit-āj, *n.* a hermit's abode.
**Hernia,** her'ni-a, *n.* rupture.
**Hero,** hē'ro, *n.* one who does notable deeds.
**Heroic,** hēr-ō'ik, *adj.* valorous; daring.
**Heroine,** her'ō-in, *n.* a female hero.
**Heroism,** her'o-izm, *n.* bravery.
**Heron,** her'on, *n.* a large water-fowl.
**Herpes,** her'pēz, *n.* certain skin diseases.
**Herpetology,** her-pet-ol'o-ji, *n.* the natural history of reptiles.
**Hesitancy,** hez'i-tan-si, *n.* wavering.
**Hesitate,** hez'it-āt, *v.* to waver.
**Hesper,** hes'per, *n.* Venus, the evening star.
**Hesperian,** hes-pē'ri-an, *adj.* western.
**Heterodox,** het'e-ro-doks, *adj.* heretical.
**Heterodoxy,** het'e-ro-dok-si, *n.* heresy.
**Heterogeneous,** het-er-ō-jēn'ē-us, *adj.* of another kind.
**Heterogenesis,** het-er-ō-jen'es-is, *n.* spontaneous
**Hew,** hū, *v.* to cut vigorously. [generation.
**Hexagon,** heks'a-gon, *n.* a figure of six equal sides.
**Hexahedron,** heks-a-hē'dron, *n.* a cube.
**Hexameter,** heks-am'e-ter, *n.* a verse of six metrical feet.
**Hexapod,** heks'ā-pod, *n.* a six-footed animal.
**Hiatus,** hī-ā'tus, *n.* a gap; an opening.
**Hibernal,** hī-ber'nal, *adj.* wintry.
**Hibernate,** hī'-ber-nāt, *v.* to pass the winter in torpor. [*n.* an Irishman.
**Hibernian,** hī-ber'ni-an, *adj.* relating to Ireland;
**Hiccough,** hik'up, *n.* a spasmodic cough.
**Hickory,** hik'o-ri, *n.* an American nut-bearing tree.
**Hidalgo,** hi-dal'go, *n.* a Spanish nobleman.
**Hidden,** hid'n, *adj.* concealed.
**Hide,** hīd, *n.* the skin of a beast; an old land measure; *v.* to conceal.
**Hidebound,** hīd'bownd, *adj.* having the skin or outer covering too closely attached; con-
**Hideous,** hid'e-us, *adj.* frightful. [ventional.
**Hiding,** hī'ding, *n.* a thrashing; concealment.
**Hie,** hī, *v.* to proceed; to wend.
**Hierarch,** hī'er-ark, *n.* the chief of a sacred order.
**Hierarchy,** hī'er-ar-ki, *n.* government by ecclesiastics. [pictures and symbols.
**Hieroglyphic,** hī-er-o-glif'ik, *n.* ancient writing in
**Hierology,** hī-er-ol'o-ji, *n.* the science of sacred
**Hierophant,** hī'er-o-fant, *n.* a priest. [things.
**Higgle,** hig'l, *v.* to chaffer.
**High,** hī, *adj.* lofty; tall; eminent.
**High-altar,** hī'awl'ter, *n.* the chief altar in a church. [vagant person.
**High-flier,** hī'flī-er, *n.* a high-flying bird; an extra-
**Highland,** hī'land, *n.* a hilly region.
**High-pressure,** hī-prezh'ūr, *n.* steam pressure in excess of that of the atmosphere.
**Highway,** hī-wā, *n.* a public road.
**Highwayman,** hī'way-man, *n.* a robber who stops people on the highways.
**Hilarious,** hil-ā'ri-us, *adj.* boisterously mirthful.
**Hilarity,** hil-ar'it-i, *n.* gaiety; mirth.
**Hillmen,** hil'men, *n.* dwellers in hill-country.
**Hilt,** hilt, *n.* a sword-handle.
**Hind,** hind, *n.* a female deer; **a farm servant.**
**Hinder,** hind'er, *v.* to obstruct; to prevent.
**Hindrance,** hin'drans, *n.* that which hinders; an obstacle.

**Hindmost,** hind'most, *adj.* the farthest in the rear.
**Hindu,** hin'doo, a native of Hindostan.
**Hinge,** hinj, *n.* a joint on which a door turns; *v.* to
**Hinny,** hin'i, *v.* to neigh. [turn.
**Hint,** hint, *n.* an insinuation; *v.* to suggest indirectly.
**Hip,** hip, *n.* the haunch; the fruit of the brier.
**Hippocentaur,** hip'o-sent'awr, *n.* Centaur (horse
**Hippodrome,** hip'o-drōm, *n.* a circus. [and man).
**Hippopotamus,** hip-o-pot'ă-mus, *n.* African river horse.
**Hip-roof,** hip'roof, *n.* a roof with angle.
**Hire,** hir, *v.* to engage help for pay.
**Hireling,** hir'ling, *n.* a servant.
**Hirer,** hir'er. *n.* one who hires.
**Hirsute,** hir'sūt, *adj.* hairy.
**Hiss,** his, *v.* to utter sibilant sounds.
**Histology,** hist-ol'o-ji, *n.* the science of tissues.
**Historian,** hist-ō'ri-an, *n.* one who writes history.
**History,** his'to-ri, *n.* a record of events.
**Histrionic,** his-tri-on'ik, *adj.* theatrical.
**Histrionics,** his-tri-on'iks, *n.* play-acting.
**Hit,** hit, *v.* to strike.
**Hitch,** hich, *v.* to fasten; *n.* a sudden obstacle.
**Hive,** hiv, *n.* place where bees are kept.
**Hives,** hivz, *n.* a skin disease.
**Hoar,** hōr, *adj.* white. [amass in secret.
**Hoard,** hōrd, *n.* a store; a secret stock; *v.* to
**Hoarding,** hōrd'ing, *n.* a temporary screen of boards round a building.
**Hoar-frost,** hōr'frost, *n.* white frost.
**Hoarse,** hōrs, *adj.* harsh; discordant.
**Hoax,** hōks, *n.* a deceptive joke.
**Hob,** hob, *n.* the nave of a wheel; a projection near
**Hobble,** hob'l, *v.* to limp; to tether. [the fire.
**Hobbledehoy,** hob'l-de-hoi, *n.* an awkward youth.
**Hobby,** hob'i, *n.* a favourite pursuit.
**Hobgoblin,** hob-gob'lin, *n.* a spectre.
**Hobnail,** hob'nāl, *n.* a heavy-headed nail.
**Hobnob,** hob-nob' *adv.* familiar association.
**Hock,** hok, *n.* a German wine.
**Hockle,** hok'l, *v.* to hamstring.
**Hocus-pocus,** hō'kus-pō'kus, *n.* a juggler's trick.
**Hod,** hod, *n.* a shoulder-supported receptacle for carrying bricks or mortar.
**Hodden,** hod'en, *n.* cloth (" hodden-gray ") manufactured from undyed wool.
**Hodge-podge,** hodj'podj, *n.* a mixed mass.
**Hodiernal,** ho-di-er'nal, *adj.* relating to to-day.
**Hodman,** hod'man, *n.* a mason's labourer.
**Hoe,** hō, *n.* an implement for breaking up earth.
**Hog,** hog, *n.* a castrated boar pig; a year-old unshorn sheep; a glutton or dirty fellow.
**Hogshead,** hogs'hed, *n.* a large cask.
**Hoity-toity,** hoi'ti-toi'ti, *interj.* an exclamation of
**Hoist,** *v.* to raise; to lift. [surprise.
**Hold,** hold, *v.* to keep possession of; to maintain; to confine.
**Holding,** hold'ing, *n.* grasping, retaining.
**Hole,** hōl, *n.* a hollow place; a pit; a dent.
**Holiday,** hol'i-dā, *n.* a feast day; a day of rest.
**Holiness,** hō'li-nes, *n.* sacredness.
**Hollands,** hol'-ands, *n.* a Dutch gin.
**Holloa,** hol-o', *interj.* a hailing cry.
**Hollow,** hol'ō, *n.* a hole; a depression; a cavity; *adj.* empty.
**Hollow-eyed,** hol'ō-id, *adj.* with sunken eyes.
**Holly,** hol'i, *n.* a shrub.
**Hollyhock,** hol'i-hok, *n.* a species of mallow.
**Holm,** hōm, *n.* land beside a river.
**Holocaust,** hol'o-kawst, *n.* a burnt sacrifice.
**Holograph,** hol'o-graf, *n.* a document in the handwriting of the person from whom it proceeds.
**Holster,** hol'ster, *n.* a case for holding pistols.
**Holt,** holt, *n.* a wood; an orchard.
**Holy,** hō'li, *adj.* morally pure; sacred.
**Holy-rood,** hō'li-rood, *n.* holy-cross.
**Holystone,** hō'li-stōn, *n.* a stone used for scrubbing boards.
**Homage,** hom'ij, *n.* reverence; respect; fealty.
**Homely,** hōm'li, *adj.* familiar; plain.
**Homeopathic,** ho-mē-o-path'ik, *adj.* relating to homeopathy.
**Homespun,** hōm'spun, *adj.* of domestic manufacture.
**Homestead,** hōm'sted, *n.* the place of the home.
**Homicide,** hom'i-sīd, *n.* murder; a man-killer
**Homily,** hom'il-i, *n.* a serious discourse.
**Hominy,** hom'i-ni, *n.* hulled corn.
**Hommock,** hom'ok, *n.* a small conical hill.
**Homodont,** hō'mō-dont, *adj.* having teeth all alike.
**Homogeneous,** ho-mo-jē'ne-us, *adj.* of the same kind.
**Homograph,** hō'mō-graf, *n.* a system of military signalling. [the same.
**Homologate,** ho-mol'o-gāt, *v.* to agree; to express
**Homologous,** ho-mo'lo-gus, *adj.* agreeing.
**Homologue,** hom'ō-log, *n.* that which is similar to something else.
**Homonym,** hō'mō-nim, *n.* a word with more than one meaning.
**Homotype,** hom'ō-tīp, *n.* that which is of the same
**Hone,** hōn, *v.* to sharpen. [class.
**Honest,** on'est, *adj.* just; good; frank.
**Honesty,** on'est-i, *n.* the state of being honest.
**Honey,** hun'i, *n.* the sweet substance collected by bees. [bees.
**Honeycomb,** hun'i-kōm, *n.* wax cells made by
**Honeydew,** hun'i-dū, *n.* a juice exuded by plant lice or the plant they infest; a sweetened tobacco.
**Honeymoon,** hun'i-moon, *n.* first month of marriage.
**Honeysuckle,** hun'i-sukl, *n.* a climbing flowering shrub [tering.
**Honied,** hun'id, *adj.* abounding in sweetness; flat-
**Honorarium,** on-or-ā'ri-um, *n.* a voluntary fee.
**Honorary,** on'or-ar-i, *adj.* conferring honour; without fee.
**Honour,** on'or, *n.* esteem due to worth.
**Hoodwink,** hood'wink, *v.* to deceive.
**Hoof,** *n.* the horny substance on an animal's foot.
**Hookah,** hoo'kă, *n.* a pipe in which the smoke passes through water.
**Hoop,** hoop, *n.* a ring of wood or metal.
**Hooper,** hoop'er, *n.* a cooper.
**Hooping-cough,** hoo'ping-kof, a convulsive cough.
**Hoopoe,** hoop'ō, *n.* a large-crested bird.
**Hoot,** hoot, *v.* to cry out.
**Hop,** hop, *v.* to leap on one leg; to spring; *n.* a plant yielding cones used in brewing.
**Hope,** hōp, *v.* to anticipate; to cherish desire of good; *n.* confidence.
**Hopper,** hop'er, *n.* a hop-gatherer: a chute for diverting material into a machine.
**Horal,** hōr'al, *adj.* relating to an hour.
**Horde,** hōrd, *n.* a migratory tribe.
**Horehound,** hōr'hownd, *n.* a plant used as a tonic.
**Horizon,** ho-rī'zon *n.* line where earth and sky
**Horizontal,** hor-i-zon'tal, *adj.* level. [meet.
**Horn,** hawrn, a bony or epidermic projection from the head of an animal; prolonged extremity; a musical instrument
**Horner,** hawrn'er, *n.* a dealer in horns.
**Horning,** hawrn'ing, *n.* the crescent moon.
**Hornpipe,** hawrn'pīp, *n.* a step dance.
**Horny,** hawrni, *adj.* hornlike, hard, unfeeling.
**Horography,** hor-og'raf-i, *n.* art of dial construction.
**Horologe,** hor'ol-ōj, *n.* a time-piece. [machines.
**Horology,** hor-ol'o-ji, *n.* the science of time-telling
**Horoscope,** hor'os-kōp, *n.* an astrological prediction.
**Horoscopy,** hor os'ko-pi, *n.* the art of prediction.
**Horrent,** hor'ent, *adj.* bristling
**Horrible,** hor'ibl, *adj.* dreadful.
**Horrid,** hor'id, *adj.* frightful.
**Horror,** hor'er, *n.* violent fear.
**Hors d'œuvre,** or-dūvr, *n.* a preliminary relish.
**Horse,** hors, *n.* a familiar quadruped. [exert.
**Horse-power,** hors'powr, *n.* the power a horse can
**Horseshoe,** hors'shoo, *n.* shoe for horses, or a thing of that shape. [smite with a horse-whip.
**Horsewhip,** hors'whip, *n.* a driving whip; *v.* to
**Hortative,** hor'ta-tiv, *adj.* encouraging; advising.
**Horticulture,** hor-ti-kult'ūr, *n.* gardening.
**Hosanna,** hō-zan'a, *n.* praise to God.
**Hose,** hōz, *n.* stockings; a portable pipe for conveying water.
**Hosier,** hōz'i-ĕr, *n.* one who sells stockings.
**Hospice,** hos'pēs, *n.* house of charitable entertainment. [strangers.
**Hospitable,** hos'pit-able, *adj.* charitable; kind to
**Hospital,** hos'pit-al *n.* a home for the sick.
**Hospitality,** hos-pit-al'it-i, *n.* generous entertainment.
**Host,** hōst, *n.* a landlord; a multitude.
**Hostage,** hōst'āj, *n.* a person left as a pledge.
**Hostel,** hos'tel, *n.* an inn.
**Hostess,** host'ĕs, *n.* female host.
**Hostile,** hos'til, *adj.* adverse.
**Hostler,** os'ler, *n.* a groom at an inn.
**Hot,** hot, *adj.* heated; warm; ardent.
**Hotbed,** hot'bed, *n.* a heated bed for forcing plants.
**Hotchpot,** hoch'pot, *n.* a confused mixture.

**Hotel,** hō'tel', *n.* a superior inn.
**Hotheaded,** hot'hed'ed, *adj.* fierce; impetuous.
**Hothouse,** hot'hows, *n.* a house kept for growing tender plants.
**Hot-press,** hot'pres, *v.* to press between hot plates.
**Hottentot,** hot'en-tot, *n.* an aboriginal of South Africa.
**Hough,** hok, *n.* the joint immediately below the fetlock.
**Hound,** hownd, *n.* a dog kept for hunting.
**Hour,** our, *n.* 60 minutes.
**Hour-glass,** our'glas, *n.* glass for measuring time
**Houri,** how'ri, *n.* a nymph of paradise.
**House,** hows, *n.* a dwelling or place of assembly.
**Housewifery,** hows'wif-er-i, *n.* pertaining to the duties of the mistress of the house.
**Housing,** howz'ing, *n.* shelter.
**Hovel,** hov'el, *n.* a mean cottage.
**Hover,** hov'er, *v.* to hang over.
**Howdah,** how'da, *n.* a seat on an elephant.
**Howitzer,** how'it-zer, *n.* a kind of short cannon.
**Howl,** howl, *v.* to cry or yell, as a dog.
**Howlet,** how'let, *n.* a kind of owl.
**Hoy,** hoy, *n.* a small coasting vessel.
**Hub,** hub, *n.* centre of a wheel.
**Hubbub,** hub'ub, *n.* tumult.
**Huckaback,** huk'a-bak, *n.* table linen.
**Huckle,** huk'l, *n.* the hip; a hip-like projection.
**Huckster,** huk'ster, *n.* a pedlar.
**Huddle,** hud'l, *v.* to crowd; to bring together hastily and carelessly.
**Hudibrastic,** hū-di-bras'tik, *adj.* in the style of *Hudibras.*
**Hue,** hū, *n.* a colour; *v.* a shouting.
**Huff,** *n.* petulant anger.
**Hug,** hug, *v.* to embrace powerfully.
**Huge,** hūj, *adj.* gigantic; massive; large.
**Huguenot,** hū'ge-nō, *n.* a French protestant.
**Hulk,** hulk, *n.* body of a ship.
**Hull,** hul, *n.* a shell.
**Hum,** hum, *v.* to make a buzzing sound.
**Human,** hū'man, *adj.* pertaining to mankind.
**Humane,** hū-mān', *adj.* kind.
**Humanise,** hū'man-īz, *v.* to civilise.
**Humanist,** hū'man-ist, *n.* a student of human nature.
**Humanity,** hū-man-it-i, *n.* mankind; benevolence.
**Humankind,** hū'man-kind, *n.* the human race.
**Humble,** hum'bl, *adj.* modest; meek; *v.* to lower; to degrade.
**Humbly,** hum'bli, *adv.* with humility.
**Humbug,** hum'bug, *n.* an imposition.
**Humdrum,** hum'drum, *adj.* dull. [fluidity.
**Humectant,** hūm-ek'tant, *adj.* tending to increase
**Humeral,** hū'mer-al, *adj.* pertaining to the shoulder.
**Humerus,** hū'mer-us, *n.* the arm above the elbow.
**Humhum,** hum'hum, *n.* a coarse Indian fabric.
**Humid,** hū'mid, *adj.* moist; damp.
**Humidity,** hū-mid'it-i, *n.* moisture.
**Humiliate,** hū-mil'i-āt, *v.* to humble.
**Humility,** hū-mil'it-i, *n.* modesty; meekness.
**Hummel,** hum'el, *adj.* hornless.
**Hummingbird,** hum'ing-berd, *n.* a small tropical bird.
**Humoral,** hū'mo-ral, *adj.* connected with humours.
**Humorist,** ū'mo-rist, *n.* one who speaks or writes of humorous things.
**Humorous,** ū-mer-us, *adj.* exciting mirth.
**Humorsome,** ū'mer-sum, *adj.* odd.
**Humour,** ū'mer, *n.* wit; fancy; abnormal animal
**Hump,** hump, *n.* a hunch on the back. [fluid.
**Humus,** hū'mus, *n.* mould.
**Hunch,** hunch, *n.* a hump. [division.
**Hundred,** hun'dred, *n.* ten times ten; a territorial
**Hung,** hung, *pa. par.* of hang.
**Hunger,** hung'ger, *n.* craving for food.
**Hungry,** hung'gri, *adj.* needing food; famishing.
**Hunt,** hunt, *v.* to chase. [frame for gates.
**Hurdle,** hur'dl, *n.* a frame of twigs; a movable
**Hurdy-gurdy,** hur'di-gurd'i, *n.* a rude musical instrument.
**Hurl,** hurl, *v.* to cast away; to throw forcibly.
**Hurly-burly,** hur'li-bur'li, *n.* confusion.
**Hurrah,** hur-rah', *interj.* an exclamation of applause.
**Hurricane,** hur'ri-kān, *n.* a violent storm.
**Hurt,** *v.* to damage, or cause pain to; *n.* a wound.
**Hurtle,** hurt'l, *v.* to dash or whirl away with noise and rapidity.
**Husband,** huz'band, *n.* a married man.
**Husbandman,** huz'band-man, *n.* a labouring farmer.
**Husbandry,** huz'band-ri, *n.* land-cultivation; [farming.
**Hush,** hush, *interj.* be silent.
**Hush-money,** hush'mun-i, *n.* money paid for
**Husk,** *n.* covering of certain fruits. [silence.
**Husky,** husk'i, *adj.* hoarse.
**Hussar,** hooz-ār', *n.* a light cavalry soldier.
**Hussy,** huz'i, *n.* a jade.
**Hustle,** hus'l, *v.* to push.
**Hustler,** hus'ler, *n.* one who hustles.
**Hut,** hut, *n.* a mean dwelling.
**Hutch,** huch, *n.* a box; a coop.
**Huzza,** huz-ah', *interj.* hurrah; a shout of joy.
**Hyacinth,** hī'ā-sinth, *n.* a bulbous plant.
**Hyaline,** hī'a-lin, *adj.* glassy.
**Hybrid,** hī'brid, *adj.* produced from different species.
**Hybridism,** hī'brid-izm, *n.* the hybrid condition.
**Hydra,** hī'dra, *n.* a many-headed monster.
**Hydrangea,** hī-dran'jē-ā, *n.* a flowering shrub.
**Hydrant,** hī'drant, *n.* a water-plug.
**Hydraulic,** hī-draw'lik, *adj.* connected with hydraulics. [liquids.
**Hydraulics,** hī-draw'liks, *n.* the science of flowing
**Hydrodynamics,** hī-dro-dī-nam'iks, *n.* the science of the force of water. [substance.
**Hydrogen,** hī'dro-jen, *n.* an elementary gaseous
**Hydrographer,** hī-drog'rā-fer, *n.* a sea-chart maker.
**Hydrography,** hī-drog'ra-fi, *n.* the art of measuring seas. [zoa, marine polypes or zoophytes.
**Hydroid,** hī'droid, *n.* one of the sub-class Hydro-
**Hydrology,** hī-drol'o-ji, *n.* the science of water.
**Hydromel,** hī'dro-mel, *n.* a beverage composed of honey and water. [instrument.
**Hydrometer,** hī-drom'e-ter, *n.* a liquid-measuring
**Hydropathic,** hī-dro-*path*'ik, *adj.* relating to cold-water treatment.
**Hydropathist,** hī-drop'a-*thist*, *n.* a practiser of *hydropathy.* [ment of disease.
**Hydropathy,** hī-drop'a-*thi*, *n.* the cold-water treat-
**Hydrophobia,** hī-dro-fō'bi-a, *n.* canine madness.
**Hydrostatics,** hī-dro-stat'iks, *n.* the science of fluid equilibrium.
**Hydrous,** hī'drus, *adj.* containing water.
**Hyemal,** hī-ē'mal, *adj.* relating to winter.
**Hygiene,** hī'ji-ēn, *n.* health preservation.
**Hygienics,** hī-ji-en'iks, *n.* the science of health.
**Hygrometer,** hī-grom'e-ter, *n.* an instrument for calculating atmospheric moisture.
**Hygrometry,** hī-grom'e-tri, *n.* the science of calculating atmospheric moisture.
**Hymeneal,** hī-mē'ni-al, *adj.* relating to marriage.
**Hymn,** him, *n.* a sacred song.
**Hymnology,** him-nol'o-ji, *n.* a collection of hymns; the science of hymns.
**Hyperbola,** hī-per'bō-la, *n.* one of the conic sections.
**Hyperbole,** hī-per'bō-lē, *n.* exaggeration.
**Hyperbolical,** hī-per-bol'ik-al, *adj.* in the manner of hyperbole.
**Hyperborean,** hī-per-bō're-an, *adj.* relating to the far north.
**Hypercriticism,** hī-per-krit'i-sizm, *n.* exaggerated criticism. [syllables.
**Hyphen,** hī'fen, *n.* a printer's mark (-) joining two
**Hypnotism,** hip'no-tizm, *n.* mesmeric sleep.
**Hypochondriac,** hī-po-kon'dri-ak, *n.* one suffering from delusions. [choly.
**Hypochondriacal,** hī-po-kon-drī'ak-al, *adj.* melan-
**Hypocrisy,** hip-ok'ra-si, *n.* deceit; sham goodness.
**Hypocrite,** hip'o-krit, *n.* a practiser of hypocrisy.
**Hypogastric,** hip-o-gas'trik, *adj.* relating to the lower part of the abdomen. [sonality.
**Hypostasis,** hī-pos'tā-sis, *n.* essence; being; per-
**Hypostatic,** hī-po-stat'ik, *adj.* real; distinctive; substantial. [right angle.
**Hypotenuse,** hī-pot'en-ūs, *n.* the side opposite a
**Hypothec,** hī-*poth*'ek, *n.* a lien on goods for money lent.
**Hypothecate,** hī-*poth*'e-kāt, *v.* to pledge as security.
**Hypothesis,** hī-*poth*'e-sis, *n.* a supposition.
**Hypothetical,** hī-po-*thet*'ik-al, *adj.* conditional.
**Hypsometry,** hip-som'ē-tri, *n.* the art of measuring
**Hyson,** hī'sun, *n.* a Chinese green tea. [heights.
**Hyssop,** his'up, *n.* an aromatic plant.
**Hysterics,** his'ter-iks, *n.* nervous fits of alternate laughing and crying.

## I

**Iambus,** ī-am'bus, *n.* a metrical foot of two syllables.
**Ibidem,** ib-ī'dem, *adv.* in the same place.
**Icarian,** ī-kā'ri-an, *adj.* pertaining to flight.

**Ice-age,** īs'āj, *n.* the glacial period.
**Iceberg,** īs'berg, *n.* a mountain of ice.
**Ice-boat,** īs'bōt, *n.* boat for forcing through or over ice. [ficially frozen.
**Ice-cream,** īs'krēm, *n.* sweetened cream arti-
**Ice-float,** īs'flōt, *n.* mass of floating ice.
**Ice-pack,** īs'pak, *n.* pack of drifted ice.
**Ichnology,** ik-nol'o-ji, *n.* the science of fossil foot-
**Ichor,** ī'kor, *n.* a watery humour. [prints.
**Ichthyolite,** ik'*thi*-o-līt, *n.* a fossil fish.
**Ichthyology,** ik-*thi*-ol'o-ji, *n.* the natural history of
**Icicle,** īs'ik'l, *n.* pendant ice. [fish.
**Icon,** ī'kon, *n.* a figure of Christ or a saint.
**Iconoclasm,** ī-kon'o-klazm, *n.* image-breaking.
**Iconoclast,** ī-kon'o-klast, *n.* an image-breaker.
**Iconography,** ī-kon-og'ra-fi, *n.* the art of illustration.
**Iconology,** ī-kon-ol'o-ji, *n.* image worship.
**Ideal,** ī-dē'al, *n.* intellectual standard of perfection; imaginary.
**Idealism,** ī-dē'al-izm, *n.* the doctrine that thought is the foundation of knowledge and existence.
**Ideality,** ī-dē-al'it-i, *n.* fancy.
**Identify,** ī-dent'i-fī, *v.* to recognise.
**Identity,** ī-dent'it-i, *n.* the condition of being the same.
**Idiocy,** id'i-o-si, *n.* the state of mental aberration.
**Idiom,** id'i-um, *n.* mode of expression peculiar to a language or people.
**Idiopathy,** id-i-op'a-*thi*, *n.* primary disease.
**Idiosyncrasy,** id-i-o-sin'kras-i, *n.* peculiarity of temperament.
**Idiotic,** id-i-ot-'ik, *adj.* extremely foolish.
**Idol,** ī'dol, *n.* an image that is worshipped.
**Idolator,** ī-dol'a-tor, *n.* one who worships idols.
**Idolize,** ī'dol-īz, *v.* to worship; to adore.
**Idyl,** ī'dil, *n.* a short pastoral poem.
**Igneous,** ig'nē-us, *adj.* pertaining to fire.
**Ignescent,** ig-nes'ent, *adj.* ready to break into fire.
**Ignis-fatuus,** ig'nis-fat'ū-us, *n.* "Will-o'-the-wisp," a light that appears in marshy places.
**Ignite,** ig-nīt, *v.* to kindle; to take fire.
**Ignoble,** ig-nō'bl, *adj.* low; mean.
**Ignominious,** ig-no-min'ī-us, *adj.* disgraceful.
**Ignominy,** ig'no-min-i, *n.* shame.
**Ignoramus,** ig-no-rā'mus, *n.* a dunce.
**Ignorance,** ig'no-rans, *n.* unlearned state; want of
**Ignore,** ig-nōr', *v.* to disregard. [knowledge.
**Iliac,** ili-ak, *adj.* pertaining to the lower intestines.
**Ill-blood,** il'blud, *n.* a feeling of enmity.
**Ill-bred,** il'bred, *adj.* badly trained.
**Illegal,** il-lē'gal, *adj.* against the law.
**Illegible,** il-lej'ibl, *adj.* not readable.
**Illegitimate,** il-lej-it'im-āt, *adj.* born out of wedlock; not right.
**Ill-favoured,** il-fā'verd, *adj.* ill-looking.
**Illiberal,** il-lib'er-al, *adj.* mean; ungenerous.
**Illicit,** il-lis'it, *adj.* unlawful.
**Illimitable,** il-lim'it-abl, *adj.* limitless.
**Illiterate,** il-lit'er-āt, *adj.* ignorant.
**Illogical,** il-loj'ik-al, *adj.* unreasonable.
**Ill-starred,** il-stārd', *adj.* unlucky.
**Illume,** il-ūm', *v.* to illuminate.
**Illumine,** il-lū'min, *v.* to throw light upon.
**Illusion,** il-lū'zhun, *n.* a delusion.
**Illusory,** il-ū'ser-i, *adj.* fallacious. [great.
**Illustrious,** il-us'tri-us, *adj.* distinguished; famous;
**Image,** im'āj, *n.* a likeness; an idol; a representation.
**Imagery,** im'āj-er-i, *n.* work of the fancy.
**Imagination,** im-aj-in-ā'shun, *n.* power of imagining. [ceive.
**Imagine,** im-aj'in, *v.* to fancy; to think; to con-
**Imam,** i-mām', *n.* one who recites prayers in a mosque.
**Imbibe,** im-bīb', *v.* to drink in.
**Imbricate,** im'bri-kāt, *v.* to lay one over another.
**Imbricated,** im-brik-ā'ted, *adj.* overlapping.
**Imbroglio,** im-brōl'yō, *n.* a complicated plot.
**Imbrue,** im-broo', *v.* to soak; to steep.
**Imbue,** im-bū', *v.* to tinge deeply.
**Imitate,** im'i-tāt, *v.* to copy.
**Immaculate,** im-mak'ū-lāt, *adj.* spotless; pure.
**Immanent,** im'a-nent, *adj.* inherent.
**Immaterial,** im-ā-tē'ri-al, *adj.* unimportant; not composed of matter.
**Immature,** im-a-tūr', *adj.* unripe; imperfect.
**Immeasurable,** im-mezh'ūr-abl, *adj.* incapable of measurement.
**Immemorial,** im-mem-ō'ri-al, *adj.* beyond memory.
**Immense,** im-mens', *adj.* unlimited; gigantic; vast.
**Immerse,** im-mers', *v.* to dip under water.
**Immersion,** im-mer'shun, *n.* the act of immersing.
**Immigrant,** im'mi-grant, *n.* one who immigrates.
**Imminent,** im'i-nent, *adj.* threatening; impending.
**Immiscible,** im-is'i-ble, *adj.* incapable of being
**Immobility,** im-mo-bil'i-ti, *n.* fixedness. [mixed.
**Immoderate,** im-mod'er-āt, *adj.* excessive.
**Immodest,** im-mod'est, *adj.* indecent; bold; impudent.
**Immolate,** im'mō-lāt, *v.* to sacrifice.
**Immorality,** im-mō-ral'it-i, *n.* vice.
**Immortal,** im-mort'al, *adj.* imperishable.
**Immortality,** im-mortal'it-i, *n.* eternal life.
**Immortalize,** im-mor'tal-īz, *v.* to make immortal.
**Immovable,** im-moov'abl, *adj.* unalterable; steadfast. [fection.
**Immune,** im-mūn', *adj.* exempt; not liable to in-
**Immunity,** im-mū'nit-i, *n.* exemption; privilege.
**Immure,** im-mūr', *v.* to confine within walls.
**Immutable,** im-mū'ta-bl, *adj.* unchangeable.
**Imp,** imp, *n.* a demon; a scamp.
**Impact,** im'pakt, *n.* contact; shock.
**Impact,** im-pakt', *v.* to drive close together.
**Impaint,** im-pānt', *v.* to paint.
**Impair,** im-pār', *v.* to deteriorate; to weaken.
**Impalement,** im-pāl'ment, *n.* an enclosed space; a term in heraldry; fixing on a stake.
**Impalpable,** im-pal'pa-bl, *adj.* not evident; intangible.
**Impanel,** im'pan'el, *v.* to enrol.
**Impart,** im'pārt', *v.* to relate, make known, or give.
**Impartial,** im-pār'shal, *adj.* just.
**Impassable,** im'pas'abl, *adj.* not to be passed.
**Impassible,** im-pas'ibl, *adj.* incapable of feeling.
**Impassioned,** im'pash-und, *adj.* excited.
**Impassive,** im-pas'iv, *adj.* insensible.
**Impatience,** im-pā'shens, *n.* lack of patience.
**Impeachment,** im-pēch'ment, *n.* censure; accusation by Crown or other representatives.
**Impeccable,** im-pek'abl, *adj.* exempt from sinning.
**Impecunious,** im-pe-kū'ni-us, *adj.* poor; without
**Impede,** im-pēd, *v.* to hinder. [money.
**Impediment,** im-ped'i-ment, *n.* a hindrance.
**Impel,** im-pel', *v.* to urge; to instigate.
**Impend,** im-pend', *v.* to threaten; to hang over; to be near.
**Impending,** im-pend'ing, *adj.* imminent.
**Impenetrable,** im-pen'e-tra-bl, *adj.* hard; incapable of being pierced.
**Impenitent,** im-pen'it-ent, *adj.* without penitence.
**Imperative,** im-per'a-tiv, *adj.* urgent; peremptory.
**Imperceptible,** im-per-sept'ibl, *adj.* not perceivable.
**Imperfect,** im-per'fekt, *adj.* short of perfection.
**Imperfection,** im-per-fek'shun, *n.* incompleteness.
**Imperforate,** im'per-for'ate, *adj.* not perforated.
**Imperial,** im-pēr'i-al, *adj.* pertaining to an empire; supreme. [manner.
**Imperially,** im-pēr'i-al-i, *adv.* in an imperial
**Imperil,** im-per'il, *v.* to endanger.
**Imperious,** im-pēr'i-us, *adj.* commanding; tyrannical.
**Imperishable,** im-per'ish-abl, *adj.* enduring; everlasting. [manence.
**Impermanence,** im-per'man-ens, *n.* lack of per-
**Impermeable,** im-per'me-abl, *adj.* impervious.
**Impersonal,** im-per'sun-al, *adj.* without personality.
**Impersonate,** im-per'sun-āt, *v.* to personate.
**Impertinent,** im-per'tin-ent, *adj.* rude; saucy.
**Imperturbable,** im-per-tur'ba-bl, *adj.* incapable of being agitated. [penetrable.
**Impervious,** im-per'vi-us, *adj.* not pervious; im-
**Impetuosity,** im-pet-ū-os'it'i, *n.* violence; passion.
**Impetus,** im'pe-tus, *n.* momentum; force of motion.
**Impiety,** im-pī'et-i, *n.* ungodliness.
**Impinge,** im-pinj', *v.* to strike upon; to touch.
**Impious,** im'pi-us, *adj.* profane; irreverent.
**Implacable,** im-plāk'abl, *adj.* inappeasable; inexorable.
**Implant,** im-plant', *v.* to fix, as to plant in the ground.
**Implead,** im-plēd', *v.* to prosecute at law.
**Implement,** im'ple-ment, *n* a tool.
**Implication,** im-pli-kā'shun, *n.* entanglement; that which is implied.
**Implicit,** im-plis'it, *adj.* unreserved; implied; un-
**Implore,** im-plōr', *v.* to entreat. [questioning.
**Imply,** im-plī', *v.* to involve; to include.
**Impolicy,** im-pol'i-si, *n.* imprudence.
**Impolitic,** im-pol'it-ik, *adj.* imprudent; unwise.
**Imponderable,** im-pon'der-abl, *adj.* incapable of being weighed.
**Imporous,** im-pō'rus, *adj.* poreless.

**Import,** im'port, *n.* a thing imported; meaning.
**Import,** im-port', *v.* to bring in; to signify.
**Important,** im-por'tant, *adj.* valuable; of note.
**Importer,** im-port'er, *n.* one who brings in goods from other countries.
**Importune,** im-por-tūn', *v.* to urge persistently.
**Importunity,** im-por-tū'ni-ti, *n.* the act of importuning. [deceive.
**Impose,** im-pōz', *v.* to lay on; to intrude; to
**Imposing,** im-pō'zing, *adj.* impressive.
**Imposition,** im-po-zish'un, *n.* a deception; a school punishment.
**Impossible,** im-pos'ibl, *adj.* that cannot be done.
**Impost,** im'post, *n.* tribute; a tax; a duty.
**Imposthume,** im-pos'tūm, *n.* an abscess.
**Impostor,** im-pos'tor, *n.* a deceiver.
**Imposture,** im-pos'tūr, *n.* fraud.
**Impotent,** im'po-tent, *adj.* weak; incompetent; powerless.
**Impound,** im-pownd', *v.* to confine in a pound.
**Impoverish,** im-pov'er-ish, *v.* to make poor.
**Impracticable,** im-prak'tik-abl, *adj.* unmanageable.
**Impractical,** im-prak'tik-al, *adj.* not practical.
**Imprecate,** im'pre-kāt, *v.* to call down good or bad upon; to curse.
**Imprecation,** im-pre-kā'shun, *n.* a curse.
**Impregnable,** im-preg'na-bl, *adj.* that cannot be taken; invincible. [pregnant.
**Impregnate,** im-preg'nāt, *v.* to imbue; to make
**Imprescriptible,** im-pre-skript'ibl, *adj.* without external authority.
**Impress,** im'pres, *n.* that which is impressed.
**Impressible,** im-pres'ibl, *adj.* susceptible.
**Impressment,** im-pres'ment, *n.* the act of forcible seizure of men for war service.
**Imprimatur,** im-pri-mā'tur, *n.* authority to print.
**Imprimis,** im-pri'mis, *adv.* in the first place.
**Imprint,** im-print', *v.* to stamp; to fix on the mind.
**Imprison,** im-priz'on, *v.* to incarcerate.
**Improbable,** im-prob'abl, *adj.* unlikely.
**Impromptu,** im-prom'tū, *n.* without study; offhand.
**Impropriety,** im-pro-pri'et-i, *n.* an improper act.
**Improve,** im-proov', *v.* to make better; to amend.
**Improvement,** im-proov'ment, *n.* the act of improving; advancement. [thoughtlessness.
**Improvidence,** im-prov'i-dens, *n.* lack of foresight;
**Improvident,** im-prov'i-dent, *adj.* inconsiderate; unthrifty. [posing without preparation.
**Improvisation,** im-pro-vis-ā'shun, *n.* the act of com-
**Improvisatore,** im-pro-viz-ā-tō'rā, *n.* one who improvises. [lessness.
**Imprudence,** im-proo'dens, *n.* incautiousness; reck-
**Impudence,** im'pū-dens, *n.* rudeness; insolence; shamelessness. [question.
**Impugn,** im-pūn', *v.* to gainsay; to oppose; to
**Impulse,** im'puls, *n.* an incentive; the act of impelling. [or loss.
**Impunity,** im-pū'ni-ti, *n.* exemption from penalty
**Imputation,** im-pū-tā'shun, *n.* charge; accusation; censure.
**Impute,** im-pūt', *v.* to charge; to accuse.
**Inability,** in-a-bil'i-ti, *n.* incapacity.
**Inaccessible,** in-ak-ses'ibl, *adj.* not to be approached.
**Inaccuracy,** in-ak'ū-ra-si, *n.* want of correctness; inaction, in-ak'shun, *n.* rest; idleness. [error.
**Inactive,** in-ak'tiv, *adj.* idle; without power to move.
**Inadequacy,** in-ad'ē-kwa-si, *n.* insufficiency.
**Inadmissible,** in-ad-mis'ibl, *adj.* not allowable.
**Inadvertence,** in-ad-vert'ens, *n.* oversight; negligence.
**Inadvertent,** in-ad-vert'ent, *adj.* inattentive.
**Inalienable,** in-āl'yen-abl, *adj.* permanent; incapable of being transferred.
**Inamorata,** in-am-o-rā'tā, *n.* a woman whom a man
**Inane,** in-ān', *adj.* empty; void. [loves.
**Inanition,** in-an-ish'un, *n.* emptiness; exhaustion.
**Inanity,** in-an'it-i, *n.* senselessness.
**Inapplicable,** in-ap'lik-abl, *adj.* unsuitable.
**Inapposite,** in-ap'o-zit, *adj.* unfit; not suitable.
**Inappreciable,** in-ap-prē'shi-abl, *adj.* imperceptible.
**Inappropriate,** in-ap-prō'pri-āt, *adj.* unsuitable.
**Inaptitude,** in-apt'i-tūd, *adj.* unfitness; awkwardness.
**Inarching,** in-arch'ing, *n.* a system of grafting.
**Inarticulate,** in-ar-tik'ū-lāt, *adj.* indistinctly uttered.
**Inartificial,** in-ar-ti-fish'al, *adj.* simple; without art.
**Inattention,** in-at-ten'shun, *n.* carelessness.
**Inattentive,** in-at-ten'tiv, *adj.* heedless.
**Inaudible,** in-awd'ibl, *adj.* unheard.
**Inaugural,** in-aw'gūr-al, *adj.* pertaining to an inauguration.
**Inaugurate,** in-aw'gū-rāt, *v.* to initiate; to make public show in commencing an undertaking.
**Inauspicious,** in-aw-spish'us, *adj.* unfavourable; ill-omened.
**Inborn,** in'bawrn, *adj.* implanted; born with.
**Incalculable,** in-kal'kū-la-bl, *adj.* countless.
**Incalescence,** in-kal-es'ens, *n.* the act of growing warm.
**Incandescence,** in-kan-des'ens, *n.* white heat.
**Incantation,** in-kan-tā'shun, *n.* a charm; an enchantment.
**Incapable,** in-kā'pa-bl, *adj.* not capable.
**Incapacitate,** in-ka-pas'it-āt, *v.* to disqualify.
**Incapacity,** in-ka-pas'it-i, *n.* inability; lack of power.
**Incarcerate,** in-kär'ser-āt, *v.* to imprison.
**Incarnadine,** in-kär'na-dīn, *v.* to dye red; *n.* carnation colour.
**Incarnate,** in-kär'nāt, *v.* to embody in flesh; *adj.* clothed with flesh. [fully setting on fire.
**Incendiarism,** in-sen'di-ar-izm, *n.* the act of wil-
**Incendiary,** in-sen'di-ar-i, *n.* one who maliciously sets fire to.
**Incense,** in'sens, *n.* fragrant odour; perfume burned in religious observances.
**Incense,** in'sens', *v.* to excite to anger.
**Incentive,** in-sen'tiv, *n.* a motive; a prompting.
**Inception,** in-sep'shun, *n.* a beginning.
**Incertitude,** in-ser'ti-tūd, *n.* doubtfulness.
**Incessant,** in-ses'ant, *adj.* unceasing; continual.
**Incest,** in'sest, *n.* sexual relations between kindred.
**Inch,** inch, *n.* the twelfth part of a foot.
**Inchoate,** in'kō-āt, *adj.* incipient; unfinished.
**Incidence,** in'si-dens, *n.* an impingement; the manner of falling. [*adj.* liable to happen.
**Incident,** in'si-dent, *n.* a circumstance; an event;
**Incidental,** in-si-dent'al, *adj.* accidental; casual.
**Incipient,** in-sip'i-ent, *adj.* beginning.
**Incision,** in-sizh'un, *n.* a cut; a gash.
**Incisive,** in-sī'siv, *adj.* sharp; cutting.
**Incisor,** in-sī'zor, *n.* a front tooth.
**Incite,** in-sit, *v.* to stimulate; to goad.
**Incivility,** in-si-vil'-it-i, *n.* rudeness; impoliteness.
**Inclement,** in-klem'ent, *adj.* without mercy; stormy.
**Inclose,** in-klōz', *v.* to shut in or surround.
**Inclosure,** in-klō'zhūr, *n.* an enclosed space.
**Inclusive,** in-kloo'ziv, *adj.* enclosing within expressed limits.
**Inclusively,** in-kloo'ziv-li, *adv.* so as to be included.
**Incognito,** in-kog'ni-to, *adj.* unknown; in disguise.
**Incoherent,** in-ko-hē'rent, *adj.* disconnected; loose. [burn.
**Incombustible,** in-kom-bust'ibl, *adj.* that will not
**Income,** in'kum, *n.* gain; earnings; revenue.
**Incoming,** in'kum-ing, *adj.* coming in.
**Incommensurate,** in-kom-mens'ū-rāt, *adj.* inadequate. [to.
**Incommode,** in-ko-mōd', *v.* to cause inconvenience
**Incommunicative,** in-kom-mūn'ik-ā-tiv, *adj.* unsocial.
**Incomparable,** in-kom'par-abl, *adj.* matchless.
**Incompatible,** in-kom-pat'ibl, *adj.* inconsistent.
**Incompetency,** in-kom'pe-ten-si, *n.* the state of being inadequate.
**Incompetent,** in-kom'pe-tent, *adj.* incapable; lacking power.
**Incomplete,** in-kom-plēt', *adj.* not complete.
**Incomprehensible,** in-kom-prē-hen'sibl, *adj.* not understandable.
**Incompressible,** in-kom-pres'ibl, *adj.* not reducible to smaller bulk.
**Inconceivable,** in-kon-sēv'abl, *adj.* unimaginable.
**Inconclusive,** in-kon-kloo'siv, *adj.* indecisive.
**Incongruent,** in-kong'groo-ent, *adj.* unsuitable.
**Incongruity,** in-kong-groo'it-i, *n.* that which is unsuitable.
**Incongruous,** in-kong'groo-us, *adj.* not fitting.
**Inconsequent,** in-kon'se-kwent, *adj.* illogical.
**Inconsiderable,** in-kon-sid'er-abl, *adj.* unimportant.
**Inconsiderate,** in-kon-sid'er-āt, *adj.* thoughtless.
**Inconsistency,** in-kon-sist'en-si, *n.* the quality of being inconsistent.
**Inconsistent,** in-kon-sist'ent, *adj.* incompatible.
**Inconspicuous,** in-kon-spik'ū-us, *adj.* not prominent.
**Inconstant,** in-kon'stant, *adj.* fickle.
**Incontestable,** in-kon-test'abl, *adj.* indisputable.
**Incontinence,** in-kon'tin-ens, *n.* unchastity.

**Incontrovertible,** in-kon-tro-vert'ibl, *adj.* indisputable.
**Inconvenience,** in-kon-vē'ni-ens, *v.* to incommode.
**Incorporate,** in-kor'po-rāt, *v.* to form into a corporate body. [porating.
**Incorporation,** in-kor-pō-rā'shun, *n.* act of incor-
**Incorporeal,** in-kor-pō're-al, *adj.* not material;
**Incorrect,** in-kor-ekt', *adj.* not correct. [spiritual.
**Incorrigible,** in-kor'ij-ibl, *adj.* bad beyond correction.
**Incorrupt,** in-kor-rupt', *adj.* pure; sound.
**Incorruptible,** in-kor-rupt'ibl, *adj.* pure; not to be bribed.
**Increase,** in-krēs', *v.* to expand; to grow.
**Increase,** in'krēs, *n.* growth.
**Increate,** in'krē-āt, *adj.* uncreated.
**Incredible,** in-kred'ibl, *adj.* surpassing belief.
**Incredulous,** in-kred'ū-lus, *adj.* sceptical; unbelieving.
**Increment,** in'kre-ment, *n.* increase.
**Incriminate,** in-krim'in-āt, *v.* to charge with; to criminate.
**Incrustation,** in-krust-ā'shun, *n.* the act of incrusting.
**Incubate,** in'kū-bāt, *v.* to sit upon eggs; to hatch.
**Incubation** in-kū-bā'shun, *n.* the act of incubating.
**Incubator,** in-kū-bā'tor, *n.* an apparatus for hatching eggs artificially.
**Incubus,** in'kū-bus, *n.* a burden; the nightmare.
**Inculcate,** in-kul'kāt, *v.* to impress; to teach.
**Inculcation,** in-kul-kā'shun, *n.* act of impressing.
**Inculpate,** in-kul'pāt, *v.* to bring into blame.
**Incumbency,** in-kum'ben-si, *n.* an obligation; the possession of an office.
**Incumbent,** in-kum'bent, *n.* the holder of a benefice; *adj.* bounden.
**Incunabula,** in-kū-nab'ū-la, *n.* early printed books.
**Incur,** in-kur', *v.* to encounter; to become liable to.
**Incurable,** in-kūr'abl, *adj.* beyond cure.
**Incurious,** in-kūr'i-us, *adj.* without curiosity.
**Incursion,** in-kur'shun, *n.* a hostile invasion; an inroad.
**Incurvate,** inkur'vāt, *v.* to make crooked.
**Incurve,** in-kurv', *v.* to curve inward.
**Indebtedness,** in-det'ed-ness, *n.* the condition of being in debt.
**Indecent,** in-dē'sent, *adj.* immodest.
**Indecipherable,** in-de-si'fer-abl, *adj.* that cannot be read.
**Indecision,** in-de-sizh'un, *n.* lack of firmness.
**Indecisive,** in-de-si'siv, *adj.* inconclusive.
**Indecorous,** in-dek'ur-us, *adj.* unbecoming.
**Indecorum,** in-de-kō'rum, *n.* impropriety.
**Indefatigable,** in-de-fat'ig-abl, *adj.* unremitting; not giving way to fatigue.
**Indefeasible,** in-de-fēz'ibl, *adj.* unalterable.
**Indefensible,** in-de-fens'ibl, *adj.* defenceless; that cannot be defended. [being defined.
**Indefinable,** in-de-fin'abl, *adj.* not capable of
**Indefinite,** in-def'in-it, *adj.* vague; unlimited.
**Indelible,** in-del'ibl, *adj.* that cannot be effaced.
**Indelicate,** in-del'ik-āt, *adj.* rude; indecent.
**Indemnify,** in-dem'ni-fi, *v.* to secure against loss.
**Indemnity,** in-dem'ni-ti, *n.* security against loss.
**Indent,** in-dent', *v.* to notch; to apply for supplies.
**Indenture,** in-dent'ūr, *n.* written contract.
**Independent,** in-depen'dent, *adj.* free from control.
**Indescribable,** in-de-skrī'ba-bl, *adj.* inexplicable.
**Indestructible,** in-de-struk'ti-bl, *adj.* incapable of destruction. [terminated.
**Indeterminable,** in-de-ter'min-abl, *adj.* not to be
**Indeterminate,** in-de-ter'min-at, *adj.* uncertain.
**Index,** in'deks, *n.* a table of contents; a guide.
**Indexterity,** in-deks-ter'it-i, *adj.* want of dexterity.
**India-rubber,** in'di-ā-rub'er, *n.* caoutchouc.
**Indicative,** in-dik'ā-tiv, *adj.* pointing out.
**Indicator,** in-dik-ā'tor, *n.* one who or that which points out.
**Indict,** in-dit', *v.* to charge with; to accuse.
**Indictment,** in-dit'ment, *n.* formal legal accusation.
**Indifference,** in-dif'er-ens, *n.* unconcern.
**Indifferent,** in-dif'er-ent, *adj.* unimportant; uninteresting.
**Indigence,** in'di-jens, *n.* poverty.
**Indigenous,** in-dij'en-us, *adj.* native.
**Indigent,** in-di-jent, *adj.* poor; needy.
**Indigestion,** in-di-jest'yun, *n.* dyspepsia; weak
**Indign,** in-dīn', *adj.* unworthy. [digestion.
**Indignant,** in-dig'nant, *n.* angry.
**Indignation,** in-dig-nā'shun, *n.* anger; resentment.
**Indignity,** in-dig'ni-ti, *n.* insult; slight.
**Indigo,** in-di-gō, *n.* a blue dye.
**Indirect,** in-di-rekt' *adj.* crooked; not direct.
**Indiscernible,** in-diz-ern'ibl, *adj.* unseen; not visible.
**Indiscreet,** in-dis-krēt', *adj.* injudicious.
**Indiscretion,** in-dis-kresh'un, *n.* rashness.
**Indiscriminate,** in-dis-krim'in-āt, *adj.* confused; promiscuous. [out care.
**Indiscriminating,** in-dis-krim'in-āt-ing, *adj.* with-
**Indispensable,** in-dis-pens'abl, *adj.* necessary.
**Indisposed,** in-dis-pōzd, *adj.* disinclined; ailing.
**Indisposition,** in-dis-po-zish'un, *n.* disinclination; illness.
**Indisputable,** in-dis-pūt'abl, *adj.* beyond dispute.
**Indissociable,** in-dis-ō'shi-abl, *adj.* inseparable.
**Indissoluble,** in-dis-sol'ū-bl, *adj.* not soluble; binding.
**Indistinct,** in-dis-tingkt', *adj.* obscure; faint.
**Indite,** in-dīt', *v.* to utter; to write; to dictate.
**Inditement,** in-dīt'ment, *n.* that which is indited.
**Indium,** in'di-um, *n.* a white metallic element.
**Individual,** in-div-id'ū-al, *adj.* single. [dividually.
**Individualise,** in-div-id'ū-al-īz, *v.* to distinguish in-
**Individualism,** in-div-id'ū-al-izm, *n.* independence of action. [separate existence.
**Individuality,** in-div-id-ū-al'it-i, *n.* personality; separate existence.
**Indoctrinate,** in-dok'trin-āt, *v.* to teach; to imbue with special views.
**Indo-European,** in'do-ū-ro-pē'an, *adj.* a term applied to a certain family of languages.
**Indolence,** in'do-lens, *n.* idleness.
**Indolent,** in'do-lent, *adj.* lazy.
**Indomitable,** in-dom'it-abl, *adj.* not to be subdued.
**Indorse,** in-dors', *v.* to sign or write on the back of.
**Indrawn,** in'drawn, *adj.* drawn in.
**Indubious,** in-dū'bi-us, *adj.* certain.
**Indubitable,** in-dū'bit-abl, *adj.* without doubt.
**Induce,** in-dūs', *v.* to prevail upon.
**Inducement,** in-dūs'ment, *n.* that which induces.
**Induct,** in-dukt', *v.* to instal.
**Inductile,** in-duk'til, *adj.* that cannot be drawn out.
**Induction,** in-duk'shun, *n.* introduction.
**Induction-coil,** in-duk'shun-koil, *n.* an electrical apparatus of two coils of wire inducing a current.
**Inductive,** in-duk'tiv, *adj.* leading to inference.
**Indue,** indū', *v.* to invest.
**Indurate,** in'dū-rāt, *v.* to harden.
**Industrial,** in-dus'tri-al, *adj.* pertaining to industry.
**Industrialism,** in-dus'trī-al-izm, *n.* the study of industrial pursuits.
**Industrious,** in-dus'tri-us, *adj.* diligent.
**Industry,** in'dus-tri, *n.* toil; labour; assiduity.
**Indwell,** in-dwel', *v.* to dwell in.
**Inebriate,** in-ē'bri-āt, *n.* a drunkard; *v.* to make drunk.
**Inebriation,** in-ē-bri-ā'shun, *n.* drunkenness.
**Inedible,** in-ed'ibl, *adj.* unfit for eating.
**Inedited,** in-ed'it-ed, *adj.* not edited.
**Ineffable,** in-ef'abl, *adj.* unspeakable.
**Ineffaceable,** in-ef-fās'abl, *adj.* that cannot be
**Ineffective,** in-ef-fek'tiv, *adj.* useless. [effaced.
**Inefficacy,** in-ef'ik-ā-si, *n.* ineffectualness.
**Inefficient,** in-ef-ish'ent, *adj.* unavailing.
**Inelegant,** in-el'e-gant, *adj.* coarse; rude; unpolished.
**Ineligible,** in-el'ij-ibl, *adj.* not worthy; unsuitable.
**Inept,** in-ept', *adj.* unfit; foolish.
**Inequality,** in-e-kwol'it-i, *n.* unevenness; lack of equality.
**Inequitable,** in-ek'wit-abl, *adj.* unjust.
**Ineradicable,** in-ē-rad'ik-abl, *adj.* incapable of being rooted out.
**Inert,** in-ert', *adj.* sluggish; motionless.
**Inertia,** in-er'shi-a, *n.* sluggishness.
**Inessential,** in-es-en'shal, *adj.* not essential.
**Inestimable,** in-es'tim-abl, *adj.* above praise.
**Inevitable,** in-ev'it-abl, *adj.* unavoidable.
**Inexact,** in-egz-akt', *adj.* incorrect.
**Inexcusable,** in-eks-kūz'abl, *adj.* without excuse.
**Inexhaustible,** in-egz-hawst'ibl, *adj.* that cannot be exhausted.
**Inexorable,** in-egz'or-abl, *adj.* inflexible; not to be moved.
**Inexpedient,** in-eks-pē'di-ent, *adj.* inconvenient.
**Inexperience,** in-eks-pēr'i-ens, *n.* lack of experience.
**Inexplicable,** in-eks'plik-abl, *adj.* incapable of explanation.
**Inexplorable,** in-eks-plōr'abl, *adj.* that cannot be explored.
**Inexpressible,** in-eks'pres'ibl, *adj.* unutterable.
**Inexpressive,** in-eks-pres'iv, *adj.* not expressive.

**Inextricable,** in-eks'trik-abl, *adj.* incapable of being extricated.
**Infallible,** in-fal'ibl, *adj.* unerring; certain.
**Infamous,** in'fa-mus, *adj.* notorious; wicked; shameless.
**Infamy,** in'fa-mi, *n.* public disgrace.
**Infant,** in'fant, *n.* a young child; a man under 21 years of age.
**Infanticide,** in-fan'ti-sid, *n.* murder of an infant.
**Infantile,** in'fant-il, *adj.* pertaining to infancy.
**Infantry,** in'fan-tri, *n.* foot soldiers. [passion.
**Infatuate,** in-fat'ū-āt, *v.* to inspire with headstrong
**Infatuation,** infat-ū-ā'shun, *n.* unreasoning passion.
**Infect,** in-fekt', *v.* to taint.
**Infection,** in-fek'shun, *n.* the act of infecting.
**Infectious,** in-fek'shus, *adj.* having the quality of infection.
**Infecundity,** in-fe-kun'di-ti, *n.* want of fertility.
**Infelicitous,** in-fel-is'it-us, *adj.* unhappy.
**Infer,** in-fer', *v.* to deduce; to imply.
**Inference,** in'fer-ens, *n.* that which is inferred.
**Inferential,** in-fer-en'shal, *adj.* deducible.
**Inferiority,** in-fēr-i-or'it-i, *n.* the state of being inferior.
**Infernal,** in-fer'nal, *adj.* outrageous; damnable.
**-ile,** in-fer'til, *adj.* not fruitful; barren.
**-,** in-fest', *v.* to disturb; to annoy.
**-,** in'fi-del, *n.* a disbeliever in Christianity.
**-y,** in-fi-del'it-i, *n.* lack of faith; unfaithfulness.
**Infiltrate,** in-fil'trāt, *v.* to enter by filtration or the
**Infinite,** in'fin-it, *adj.* unlimited. [pores.
**Infinitesimal,** in-fin-it-es'i-mal, *adj.* excessively small. [limit.
**Infinitude,** in-fin'it-ūd, *n.* state without bound or
**Infinity,** in-fin'it-i, *n.* unlimited extent or number.
**Infirm,** in-ferm', *adj.* feeble; irresolute.
**Infirmity,** in-ferm'it-i, *n.* defect; weakness.
**Inflame,** in-flām', *v.* to cause to burn; to excite.
**Inflammable,** in-flam'abl, *adj.* combustible.
**Inflammation,** in-flam'ā-shun, *n.* violent heat in any part; state of being in flame.
**Inflammatory,** in-flam'at-or-i, *adj.* showing inflammation; excitable.
**Inflate,** inflāt,' *v.* to swell; to blow out.
**Inflation,** in-flā'shun, *n.* the act or state of being inflated.
**Inflect,** in-flekt', *v.* to bend; to conjugate.
**Inflection,** in-flek'shun, *n.* the act of bending; voice modulation.
**Inflexible,** in-fleks'ible, *adj.* unyielding.
**Inflict,** in-flikt', *v.* to impose.
**Infliction,** in-flik'shun, *n.* punishment; act of inflicting. [ing.
**Inflorescence,** in-flor-es'ens, *n.* method of flower-
**Influence,** in'floo-ens, *n.* authority; power.
**Influential,** infloo-en'shal, *adj.* having influence or power.
**Influenza,** in-floo-en'za, *n.* an epidemic catarrh.
**Influx,** in'fluks, *n.* a flowing in.
**Influxion,** in-fluk'shun, *n.* infusion.
**Inform,** in-form', *v.* to impart; to animate; to tell.
**Informal,** in-form'al, *adj.* without form; irregular.
**Informality,** in-form-al'it-i, *n.* a dispensing with form. [against.
**Informant,** in-form'ant, *n.* one who informs
**Information,** in-form,-ā'shun, *n.* knowledge.
**Infracostal,** in-fra-kost'al, *adj.* beneath the ribs.
**Infraction,** in-frak'shun, *n.* a breach.
**Infrangible,** in-fran'ji-bl, *adj.* unbreakable.
**Infrequent,** in-frē'quent, *adj.* rare; uncommon.
**Infringe,** in-frinj', *v.* to violate; to break.
**Infuriate,** in-fū'ri-āt, *v.* to enrage.
**Infuse,** in-fūz', *v.* to brew; to steep; to pour into.
**Infusible,** in-fūz'ibl, *adj.* capable of being infused.
**Infusion,** in-fū'zhun, *n.* the act of infusing.
**Infusoria,** in-fū-sō'ri-a, *n.* certain classes of Proto-
**Ingathering,** in'gath-er-ing, *n.* harvest. [zoa.
**Ingenious,** in-jē'ni-us, *adj.* skilful; inventive.
**Ingenium,** in-jē'ni-um, *n.* tendency of mind.
**Ingenuity,** in-jen-ū'it-i, *n.* inventiveness.
**Ingenuous,** in-jen'ū-us, *adj.* frank; open; candid.
**Ingenuousness,** in-jen'ū-us-ness, *n.* frankness.
**Ingle,** ing'gl, *n.* fireside.
**Inglorious,** in-glō'ri-us, *adj.* disgraceful.
**Ingoing,** in'gō-ing, *n.* an entering.
**Ingot,** in'got, *n.* a bar of metal.
**Ingrain,** in-grān', *v.* to fix deeply; to dye in the raw.
**Ingrate,** in'grāt, *n.* one who is ungrateful.
**Ingratiate,** in-grā'shi-āt, *v.* to put oneself in favour.
**Ingratitude,** in-grat'it-ūd, *n.* unthankfulness for favours.
**Ingredient,** in-grē'di-ent, *n.* a compound part.
**Ingress,** in'gres, *n.* entrance.
**Ingrowing,** in'grō-ing, *adj.* growing inward.
**Inguinal,** ing'gwi-nal, *adj.* relating to the groin.
**Ingurgitate,** in-gur'jit-āt, *v.* to swallow greedily.
**Inhabit,** in-hab'it, *v.* to dwell in.
**Inhabitant,** in-hab'it-ant, *n.* a dweller.
**Inhalation,** in-hāl-ā'shun, *n.* the drawing in of air.
**Inhale,** in-hāl', *v.* to draw into the lungs.
**Inharmonious,** in-hār-mō'ni-us, *adj.* discordant.
**Inherent,** in-hēr'ent, *adj.* innate; existing in.
**Inherit,** in-her'it, *v.* to possess by descent.
**Inheritance,** in-her'it-ans, *n.* an inherited property.
**Inhibit,** in-hib'it, *v.* to prohibit.
**Inhibition,** in-hib-ish'un, *n.* that which prohibits.
**Inhospitable,** in-hos'pit-abl, *adj.* not disposed to entertain strangers.
**Inhuman,** in-hū'man, *adj.* cruel; unfeeling.
**Inhumanity,** in-hū-man'it-i, *n.* want of feeling.
**Inhumation,** in-hū-mā'shun, *n.* the act of burial.
**Inhume,** in-hūm', *v.* to bury.
**Inimical,** in-im'ik-al, *adj.* unfriendly; repugnant.
**Inimitable,** in-im'it-abl, *adj.* beyond imitation.
**Iniquitous,** in-ik'wit-us, *adj.* unjust; wicked.
**Iniquity,** in-ik'wi-ti, *n.* injustice; wickedness.
**Initial,** in-ish'al, *adj.* first; beginning; *n.* the first letter of a word. [quainted with.
**Initiate,** in-ish'i-āt, *v.* to introduce; to make ac-
**Initiation,** in-ish-i-ā'shun, *n.* the act of initiating.
**Initiative,** in-ish'i-ā-tiv, *adj.* serving to initiate; *n.* the first step.
**Inject,** in-jekt', *v.* to force in.
**Injection,** in-jek'shun, *n.* the act of forcing in; a clyster. [form.
**Injudicial,** in-joo-dish'al, *adj.* contrary to legal
**Injudicious,** in-joo-dish'us, *adj.* unwise; imprudent. [command.
**Injunction,** in-jungk'shun, *n.* an order of court; a
**Injure,** in'joor, *v.* to damage; to harm.
**Injurious,** in-joo'ri-us, *adj.* harmful.
**Injustice,** in-jus'tis, *n.* violation of right.
**Ink,** ingk, *n.* a fluid used in writing.
**Inkling,** ingk'ling, *n.* a hint.
**Inkstand,** ingk'stand, *n.* a vessel for holding ink.
**Inlaid,** in-lād', *v. pa. part.* of Inlay.
**Inlay,** in-lā', *v.* to ornament by inserting other sub-
**Inlay,** in'lā, *n.* pieces inlaid. [stances.
**Inlet,** in'let, *n.* a small bay; an entrance.
**Inly,** in'li, *adv.* internally; *adj.* inward.
**Inmate,** in'māt, *n.* one who resides in the same
**Innate,** in-āt', *adj.* inborn. [dwelling.
**Innavigable,** in-nav'ig-abl, *adj.* not navigable.
**Innervation,** in-er-vā'shun, *n.* nervous activity.
**Innocence,** in'o-sens, *n.* purity.
**Innocent,** in'o-sent, *adj.* pure; guileless.
**Innocuous,** in-ok'ū-us, *adj.* harmless.
**Innovate,** in'ō-vāt, *v.* to introduce a novel idea.
**Innuendo,** in-ū-en'do, *n.* a side hint.
**Innumerable,** in-nū'mer-abl, *adj.* incapable of being numbered.
**Inoculate,** in-ok'ū-lāt, *v.* to engraft; to communicate disease by the insertion of matter into the
**Inodorous,** in-ō'der-us, *adj.* scentless. [system.
**Inoffensive,** in-o-fen'siv, *adj.* without offence.
**Inoperative,** in'op'er-a-tiv, *adj.* inactive; without
**Inopportune,** in-op'or-tūn, *adj.* untimely. [effect.
**Inordinate,** in-or'din-āt, *adj.* excessive.
**Inorganic,** in-or-gan'ik, *adj.* without living organisation.
**In-patient,** in-pā-shent, *n.* patient living in hospi-
**Inpouring,** in-pōr'ing, *n.* a pouring in. [tal.
**Input,** in'poot, *n.* contribution. [a sudden death.
**Inquest,** in'kwest, *n.* a judicial inquiry concerning
**Inquietude,** in-kwī'et-ūd, *n.* uneasiness; restlessness.
**Inquire,** in-kwīr', *v.* to ask; to examine.
**Inquiry,** in-kwī'ri, *n.* examination; act of inquiring.
**Inquisition,** in-kwiz-ish'un, *n.* a judicial inquiry; a tribunal for dealing with heretics.
**Inquisitive,** in-kwiz'it-iv, *adj.* prying; curious.
**Inroad,** in'rōd, *n.* a sudden incursion.
**Inrush,** in'rush, *n.* a rushing in.
**Insalubrious,** in-sal-ū'bri-us, *adj.* unhealthy.
**Insane,** in-sān', *adj.* of unsound mind.
**Insanity,** in-san'it-i, *n.* derangement of mind.
**Insatiable,** in-sā'shi-abl, *adj.* incapable of being satisfied.
**Inscribe,** in-skrīb', *v.* to write upon.
**Inscription,** in-skrip'shun, *n.* a writing upon; a title.
**Inscrutable,** in-skroot'abl, *adj.* beyond finding out.
**Insect,** in'sekt, *n.* a small flying or crawling animal.

**Insectivorous,** in-sekt-iv'er-us, *adj.* feeding on insects.
**Insecure,** in-sē-kūr', *adj.* unsafe.
**Insensate,** in-sen'sāt, *adj.* thoughtless; senseless.
**Insensible,** in-sen'sibl, *adj.* wanting in feeling.
**Insentient,** in-sen'shi-ent, *adj.* without perception.
**Inseparable,** in-sep'ar-abl, *adj.* that cannot be separated.
**Insert,** in-sert', *v.* to put in.
**Insertion,** in-ser'shun, *n.* the act of inserting; the thing inserted.
**Inset,** in'set, *n.* something inserted; *v.* to set in.
**Inside,** in-sīd', *n.* within.
**Insidious,** in-sid'i-us, *adj.* deceitful; designing.
**Insight,** in'sit, *n.* penetration; knowledge.
**Insignia,** in-sig'ni-a, *n.* badges of office.
**Insignificant,** in-sig-nifi-kant, *adj.* unimportant; trifling.
**Insincere,** in-sin-sēr', *adj.* deceitful.
**Insincerity,** in-sin-ser'it-i, *n.* deceitfulness.
**Insinuate,** in-sin'ū-āt, *v.* to hint; to instil; to introduce gently.
**Insipid,** in-sip'id, *adj.* tasteless.
**Insipidity,** in-sip-id'it-i, *n.* lacking in life and spirit.
**Insipience,** in-sip'i-ens, *n.* foolishness.
**Insistence,** in-sist'ens, *n.* pertinacity.
**Insobriety,** in-so-brī'et-i, *n.* intemperance; drunkenness.
**Insociable,** in-so'sha-abl, *adj.* not sociable.
**Insolate,** in'so-lāt, *v.* to expose to the sun.
**Insolence,** in'solens, *n.* rudeness.
**Insolent,** in'so-lent, *adj.* insulting.
**Insoluble,** insol'ū-bl, *adj.* not capable of being dissolved or explained.
**Insolvable,** in-solv'abl, *adj.* inexplicable.
**Insolvency,** in-sol'ven-si, *n.* inability to settle one's debts.
**Insomnia,** in-som'ni-ā, *n.* sleeplessness.
**Insouciance,** in-soo'si-ans, *n.* indifference.
**Inspect,** in-spekt', *v.* to examine.
**Inspector,** in-spek'tor, *n.* a superintendent; an examiner.
**Inspire,** in-spīr', *v.* to draw in breath; to prompt; to infuse.
**Inspirit,** in-spir'it, *v.* to animate.
**Inspissate,** in-spis'āt, *v.* to thicken.
**Instability,** in-sta-bil'it-i, *n.* inconstancy; want of firmness.
**Instable,** in-stā'bl, *adj.* inconstant.
**Install,** in-stawl', *v.* to invest; to place in office; to establish.
**Installation,** in-stal-ā'shun, *n.* the act of giving possession of an office.
**Instalment,** in-stawl'ment, *n.* the act of installing; payment of part.
**Instance,** in'stans, *n.* example; occurrence.
**Instant,** in'stant, *n.* a moment; *adj.* present; urgent.
**Instantaneous,** in-stant-ā'ne-us, *adj.* done in an instant.
**Instanter,** in-stant'er, *adv.* immediately.
**Instellation,** in-stel-ā'shun, *n.* placing among the stars.
**Instep,** in'step, *n.* the upper part of the foot.
**Instigate,** in'sti-gāt, *v.* to urge to do; to incite.
**Instil,** in-stil', *v.* to drop into; to infuse.
**Instinct,** in'stingkt, *n.* natural impulse.
**Instinct,** in-stingkt', *adj.* animated with.
**Institute,** in'sti-tūt, *v.* to set up; begin; *n.* something established.
**Instrumental,** in-strū-ment'al, *adj.* acting as a means.
**Insubordinate,** in-sub-or'din-āt, *adj.* disobedient.
**Insufferable,** in-suf'er-abl, *adj.* intolerable.
**Insufficiency,** in-suf-fish'en-si, *n.* the state of being unfit.
**Insular,** in'sū-lar, *adj.* pertaining to an island.
**Insulate,** in'sū-lāt, *v.* to separate.
**Insult,** in-sult', *v.* to abuse; to affront.
**Insult,** in'sult, *n.* abuse; affront.
**Insuperable,** in-sū'per-abl, *adj.* not to be overcome.
**Insupportable,** in-sup-port'abl, *adj.* insufferable.
**Insurance,** in-shoor'ans, *n.* the act of insuring.
**Insure,** in-shoor', *v.* to secure; to invest against loss.
**Insurgent,** in-sur'jent, *n.* one who rises against authority.
**Insurmountable,** in-sur-mownt'abl, *adj.* not to be overcome.
**Insurrection,** in-sur-ek'shun, *n.* a rising or revolt; rebellion.
**Insusceptible,** in-sus-sep'tibl, *adj.* insensible to feeling.
**Intact,** in-takt', *adj.* entire; uninjured.
**Intaglio,** in-tal'yō, *n.* a figure cut into any substance.
**Intangible,** in-tan'jibl, *adj.* not perceptible to the touch.
**Integer,** in'te-jer, *n.* a whole number.
**Integral,** in'te-gral, *adj.* entire; complete.
**Integrant,** in'te-grant, *n.* constituting part of a whole.
**Integrate,** in'te-grāt, *v.* to constitute one whole or total; to renew.
**Integrity,** in-teg'rit-i, *n.* uprightness; honesty.
**Integument,** in-teg'ū-ment, *n.* the external skin of animal or plant.
**Intellect,** in'tel-ekt, *n.* the understanding; the reasoning faculties.
**Intellectual,** in-tel-ekt'ū-al, *adj.* pertaining to the intellect.
**Intellectualism,** in-tel-ekt'ū-al-izm, *n.* the doctrine of pure reason.
**Intelligence,** in-tel'i-jens, *n.* mental power.
**Intelligent,** in-tel'i-jent, *adj.* mentally bright.
**Intelligible,** in-tel'i-jibl, *adj.* easy to understand.
**Intemperance,** in-tem'per-ans, *n.* excess; drunkenness.
**Intend,** in-tend', *v.* to purpose; to incline to.
**Intendant,** in-ten'dant, *n.* superintendent; overseer.
**Intense,** in-tense', *adj.* keen; tightly stretched; emotional.
**Intensify,** in-ten'si-fī, *v.* to make more intense.
**Intensity,** in-ten'si-ti, *n.* extreme application, power, or feeling.
**Intensive,** in-ten'siv, *adj.* giving force.
**Intent,** in-tent', *n.* purpose; *adj.* of close application.
**Intention,** in-ten'shun, *n.* having design towards.
**Inter,** in-ter', *v.* to bury.
**Interact,** in-ter-akt', *n.* a short piece between two chief pieces; the interval between the acts.
**Interbreed,** in-ter-brēd', *v.* to breed by crossing.
**Intercalate,** in-ter'kal-āt, *v.* to insert between.
**Intercede,** in-ter-sēd', *v.* to mediate; to plead.
**Intercept,** in-ter-sept', *v.* to stop in passage; to obstruct.
**Intercessor,** in-ter-ses'or, *n.* a mediator.
**Interchange,** in-ter-chanj', *v.* to exchange mutually.
**Interchangeable,** in-ter-chanj'abl, *adj.* capable of exchange or alternation.
**Intercostal,** in-ter-kost'al, *adj.* between the ribs.
**Intercourse,** in'ter-kōrs, *n.* mutual dealings; commerce.
**Interdict,** in-ter-dikt', *v.* to prohibit.
**Interdictory,** in-ter-dikt'or-i, *adj.* prohibitory.
**Interest,** in'ter-est, *n.* concern; payment for the use of money; *v.* to arouse concern.
**Interesting,** in'ter-est-ing, *adj.* worthy of attention.
**Interfere,** in-ter-fēr', *v.* to meddle with; to interpose.
**Interference,** in-ter-fēr-ens, *n.* act of interfering.
**Interim,** in'ter-im, *n.* intervening time.
**Interject,** in-ter-jekt', *v.* to throw between.
**Interlace,** in-ter-lās', *v.* to lace together.
**Interlard,** in-ter-lārd', *v.* to intermix.
**Interleave,** in-ter-lēv', *v.* to insert leaves.
**Interline,** in-ter-lin', *v.* to insert between lines.
**Interlinear,** in-ter-lin'e-ar, *adj.* between lines.
**Interlocution,** in-ter-lō-kū'shun, *n.* conference; intermediate judgment.
**Interlocutor,** in-ter-lok'ū-tor, *n.* one who speaks between dialogue.
**Interlocutory,** in-ter-lok'u-ter-i, *adj.* in dialogue form.
**Interloper,** in-ter-lo'per, *n.* an intruder.
**Interlude,** in-ter-lood, *n.* between the acts.
**Interlunar,** in-ter-loo'ner, *adj.* relating to the period of the moon's invisibility.
**Intermediate,** in-ter-mē'di-at, *adj.* intervening.
**Interment,** in-ter'ment, *n.* burial.
**Interminable,** in-ter'min-abl, *adj.* without end.
**Intermission,** in-ter-mish'un, *n.* interval.
**Intermittent,** in-ter-mit'ent, *adj.* ceasing at intervals.
**Intermural,** in-ter-mū'ral, *adj.* between walls.
**Intern,** in-tern', *v.* to confine in neutral territory.
**Internal,** in-ter'nal, *adj.* inward.
**International,** in-ter-nash'un-al, *adj.* between nations.
**Internecine,** in-ter-nē'sin, *adj.* mutually destructive.
**Internode,** in'ter-nōd, *n.* space between two nodes.
**Interpellation,** in-ter-pel-ā'shun, *n.* interposition.
**Interpolate,** in-ter'po-lāt, *v.* to insert words unfairly.
**Interpolation,** in-ter-po-lā'shun, *n.* what is interpolated.
**Interpose,** in-ter-pōz', *v.* to step between; to mediate.
**Interpret,** in-ter'pret, *v.* to explain; to translate.
**Interpretation,** in-ter-pre-tā'shun, *n.* the act of explaining.
**Interpreter,** in-ter'pre-ter, *n.* one who translates or elucidates.
**Interregnum,** in-ter-reg'num, *n.* time between the death of a ruler and the accession of a successor.
**Interrogate,** in-ter'o-gāt, *v.* to question.
**Interrogatory,** in-ter-rog'ā-to-ri, *n.* a question.
**Interrupt,** in-ter-rupt', *v.* to interfere; to hinder; to oppose.
**Interruption,** in-ter-rup'shun, *n.* interference.
**Interscapular,** in-ter-skap'ū-lar, *adj.* between the shoulder blades.

**Intersect,** in-ter-sekt', *v.* to cut between.
**Intersection,** in-ter-sek'shun, *n.* intersecting point.
**Intersperse,** in-ter-spers', *v.* to scatter among.
**Interstellar,** in-ter-stel'ar, *adj.* among the stars.
**Interstice,** in'ter-stis, *n.* a space between things.
**Intertwine,** in-ter-twin', *v.* to twine together.
**Interval,** in'ter-val, *n.* time between.
**Intervention,** in-ter-ven'shun, *n.* an interposing.
**Interview,** in'ter-vū, *n.* a meeting; *v.* to call upon a person and take down his views.
**Interweave,** in-ter-wēv', *v.* to weave together.
**Intestable** in-test'abl, *adj.* not qualified to execute a will.
**Intestate,** in-tes'tāt, *adj.* dying without a will.
**Intestinal,** in-tes'tin-al, *adj.* relating to the bowels.
**Intestine,** in-tes'tin, *n.* domestic; internal.
**Intimacy,** in'tim-ā-si, *n.* familiarity.
**Intimate,** in'ti-māt, *n.* near; familiar with.
**Intimate,** in-ti-māt', *v.* to hint; to suggest; to make known. [timid.
**Intimidate,** in-tim'id-āt, *v.* to frighten; to make
**Intolerable,** in-tol'er-abl, *adj.* insufferable.
**Intolerance,** in-tol'er-ans, *n.* lack of toleration; bigotry.
**Intone,** in-tōn', *v.* to chant.
**Intonation,** in-tōn-ā'shun, *n.* inflection of voice.
**Intoxicant,** in-tok'si-kant, *n.* that which intoxicates. [excite.
**Intoxicate,** in-tok'si-kāt, *v.* to make drunk; to
**Intractable,** in-trakt'abl, *adj.* unmanageable; unruly.
**Intramural,** in-tra-mū'ral, *adj.* within walls.
**Intransitive,** in-tran'sit-iv, *adj.* not passing over.
**Intrench,** in-trensh', *v.* to make trenches; to encroach. [defence; encroachment.
**Intrenchment,** in-trench'ment, *n.* a ditch of
**Intrepid,** in-trep'id, *adj.* fearless.
**Intrepidity,** in-tre-pid'it-i, *n.* daring; fearlessness.
**Intricacy,** in'trik-a-si, *n.* entanglement; perplexity.
**Intricate,** in'trik-āt, *adj.* complicated; obscure.
**Intrigue,** in-trēg', *n.* a secret plot; an amour.
**Intrinsic,** in-trins'ik, *adj.* real; inherent.
**Introduce,** in-tro-dūs', *v.* to make known to; to bring in. [ducing.
**Introduction,** in-trō-duk'shun, *n.* the act of intro-
**Introductory,** in-tro-dukt'or-i, *n.* serving to introduce.
**Intromission,** in-tro-mish'un, *n.* the act of sending in. [tion.
**Introspection,** in-tro-spek'shun, *n.* self-examina-
**Intrude,** in-trood', *v.* to force oneself in uninvited.
**Intrusion,** in-troo'zhun, *n.* entrance without authority.
**Intrusive,** in-troo'siv, *adj.* apt to intrude.
**Intrust,** in-trust', *v.* to trust to; to give charge of.
**Intuition,** in-tū-ish'un, *n.* natural perception.
**Intuitive,** in-tū'it-iv, *adj.* perceived by intuition.
**Intuse,** in-tūz', *n.* a bruise.
**Inundate,** in-un'dāt, *v.* to overflow.
**Inundation,** in-un-dā'shun, *n.* a flood.
**Inure,** in-ūr', *v.* to harden; to accustom.
**Inutility,** in-ū-til'it-i, *n.* uselessness.
**Invade,** in-vād', *v.* to encroach upon; to enter a country as an enemy.
**Invalid,** in-val'id, *adj.* void; worthless.
**Invalid,** in'val-ēd, *n.* a sick person.
**Invalidate,** in-val'i-dāt, *v.* to make void.
**Invalidity,** in-val-id'it-i, *n.* wanting legality.
**Invaluable,** in-val'ū-abl, *adj.* priceless.
**Invariable,** in-vār'i-abl, *adj.* unchangeable.
**Invasion,** in-vā'zhun, *n.* a hostile entrance.
**Invective,** in-vek'tiv, *n.* severe censure; sarcasm.
**Inveigh,** in-vā', *v.* to censure; to rail.
**Inveigle,** in-vē'gl, *v.* to entice; to wheedle.
**Invent,** in-vent', *v.* to contrive something new.
**Invention,** in-ven'shun, *n.* a thing invented; a fabrication.
**Inventive,** in-ven'tiv, *adj.* ready in contriving.
**Inventor,** in-ven'tor, *n.* one who invents.
**Inventory,** in-ven-to-ri, *n.* a list of articles.
**Inverse,** in-vers', *adj.* opposite.
**Inversely,** in-vers'li, *adj.* in reverse order.
**Invert,** in-vert', *v.* to reverse; to turn upside down.
**Invertebrate,** in-ver'te-brāt, *adj.* without backbone.
**Invest,** in-vest', *v.* to lay out money; to besiege; to clothe.
**Investigate,** in-vest'i-gāt, *v.* to inquire into.
**Investiture,** in-vest'it-ūr, *n.* a putting in possession. [invested; blockade.
**Investment,** in-vest'ment, *n.* that which is
**Inveterate,** in-vet'er-āt, *adj.* habitual; hardened.
**Invidious,** in-vid'i-us, *adj.* like to call forth envy.
**Invigorate,** in-vig'or-āt, *v.* to strengthen.
**Invincible,** in-vin'si-bl, *adj.* not to be overcome.
**Inviolable,** in-vi'o-la-bl, *adj.* not to be broken.
**Inviolate,** in-vi'o-lāt, *adj.* uninjured; untampered
**Invisible,** in-viz'ibl, *adj.* not to be seen. [with.
**Invitation,** in-vi-tā'shun, *n.* act of inviting.
**Invite,** in-vit', *v.* to request attendance; to allure.
**Invocation,** in-vo-kā'shun, *n.* prayer.
**Invoice,** in'vois, *n.* bill with prices.
**Invoke,** in-vōk', *v.* to summon: to implore.
**Involuntary,** in-vol'un-tar-i, *adj.* unintentional.
**Involution,** in-vo-lū'shun, *n.* complication.
**Invulnerable,** in-vul'ner-abl, *adj.* unassailable; im-
**Inward,** in-werd, *adj.* within. [penetrable.
**Inwrought,** in-rawt', *adj.* worked together with other things.
**Iodide,** i-o'did, *n.* an iodine and metal compound.
**Iodine,** i'o-din, *n.* a substance made from seaweed ashes.
**Iolite,** i'o-lit, *n.* a violet-blue transparent stone.
**Ionic,** i-on'ik, *adj.* relating to Ionia; *n.* an order of
**Iota,** i-ō'ta, *n.* a jot. [architecture.
**Ipecacuanha,** ip-e-kak-ū-an'a, a South American root.
**Irascible,** i-ras'ibl, *adj.* irritable; easily angered.
**Ire,** ir, *n.* wrath; anger.
**Irenic,** i-ren'ik, *adj.* peaceful.
**Irenicon,** i-ren'i-kon, *n.* a peace proposition.
**Iricism,** i'ris-izm, *n.* an Irishism.
**Iridescent,** ir-id-es'ent, *adj.* prismatic.
**Iridium,** i-rid'i-um, *n.* a heavy infusible metal.
**Iris,** i'ris, *n.* the rainbow.
**Irksome,** erk'sum, *adj.* tedious; troublesome; wearisome.
**Iron,** i'run, *n.* the commonest of the metals.
**Ironical,** i-ron'ik-al, *adj.* sarcastic.
**Irony,** i'ron-i, *n.* ridicule.
**Irradiate,** ir-rā'di-āt, *v.* to illuminate.
**Irrational,** ir-rash'ō-nal, *adj.* absurd; unreason-
**Irreclaimable,** ir-rē-klām'abl, *adj.* lost. [able.
**Irreconcilable,** ir-rek-on-sil'abl, *adj.* incapable of being reconciled.
**Irrecoverable,** ir-re-kuv'er-abl, *adj.* not to be recovered.
**Irredeemable,** ir-re-dēm'abl, *adj.* not to be redeemed. [reduced.
**Irreducible,** ir-re-dūs'ibl, *adj.* that cannot be
**Irrefragable,** ir-ref'ra-ga-bl, *adj.* indisputable.
**Irrefutable,** ir-re-fū'ta-bl *adj.* incontestable.
**Irregular,** ir-reg'ū-lar, *adj.* variable; not according to rule. [irregular.
**Irregularity,** ir-reg-u-lar-it-i, *n.* the state of being
**Irrelevant,** ir-rel'e-vant, *adj.* not bearing on the question.
**Irreligious,** ir-re-lij'us, *adj.* impious.
**Irremediable,** ir-re-mē'di-abl, *adj.* without remedy.
**Irremissible,** ir-re-mis'ibl, *adj.* beyond forgiveness.
**Irreparable,** ir-rep'ar-abl, *adj.* beyond repair.
**Irrepressible,** ir-re-pres'ibl, *adj.* incapable of restraint. [blame.
**Irreproachable,** ir-re-proch'abl, *adj.* free from
**Irresistible,** ir-re-zist'ibl, *adj.* resistless.
**Irresolute,** ir-rez'o-lūt, *adj.* wavering.
**Irrespective,** ir-re-spek'tiv, *adj.* without regard.
**Irresponsible,** ir-re-spon'si-bl, *adj.* not answerable for.
**Irretrievable,** ir-re-trēv'abl, *adj.* not recoverable.
**Irreverent,** ir-rev'er-ent, *adj.* lacking in reverence.
**Irreversible,** ir-re-vers'ibl, *adj.* unchangeable.
**Irrevocable,** ir-rev'o-ka-bl, *adj.* beyond revocation.
**Irrigate,** ir'ri-gāt, *v.* to water; to spread water over. [lands.
**Irrigation,** ir-ri-gā'shun, *n.* watering cultivable
**Irriguous,** ir-rig'ū-us, *adj.* watery; moist.
**Irritable,** ir'ri-table, *adj.* touchy.
**Irritant,** ir'ri-tant, *n.* that which irritates.
**Irritate,** ir-ri-tāt', *v.* to annoy.
**Irruption,** ir-rup'shun, *n.* a bursting in.
**Ischial,** is'ki-al, *adj.* pertaining to the hip.
**Ishmaelite,** ish'mā-līt, *n.* an outcast.
**Isinglass,** i'sing-glas, *n.* basis for jellies made from part of a fish.
**Islamism,** iz'lam-izm, *n.* Mahommedanism.
**Island,** i'land, *n.* land surrounded by water.
**Islet,** i'let, *n.* a small island.
**Isochronous,** i-sok'ro-nus, *adj.* equal in time.
**Isolate,** is'o-lāt' *v.* to set apart; to detach.
**Isolation,** is-o-lā'shun, *n.* the act of isolating.
**Isomeric,** i-so-mer'ik, *adj.* of like elements but different properties.
**Isonomy,** i-son'o-mi, *n.* equality.
**Isothermal,** i-so-*ther*'mal, *adj.* possessing equal heat.

**Issue,** ish'ū, *v.* to flow; to proceed from; *n.* progeny.
**Isthmian,** ist'mi-an, *adj.* pertaining to an isthmus.
**Isthmus,** ist'mus, *n.* a neck of land.
**Italicize,** i-tal'i-siz, *adj.* to print or mark as italics.
**Italics,** i-tal'iks, *n.* inclined letters.
**Itch,** ich, *v.* to have skin irritation; *n.* a skin disease.
**Item,** i'tem, *n.* a distinct particular.
**Iterate,** it'er-āt, *v.* to repeat.
**Iteration,** it-er-ā'shun, *n.* the act of repetition.
**Itinerant,** i-tin'er-ant, *n.* a wanderer.
**Itinerary,** i-tin'er-ar-i, *n.* an outline of route.
**Itinerate,** i-tin'er-āt, *v.* to proceed from place to
**Ivied,** i'vid, *adj.* covered with ivy. [place.
**Ivory,** i'ver-i, *n.* elephant's tusk.
**Ivy,** i'vi, *n.* an evergreen creeping plant.

## J

**Jab, jab,** *v.* to prod.
**Jabber,** jab'er, *v.* to chatter.
**Jacinth,** jā'sinth, *n.* a precious stone.
**Jack,** jak, *n.* a pike; a spit turner; a playing card.
**Jackal,** jak'awl, *n.* a wild animal.
**Jackanapes,** jak'ā-nāps, *n.* an impudent fellow.
**Jackass,** jak'as, *n.* a male ass.
**Jackboots,** jak'boots, *n.* boots reaching above the
**Jackdaw,** jak'daw, *n.* a bird. [knee.
**Jacket,** jak'et, *n.* a short coat.
**Jackscrew,** jak'skroo, *n.* screw for moving weighty objects.
**Jacobite,** jak'o-bīt, *n.* an adherent of the Suarts.
**Jacquerie,** zhak'er-ē, *n.* French peasants' revolt of 1358.
**Jade,** jād, *n.* a tired horse; a mean woman.
**Jag,** jag, *n.* a notch.
**Jail,** jāl, *n.* a prison.
**Jailer,** jāl'er, *n.* a jail-keeper.
**Jainism,** jān'izm, *n.* a heterodox Hindu doctrine.
**Jam,** *n.* preserved fruit; a crowd; *v.* to squeeze.
**Jamb,** jam, *n.* door-post.
**Jangle,** jang'gl, *v.* to wrangle; *n.* discordant voices or sounds.
**Janitor,** jan'it-or, *n.* a doorkeeper; a porter.
**Janizary,** jan'i-zar-i, *n.* a Turkish foot-soldier.
**Janus,** jā'nus, *n.* a Roman god.
**Japan,** jā-pan', *v.* to varnish in the Japanese style.
**Jape,** jāp, *v.* to mock; to jest.
**Jardiniere,** zhār-dan-i-ār', *n.* a vessel for flowers.
**Jargon,** jār'gon, *n.* confused chatter.
**Jargonelle,** jār-gon-el', *n.* a kind of pear.
**Jasey,** jā'zi, *n.* a worsted wig.
**Jasmine,** jas'min, *n.* a climbing plant.
**Jasper,** jas'per, *n.* a kind of quartz.
**Jaundice,** jawn'dis, *n.* a liver disease.
**Jaundiced,** jawn'dist, *adj.* prejudiced; afflicted with jaundice.
**Jaunt, jawnt,** *v.* to stroll; to ramble.
**Jaunty,** jawn'ti, *adj.* airy.
**Javelin,** jav'el-in, *n.* a spear.
**Jaw,** *n.* the bone that holds the teeth.
**Jazz,** jaz, *n.* syncopated music.
**Jealous,** jel'us, *adj.* suspicious.
**Jean,** jēn, *n.* twilled cotton cloth.
**Jeer,** jēr, *v.* to sneer.
**Jehovah,** je-hō'va, *n.* the Hebrew name of God.
**Jejune,** zheh-zhūn, *ad.* (*Fr.*), empty.
**Jeopardise,** jep'erd-īz, *v.* to endanger.
**Jeopardy,** jep'er-di, *n.* danger.
**Jeremiad,** jer-e-mī'ad, *n.* a lamentation.
**Jerk,** *v.* to pull or throw suddenly.
**Jerkin,** jer'kin, *n.* a short coat.
**Jerry-builder,** jer'i-bild-er, *n.* a builder of cheap and flimsy structures.
**Jess,** *n.* a strap for holding a hawk's legs.
**Jesse, jes-si,** *n.* a large branched candlestick.
**Jester,** jest'er, *n.* a maker of jests.
**Jestingly,** jest'ing-li, *adv.* jocosely.
**Jesuitical,** jez-ū-it'-ikal, *adj.* crafty.
**Jesus,** jē'zus, *n.* the Saviour. [a gas bracket.
**Jet,** *n.* a black fossil substance; a spout of water;
**Jetsam,** jet'sam, *n.* floating wreckage.
**Jetton,** jet'on, *n.* a stamped metal counter.
**Jetty,** jet'i, *n.* a small pier.
**Jew,** joo, *n.* a Hebrew.
**Jew-baiting,** joo-bāt'ing, *n.* persecution of Jews.
**Jewel,** joo'el, *n.* a precious stone; an ornament of gems.
**Jeweller,** joo'el-er, *n.* a dealer in jewels.
**Jewellery,** joo'el-ri, *n.* jewels in general.
**Jewry,** joo'ri, *n.* a Jewish quarter.
**Jew's-harp,** jooz'harp, *n.* a small musical instrument played between the teeth by striking a
**Jezebel,** jez'e-bel, *n.* a virago. [spring.
**Jib,** *n.* a short movable triangular sail; *v.* to be restive.
**Jib'boom,** *n.* the beam on which the jib is fixed.
**Jig, jig,** *n.* a dance.
**Jilt, jilt,** *n.* a coquette.
**Jingle,** jing'gl, *v.* to tinkle.
**Jingo,** jing'go, *n.* a headstrong politician.
**Jobber,** job'er, *n.* a dealer in stocks.
**Jobbery,** job'er-i, *n.* fraudulent methods.
**Jocose,** jō-kōs', *adj.* merry; full of fun.
**Jocular,** jok'ū-lar, *adj.* sportive.
**Jocund,** jok'und, *adj.* gay; cheerful.
**Jodel,** jō'del, *v.* to sing falsetto; a Swiss call.
**Jog,** *v.* to shake.
**Joggle,** jog'l, *v.* to shake; to jostle.
**Jog-trot,** jog'trot, *n.* a humdrum pace
**Joiner,** join'er, *n.* a woodworker.
**Joinery,** join'er-i, *n.* the joiner's art.
**Joint,** joint, *n.* a joining.
**Jointly,** joint'li, *adv.* together.
**Joint'stock,** *n.* stock or capital jointly held.
**Jointure,** joint'ūr, *n.* property settled on a woman on her marriage.
**Joist,** joist, *n.* a supporting beam.
**Joke,** jōk, *n.* a jest; *v.* to jest.
**Jollification,** jol-if-ik-ā'shun, *n.* festivity.
**Jollity,** jol'it-i, *n.* boisterous mirth.
**Jolly,** jol'i, *adj.* merry.
**Jollyboat,** jol'i-bōt, *n.* a small boat or yawl.
**Jolt,** jōlt, *v.* to shake jerkily.
**Jonquil,** jon'kwil, *n.* a flowering plant.
**Joskin,** jos'kin, *n.* a clown.
**Joss,** jos, *n.* a Chinese idol.
**Jostle,** jos'l, *v.* to knock against.
**Jot,** jot, *n.* a small quantity; *v.* to set down concisely.
**Jotting,** jot'ing, *n.* a note or memorandum.
**Joule,** jool, *n.* a unit of electrical energy.
**Jounce,** jowns, *v.* to jolt.
**Journal,** jur'nal, *n.* a record.
**Journalism,** jur'nal-izm, *n.* the journalistic profession.
**Journalist,** jur'nal-ist, *n.* a writer on the Press.
**Journey,** jur'ni, *v.* to travel. [man.
**Journeyman,** jur'ni-man, *n.* a qualified hired work-
**Joust,** jowst, *n.* an encounter by two knights at a
**Jovial,** jō'vi-al, *adj.* mirthful. [tournament.
**Jowl,** *n.* the cheek.
**Joy,** joi, *n.* exultation; gladness.
**Jubilant,** joo'bil-ant, *adj.* joyous.
**Jubilee,** joo'bil-ē, *n.* a time of rejoicing; a fiftieth-year celebration.
**Judaical,** joo-dā'ik-al, *adj.* pertaining to the Jews.
**Judaism,** joo'dā-izm, *n.* Jewish doctrines.
**Judean,** joo-dē-an, *n.* a native of Judea; *adj.* relating to Judea.
**Judge,** juj, *n.* one who passes judgment in law cases; one who decides in a dispute; *v.* to decide.
**Judgeship,** juj'ship, *n.* the office of judge.
**Judgment,** juj'ment, *n.* taste; a judicial decision.
**Judicable,** joo'dik-abl, *adj.* capable of being tried.
**Judicatory,** joo'dik-ā-to-ri, *adj.* pertaining to a judge. [ing justice.
**Judicature,** joo'dik-ā-tūr, *n.* the power of dispens-
**Judicial,** joo'dish-al, *adj.* relating to the law.
**Judiciary,** joo-dish'i-ar-i, *n.* the judges as a whole.
**Judicious,** joo-dish'us, *adj.* according to right judgment.
**Juggernaut,** jūg'er'nawt, *n.* Indian idol; that which crushes.
**Juggle,** jug'l, *v.* to conjure.
**Juggler,** jug'ler, *n.* one who juggles; a conjurer.
**Jugglery,** jug'ler-i, *n.* trickery.
**Jugular,** jug'ū-ler, *n.* a vein in the neck.
**Juicy,** joo'si, *adj.* full of juice.
**Jujube,** joo'joob, *n.* a kind of spring shrub; a
**Julep,** joo'lep, *n.* a sweet drink. [sweetmeat.
**Jumble,** jum'bl, *v.* to mix confusedly.
**Jump,** *v.* to leap.
**Jumper,** jūm-per, *n.* a knitted jersey.
**Junction,** jungk'shun, *n.* a joining.
**Juncture,** jungk'tūr, *n.* a critical time.
**Jungle,** jung'gl, *n.* thick forest.
**Junior,** joo'ni-er, *adj.* younger.
**Juniper,** joo'nip-er, *n.* a shrub and its berry.
**Junk,** jungk, *n.* old ropes; hard salt beef; a small Chinese ship.
**Junker,** yŏon'ker, *n.* a young German noble.
**Junket,** jungk'et, *n.* a sweetmeat.; a pic-nic.

**Junketing,** jun'ket-ing, *n.* a festival.
**Junta,** yŏon'ta, *n.* Spanish Council of State.
**Junto,** yŏon'to, *n.* a confederacy.
**Jupon,** joo'pon, *n.* a sleeveless jacket.
**Juridical,** joo-rid'ik-al, *adj.* relating to law admis-
**Jurisconsult,** joo-ris-kon'sult, *n.* a jurist. [sion.
**Jurisdiction,** joo'ris-dik'shun, *n.* the district within which a court has power.
**Jurisprudence,** joo-ris-proo'dens, *n.* science of the
**Jurist,** joo'rist, *n.* one versed in civil law. [law.
**Juror,** joo'ror, *n.* one of a jury.
**Jury,** joo'ri, *n.* a body of men to judge a legal case.
**Juryman,** joor'i-man, *n.* a member of a jury.
**Jurymast,** joor-i-mast, *n.* a temporary mast.
**Jury-rudder,** joo'ri-rud-er, *n.* an extemporised
**Just,** *adj.* right; lawful; upright. [rudder.
**Justice,** just'is, *n.* impartiality; equity; a magistrate.
**Justiceship,** jus'tis-ship, *n.* the office of justice.
**Justiciary,** just-ish'i-ar-i, *n.* one who administers justice. [excusable.
**Justifiable,** just-i-fi'abl, *adj.* that can be justified;
**Justification,** just-if-ik-a'shun, *n.* defence; vindica-
**Justify,** just'i-fi, *v.* to vindicate. [tion.
**Jut,** *v.* to project.
**Jute,** joot, *n.* a coarse kind of hemp.
**Juvenescence,** joo-ven-es'ens, *n.* youthfulness.
**Juvenile,** joo'ven-il, *n.* a youth; *adj.* youthful.
**Juxtaposition,** juks-tă-po-zish'un, *n.* contiguity.

## K

**Kágo,** ka'gŏ, *n.* a basket.
**Kapok,** kă-pok, *n.* cotton-like fibre.
**Kaleidoscope,** kal-i'do-skŏp, *n.* an optical toy.
**Kamptulicon,** kamp-tū'li-kon, *n.* a kind of floor-cloth.
**Kanaka,** kan-ă'ka, *n.* a native of the Sandwich
**Kaolin,** kā'o-lin, *n.* a very fine clay. [Islands.
**Katydid,** kā'ti-did, *n.* a kind of grasshopper (American).
**Kea,** kē-uh, *n.* destructive New Zealand bird.
**Keel,** kēl, *n.* the lower timber of a ship.
**Keeler,** keel'er, *n.* a shallow tub.
**Keel-haul,** kēl'hawl, *n.* to haul under keel by ropes; a form of naval punishment.
**Keelson,** kēl'son, *n.* an inner keel.
**Keen,** kēn, *adj.* eager; alert; pungent; acute.
**Keep,** kēp, *v.* to retain; to last.
**Keeper,** kēp'er, *n.* one who guards.
**Keepsake,** kēp'sāk, *n.* a gift of regard.
**Keg,** keg, *n.* a small cask.
**Kelp,** kelp, *n.* seaweed.
**Kelpie,** kelp'i, *n.* a fancied spirit of the water.
**Ken,** ken, *v.* to know.
**Kennel,** ken'el, *n.* shelter for a dog.
**Kerasine,** ker'a-sēn, *adj.* made of horn.
**Kerbstone,** *see* Curbstone.
**Kerchief,** ker'chif, *n.* a small loose shawl.
**Kern,** kern, *n.* the last sheaf of the harvest.
**Kernel,** ker'nel, a grain; a seed within a shell.
**Kerosene,** ker'o-sēn, *n.* coal oil.
**Kersey,** ker'si, *n.* a kind of woollen cloth.
**Kesting,** kes'ting, *n.* a small green plum.
**Kestrel,** kes'trel, *n.* a kind of falcon.
**Ketch,** *n.* a two-masted vessel. [mushrooms.
**Ketchup,** ketch'up, *n.* a flavouring made from
**Kettle,** ket'l, *n.* a vessel for boiling liquids in.
**Kettle-drum,** ket'l-drum, *n.* a kind of drum.
**Kex,** keks, *n.* hemlock stalk.
**Key,** kē, *n.* an instrument for opening or closing a lock; centre stone; fundamental note.
**Keyboard,** kē'bôrd, *n.* the keys of a piano or organ. [musical composition.
**Keynote,** kē'nōt, *n.* the fundamental note of a
**Khaki,** kā'ki, *n.* dust-coloured uniform.
**Khamsin,** kăhm'sēn, *n.* hot wind.
**Khan,** kan, *n.* an Asiatic chief.
**Khanate,** kăn'āt, *n.* the territory of a khan.
**Kibe,** kīb, *n.* a chilblain.
**Kick,** kik, *v.* to give a blow with the foot; *n.* the blow itself.
**Kickshaw,** kik-shaw, *n.* something fanciful.
**Kid,** *n.* a young goat; kid leather.
**Kiddow,** kid'do, *n.* a web-footed bird.
**Kidling,** kid'ling, *n.* a young kid.
**Kidnap,** kid'nap, *v.* to carry off a human being.
**Kidnapper,** kid'nap-er, *n.* one who kidnaps.
**Kidney,** kid'ni, *n.* a gland for secretion of the urine.
**Kilderkin,** kil'der-kin, *n.* a small barrel.
**Kiley,** ki'lē, *n.* a boomerang.
**Kill,** kil, *v.* to slay; to nullify.
**Kiln,** *n.* an oven for making lime, bricks, etc.
**Kilo,** ki'lo, *n.* a large oven.
**Kilogramme,** kil'-o-gram, *n.* French measure of weight.
**Kilometre,** kil-o-metr, *n.* French measure of length.
**Kilt,** kilt, *n.* lower part of Highlander's dress.
**Kimbo,** kim'bŏ, *adj.* bent; arched.
**Kin,** *n.* kindred.
**Kind,** kind, *adj.* generous; good; gracious.
**Kindle,** kin'dl, *v.* to set on fire; to inflame.
**Kindliness,** kind'li-ness, *n.* gentleness.
**Kindness,** kind'ness, *n.* the act of being kind;
**Kindred,** kin'dred, *n.* relations. [goodness.
**Kine,** kin, *n.* cows.
**Kinematics,** kin-ĕ-mat'iks, *n.* the science of
**Kinetic,** ki-net'ik, *adj.* moving. [motion.
**Kinetics,** kin-et'iks, *n.* the science of force in connection with motion.
**Kinetoscope,** ki-net'o-skop. *n.* a movable pano-
**King,** *n.* a ruler. [rama.
**Kingcup,** king'kup, *n.* the buttercup.
**Kingdom,** king'dum, *n.* territory ruled over by a
**Kingly,** king'li, *adj.* king-like; noble. [king.
**King's-evil,** kingz-ē'vil, *n.* scrofula.
**Kink,** kingk, *n.* a twist; a knot.
**Kino,** ki'no, *n.* a vegetable exudation.
**Kinsfolk,** kins'fōk, *n.* kindred.
**Kiosk,** kē-osk', *n.* a pavilion.
**Kip,** *n.* calf-skin.
**Kipper,** kip'er, *n.* male salmon after spawning; preserved haddock or herring.
**Kipskin,** kip-skin, *n.* calf-skin.
**Kirk,** kirk, *n.* a church (Scotch).
**Kirtle,** kir'tl, a kind of gown; a mantle.
**Kiss,** kis, *v.* to salute with the lips; *n.* the act of kissing.
**Kit,** *n.* a workman's outfit of tools.
**Kit-cat,** kit-kat, *n.* a size of portrait [36 × 28 inches) so-called after the portraits done by Kneller for the Kit-cat Club.
**Kitchen,** kit'chen, *n.* place where food is cooked.
**Kitchener,** kit'chen-er, *n.* a cooking stove.
**Kite,** kit, *n.* a bird of prey; a flying toy.
**Kith,** *n.* kindred.
**Kitten,** kit-en, *n.* a young cat.
**Kitty-wake,** kiti-wāke, *n.* a sea-gull.
**Klang,** *n.* a confused tone.
**Kleptomania,** klep-to-mā'ni-ă, *n.* a morbid impulse to steal.
**Klick,** klik, *n.* a sharp catching noise.
**Kloof,** *n.* a mountain cleft in S. Africa.
**Knab,** nab, *v.* to seize hold of.
**Knack,** nak, *n.* adroitness; special aptitude.
**Knacker,** nak'er, *n.* a buyer of dead horses.
**Knag,** nag, *v.* a knot.
**Knap,** nap, *v.* to break.
**Knapsack,** nap'sak, *n.* a soldier's provision bag.
**Knapskull,** nap'skull, *n.* a helmet.
**Knarled,** når'ld, *adj.* knotty.
**Knave,** nāv, *n.* a scamp; a playing card.
**Knavery,** nā'ver-i, *n.* villainy.
**Knead,** nēd, *v.* to work and press.
**Knee,** nē, *n.* the joint between the leg and thigh.
**Kneel,** nēl, *v.* to bend the knee.
**Kneepan,** nē'pan. *n.* a round bone at the knee; the patella.
**Knell,** nel, *n.* the sound of a funeral bell.
**Knickerbockers,** nik'er-bok-ers, *n.* short trousers, gathered in at the knee.
**Knick-knack,** nick-nak, *n.* a trifling object.
**Knife,** nīf, *n.* a cutting instrument.
**Knight,** nit, *n.* a champion; the rank next below baronet, entitling the owner to be called "Sir."
**Knight-errant,** nit-er'ant, *n.* one who travelled in quest of adventures in olden times.
**Knighthood,** nit'hood, *n.* the dignity of a knight.
**Knight-marshal,** nit-mar'shal, *n.* a royal official.
**Knight-service,** nit-ser'vis, *n.* a land tenure based on military service.
**Knit,** *v.* to join; to make into webbing.
**Knitting,** nit'ing, *n.* work produced by knitting.
**Knob,** nob, *n.* a protuberance.
**Knobby,** nob'i, *adj.* covered with knobs.
**Knock,** nok, *v.* a rap. [a door.
**Knocker,** nok'er, *n.* a knocking instrument fixed to
**Knock-kneed,** nok'nēd, *adj.* knees inclined inward.
**Knoll,** nōl, *n.* a small round hill.
**Knop,** nop, *n.* a nob or cluster.
**Knot,** not, *n.* a group; a bunch; a cluster; a tie.
**Knot-grass,** not'gras, *n.* a grass with knotty stems.
**Knotty,** not'i, *adj.* abounding in knots; difficult.
**Knotwork,** not'werk, *n.* fancy work formed of knots

**Knout,** nowt, *n.* a Russian whip of punishment.
**Know,** nō, *v.* to understand; to perceive.
**Knowingly,** nō'ing-li, *adj.* intelligently.
**Knowledge,** nol'ĕj, *n.* learning; information; in-
**Knub,** nub, *n.* a knob. [struction.
**Knuckle,** nuk'l, *n.* joint of a finger.
**Knurr,** nur, *n.* a wooden ball.
**Kotil,** ko'bil, *n.* a small boat.
**Kodak,** kō'dak, *n.* the trade name of a small camera.
**Kopek,** kō'pek, *n.* a small Russian coin.
**Koran,** kō'ran, *n.* the Mahommedan Bible.
**Koumiss,** koo'mis, *n.* an intoxicating beverage made from mare's milk fermented.
**Kow-tow,** kŏw-tŏw, *v.* to abase one's-self.
**Kraal,** krâl, *n.* a Hottentot village. [Moscow.
**Kremlin,** krem'lin, *n.* formerly an Imperial palace at
**Kurkee,** kur'kee, *n.* a coarse kind of blanket.
**Kyanise,** kī'an-īz, *v.* to protect wood by means of corrosive sublimate.
**Kyllosis,** kil-lō'sis, *n.* club-foot.
**Kyloe,** kī'lo, *n.* cattle of the Hebrides.

## L

**Label,** lā'bel, *n.* a slip for name or description.
**Labellum,** la-bel'um, *n.* the lower portion of a petal.
**Labial,** lā'bi-al, *n.* a lip consonant; *adj.* relating to the lips. [duced by lips and teeth.
**Labiodental,** la-bi-o-dent'al, *adj.* of sound pro-
**Labium,** lā'bi-um, *n.* a lip.
**Laboratory,** la-bor'ā-to-ri, *n.* a chemist's workshop; place for scientific experiments.
**Laborious,** la-bō'ri-us, *adj.* with diligence; toil-
**Labour,** lā'bor, *n.* toil; exertion. [some.
**Laboured,** lā'berd, *adj.* with evident effort.
**Labourer,** lā'bor-er, *n.* one who works with his hands.
**Laburnum,** la-burn'um, *n.* a tree that bears clusters of yellow flowers. [windings.
**Labyrinth,** lab'i-rinth, *n.* a maze; a place of many
**Lac,** lak, *n.* a resinous substance; 100,000 rupees.
**Lace,** lās, *n.* delicate net-work; a string or fastening. [tear.
**Lacerate,** las'er-āt, *v.* to rend; to wound; to
**Lacerta,** las-er'ta, *n.* a class of Saurian reptiles.
**Laches,** lash'ez, *n.* negligence; delay.
**Lachrymal,** lak'ri-mal, *adj.* secreting tears.
**Lachrymary,** lak'ri-mā-ri, *adj.* containing tears.
**Lachrymose,** lak'ri-mōs, *adj.* tearful.
**Lacing,** lās'ing, *n.* a laced fastening; a lace.
**Lack,** lak, *v.* to want.
**Lackadaisical,** lak-ā-dā'zi-kal, *adj.* sentimental; dreamy.
**Lackaday,** lak-a-dā', *excl.* alas! the day.
**Lackey,** lak'ĕ, *n.* a servile attendant.
**Laconic,** la-kon'ik, *adj.* short; concise; pithy.
**Lacquer,** lak'er, *n.* a kind of varnish.
**Lactate,** lak'tāt, *n.* the condition of giving milk.
**Lacteal,** lak'te-al, *adj.* milky.
**Lacteous,** lak'te-us, *adj.* pertaining to milk.
**Lactiferous,** lak-tif'er-us, *adj.* producing milk.
**Lactometer,** lak-tom'e-ter, *n.* a milk-measuring in-
**Lactose,** lak'tōs, *adj.* milky. [strument.
**Lacuna,** la-kū'na, *n.* an hiatus.
**Lacustrine,** la-kus'trin, *adj.* relating to lakes.
**Lad,** lad, *n.* a boy.
**Ladder,** lad'er, *n.* a means of ascent.
**Lade,** lād, *v.* to load; to throw out.
**Laden,** lā'dn, *adj.* loaded.
**Ladle,** lā'dl, *n.* an implement for lifting liquids.
**Lady,** lā'di, *n.* a female of rank or position.
**Lag,** lag, *v.* to linger.
**Lager-beer,** lā'ger-bĕr, *n.* light German beer.
**Laggard,** lag'erd, *adj.* slow; loitering.
**Lagoon,** la'goon', *n.* a shallow lake.
**Laic,** la'ik, *adj.* pertaining to the laity.
**Lair,** lār, *n.* resting-place; retreat of wild animals.
**Laird,** lārd, *n.* a Scottish chief, or landed proprietor.
**Laity,** lā'it-i, *n.* the people, as distinguished from the clergy.
**Lake,** lāk, *n.* a body of water surrounded by land.
**Lakelet,** lāk'let, *n.* a small lake.
**Lama,** lā'ma, *n.* a Buddhist head priest in Tibet.
**Lamb,** lam, *n.* a young sheep.
**Lambent,** lam'bent, *adj.* flickering.
**Lambkin,** lam'kin, *n.* a small lamb.
**Lame,** lām, *adj.* halt or crippled.
**Lamella,** la-mel'ā, *n.* a thin plate or scale.
**Lament,** lā'ment, *n.* an expression of sorrow.
**Lamentable,** lam'ent-abl, *adj.* sorrowful.
**Lamentation,** lam-ent'ā'shun, *n.* the act of sorrowing.
**Lamina,** lam'in-ā, *n.* a thin plate; a leaf-blade.
**Lammas,** lam'as, *n.* the 1st of August.
**Lamp,** *n.* an illuminating vessel.
**Lampblack,** lamp'blak, *n.* soot from lamp smoke.
**Lampoon,** lam-poon', *n.* satire; skit.
**Lamprey,** lam'pri, *n.* an eel-like fish.
**Lanate,** lā'nāt, *adj.* woolly.
**Lance,** lans, *n.* a pointed weapon; long-handled.
**Lanceolated,** lan'sē-o-lā-ted, *adj.* in the shape of
**Lancet,** lan'set, *n.* a surgical knife. [lance-heads.
**Land,** *n.* the solid surface of the earth.
**Land-agent,** land'āj-ent, *n.* a land-owner's deputy.
**Landgrabber,** land-grab'er, *n.* an unscrupulous appropriator of real estate.
**Landlady,** land'lā-di, *n.* woman innkeeper or land
**Landlock,** land'lok, *v.* to enclose by land. [owner.
**Landloper,** land'lō-per, *n.* a vagrant wanderer.
**Landlord,** land'lawrd, *n.* landowner; inn-keeper.
**Landmark,** land'mârk, *n.* a boundary mark; an elevated object. [estate.
**Landowner,** land'owner, *n.* a proprietor of real
**Landscape,** land'skāp, *n.* a land view.
**Landshark,** land'shark, *n.* one who essays to cheat sea-farers.
**Landslide,** land'slide, *n.* a slipping down of land.
**Landsman,** lands'man, *n.* one who lives on land.
**Landward,** land'werd, *adj.* towards the land.
**Lane,** lān, *n.* a narrow road.
**Language,** lang'gwāj, *n.* speech.
**Languid,** lang'gwid, *adj.* feeble; sluggish.
**Languish,** lang'gwish, *v.* to pine.
**Languor,** lang'gwer, *n.* lassitude.
**Lanlary,** la-nl-ary, *n.* a shambles.
**Lank,** *adj.* limp; thin; loose; weak.
**Lankness,** lank'ness, *n.* slenderness.
**Lantern,** lan'tern, *n.* a protected hand lamp; a roof-light.
**Lanyards,** lan'yards, *n.* ship's ropes.
**Laodicean,** lā-o-di-sē'an, *adj.* lukewarm in religion.
**Lap,** lap, *n.* upper part of the legs of a seated person; *v.* to overspread.
**Lapel,** lap-el', *n.* fold of a garment; collar of a coat.
**Lapidary,** lap'id-ar-i, *n.* a cutter of precious stones.
**Lappet,** lap'et, *n.* a little flap.
**Lapsable,** lap'sa-bl, *adj.* liable to lapse.
**Lapse,** laps, *v.* to pass slowly; to slide.
**Lapstone,** lap'stōn, *n.* stone on which shoemakers beat leather.
**Laputan,** la-pū'tan, *adj.* very small; from Gulliver's *Laputa*.
**Lapwing,** lap'wing, *n.* the peewit.
**Larboard,** lär'bōrd, *n.* port side of a ship.
**Larceny,** lär'sen-i, *n.* theft.
**Lard,** lärd, *n.* fat of swine.
**Larder,** lärd'er, *n.* place where provisions are kept.
**Large,** lärj, *adj.* big; extensive; profuse.
**Largess,** larj'es, *n.* a present.
**Lark,** lärk, *n.* a singing bird; a frolic.
**Larva,** lär'va, *n.* a grub; an insect in its caterpillar stage.
**Laryngitis,** lar-in-jī'tis, *n.* inflammation of the
**Larnyx,** lar'ingks, *n.* the organ of voice. [larynx.
**Lascar,** las'ker, *n.* an East Indian sailor.
**Lascivious,** las-siv'i-us, *adj.* wanton; lewd.
**Lash,** lash, *n.* the thong of a whip; *v.* to strike with
**Lasher,** lash'er, *n.* water above a weir. [a whip.
**Lass,** las, *n.* a girl or young woman.
**Lassitude,** las'it-ūd, *n.* languor.
**Lasso,** las'ō, *n.* a slip-noose.
**Last,** *n.* the ultimate; a shoemaker's wooden mould.
**Latch,** latch, *n.* a fastening; *v.* to fasten.
**Latchet,** latch'et, *n.* a shoe string.
**Late,** lāt, *adj.* tardy; departed.
**Lateen,** lat-eēn, *adj.* applied to a form of sail.
**Latent,** lā'tent, *adj.* hidden.
**Lateral,** lat'er-al, *adj.* indirect; relating to the side.
**Latericeous,** lat-er-ish'us, *adj.* brick-coloured.
**Lath,** *lath*, *n.* a thin strip of wood.
**Lathe,** lāth, *n.* a turner's machine.
**Lather,** lath'er, *n.* foam; *v.* to foam.
**Latifoliate,** lat-i-fō'li-āt, *adj.* broad-leaved.
**Latin,** lat'in, *n.* Roman.
**Latinise,** lat'in-īz, *v.* to put in Latin form.
**Latinist,** lat'in-ist, *n.* one learned in Latin.
**Latinity,** lat-in'it-i, *n.* pure Latin style.
**Latish,** lā'tish, *adj.* rather late. [equator.
**Latitude,** lat'i-tūd, *n.* width; distance from the
**Latitudinal,** lat-it-ū'din-al, *adj.* possessing latitude.
**Latitudinarian,** lat-i-tū-din-ā'ri-an, *adj.* free; unrestrained in views.

**Latrine,** lat'rin, *n.* place of convenience in a large building.
**Latten,** lat'en, *n.* iron plate covered with tin.
**Latter,** lat'er, *ad.* the more recent or last of two.
**Lattice,** lat'is, *n.* open work of cross bars.
**Lattice-work,** lat'is-werk, *n.* same as lattice.
**Laud,** lawd, *v.* to praise.
**Laudable,** lawd'able, *adj.* praiseworthy.
**Laudanum,** lawd'a-num, *n.* tincture of opium.
**Laudatory,** lawd'ă-to-ri, *adj.* praising.
**Laugh,** lăf, *v.* to make a merry sound; to be
**Laughable,** lăf'abl, *adj.* comical. [mirthful.
**Launch,** lawnch, *v.* to send forth; *n.* a large boat.
**Laundress,** lawn'dres, *n.* a washerwoman.
**Laundry,** lawn'dri, *n.* a wash-house.
**Laureate,** law'rē-ăt, *n.* the court poet; one decked
**Laurel,** law'rel, *n.* a shrub. [with laurel.
**Lava,** lă'va, *n.* molten matter ejected from a volcano.
**Lavatory,** lav'a-to-ri, *n.* place for washing.
**Lave,** lāv, *v.* to wash or bathe.
**Lavender,** lav'en-der, *n.* a sweet-scented plant.
**Laverock,** lav'er-ok, *n.* the lark.
**Lavish,** lav'ish, *adj.* wasteful.
**Law,** law, *n.* a rule or ordinance, authoritatively
**Lawful,** law'ful, *adj.* legal. [imposed and binding.
**Lawn,** lawn, *n.* fine linen; a grass plot.
**Lawn-tennis,** lawn-ten'is, *n.* a game with ball and
**Lawsuit,** law'sūt, *n.* a suit in law. [racket.
**Lawyer,** law'yer, *n.* one who practises the law.
**Lax,** laks, *ad.* flabby; soft; not firm.
**Laxative,** laks'ă-tiv, *n.* a purgative.
**Laxity,** laks'it-i, *n.* looseness. [narrative song.
**Lay,** lā, *v.* to place prone; *adj.* unclerical; *n.* a
**Lay-brother,** lā'bruth-er, *n.* an unprofessional
**Layer,** lā'er, *n.* a stratum. [clerical assistant.
**Layette,** lā-et', *n.* an infant's outfit.
**Layman,** lā'man, *n.* one of the laity.
**Lazar,** lā'zar, *n.* a person with a pestilential disease.
**Lazaretto,** laz-ă-ret'to, *n.* a hospital; a pest-house.
**Lazy,** lā'zi, *adj.* indolent.
**Lea,** lē, *n.* a field.
**Leach,** lēch, *n.* the edge of a ship's sail.
**Lead,** led, *n.* a soft grey metal.
**Lead,** lēd, *v.* to direct or precede.
**Leader,** lē'der, *n.* one who leads.
**Leaf,** lēf, *n.* one of the external parts of a plant or tree; a division of a flat body, as the leaf of a book, a table, etc.
**Leaflet,** lēf'let, *n.* a small leaf.
**Leafy,** lēf'i, *adj.* full of leaves.
**League,** lēg, *n.* an alliance, three miles.
**Leak,** lēk, *v.* to ooze out; *n.* a crack that lets out
**Leakage,** lēk'ij, *n.* loss by leaking. [water.
**Leaky,** lēk'i, *adj.* having leaks.
**Leal,** lēl, *adj.* loyal; faithful.
**Lean,** lēn, *v.* to incline; *adj.* meagre; not fat; poor.
**Leap,** lēp, *v.* to spring up or away from a base.
**Leap-year,** lēp-yēr, *n.* every fourth year, which has one more day than others.
**Learn,** lern, *v.* to acquire knowledge.
**Learner,** lern'er, *n.* one who is learning.
**Learning,** lern'ing, *n.* scholarship; knowledge.
**Lease,** lēs, *v.* to let for hire; *n.* a tenure of land or other property.
**Leaseholder,** lēs'hold-er, *n.* one who occupies under lease. [a kind.
**Leash,** lēsh, *n.* a leather thong; three animals of
**Least,** lēst, *adj.* smallest in size, value or import-
**Leather,** leth'er, *n.* tanned hide. [ance.
**Leathern,** leth'ern, *adj.* composed of leather.
**Leave,** lēv, *v.* to discard or depart from; *n.* a term of permissive absence.
**Leaved,** lēvd, *adj.* provided with leaves.
**Leaven,** lev'en, *n.* yeast.
**Leavings,** lēv'ings, *n.* things left.
**Lecherous,** lech'er-us, *adj.* lustful.
**Lectern,** lek'tern, *n.* reading-desk in churches.
**Lectionary,** lek'shun-er-i, *n.* a book for use in public worship.
**Lector,** lek'tor, *n.* a scripture reader.
**Lecture,** lek'tūr, *n.* a discourse; *v.* to inform by
**Ledge,** lej, *n.* a ridge. [discourse.
**Ledger,** lej'er, *n.* an account book.
**Ledgy,** lēj'i, *adj.* full of ledges.
**Lee,** lē, *n.* the side opposite the wind.
**Leech,** lēch, *n.* a blood-sucking worm.
**Leer,** lēr, *n.* a sarcastic grin.
**Lees,** lēz, *n.* dregs; sediment.
**Lee-shore,** lē'shōr, *n.* shore toward which the wind
**Leet,** lēt, *n.* a court of record. [blows.
**Leeward,** le'werd, *adj.* towards the lee.
**Leeway,** le'wā, *n.* a movement towards the lee.
**Leg,** *n.* a pedal limb; a support.
**Legacy,** leg'ă-si, *n.* a bequest.
**Legal,** lē'gl, *adj.* conforming to law.
**Legalise,** lē'gal'iz, *v.* to render lawful.
**Legality,** lē-gal'it-i, *n.* lawfulness.
**Legate,** leg'at, *n.* a kind of ambassador.
**Legatee,** leg-ă-tē, *n.* a the recipient of a legacy.
**Legation,** le-ga'shun, *n.* a minor embassy.
**Legato,** le-gā'to, *adj.* smooth (*mus.*).
**Legend,** lē'jend, *n.* a story; a motto.
**Leger,** lej'er, *adj.* light; small.
**Legerdemain,** lej-er-de-mān', *n.* sleight of hand.
**Legging,** leg'ing, *n.* a leg covering.
**Legible,** lej'ibl, *adj.* readable.
**Legion,** lē'jun, *n.* a great number; a body of soldiers.
**Legionary,** lē'jun-ar-i, *adj.* relating to legions; a soldier in a legion.
**Legislate,** lej'is-lāt, *v.* to make laws.
**Legislation,** lej-is-lā'shun, *n.* act of legislating.
**Legislative,** lej-is-lā'tiv, *n.* enacting laws.
**Legislator,** lej-is-lā'tor, *n.* a law-maker.
**Legislature,** lej-is-lā'tūr, *n.* a body of law-makers.
**Legist,** lē'jist, *n.* one learned in laws.
**Legitimacy,** le-jit'i-ma-si, *n.* lawfulness.
**Legitimate,** le-jit'i-māt, *adj.* legal.
**Legitimise,** le-jit'im-iz, *v.* to render legitimate.
**Legitimist,** le-jit'im-ist, *n.* a supporter of legitima'e authority.
**Legume,** leg'ūm, *n.* a pod, as of peas.
**Leguminous,** le-gū'min-us, *adj.* legume-bearing.
**Leisure,** lezh'ūr, *n.* spare time.
**Lemming,** lem'ing, *n.* a vole-like rat.
**Lemon,** lem'on, *n.* an acid fruit of the orange order.
**Lemonade,** lem'on-ād, *n.* a lemon drink.
**Lemur,** lē'mur, *n.* a species of Madagascar monkey.
**Lemures,** lem'ū-rēz, *n.* spectres.
**Lend,** *v.* to grant on loan.
**Lengthy,** leng'thi, *adj.* of great length; longish.
**Lenient,** lē'ni-ent, *adj.* clement; gentle.
**Lenity,** len'it-i, *n.* gentleness; mercy; mildness.
**Lens,** lenz, *n.* a magnifying glass.
**Lent,** lent, *v.* a fast before Easter.
**Lenten,** lent'en, *adj.* pertaining to Lent; scanty.
**Lenticular,** len-tik'ū-lar, *adj.* like lens or lentil seed.
**Lentigo,** len'ti-go, *n.* a freckle.
**Lentil,** len'til, *n.* a pulse-bearing edible plant.
**Lentisk,** len'tisk, *n.* mastic-tree.
**Leonine,** lē'o-nin, *adj.* lion-like.
**Leopard,** lep'erd, *n.* a spotted wild cat.
**Leper,** lep'er, *n.* a person afflicted with leprosy.
**Lepidoptera,** lep-id-op'ter-ă, *n.* four-winged insects.
**Leporine,** lep'o-rin, *adj.* like or relating to hares.
**Leprosy,** lep'rō-si, *n.* a virulent skin disease.
**Leprous,** lep'rus, *adj.* affected with leprosy.
**Lesion,** lē'zhun, *n.* an injury.
**Less,** les, *adj.* in a smaller degree.
**Lessee,** lessē', *n.* one to whom a lease is granted.
**Lessen,** les'en, *v.* to diminish; to make less.
**Lesson,** les'on, *n.* a task; a portion of study.
**Lessor,** les-or', *n.* a lease granter.
**Lest,** *conj.* for fear that.
**Let,** let, *v.* to permit, to lease.
**Letch,** lech, *v.* to wash by water percolation.
**Lethal,** lē'thal, *n.* deadly; mortal.
**Lethargy,** *leth*'er-ji, *n.* dullness; heaviness.
**Lethe,** lē'*thē*, *n.* the river of forgetfulness.
**Lethiferous,** le*th*-if'er-us, *adj.* deadly.
**Letter,** let'ter, *n.* an epistle; a sign of the alphabet.
**Lettered,** let'erd, *adj.* learned.
**Letters,** let'ers, *n.* literature; authorship.
**Lettuce,** let'is, *n.* a well-known edible plant.
**Levant,** le'vănt, *n.* Mediterranean shore.
**Levant,** le-vant', *v.* to decamp.
**Levanter,** le'văn'ter, *n.* a warm disagreeable wind.
**Levantine,** le-vant'in, *adj.* pertaining to the Levant.
**Levee,** le-vē', *n.* an assembly of visitors.
**Level,** lev'el, *n.* a horizontal plane; *v.* to make flat.
**Leveller,** lev'el-er, *n.* one who makes level; an advocate of equality.
**Lever,** lē'ver, *n.* a bar for raising weights.
**Leverage,** lē'ver-āj, *n.* lever power.
**Leveret,** lev'er-et, *n.* a young hare.
**Leviable,** lev'i-abl, *adj.* that may be levied.
**Leviathan,** le-vī'ă-*than*, *n.* a huge sea animal.
**Levigate,** lev'i-gāt, *v.* to make smooth.
**Levitation,** lev-it'ā'shun, *n.* the act of lightening.
**Levity,** lev'it-i, *n.* frivolity; thoughtlessness.
**Levy,** lev'i, *n.* to impose; to distrain; to collect.
**Lewd,** lūd, *adj.* lustful. [ing.
**Lexicography,** leks-i-kog'ra-fi, *n.* dictionary mak-

**Lexicology, leks-i-kol'o-ji,** *n.* the science of word-
**Lexicon, leks'i-kon,** *n.* a dictionary. [signification.
**Liability, lī'ă-bil'i-ti,** *n.* responsibility.
**Liable, lī'abl,** *adj.* accountable; subject to.
**Liaison, lē-ā'zong,** *n.* union; an illicit friendship between a man and a woman.
**Liar, lī'ar,** *n.* a speaker of untruths.
**Lias, lī'as,** *n.* a limestone formation underlying the oolitic system.
**Libation, lī-bā'shun,** *n.* an offering of wine.
**Libel, lī'bel,** *n.* to defame.
**Libellous, lī'bel-us,** *adj.* defamatory.
**Liberal, lib'er-al,** *adj.* generous; *n.* a supporter of Liberal politics.
**Liberalise, lib'er-al-īz,** *v.* to expand; to enlighten.
**Liberalism, lib'er-al-izm,** *n.* Liberal principles.
**Liberate, lib'er-āt,** *v.* to set free.
**Liberator, lib'er-ā-tor,** *n.* one who sets free.
**Libertine, lib'er-tin,** *n.* a debauchee.
**Libertinism, lib'er-tin-izm,** *n.* licentiousness.
**Liberty, lib'er-ti,** *n.* freedom.
**Libidinous, lib-id'in-us,** *adj.* lewd.
**Librarian, lī-bra'ri-an,** *n.* keeper of a library.
**Library, lī'bra-ri,** *n.* a room where books are kept.
**Librate, lī'brāt,** *v.* to balance.
**Libration, lī'brā'shun,** *n.* act of balancing.
**Libratory, lī'bra-to-ri,** *adj.* moving like a balance.
**Libretto, lē-bret'to,** *n.* the book of words of an opera or other extended musical composition.
**Licence, lī'sens,** *n.* permission.
**Licensee, lī-sen-sē',** *n.* a licence holder.
**Licentiate, lī-sen'shi-āt,** *n.* one who holds licence for a profession.
**Licentious, lī-sen'shus,** *adj.* unrestrained; immoral.
**Lichen, lī'ken,** *n.* a plant of the moss order.
**Licit, lis'it,** *adj.* lawful; proper.
**Lick, lik,** *v.* to draw the tongue over the surface of.
**Lictor, lik'tor,** *n.* a court official of ancient Rome.
**Lid,** *n.* a movable cover.
**Lie, lī,** *v.* to utter falsehood; to remain prostrate.
**Lief, lēf,** *adv.* willingly; gladly.
**Liege, lēj,** *n.* a vassal.
**Lien, lī'en** or **lē'en,** *n.* a legal claim.
**Lieu, lū,** *n.* place; room; stead.
**Lieutenant, lef-ten'ant,** *n.* an officer next below a
**Life, lif,** *n.* vitality; animate existence. [captain.
**Life-guards, lif-gārdz,** *n.* a cavalry regiment.
**Lifeless, lif'les,** *adj.* dead; inert.
**Lift, lift,** *v.* to raise to a higher position.
**Ligament, lig'a-ment,** *n.* a cord.
**Ligation, lī-gā'shun,** *n.* act or condition of binding.
**Ligature, lig'a-tūr,** *n.* a bandage.
**Light, līt,** *n.* the agent which renders objects visible; knowledge; a point of view; a win-
**Lighten, lit'en,** *v.* to render lighter. [dow.
**Lighter, lī'ter,** *n.* a river barge. [guidance at sea.
**Light-house, lit'hows,** *n.* a house with a light for
**Light-minded, lit'mīnd'ed,** *adj.* volatile.
**Lightning, lit'ning,** *n.* an electric flash in the sky.
**Lights, līts,** *n.* the lungs.
**Lightsome, lit'sum,** *adj.* light-hearted.
**Ligneous, lig'nē-us,** *adj.* woody.
**Lignine, lig'nin,** *n.* woody fibre.
**Lignite, lig'nīt,** *n.* wood coal.
**Lignum, lig'num,** *n.* wood apart from tissues or bark. [to enjoy; to be pleased with.
**Like, lik,** *adj.* equal; similar; *n.* resemblance; *v.*
**Likelihood, lik'li-hood,** *n.* probability.
**Liken, lī'ken,** *v.* to compare.
**Likeness, lik'ness,** *n.* a portrait.
**Liking, lī'king,** *n.* pleasure; inclination.
**Lilac, lī'lak,** *n.* a shrub.
**Liliaceous, lil-i-ā'shus,** *adj.* relating to lilies.
**Lilliputian, lil-li-pū'shan,** *adj.* dwarfish.
**Lilt, lilt,** *v.* to sing cheerfully.
**Limb, lim,** *n.* an arm, leg, or foot; branch of a tree; *v.* to dismember.
**Limber, lim'ber,** *adj.* flexible; *n.* a two-wheeled attachment to a gun-carriage.
**Limberness, lim'ber-ness,** *n.* flexibility.
**Limbo, lim'bō,** *n.* a place of restraint or part of
**Limit, lim'it,** *n.* restriction; bounds. [Hades.
**Limitation, lim-it-ā'shun,** *n.* restriction.
**Limn, lim,** *v.* to draw or paint.
**Limner, lim'ner,** *n.* a portrait painter.
**Limp, limp,** *v.* to walk lame; *adj.* lacking stiffness.
**Limpet, lim'pet,** *n.* a small shell-fish that sticks to
**Limpid, lim'pid,** *adj.* clear. [rocks.
**Limpidity, lim-pid'it-i,** *n.* clearness.
**Limy, lī'mi,** *adj.* viscous.
**Linchpin, linsh'pin,** *n.* a bolt for an axle.
**Linden, lin'den,** *n.* the lime tree.
**Line, līn,** *n.* a mark drawn, stretched, or scored from point to point; a cord; a longitudinal
**Lineage, lin'e-āj,** race; family. [extension.
**Lineal, lin'e-al,** *adj.* hereditary.
**Lineament, lin'ē-ā-ment,** *n.* feature; outline.
**Linear, lin'e-ar,** *adj.* straight; in line; composed
**Linen, lin'en,** *n.* cloth made from flax. [of lines.
**Liner, lī'ner,** *n.* a ship making passages by a certain
**Ling,** *n.* heather. [line or route.
**Linger, ling'ger,** *v.* to lag behind.
**Lingerer, ling'ger-er,** *n.* a laggard.
**Lingual, ling'gwal,** *adj.* pertaining to the tongue.
**Linguist, ling'gwist,** *n.* one skilled in languages.
**Linguistic, ling-gwist'ik,** *adj.* pertaining to lan-
**Liniment, lin'i-ment,** *n.* ointment. [guage.
**Link,** *n.* a connecting part; a torch; *v.* to connect.
**Links, lingks,** *n.* ground on which golf is played.
**Linnean, lin-ē'an,** *adj.* pertaining to the Linnean classification.
**Linnet, lin'et,** *n.* a small singing bird.
**Linoleum, lin-ō'le-um,** *n.* a kind of floor-covering.
**Linotype, lin'o-tip,** *n.* a type-setting machine.
**Linseed, lin'sēd,** *n.* flax-seed.
**Linsey-woolsey, lin-zi-wool'zi,** *n.* a mixture of linen and wool.
**Linstock, lin'stok,** *n.* a gunner's match.
**Lint, lint,** *n.* scraped flax fibre for wound dressing.
**Lintel, lin'tel,** *n.* a head-piece of a door.
**Lion, lī'on,** *n.* a well-known carnivorous animal; a prominent person or object.
**Lionise, lī'on-īz,** *v.* to flatter; to treat as eminent.
**Lip,** *n.* the fleshy covering of the front teeth; the outer edge of a vessel.
**Liquation, lik-wā'shun,** *n.* the act of rendering liquid.
**Liquefaction, lik-wē-fak'shun,** *n.* act of melting.
**Liquefy, lik'wē-fī,** *v.* to melt.
**Liquescent, lik-wes'ent,** *adj.* melting.
**Liqueur, lik-er',** *n.* a cordial.
**Liquid, lik'wid,** *n.* fluid.
**Liquidate, lik'wid-āt,** *v.* to settle, or wind up.
**Liquidation, lik-wid-ā'shun,** *n.* act of liquidating.
**Liquidator, lik-wid-ā'tor,** *n.* one who winds up insolvent estates.
**Liquor, lik'or,** *n.* a liquid; strong drink; spirits.
**Liquorice, lik'er-is,** *n.* Spanish juice.
**Lisp,** *v.* to whisper, or pronounce sibilant imper-
**Lissome, lis'um,** *adj.* supple. [fectly.
**List,** *n.* a catalogue; the edge of cloth; *v.* to desire; to listen.
**Listel, list'el,** *n.* a narrow fillet.
**Listen, lis'n,** *v.* to hearken; to give close attention.
**Listener, lis'ner,** *n.* one who listens.
**Listlessly, list'les-li,** *adj.* carelessly.
**Litany, lit'an-i,** *n.* a form of public prayer.
**Literal, lit'er-al,** *adj.* real; exact.
**Literary, lit'er-ar-i,** *adj.* versed in or relating to
**Literate, lit'er-āt,** *adj* learned. [literature.
**Literati, lit-er-ā'ti,** *n.* men of letters.
**Literature, lit'er-ā-tūr,** *n.* books and writings collectively; the science of letters.
**Lithe, lith,** *adj.* flexible; nimble.
**Litheness, lith'ness,** *adj.* flexibility; tenderness.
**Lithograph, lith'o-graf,** *n.* a stone print; *v.* to write on stone and print therefrom.
**Lithography, lith-og'-raf-i,** *n.* art of writing on stone.
**Lithology, lith-ol'o-ji,** *n.* natural history of stones.
**Lithotomy, lith-ot'-o-mi,** *n.* operation of cutting stone from the bladder.
**Lithotrity, lith-ot'ri-ti,** *n.* the operation of crushing stone in bladder.
**Litigant, lit'i-gant,** *n.* one engaged in a lawsuit.
**Litigate, lit'i-gāt,** *v.* to engage in contention at law.
**Litigation, lit-i-gā'shun,** *n.* contention in law.
**Litigious, lit-ij'yus,** *adj.* inclined to legal contention.
**Litmus, lit'mus,** *n.* dye obtained from lichens.
**Litre, lē'tr,** *n.* a French liquid measure.
**Litter, lit'r,** *n.* a hand carriage for the dead or injured; the young of an animal produced at one birth.
**Little, lit'l,** *adj.* small in size, quantity, or degree.
**Littoral, lit'to-ral,** *n.* pertaining to the shore.
**Liturgical, lit-ur'jik-al,** *adj.* relating to liturgy.
**Liturgy, lit'ur-ji,** *n.* the ritual prescribed for public worship. [regulate one's conduct.
**Live, līv,** *v.* to have life; to dwell in a place; to
**Livelihood, līv'li-hood,** *n.* subsistence; means of
**Liveliness, līv'li-nes,** *n.* gaiety. [living.
**Livelong, līv'long,** *adj.* tedious; long-lasting.
**Lively, līv'li,** *adj.* animated; active.
**Liver, līv'er,** *n.* organ of bile secretion.

**Livery,** liv'er-i, *n.* uniform dress.
**Liveryman,** liv'er-i-man, *n.* one who wears livery; a member of a city guild.
**Livestock,** liv'stok, *n.* farm animals.
**Livid,** liv'id, *adj.* discoloured; *n.* a lead colour.
**Living,** liv'ing, *n.* support; a benefice.
**Livraison,** li-vrā-zong', *n.* a number of a book published in serial form.
**Lixiviation,** lik-siv-i-ā'shun, the process of washing substances in fluid for dissolving purposes.
**Lizard,** liz'erd, *n.* a saurian reptile.
**Llama,** lā-ma, *n.* S. American ruminant, load-carrying.
**Llano,** lā'no, *n.* a prairie.
**Lloyd's,** loidz, *n.* the London shipowners' exchange and marine insurance headquarters.
**Loach,** lōch, *n.* a small river-fish.
**Load,** lōd, *n.* a burden; *v.* to make heavy.
**Loadstar,** lōd'stār, *n.* the polestar.
**Loadstone,** lōd'stōn, *n.* magnetic ore.
**Loaf,** lōf, *n.* a shaped mass of bread or sugar; *v.* to
**Loafer,** lō'fer, *n.* an idler. [lounge idly.
**Loam,** lōm, *n.* soil; marl.
**Loan,** lōn, *n.* money or object lent; *v.* the lending
**Loath,** lōth, *adj.* unwilling. [thereof.
**Loathe,** lōth, *v.* to detest.
**Loathsomeness,** lōth'sum-ness, *n.* the quality of being loathsome.
**Lobate,** lō'bāt, *adj.* composed of lobes.
**Lobby,** lōb'i, *n.* an anteroom.
**Lobe,** lōb, *n.* a division of the brain, lungs, etc.
**Lobelia,** lō-bē'li-a, *n.* a flowering plant.
**Lobster,** lob'ster, *n.* a shell-fish.
**Local,** lō'kl, *adj.* pertaining to a place; restricted.
**Localise,** lō'kal-iz, *v.* to render local.
**Locality,** lō-kal'i-ti, *n.* place; district; position.
**Locate,** lō-kāt', *v.* to place; to mark the location of.
**Location,** lo-kā'shun, *n.* a site.
**Loch,** lock, *n.* a lake.
**Lock,** lok, *n.* an appliance for fastening doors, cabinets, etc.; the inclosure of a canal; *v.* to secure; to confine; to unite.
**Lockage,** lok'āj, *n.* the locks of a canal.
**Locker,** lok'er, *n.* a chest or cupboard.
**Locket,** lok'et, *n.* a little case; a pendant.
**Lockram,** lok'ram, *n.* a coarse cloth made at Locrenan. [locks.
**Locksmith,** lok'smith, *n.* a maker and mender of
**Locomotion,** lo-ko-mo'shun, *n.* movement.
**Locomotive,** lo-ko-mo'tiv, *n.* a railway engine.
**Locorestive,** lo-ko-rest'iv, *adj.* remaining stationary. [point.
**Locus,** lo'kus, *n.* place; curve described by a
**Locust,** lō'kust, *n.* a destructive winged insect; a thorny tree.
**Locution,** lo-kū'shun, *n.* the art of speaking.
**Lode,** lōd, *n.* a metallic vein; a channel.
**Lodge,** loj, *n.* a cottage at the entrance to a park; a friendly society or its place of meeting.
**Lodger,** lōj'er, *n.* one who lives in the house of another. [lery; an upper room.
**Loft,** *n.* the space close under the roof; a gal-
**Logarithm,** log'ā-rithm, *n.* mathematical term.
**Log-book,** log'book, *n.* journal of a ship's course.
**Loggerhead,** log'er-hed, *n.* a dunce.
**Logic,** loj'ik, *n.* the art of reasoning.
**Logical,** loj'ik-al, *adj.* reasonable.
**Logician,** lo-jish'an, *n.* one versed in logic.
**Log-line,** log'lin, *n.* line for measuring a ship's way. [symbol, or type.
**Logogram,** lō'gō-gram, *n.* an abbreviated word,
**Logomachy,** log-om'ā-ki, *n.* wordy dispute.
**Logwood,** log'wood, *n.* dark red wood used in
**Loin,** loin, *n.* the part above the hip. [dyeing.
**Loiter,** loi'ter, *v.* to delay.
**Loll,** lol, *v.* to lean lazily.
**Lollard,** lol'erd, *n.* a follower of Wyclif.
**Lombard,** lom'berd, *n.* an inhabitant of Lombardy; an old-time banker.
**Lone,** lōn, *adj.* solitary; alone.
**Long,** *adj.* drawn out; lengthy; protracted.
**Longevity,** lon-jev'it-i, *n.* long life.
**Longing,** long'ing, *n.* craving; desire.
**Longitude,** lon'jit-ūd, *n.* length; distance from east
**Loo,** *n.* a card game. [to west.
**Look,** *n.* to observe; to take sight of.
**Look-out,** look'owt, *n.* a watching for.
**Loom,** *n.* a weaving machine; *v.* to appear in sight.
**Loon,** *n.* a water-fowl; a mean fellow.
**Loop,** *n.* a noose; a bend; a thong.
**Loophole,** loop'hōl, *n.* hole in a wall; way of escape.
**Loose,** loos, *adj.* unfastened; not dense; lax.
**Loosen,** loos'n, *v.* to unfasten; to relax.
**Loot,** *n.* plunder; *v.* to plunder.
**Lop,** *v.* to hang down; to cut away.
**Lopsided,** lop-sīd'ed, *adj.* unequal; heavier or more inclined in one direction.
**Loquacity,** lo-kwas'it-i, *n.* talkativeness.
**Lord,** lawrd, *n.* a peer; a person of rank and authority.
**Lordliness,** lawrd'li-ness, *n.* dignity.
**Lordling,** lawrd'ling, *n.* a little lord; a presumer.
**Lordship,** lawrd'ship, *n.* dominion; the condition of being a lord.
**Lore,** lōr, *n.* learning; doctrine.
**Lorette,** lo-ret', *v.* an elegant loose woman.
**Lorgnette,** lōr-nyet', *n.* an opera-glass.
**Lorry,** lor'i, *n.* a four-wheeled waggon.
**Lose,** looz, *v.* to misplace; to waste; to suffer damage or defeat.
**Lot,** lot, *n.* a quantity; a portion.
**Lothario,** lo-*thā*'ri-o, *n.* a male flirt.
**Lotion,** lō'shun, *n.* a medicinal wash.
**Lottery,** lot'er-i, *n.* chance; prize-giving by lot.
**Lotus,** lō'tus, *n.* the Egyptian water-lily.
**Lough,** lok, *n.* a lake (Irish spelling).
**Lounge,** lownj, *v.* to loiter.
**Lounge-lizard,** lownj-liz'ard, *n.* a loafer.
**Lout,** lowt, *n.* a stupid fellow.
**Lovable,** luv'able, *adj.* deserving of love.
**Love,** luv, *n.* affection; regard; esteem.
**Love-feast,** luv'fēst, *n.* a religious festival.
**Lover,** luv'er, *n.* one who loves; a sweetheart.
**Love-sick,** luv'sik, *adj.* overcome with amorous
**Low,** lō, *adj.* of little elevation. [feeling.
**Low-bred,** lō'bred, *adj.* of low birth; vulgar.
**Lower,** lō'er, *v.* to humble.
**Lower,** low'er, *v.* to threaten; to appear dark.
**Lowering,** low'ering, *adj.* cloudy.
**Lowing,** lō'ing, *adj.* bellowing; *n.* cry of cattle.
**Lowliness,** lō'li-nes, *n.* humility.
**Lowness,** lō'ness, *n.* dejection.
**Low-water,** lō'waw-ter, *n.* the lowest point of ebb-
**Loxia,** lok'si-a, *n.* wry-neck. [tide.
**Loyal,** loi'al, *adj.* faithful.
**Loyalty,** loi'al-ti, *n.* fidelity in allegiance.
**Lozenge,** loz'enj, *n.* a rhomb; a small sweetmeat.
**Lubber,** lub'er, *n.* a clown; a clumsy fellow.
**Lubricant,** loo'-brik-ant, *n.* a smoothing material.
**Lubricate,** loo'brik-āt, *v.* to make smooth.
**Luce,** loos, *n.* a fresh-water fish.
**Lucent,** loo'sent, *adj.* resplendent.
**Lucernal,** loo-ser'nal, *adj.* relating to a lamp.
**Lucerne,** loo-sern', *n.* a fodder plant.
**Lucid,** loo'sid, *adj.* clear; transparent.
**Lucidity,** loo-sid'it-i, *n.* light.
**Luck,** luck, *n.* fortune; fate; chance.
**Luckless,** luk'less, *adj.* unfortunate.
**Lucky,** luk'i, *adj.* fortunate.
**Lucrative,** loo'kra-tiv, *adj.* gainful; profitable.
**Lucubrate,** loo'kū-brāt, *v.* to write or study at night.
**Lucubration,** loo-kū-brā'shun, *n.* product of study.
**Ludicrous,** loo'di-krus, *adj.* laughable.
**Lues,** lū'ez, a plague.
**Luff,** luf, *v.* turn ship to windward.
**Lug,** *v.* to drag.
**Luggage,** lug'ij, *n.* personal travelling baggage.
**Lugger,** lug'ger, *n.* a small sailing ship.
**Lugubrious,** loo-gū'bri-us, *n.* doleful.
**Lukewarm,** look-wawrm, *adj.* tepid.
**Lull,** lul, *n.* an interval of calm or silence.
**Lullaby,** lul'ā-bi, *n.* a song to quieten children.
**Lumbago,** lum-bā'go, *n.* rheumatism in the loins.
**Lum'bar,** *adj.* pertaining to the loins.
**Lumber,** lum'ber, *n.* timber; anything cumbersome.
**Luminary,** loo'min-ar-i, *n.* a body giving light.
**Luminous,** loo'min-us, *adj.* shining.
**Lump,** *n.* a mass of unshapen form and uncertain
**Lumper,** lump-er, *n.* a ship labourer. [size.
**Lumpish,** lump-ish, *adj.* bulky; heavy.
**Lumpy,** lump-i, *adj.* full of lumps.
**Lunacy,** loo'na-si, *n.* insanity.
**Lunar,** loo'ner, *adj.* of the moon.
**Lunary,** loo'ner-i, *adj.* pertaining to the moon.
**Lunate,** loo'nāt, *adj.* half-moon shape.
**Lunatic,** loo'na-tik, *n.* a madman; one insane.
**Lunation,** loo-nā'shun, *n.* the interval between two lunar revolutions.
**Lunch,** lunsh, *n.* a light repast between breakfast and dinner; *v.* to take same.
**Lune,** loon, *n.* anything of half-moon form.
**Lunette,** loo-net', *n.* a small moon; a detached
**Lung,** *n.* a breathing organ. [bastion.

**Lunge,** lunj, *v.* a sudden push.
**Lupine,** loo'pin, *adj.* wolf-like; *n.* a plant.
**Lupulus,** loo'pū-lus, *n.* the hop plant.
**Lupus,** loo'pus, *n.* a corroding skin disease.
**Lurch,** *v.* to shift; *n.* a sudden roll of a ship.
**Lurcher,** lurch'er, *n.* a lurker; a kind of sporting dog.
**Lure,** loor, *v.* to snare.
**Lurid,** loo'rid, *adj.* gloomy; ghastly.
**Lurk,** *v.* to skulk; to lie in wait.
**Luscious,** lush'us, *adj.* delicious; cloyingly rich.
**Lush,** *adj.* fresh; succulent.
**Lusory,** loo'so-ri, *adj.* playful.
**Lust,** *n.* carnal desire; *v.* to crave immoderately.
**Lustful,** lust'ful, *adj.* sensual.
**Lustral,** lus'tral, *adj.* used in the ceremony of purification.
**Lustration,** lus-trā'shun, *n.* purification by sacrifice.
**Lustre,** lus'tr, *n.* brightness; splendour.
**Lustrous,** lus'trŭs, *adj.* shining; luminous.
**Lustrum,** lus'trum, *n.* a period of five years.
**Lusty,** lus'ti, *adj.* robust; vigorous.
**Lutarious,** loo-tā'ri-us, *adj.* mud-like.
**Lute,** loot, *n.* a stringed instrument.
**Lute-string,** loot-string, *n.* string of a lute.
**Lutheran,** loo'*ther*-an, *adj.* relating to the doctrines of Luther.
**Luxate,** luks'āt, *v.* to put out of joint.
**Luxuriant,** lug-zū'ri-ant, *adj.* abundant.
**Luxuriate,** lug-zū'ri-āt, *v.* to indulge; to grow to excess.
**Luxurious,** luk-zū'ri-us, *adj.* pleasurable; given to luxury.
**Luxury,** luks'ū-ri, *n.* a delicacy; indulgence in costly things.
**Lycanthropy,** li-kan'*thro*-pi, *n.* insanity with lupine imaginings.
**Lyceum,** li-sē'um, *n.* a literary society; or the place where it meets.
**Lydian,** lid'i-ān, *adj.* soft and slow music; effeminate.
**Lye,** li, *n.* a solution from ashes or alkaline salt.
**Lying,** li-ing, *n.* falsifying; *adj.* recumbent.
**Lying-to,** li'ing-too, *v.* checking in sailing; sailing so as to front the waves.
**Lymph,** limf, *n.* a fluid contained in animal bodies.
**Lymphatic,** lim-fat'ik, *adj.* relating to lymph.
**Lynch,** linsh, *v.* to punish without legal trial.
**Lyre,** lir, *n.* a stringed musical instrument.
**Lyric,** lir'ik, *n.* a poem to be sung.
**Lyrist,** lir'ist, one who plays the lyre.

## M

**Mab,** *n.* fairy queen.
**Macadamise,** mak-ad'am-iz, *v.* to line a road with broken stones.
**Macarise,** mak'ar-iz, *v.* to bless.
**Mace,** mās, *n.* spice; a staff of authority.
**Macerate,** mas'er-āt, *v.* to steep; to attenuate.
**Machiavellian,** mak-i-ā-vel'yan, *adj.* cunning in politics.
**Machination,** mak-in-ā'shun, *n.* an artful plot.
**Machine,** ma-shēn', *n.* a mechanical contrivance producing action and force.
**Machinist,** ma-shēn'ist, *n.* a constructor or worker of machines.
**Macrobiote,** ma-krō'bi-ōt, *n.* one of long life.
**Macrocosm,** mak'ro-kozm, *n.* the universe.
**Macula,** mak'ū-la, *n.* a surface spot.
**Mad,** *adj.* insane; furious.
**Madden,** mad'n, *v.* to enrage.
**Madeira,** ma-dē'ra, *n.* a wine produced in Madeira.
**Madonna,** ma-don'ā, *n.* the Virgin.
**Madrepore,** mad're-pōr, *n.* coral.
**Madrigal,** mad'ri-gal, *n.* a part song; short poem.
**Maelstrom,** māl'strom, *n.* a whirlpool.
**Magazine,** mag-a-zēn', *n.* a periodical; military storehouse.
**Magdalen,** mag'da-len, *n.* a repentant woman.
**Maggot,** mag'ot, *n.* a worm; a grub.
**Magi,** mā'ji, *n.* ancient Persian priests; wise men.
**Magian,** mā'ji-an, *adj.* relating to the Magi.
**Magilp,** ma-gilp', *n.* painter's mixture of linseed oil and mastic varnish.
**Magic,** maj'ik, *n.* enchantment; sorcery.
**Magical,** maj'ik-al, *adj.* produced by magic.
**Magician,** ma-jish'an, *n.* an enchanter.
**Magisterial,** maj-is-tē'ri-al, *adj.* masterful.
**Magistracy,** maj'is-tra-si, *n.* the body of magistrates.
**Magistrate,** maj'is-trāt, *n.* a public civil officer.
**Magnanimity,** mag-na-nim'it-i, *n.* high-mindedness.
**Magnate,** mag'nāt, *n.* a man of rank or influence.
**Magnesia,** mag-nē'shi-a, *n.* a light white powder.
**Magnet,** mag'net, *n.* loadstone.
**Magnetism,** mag-net-izm, *n.* power of attraction.
**Magnetize,** mag'net-iz, *v.* to influence; to attract.
**Magnificence,** magn-if'is-ens, *n.* pomp; grandeur.
**Magniloquence,** mag-nil'o-kwens, *n.* high-sounding phrases.
**Magnolia,** mag-nō'li-ā, *n.* a North American tree bearing large flowers.
**Magpie,** mag'pi, *n.* a bird of the crow species.
**Mahabharata,** ma-hā-bā'ra-ta, *n.* the title of an Indian epic.
**Mahogany,** mā-hog'an-i, *n.* a fine hard-wood.
**Maim,** mām, *v.* to injure; to make lame.
**Mainland,** mān'land, *n.* the land as distinct from sea.
**Maintain,** men-tān', *v.* to support; to uphold.
**Maintenance,** men'ten-ans, *n.* sustenance.
**Majesty,** maj'es-ti, *n.* dignity; royal state.
**Major,** mā'jer, *adj.* greater; elder; *n.* a military officer.
**Major-domo,** mā'jer-dō'mo, *n.* a general steward.
**Majority,** ma-jor'it-i, *n.* the larger number; full age; a major's rank.
**Malachite,** mal'ak-it, *n.* a green mineral.
**Maladministration,** mal-ad-min-is-tra'shun, *n.* bad government.
**Malady,** mal'ā-di, *n.* sickness; ailment.
**Malaise,** ma-lāz', *n.* uneasiness.
**Malapert,** mal'a-pert, *adj.* forward; bold.
**Malapropism,** mal'a-prop-izm, *n.* misapplication of words.
**Malar,** mā'lar, *adj.* relating to the cheek.
**Malaria,** ma-lā'ri-a, *n.* a febrile malady.
**Malcontent,** mal'kon-tent, *n.* a discontented person.
**Malediction,** mal-e-dik'shun, *n.* a curse.
**Malefactor,** mal-e-fak'tor, *n.* a criminal.
**Malevolence,** mal-ev'o-lens, *n.* enmity.
**Malfeasance,** mal-fēz'ans, *n.* bad conduct.
**Malformation,** mal-form-ā'shun, *n.* deformity.
**Malice,** mal'is, *n.* spite; ill-will.
**Malicious,** mal-ish'us, *adj.* wicked; spiteful.
**Malign,** ma-lin', *v.* malicious; badly disposed.
**Malignant,** ma-lig'nant, *adj.* spiteful.
**Malingerer,** ma-ling'ger-er, *n.* one who feigns sickness.
**Malison,** mal'i-zun, *n.* a curse.
**Malleable,** mal'e-abl, *adj.* ductile.
**Malmsey,** mām'zi, *n.* a wine.
**Malpractice,** mal-prak'tis, *n.* evil practice.
**Maltster,** mawlt'ster, *n.* one who makes malt.
**Maltreatment,** mal-trēt'ment, *n.* improper treatment.
**Malversation,** mal-ver-sā'shun, *n.* evil practices.
**Mammer,** mam'-mer, *v.* to hesitate.
**Mammillary,** mam'il-er-i, *adj.* pertaining to the breasts.
**Mammon,** mam'on, *n.* the god of wealth; riches.
**Mammoth,** mam'*uth*, *n.* a large extinct animal of the elephant kind; *adj.* gigantic.
**Manacles,** man'a-klz, *n.* handcuffs.
**Manageable,** man'āj-abl, *adj.* governable.
**Manciple,** man'-se-pl, *n.* a steward.
**Mandamus,** man-dā'mus, *n.* writ of command from a higher court to a lower.
**Mandarin,** man'da-rin, *n.* a Chinese official.
**Mandatary,** man'da-ta-ri, *n.* one to whom a mandate is addressed.
**Mandate,** man'-date, *n.* an order, a charge; a command.
**Mandibular,** man-dib'ū-lar, *adj.* pertaining to the jaw.
**Manducation,** man-dū-kā'shun, *n.* the act of chewing.
**Manège,** man-ăzh', *n.* the art of horse-training.
**Manequin,** man'-e-kin, *n.* an artist's model.
**Manes,** mān'ēz, *n.* tutelary spirits of the departed.
**Manganese,** mang'gan-ēz, *n.* a hard brittle metal.
**Mangel-wurzel,** mang'gel-werz'l, *n.* plant grown for cattle food.
**Manger,** mān'jer, *n.* a feed box.
**Mangy,** mān'ji, *adj.* scabby.
**Maniac,** mā'ni-ak, *n.* a madman.
**Maniacal,** ma-ni'ak-al, *adj.* affected with insanity.
**Manicate,** man'i-kāt, *adj.* covered with matted hair.
**Manifesto,** man-i-fes'to, *n.* a public declaration.
**Manikin,** man'i-kin, *n.* a dwarf.
**Manipulate,** man-ip'ū-lāt, *v.* to work with the hands; to handle.
**Manliness,** man'li-nes, *n.* bravery; manly qualities.
**Mannerism,** man'er-izm, *n.* peculiarity of writing, speech, or behaviour.
**Manœuvre,** man-oo'ver, *n.* an adroit strategy.
**Manometer,** man-om'e-ter, *n.* an instrument for measuring gases.
**Manor,** man'or, *n.* a feudal lordship.
**Manorial,** man-ō'ri-al, *adj.* pertaining to a manor.
**Manslaughter,** man'slaw-ter, *n.* wilful slaying.
**Mantel,** man'tel, *n.* a shelf over a fireplace.
**Manual,** man'ū-al, *adj.* pertaining to the hand.

**Manufactory,** man-ū-fak'to-ri, *n.* a factory.
**Manufacture,** man-ū-fak'tūr, *v.* to make from raw materials; *n.* the thing manufactured.
**Manumission,** man-ū-mish'un, *n.* the act of setting free.
**Manuscript,** man'ū-skript, *n.* written matter.
**Manx,** mangks, *adj.* pertaining to the Isle of Man.
**Maranatha,** mar-an-ā'tha. *n.* "The Lord cometh." Anathema Maranatha, *i.e.* Let him be accursed at the coming of the Lord.
**Maraschino,** mar-as-kē'no, *n.* a liqueur distilled from cherries.
**Marasmus,** mar-as'mus, *n.* a flesh wasting.
**Maraud,** ma-rawd', *n.* to wander in quest of plunder.
**Marcescent,** mar-ses'ent, *adj.* withering.
**Marches,** mārch'ez, *n.* borders of a country.
**Marchioness,** mārsh-o-nes', *n.* a wife or widow of a Marquis.
**Marcid,** mār'sid, *adj.* withered. [butter.
**Margarine,** mār-gar-ēn', *n.* a fatty imitation of
**Marginal,** mār'jin-al, *adj.* in the margin.
**Marigold,** mar'i-gold, *n.* a yellow-flowering plant.
**Marine,** ma-rīn', *n.* a soldier serving on a ship; the navy; *adj.* relating to the sea.
**Mariolatry,** mār-i-ol'ā-tri, *n.* worship of the Virgin.
**Marital,** mar'it-al, *adj.* relating to a marriage.
**Maritime,** mar'i-tim, *adj.* pertaining to the sea.
**Mark,** mārk, *n.* a sign; an impression; a badge; *v.* to make a mark; to note.
**Marl,** mārl, *n.* rich earth or clay.
**Marlaceous,** mārl-ā'shus, *adj.* marl-like.
**Marline,** mār'lin, *n.* a small protective rope.
**Marmalade,** mār'ma-lād, *n.* preserve made from oranges.
**Marmorean,** mār-mō're-an, *adj.* like, or pertaining to marble.
**Maroon,** ma-roon', *n.* claret colour; a fugitive negro slave; *v.* to put ashore on an uninhabited island.
**Marque,** mārk, *n.* licence to make reprisals.
**Marquee,** mār'kē', *n.* a large field tent.
**Marquetry,** mār'ke-tri, *n.* inlaid shell-work.
**Marquis,** mārk'wis, *n.* a title of nobility ranking next below a duke.
**Marriageable,** mar'ij-abl, *adj.* in condition to marry. [In bones.
**Marrow,** mar'ō, *n.* essence; soft matter contained
**Mars,** mārz, *n.* a planet; the god of war.
**Marsellaise,** mār'sāl-yās, *n.* French revolutionary hymn. [ceremonies.
**Marshal,** mār'shal, *n.* an officer for regulating
**Marsupial,** mār-sū'pi-al, *adj.* having pouch for carrying young.
**Martello,** mār-tel'lo, *n.* a small round fort.
**Martial,** mār'shal, *adj.* military; bold.
**Martin,** mār'tin, *n.* a small bird of the swallow kind.
**Martinet,** mār'-tin-et, *n.* a severe disciplinarian.
**Martingale,** mār'tin-gāl, *n.* a horse strap.
**Martinmas,** mār'tin-mas, *n.* feast of St. Martin, Nov. 11.
**Martyr,** mār'ter, *n.* one who suffers for a principle.
**Martyrdom,** mār'ter-dom, *n.* the suffering of a martyr.
**Martyrology,** mār-ter-ol'o-ji, *n.* history of martyrs.
**Marvellous,** mār'vel-us, *adj.* astonishing; wonderful. [masonry.
**Masonic,** mā-son'ik, *adj.* pertaining to free-
**Masonry,** mā'son-ri, *n.* stonework.
**Masora,** ma-sō'ra, *n.* a collection of Jewish comments on the Old Testament.
**Masquerade,** mask'er-ād, *n.* a masked revelry; *v.* to assemble in masks.
**Massacre,** mas'ā-ker, *n.* carnage; butchery; murder.
**Masterkey,** mā'ster-kē, *n.* a key that opens a series of different locks. [skill.
**Masterly,** mās'ter-li, *adj.* master-like: with supreme
**Masterpiece,** mās'ter-pēs, *n.* a great work; a chief effort. [victory.
**Mastery,** mās'ter-i, *n* command over; dominion;
**Mastic,** mas'tik, *n.* a kind of resin; a cement made therefrom.
**Mastiff,** mas'tiff, *n.* a large kind of watch-dog.
**Mastodon,** mas'tō-don, *n.* a large extinct animal.
**Mastoid,** mas'toid, *adj.* like a nipple.
**Matadore,** mat'ā-dōr, *n.* a bull-fighter.
**Material,** mat-ē'ri-al, *adj.* essential; composed of matter.
**Materialist,** mat-ē'ri-al-ist, *n.* one who disbelieves in spiritual power.
**Materiality,** mat-ē-ri-al'it-i, *n.* material existence.
**Maternal,** ma'ter'nal, *adj.* motherly.
**Maternity,** ma-ter'nit-i, *n.* condition of being a mother.
**Mathematics,** math-ē-mat'iks, *n.* the science of numbers.
**Matinée,** mat-in-ā', *n.* morning performance.
**Matins,** mat'ins, *n.* morning worship.
**Matrass,** mat'ras, *n.* a vessel used for chemicals.
**Matricide,** mat'ri-sid, *n.* mother murder; the murderer of a mother [to college membership.
**Matriculate,** ma-trik'ū-lāt, *v.* to enrol; to admit
**Matrimony,** mat'ri-mun-i, *n.* marriage.
**Matrix,** mā'triks, *n.* a mould.
**Matron,** mā'tron, *n.* a married woman.
**Mattock,** mat'ok, *n.* a pick-axe.
**Mattress,** mat'res, *n.* a bed made of stuffed
**Maturity,** mat-ū'ri-ti, *n.* ripeness. [material.
**Matutinal,** ma-tū'tin-al, *adj.* relating to morning.
**Maudlin,** mawd'lin, *adj.* drunk; silly.
**Maul-stick,** mawl'stik, *n.* a hand rest used by painters.
**Mausoleum,** maw-so-lē'um, *n.* a stately tomb.
**Mavis,** mā'vis, *n.* the thrush.
**Maw,** maw, *n.* the stomach.
**Mawkish,** mawk'ish, *adj.* nauseous; sickening; silly.
**Maxillary,** maks-il'ar-i, *adj.* relating to the jaw.
**Maxim,** maks'im, *n.* a proverb.
**Maximum,** maks'i-mum, *n.* the greatest number or quantity.
**Mayoralty,** mā'or-al-ti, *n.* office of mayor.
**Mazarine,** maz-er-ēn', *n.* a rich blue colour.
**Maze,** māz, *n.* a labyrinth; *v.* to bewilder.
**Mead,** mēd, *n.* a drink made from honey; a
**Meagre,** mē'gr, *adj.* scanty; poor. [meadow.
**Mealy-mouthed,** mē'li-mowth'd, *adj.* soft-tongued.
**Meander,** mē-an'der, *v.* to wind in and out; *n.* a winding course.
**Meaningly,** meen'-ing-le, *adv.* significantly.
**Measles,** mēz'lz', *n.* a skin eruption.
**Measurement,** mezh'ūr-ment, *n.* dimensions; the act of measuring. [ing to machines.
**Mechanic,** me-kan'ik, *n.* an artisan; *adj* pertain-
**Mechanical,** me-kan'ik-al, *adj.* machine-like.
**Mechanics,** me-kan'iks, *n.* science of the action of force. [machine.
**Mechanism,** mek'an-izm, *n.* the structure of a
**Mechanist,** mek'an-ist, *n.* one who constructs or tends machines.
**Medal,** med'l, *n.* coin or token, with device.
**Medallion,** me-dal'yun, *n.* a large medal.
**Medallist,** med'al-ist, *n.* one who has gained a medal. [body.
**Meddler,** med'ler, *n.* one who interferes; a busy-
**Medial,** mē'di-al, *adj.* average; middle.
**Mediate,** mē'di-āt, *v.* to intercede.
**Mediation,** mē-di-ā'shun, *n.* the act of mediating.
**Mediatorial,** me-di-at-ō'ri-al, *adj.* pertaining to a mediator.
**Medical,** med'ik-al, *adj.* pertaining to medicine.
**Medicament,** med'ik-a-ment, *n.* a medicinal substance. [power.
**Medicinal,** med-is'in-al, *adj.* possessing healing
**Medicine,** med'i-sin, *n.* substances used for curative purposes.
**Medieval,** mē-di-ē'val, *adj.* relating to the Middle Ages.
**Mediocre,** mē-di-ō'kr, *adj.* ordinary; moderate.
**Meditative,** med-i-tā'tiv, *adj.* thoughtful; contemplative.
**Medium,** mē'di-um, *n.* middle; a means.
**Medley,** med'li, *n.* a jumble; a miscellany.
**Medullary,** me-dul'ār-i, *adj.* composed of or like
**Meed,** mēd, *n.* reward. [marrow.
**Meetly,** mēt'li, *adv.* duly; suitably.
**Megrim,** mē'grim, *n.* pain in half of the head.
**Melancholy,** mel-an-kol-i, *n.* gloom; dejection.
**Melée,** mā-lā', *n.* a disordered conflict.
**Meliorate,** mēl'yor-āt, *v.* to improve.
**Melliferous,** mel-if'er-us, *adj.* honey-like.
**Mellifluous,** mel-if'loo-us, *adj.* smooth; softly flowing.
**Mellow,** mel'ō, *adj.* soft; ripe; mature.
**Melodious,** mel'ō-dius, *adj.* sweet sounding.
**Melodrama,** mel'ō-drām-ā, *n.* sensational play.
**Melody,** mel'o-di, *n.* sweet sound; an air; a tune.
**Membrane,** mem-brān, *n.* the tissue lining or covering bodily parts.
**Memento,** me-men'to, *n.* a souvenir; a token.
**Memoir,** mem'wār, *n.* a short biography.
**Memorable,** mem'or-abl, *adj.* famous; worthy of remembrance. [note.
**Memorandum,** mem-ō-ran'dum, *n.* a record; a

**Memorial,** mem-ō'ri-al, *n.* a monument; something which keeps a thing or person in remembrance.
**Memorialise,** me-mō'ri-al-iz, *v.* to present a memorial to.
**Memorise,** mem'ō-riz, *v.* to learn by heart.
**Menace,** men'ās, *v.* to threaten; *n.* a threat.
**Menagerie,** men-aj'er-i, *n.* a collection of wild animals.
**Mendacity,** men-das'it-i, *n.* falsehood; lying.
**Mendicant,** men'-de-kant, *adj.* reduced to beggary.
**Menial,** mē'ni-al, *adj.* servile; *n.* an inferior ser-
**Meniscus,** mē-nis'kus, *n.* new moon. [vant.
**Menstrual,** mens'trū-al, *adj.* monthly.
**Menstruum,** men'strū-um, *n.* a solvent.
**Mensuration,** men-sūr-ā'shun, *n.* the science of
**Mentor,** men'tor, *n.* an adviser [measuring.
**Mephistophelean,** mef-is-tō-fē'le-an, *adj.* scoffing; cynical. [exhalations.
**Mephitic,** mef-it'ik, *adj.* pertaining to poisonous
**Mercenary,** mer'sen-ar-i, *adj.* greedy; *n.* a hireling.
**Mercery,** mer'ser-i, *n.* a mercer's stock.
**Merchandise,** mer'chan-diz, *n.* merchantable goods. [sisting of quicksilver.
**Mercurial,** mer-kū'ri-al, *adj.* active; spirited; con-
**Mercury,** mer'kūr-i, *n.* quicksilver.
**Meretricious,** mer-i-trish'us, *adj.* evil; showy;
**Meridian,** mer-id'i-an, *n.* noon. [alluring.
**Meritorious,** mer-i-tō'ri-us, *adj.* having merit.
**Merle,** merl, *n.* a blackbird.
**Merlin,** mer'lin, *n.* a sort of hawk.
**Merriment,** mer'i-ment, *n.* jollity; gaiety; laughter.
**Mesentery,** mes'en-ter-i, *n.* an intestinal membrane.
**Mesh,** mesh, *n.* opening between the threads of a net; *v.* to ensnare.
**Mesmerism,** mes'mer-izm, *n.* the act of mesmerising.
**Mesne,** mēn, *adj.* intermediate.
**Messenger,** mes'en-jer, *n.* a conveyer of messages.
**Messuage,** mes'wāj, *n.* a dwelling and lands.
**Metal,** met'l, *n.* a fusible mineral substance.
**Metallurgy,** met-al-ur'ji, *n.* the science of refining metals. [tion.
**Metamorphosis,** met-ă-mor'fo-sis, *n.* a transforma-
**Metaphorical,** met-ă-for'ik-al, *adj.* figurative.
**Metaphysical,** met-a-fiz'ik-al, *adj.* pertaining to metaphysics.
**Metaphysics,** met-a-fiz'iks, *n.* science of the mind.
**Mete,** mēt, *v.* to measure; *n.* boundary.
**Metempsychosis,** me-tem-si-kō'sis, *n.* the passing of a soul from one body to another.
**Meteor,** mē'te-or, *n.* a shooting star.
**Meteorolite,** mē-tē-or'o-lit, *n.* a meteoric stone.
**Meteorology,** mē-tē-or-ol'o-ji, *n.* the science of the atmosphere.
**Meter,** mē'ter, *n.* a measuring apparatus.
**Metheglin,** meth-eg'lin, *n.* a liquor made from honey. [method.
**Methodical,** meth-od'ik-al, *adj.* according to
**Methodism,** meth'od-izm, *n.* the doctrine of the Methodists.
**Metre,** mēt'r, *n.* verse ; poetic measure.
**Metrical,** met'rik-al, *adj.* pertaining to verse.
**Metropolitan,** met-ro-pol'it-an, *adj.* relating to a chief city; an archbishop.
**Mettle,** met'l, *n.* spirit; courage.
**Mettlesome,** met'l-sum, *adj.* spirited.
**Mew,** mū, *n.* a cat's cry; a sea-fowl; *v.* to coop up.
**Mews,** mūz, *n.* a row of stables.
**Mezzotint,** mez'zo-tint, *n.* a style of engraving on copper.
**Miasma,** mē-az'mă, *n.* noxious exhalations.
**Michaelmas,** mik'l-mas, *n.* feast of St. Michael, 29th September.
**Microcosm,** mī'kro-kozm, *n.* a little world.
**Microscope,** mī'kro-skōp, *n.* a magnifying instru-
**Midriff,** mid'rif, *n.* the diaphragm. [ment.
**Midshipman,** mid'ship-man, *n.* a naval cadet.
**Midwifery,** mid'wif-ri, *n.* childbirth assistance.
**Mien,** mēn, *n.* look; aspect; bearing; expression.
**Mignonette,** min-yun-et', *n.* a fragrant plant.
**Migratory,** mī'gra-to-ri, *adj.* accustomed to
**Milch,** milch, *adj.* yielding milk. [migrate.
**Mildew,** mil'dū, *n.* fungus on leaves, cloth, etc.
**Mileage,** mil'ij, *n.* fees for miles covered.
**Milesian,** mi-lēz'yan, *adj.* pertaining to Ireland or the Irish.
**Militant,** mil'it-ant, *adj.* warlike; fighting.
**Militate,** mil-it-āt', *v.* to contend or oppose.
**Militia,** mil-ish'a, *n.* a subsidiary military body.
**Milky-way,** milk'ī-wā, *n.* the galaxy.
**Mill-cog,** mil'kog, *n.* the tooth of a wheel.
**Millenary,** mil-en'ar-i, *n.* comprising a thousand.
**Millennial,** mil-en'yal, *adj.* pertaining to the Millennium. [years of Christ's reign on earth.
**Millennium,** mil-en'yum, *n.* the promised 1,000
**Millet,** mil'et, *n.* an edible grain.
**Milliard,** mil'i-ard, *n.* a thousand millions,
**Milliner,** mil'in-er, *n.* a maker of or dealer in ladies' head-gear.
**Million,** mil'yun, *n.* ten hundred thousand.
**Millionaire,** mil-yun-ār', *n.* a man worth a million or more.
**Milsey,** mil'-sa, *n.* a milk strainer.
**Milt,** milt, *n.* the spleen; roe of fishes.
**Mimetic,** mim-et'ik, *adj.* imitative.
**Mimic,** mim'ic, *n.* one who imitates; *v.* to imitate.
**Mimicry,** mim'ik-ri, *n.* imitation.
**Minaret,** min'ar-et, *n.* the turret of a mosque.
**Mincingly,** min'sing-li, *adj.* affectedly.
**Miner,** mī'ner, *n.* one who works in a mine.
**Mineral,** min'er-al, *n.* an inorganic substance found in the earth; any substance comprising metal.
**Mineralogy,** min-er-al'o-ji, *n.* science of minerals.
**Miniature,** min'i-ā-tūr, *n.* a small painting; *adj.* on a small scale.
**Minim,** min'im, *n.* half a semi-breve; a dwarf; a drop.
**Minimum,** min'im-um, *n.* the least quantity.
**Minion,** min'yun, *n.* a kind of type; a mean favourite. [bers of a Government.
**Ministry,** min'is-tri, *n.* office of minister; the mem-
**Minor,** mī'nor, *adj.* less; smaller; *n.* one under age.
**Minority,** min-or'it-i, *n.* a smaller number; state of being under age.
**Minster,** min'ster, *n.* a monastery church or cathedral. [musician.
**Minstrel,** min'strel, *n.* a wandering singer; a
**Minstrelsy,** min'strel-si, *n.* minstrel music.
**Mint,** *n.* place where money is coined; an aromatic herb. [coining.
**Mintage,** mint'āj, *n.* a thing coined; duty paid for
**Minus,** mī'nus, *n.* less; sign of subtraction.
**Minute-book,** min'it-book,*n.* book of notes of proceedings. [minute as distress signal.
**Minute-gun,** min'it-gun, *n.* a gun fired every
**Minutiæ,** mi-nū'shi-ē, *n.* small details.
**Minx,** mingks, *n.* a pert girl.
**Miracle,** mir'a-kl, *n.* a supernatural occurrence.
**Miradore,** mir-'a-dore, *n.* a gallery commanding a wide view.
**Mirage,** mi-razh', *n.* the appearance of water on a flat expanse.
**Miry,** mī'ri, *adj.* covered with mire.
**Misadventure,** mis-ad-vent'ūr, *n.* misfortune.
**Misanthropy,** mis-an'thro-pi, *n.* hatred of humankind. [ception.
**Misapprehension,** mis-ap-rē-hen'shun, *n.* miscon-
**Misbehaviour,** mis-bē-hāv'yer, *n.* bad conduct.
**Misbelief,** mis-bē-lēf', *n.* wrong belief. [koning.
**Miscalculation,** mis-kal-kū-lā'shun, *n.* a wrong rec-
**Miscall,** mis-kawl', *n.* to call wrongly.
**Miscarriage,** mis-kar'ij, *n.* the act of bringing forth prematurely.
**Miscegenation,** mis-sē-jen-ā'shun, *n.* mixture of races. [various.
**Miscellaneous,** mis-sel-ā'ne-us, *adj.* mixed;
**Miscellany,** mis-el'an-i, *n.* a collection of varied compositions or objects.
**Mischance,** mis-chans', *n.* bad luck; mishap.
**Mischief,** mis'chif, *n.* harm; injury.
**Miscible,** mis'si-bl, *adj.* capable of being mixed.
**Misconception,** mis-kon-sep'shun, *n.* a wrong idea.
**Misconduct,** mis-kon'dukt, *n.* bad behaviour.
**Miscreant,** mis'krē-ant, *n.* a vile person.
**Misdeed,** mis-dēd', *n.* a wrongful act. [offence.
**Misdemeanour,** mis-de-mē'ner, *n.* an indictable
**Misdirect,** mis-di-rekt', *v.* to direct wrongly.
**Mise,** miz, *n.* expenditure; money gift to superior.
**Misemployment,** mis-em-ploi'ment, *n.* unsatisfactory work.
**Miserable,** miz'er-abl, *adj.* wretched.
**Miserere,** miz'er-ē'rē, *n.* a hymn appealing for Divine pity.
**Miserly,** mī'zer-li, *adj.* avaricious.
**Misery,** miz'er-i, *n.* distress; poverty.
**Misfeasance,** mis-fe'-zans, *n.* the doing of a lawful act in a negligent manner.
**Misfortune,** mis-for'tūn, *n.* calamity; bad fortune.
**Misgiving,** mis-giv'ing, *n.* doubt; distrust.
**Misgovernment,** mis-guv'ern-ment, *n.* wrongful government.
**Misguidance,** mis-gid'ans, *n.* leading astray.
**Mishap,** mis-hap', *n.* an accident.
**Mishna,** mish'nă, *n.* a collection of Jewish laws.
**Misinform,** mis-in-form', *v.* to inform wrongly.

**Misinterpret,** mis-in-ter'pret, *v.* to interpret wrongly.
**Misjudge,** mis-juj', *v.* to judge erroneously.
**Mislay,** mis-lā', *v.* to lay in the wrong place; to loose.
**Mislead,** mis-lēd', *v.* to lead wrongly.
**Mislike,** mis-lik', *v.* to dislike.
**Mismanagement,** mis-man'āj-ment, *n.* bad management.
**Misnomer,** mis-nō'mer, *n.* a wrong name.
**Misogamist,** mis-og'am-ist, *n.* one who dislikes marriage.
**Misogynist,** mis-og'in-ist, *n.* a woman hater.
**Misprint,** mis-print', *n.* a printer's error.
**Misprision,** mis-prizh'n, *n.* a criminal oversight.
**Misquote,** mis-kwōt', *v.* to quote wrongfully.
**Misrepresentation,** mis-rep-re-sent-ā'shun, *n.* an unfaithful picture or narration.
**Misrule,** mis-rool', *n.* unjust rule.
**Missal,** mis'al, *n.* a Mass book.
**Misshape,** mis-shāp', *v.* to shape wrongly.
**Missile,** mis'il, *n.* a weapon thrown by the hand.
**Mission,** mish'un, *n.* a duty a person or persons may be sent out to perform; persons sent.
**Missive,** mis'iv, *n.* a written message.
**Misstatement,** mis-stāt'ment, *n.* a wrongful statement.
**Mist,** mist, *n.* a watery vapour in the atmosphere.
**Mistake,** mis-tak', *n.* error.
**Mistime,** mis-tīm', *v.* to time wrongly.
**Mistress,** mis'tres, *n.* female head of a house; a concubine.
**Mistrustful,** mis-trust'ful, *adj.* suspicious.
**Misunderstanding,** mis-un-der-stand'ing, *n.* a mistake; disagreement.
**Misusage,** mis-ūz'āj, *n.* ill-treatment.
**Misuse,** mis-ūs', *n.* wrongful use. [machine-gun.
**Mitrailleuse,** mē-trā'ī-yāz, *n.* a breech-loading
**Mitre,** mī'tr, *n.* head-covering worn by bishops.
**Mitten,** mit'n, *n.* a kind of glove.
**Mittimus,** mit'ī-mus, *n.* a warrant of commitment.
**Mizzenmast,** miz'n-mast, *n.* mast that holds the mizzen.
**Mnemonics,** nē-mon'iks, *n.* memory cultivation.
**Moat,** mōt, *n.* water trench round a castle.
**Mobile,** mō-bīl', *adj.* capable of being moved.
**Mobilise,** mob'il-īz, *v.* to prepare for war service.
**Mocassin,** mok'ā-sin, *n.* shoe worn by Red Indians.
**Mockery,** mok'er-ī, *n.* derision; ridicule.
**Modal,** mō'dal, *n.* pertaining to form.
**Modality,** mō-dal'it-ī, *n.* mode in its logical significance. [imitated.
**Model,** mod'l, *n.* an example; something to be
**Moderation,** mod-er-ā'shun, *n.* temperance; avoidance of excess.
**Moderator,** mod'er-ā-ter, *n.* one who restrains; a church or university official.
**Modernise,** mod'ern-īz, *v.* to make modern.
**Modesty,** mod'est-ī, *n.* virtue; chastity; humility.
**Modicum,** mod'ī-kum, *n.* a small portion.
**Modification,** mod-if-ik-ā'shun, *n.* change.
**Modillion,** mo-dil'yun, *n.* an ornamental bracket.
**Modish,** mō'dish, *adj.* fashionable.
**Modiste,** mō-dēst', *n.* a dressmaker.
**Modulate,** mod'ū-lāt, *v.* to vary sounds; to inflect.
**Modulator,** mod-ū-lā'tor, *n.* one who modulates.
**Module,** mod'ūl, *n.* a small measure; a model.
**Modulus,** mod'ū-lus, *n.* a constant multiplier.
**Mofussil,** mō-fus'il, *n.* Indian country districts.
**Mohair,** mō'hār, *n.* the hair of the Angora goat; fabric made therefrom.
**Moisty,** mol'et-ī, *n.* half.
**Moil,** *v.* to drudge; to smear with dirt.
**Moire antique,** mwār-an-tēk, *n.* watered silk.
**Moist,** *adj.* damp; humid.
**Moisture,** moist'ūr, *n.* humidity.
**Molar,** mō'lar, *n.* a grinding tooth; *adj.* grinding.
**Molasses,** mō-las'ez, *n.* treacle.
**Mole,** mōl, *n.* a small burrowing animal; a permanent mark on the skin. [of matter.
**Molecule,** mōl'e-kūl, *n.* one of the smaller particles
**Moleskin,** mōl'skin, *n.* skin of a mole; a kind of cloth.
**Molest,** mo-lest', *v.* to annoy; to disturb.
**Molestation,** mo-lest-ā'shun, *n.* the act of molesting.
**Mollient,** mol'ī-ent, *adj.* assuaging; softening.
**Mollify,** mol'if-ī, *v.* to appease; to pacify.
**Molten,** molt'en, *adj.* melted.
**Moment,** mō'ment, *n.* value; an instant of time.
**Momentary,** mō'ment-ar-ī, *adj.* of short duration.
**Momentous,** mō-men'tus, *adj.* important.
**Momentum,** mō-men'tum, *n.* impetus; force.
**Monachism,** mon'ak-izm, *n.* the monastic life.
**Monad,** mon'ad, *n.* the ultimate atom.
**Monarchical,** mon-ark'ik-al, *adj.* pertaining to monarchy.
**Monastery,** mon'as-ter-ī, *n.* a house for monks.
**Monetary,** mun'ī-ter-ī, *adj.* relating to money.
**Monetize,** mun'ēt-īz, *v.* to convert into money.
**Mongrel,** mung'grel, *n.* of mixed breed.
**Monism,** mō'nizm, *n.* doctrine of unity.
**Monitor,** mon'it-or, *n.* an admonisher; an instruc-
**Monitory,** mon'it-or-ī, *adj.* giving warning. [tor.
**Monochord,** mon'ō-kord, *n.* a one-chorded instrument.
**Monocle,** mon'o-kl, *n.* a single eye-glass.
**Monody,** mon'ō-di, *n.* song of mourning for one voice. [wife.
**Monogamy,** mon-og'am-ī, *n.* marriage to one
**Monogram,** mon'ō-gram, *n.* a design of interwoven initials. [thing.
**Monograph,** mon'ō-graf, *n.* a description of a single
**Monolith,** mon'ō-lith, *n.* a column of a single stone.
**Monologue,** mon'ō-log, *n.* a soliloquy; entertainment given by one person.
**Monomania,** mon-ō-mā'nī-ā, *n.* mental derangement on a particular subject. [in a thing.
**Monopoly,** mon-op'o-lī, *n.* the sole right of dealing
**Monosyllable,** mon'ō-sil-abl, *n.* a word of one syllable.
**Monotheism,** mon-ō-*thē*'izm, *n.* belief in one God.
**Monotony,** mon-ot'o-nī, *n.* sameness; lack of variety.
**Monsoon,** mon-soon', *n.* a periodical Indian wind.
**Monster,** mon'ster, *n.* something unnatural.
**Monstrosity,** mon-stros'it-ī, *n.* an unnatural pro-
**Moody,** moo'dī, *adj.* gloomy; peevish. [duct.
**Moonshine,** moon'shīn, *n.* the shine of the moon.
**Moor,** moor, *n.* a heath.
**Moorage,** moor'āj, *n.* place for mooring vessels.
**Moot,** *v.* to discuss; to propose for debate.
**Mope,** mōp, *v.* to be dull.
**Moraine,** mō-rān', *n.* rocks on the edge of glaciers. [good.
**Moral,** mor'al, *adj.* relating to right or wrong;
**Moralise,** mor'al-īz, *v.* to apply moral lessons.
**Morass,** mo-ras', *n.* a marsh.
**Morbid,** mor'bid, *adj.* unsound; diseased.
**Mordant,** *adj.* biting; *n.* substance for fixing colours.
**Moreen,** mo-rēn', *n.* a mixed textile fabric.
**Moresque,** mōr-esk', *adj.* in the Moorish manner.
**Morganatic,** mor-gan-at'ik, *adj.* applied to marriage of a man with a woman of inferior rank.
**Moribund,** mor'ī-bund, *adj.* dying.
**Moroseness,** mō-rōs'nes, *n.* sulkiness.
**Morphia,** mor'fi-ā, *n.* extract of opium.
**Morphology,** morf-ol'ō-jī, *n.* science of organic
**Morsel,** mor'sel, *n.* a small piece. [form.
**Mortality,** mor-tal'it-ī, *n.* liability to death.
**Mortar,** mor'tar, *n.* a cement; a vessel in which substances are pounded; a shell-throwing instrument.
**Mortgage,** mor'gāj, *n.* a deed of pledge.
**Mortification,** mor-tif-ī-kā'shun, *n.* shame; chagrin; a dying part.
**Mortifying,** mort'i-fī-ing, *adj.* humiliating; vexatious.
**Mortise,** mor'tis, *n.* an opening for a tenon.
**Mortmain,** mort'mān, *n.* inalienable transfer of property to a body in trust.
**Mortuary,** mort'ū-ar-ī, *n.* a burial place; building for temporary reception of the dead.
**Mosaic,** mo-zā'ik, *adj.* inlaid work.
**Moslem,** mos'lem, *n.* a Mohammedan.
**Mosque,** mosk, *n.* a Mohammedan temple.
**Mote,** mōt, *n.* a speck; a particle.
**Mother,** mūth'er, *n.* a female parent.
**Motherly,** muth'er-lī, *adj.* maternal; mother-like.
**Motherwit,** muth'er-wit, *n.* native wit.
**Motion,** mō'shun, *n.* the condition of moving.
**Motive,** mō'tiv, *n.* that which prompts to action;
**Motley,** mot'lī, *n.* of various colours. [design.
**Motor,** mō'tor, *n.* a motion-producing machine.
**Mottled,** mot'ld, *adj.* dappled; speckled.
**Motto,** mot'ō, *n.* a concise sentence; an inscription.
**Moulder,** mōl'der, *v.* to decay.
**Mouldy,** mōl'dī, *adj.* grown over with fungus.
**Moult,** mōlt, *v.* to shed feathers.
**Mountain,** mown'tn, *n.* a lofty hill.
**Mountainous,** mownt'an-us, *adj.* abounding in mountains; huge.
**Mountebank,** mownt'ī-bank, *n.* a quack; a pretender.
**Mounting,** mown'ting, *n.* an ascent; a setting.

**Mournful,** mörn'ful, *adj.* lamentable.
**Moustache,** mous-tash', *n.* hair on the upper lip.
**Movables,** moov'ă-blz, *n.* goods; furniture, etc.
**Movingly,** moov'ing-li, *adj.* with emotion.
**Mow,** mō, *v.* to cut down; *n.* a pile of hay, etc.
**Mucilage,** mū'sil-āj, *n.* gum.
**Muck,** muk, *n.* filth.
**Mucus,** mū'kus, *n.* slimy fluid.
**Muddle,** mud'l, *n.* confusion; disorder; *v.* to confuse.
**Muffin,** muf'in, *n.* a light cake.
**Mufti,** muf'ti, *n.* a Turkish legal official; an officer's dress while off duty.
**Muggy,** mug'i, *adj.* heavy; damp; close.
**Mulatto,** mū-lat'ō, *n.* offspring of a white and a black.
**Mulch,** mulsh, *n.* rotted straw.
**Mulct,** mulkt, *v.* to fine; *n.* a fine.
**Muleteer,** mū-lē-tēr', *n.* a mule-driver.
**Mulish,** mū'lish, *adj.* stupid; obstinate.
**Mull,** mul, *v.* to heat and sweeten; to spoil; *n.* a headland.
**Muller,** mul'er, *n.* a pulveriser; pestle.
**Mullion,** mul'yun, *n.* upright division of windows.
**Mulse,** muls, *n.* spiced wine.
**Multifarious,** mul-ti-fā'ri-us, *adj.* of various kinds.
**Multiped,** mul-ti-ped, *n.* a many-footed insect.
**Multiple,** mul'ti-pl, *n.* an exactly divisible number; *adj.* of many parts.
**Multiplex,** mul'ti-pleks, *adj.* with many folds.
**Multiplicity,** mul-ti-plis'it-i, *n.* the condition of being numerous.
**Multiply,** mul'ti-ply, *v.* to increase in numbers.
**Multitude,** mul'ti-tūd, *n.* a crowd; a large number, the people.
**Mum,** *adj.* silent; *n.* silence.
**Mumble,** mum'bl, *v.* to mutter.
**Mummer,** mum'er, *n.* an actor; a buffoon.
**Mummy,** mum'i, *n.* an embalmed body.
**Mumpish,** mump'ish, *adj.* sullen; glum.
**Munch,** munsh, *v.* to chew with closed lips.
**Mundane,** mun'dān, *adj.* worldly; pertaining to the world.
**Municipal,** mū-nis'ip-al, *adj.* pertaining to a town or city having local governing power.
**Munificence,** mū-nif'is-ens, *n.* generosity; bounty; liberality.
**Muniment,** mū'ni-ment, *n.* title deed; a stronghold.
**Munition,** mū-nish'un, *n.* war materials.
**Munnion,** mun'yun, *n.* (same as *Mullion*).
**Mural,** mū'ral, *adj.* relating to a wall.
**Murder,** mur'der, *n.* the act of killing; *v.* to slay.
**Muriatic,** mū-ri-at'ik, *adj.* pertaining to sea-salt.
**Murky,** murk'i, *adj.* obscure; gloomy; dark.
**Murrain,** mur'ān, *n.* infectious disease among cattle.
**Muscle,** mus'l, *n.* fleshy fibres; animal tissue.
**Muscoid,** musk'oid, *adj.* moss-like.
**Muscles,** mus'ls, *n.* contractile fibres.
**Muscovado,** mus-kō-va'do, *n.* sugar before refinement.
**Muscular,** musk'ū-lar, *adj.* strong; relating to the muscles.
**Museum,** mū-zē'um, *n.* place where curiosities [and treasures are exhibited.
**Music,** mū'zik, *n.* the science of sounds; melody.
**Musk,** *n.* a strong scent obtained from the musk-
**Muslin,** muz'lin, *n.* fine cotton fabric. [deer.
**Mussulman,** mus'l-man, *n.* a Mohammedan.
**Must,** must, *n.* new unfermented wine; *v.* to be compelled.
**Muster,** must'er, *v.* to assemble; to collect; *n.* a
**Musty,** must'i, *adj.* mouldy. [review of soldiers.
**Mutable,** mū'tă-bl, *adj.* variable; changeful.
**Mute,** mūt, *adj.* silent; dumb.
**Mutilate,** mū'til-āt, *v.* to cut; to maim.
**Mutiny,** mū'tin-i, *n.* revolt against authority.
**Mutton,** mut'n, *n.* the flesh of the sheep.
**Mutual,** mū'tū-al, *adj.* reciprocal; in common.
**Muzzle,** muz'l, *n.* a snout; a fastening for the mouth; *v.* to restrain; to gag.
**Mycology,** mi-kol'ō-ji, *n.* the science of fungi.
**Myopic,** mi'-op'-ic, *adj.* short-sighted.
**Myriad,** mir'i-ad, *n.* a large number.
**Myrmidon,** mer'mid-un, *n.* a member of a ruffianly
**Myrrh,** mer, *n.* an aromatic gum. [band.
**Myrtle,** mer'tl, *n.* an evergreen shrub.
**Mystery,** mist'er-i, *n.* a deep secret; something unrevealed. [intercourse with God.
**Mystic,** mis'tik, *adj.* one who professes direct
**Mystical,** mis'tik-al, *adj.* obscure; emblematical.
**Mystify,** mis'ti-fi, *v.* to confuse; to involve in obscurity.
**Myth,** mith, *n.* a fable; a concocted story.

## N

**Nab,** nab, *v.* to pounce upon and carry off.
**Nabob,** nā'bob, *n.* Indian deputy governor; one enriched in the East.
**Nacarat,** nak'-a-rat, *n.* a pale red colour with a tint of orange.
**Nacre,** nā'kr, *n.* mother-of-pearl.
**Nacreous,** nā'krē-us, *adj.* of a pearly lustre.
**Nadir,** nā'dir, *n.* opposite the zenith.
**Nag,** nag, *n.* a pony; *v.* to carp.
**Nail,** nāl, *n.* a pointed piece of metal for fastening substances; horny scale at the backs of the finger ends.
**Naïveté,** nā'ēv'tā, *n.* natural simplicity.
**Naked,** nā'ked, *adj.* unclothed; bare.
**Namby-pamby,** nam'bi-pam'bi, *n.* silly; affected; trifling.
**Name,** nām, *n.* appellation; designation; title.
**Namely,** name'-le, *adv.* to wit; to state more particularly.
**Namesake,** nām'sāk, *n.* one with like name to another.
**Nankeen,** nan'kēn', *n.* a buff-coloured cloth.
**Nap,** nap, *n.* woolly surface; a short sleep.
**Nape,** nāp, *n.* the back of the neck.
**Napery,** nāp'er-i, *n.* table linen.
**Napiform,** nap'i-form, *adj.* turnip-shaped.
**Narcotic,** nār-kot'ik, *adj.* sleep-producing; *n.* sleep-producing medicine.
**Nard,** nārd, *n.* an aromatic plant.
**Narghile,** nar'-ge-le, *n.* a small pipe for smoking tobacco.
**Narrative,** nar'ă-tiv, *n.* a story; an account of events.
**Narrow,** nar'o, *adj.* limited, bigoted.
**Narrows,** nar'ōz, *n.* a contracted passage.
**Narthex,** nar'-theks, *n.* a vestibule of a church before the proper entrance.
**Nasal,** nā'zal, *adj.* pertaining to the nose.
**Nascent,** nā'sent, *adj.* early stages of existence; incipient.
**Nasty,** nāhs-ti, *adj.* dirty, unpleasant.
**Nasute,** nā-sūt', *adj.* long-snouted.
**Natal,** nā'tal, *adj.* pertaining to birth; native.
**Natatory,** na'ta-tor-i, *adj.* relating to swimming.
**Nation,** nā'shun, *n.* a distinct people; a people living under one government.
**Native,** nā-tiv, *n.* original, as of inhabitants.
**Nativity,** nā-tiv'it-i', *n.* birth.
**Natural,** nat'ū-ral, *adj.* inborn; relating to nature; unartificial.
**Naturalise,** nat'ū-ral-iz, *v.* to grant to a foreigner the rights of native citizenship.
**Nature,** nā'tūr, *n.* the system of created things.
**Naught,** nawt', *n.* nothing.
**Naughty,** nawt-i, *adj.* ill-behaved.
**Nauscopy,** naw-'sko-pe, *n.* the art of seeing ships or land at great distances.
**Nausea,** naw'sē-ă, *n.* loathing; producing tendency to vomit.
**Nauseate,** naw'sē-āt, *v.* to sicken; to disgust.
**Nautical,** naw'tik-al, *adj.* naval; relating to navigation.
**Naval,** nā'val, *adj.* marine; relating to ships.
**Nave,** nāv, *n.* body of a church; the hub of a wheel.
**Navel,** nā'vel, *n.* the middle of the abdomen.
**Navigable,** nav'ig-abl, *adj.* sailable; permitting of the passage of ships.
**Navy,** nā'vi, *n.* fleet of ships.
**Navvy,** nav'i, *n.* a labourer on excavations, railways, etc.
**Neap-tide,** nēp'tīd, *n.* low tide.
**Near,** nēr, *adj.* close to.
**Neat,** nēt, *adj.* pertaining to cattle; tidy; *n.* a cow.
**Neb,** neb, *n.* beak of a bird.
**Nebula,** neb'ū-lă, *n.* a gauzy cloud; film; star cluster.
**Necessarianism,** nes-es-ā'ri-an-izm, *n.* a fatalism.
**Necessary,** nes'es-ar-i, *adj.* inevitable; needful; that must be.
**Necessitate,** nes-es'it-āt, *v.* to compel.
**Necessitous,** nes-es'it-us, *adj.* needy; indigent.
**Neck,** nek, *n.* the exterior of the throat.
**Necrology,** nē-krol'ō-ji, *n.* record of deaths.
**Necromancy,** nē'kro-man-si, *n.* enchantment; conjuring.
**Necropolis,** nē-krop'o-lis, *n.* a cemetery.
**Necrosis,** nē-krō'sis, *n.* mortification.
**Nectar,** nek'tar, *n.* the drink of the gods.
**Née,** nā, *adj.* born. (*Fr.*)
**Need,** nēd, *n.* necessity.

**Needy,** nēd-i, *adj.* poor.
**Nefarious,** nē-fā'ri-us, *adj.* wicked; villainous.
**Negative,** neg'ā-tiv, *n.* a proposition that denies.
**Neglect,** neg-lekt', *v.* to disregard.
**Negligence,** neg'li-jens, *n.* habitual carelessness.
**Negotiate,** nē-gō'shi-āt, *v.* to treat with; to traffic.
**Negus,** nē'gus, *n.* diluted wine.
**Neigh,** ney, *v.* to whinny.
**Neighbourhood,** nā'ber-hood, *n.* the district near.
**Nelumbo,** ne-lum'-bo, *n.* a sort of water-lily.
**Nemalite,** nem'ā-lit, *n.* fibrous hydrate of magnesia.
**Nemesis,** nem'e-sis, *n.* the goddess of revenge; retribution.
**Neologism,** nē-ol'o-jism, *n.* a new doctrine.
**Neology,** nē-ol'o-ji, *n.* the introduction of new words or doctrines; rationalism.
**Neophyte,** nē'ō-fit, *n.* a novice; a new convert.
**Neo-platonism,** nē'ō-plā'ton-izm, *n.* a philosophical system combining Platonic and Oriental teachings.
**Nepenthe,** nē-pen'*thē*, *n.* a drug that allays pain.
**Nephew,** nēv-'u, *n.* son of sister or brother.
**Nephritic,** nē-frit'ik, *adj.* relating to the kidneys.
**Nephroid,** nē-froid, *adj.* kidney-shaped.
**Nepotism,** nē'pot-ism, *n.* favouritism to kindred.
**Neptunian,** nep-tū'ni-an, *adj.* relating to the ocean.
**Nereid,** nē'rē-id, *n.* a sea-nymph.
**Nerve,** nerv, *n.* self-command; an organ of sensation.
**Nervous,** nerv'us, *adj.* strong; easily agitated.
**Nervure,** ner'-vure, *n.* veins of leaves.
**Nescience,** nē'shi-ens, *n.* ignorance.
**Nestorianism,** nes-tō'ri-an-izm, *n.* the doctrine of Nestor.
**Net,** net, *n.* a contrivance of twine for catching fish or birds; *adj.* free of deductions.
**Nether,** neth'er, *adj.* lower.
**Neuralgic,** nū-ral'jik, *adj.* pertaining to nerve pain.
**Neurology,** nū-rol'o-ji, *n.* science of the nerves.
**Neutrality,** nū-tral'it-i, *n.* condition of not taking sides.
**Newfangled,** nū-fang'gld, *adj.* newly-formed.
**Newt,** nūt, *n.* a small amphibian lizard.
**Nib,** nib, *n.* a pen; bill of bird.
**Nibble,** nib'l, *v.* to bite lightly.
**Nicety,** nis'ē-ti, *n.* minute accuracy; fastidiousness.
**Niche,** nich, *n.* a small recess.
**Nick,** nik, *n.* a notch; the exact moment.
**Nick-nacks,** nik'naks, *n.* trifles.
**Nickname,** nik'nām, *n.* an appellation of familiarity or derision.
**Nictitate,** nik-ti-tāt', *v.* to wink.
**Nidge,** nij, *v.* to dress stones with a pick.
**Nidification,** nid-i-fik-ā'shun, *n.* the process of nest building and bird rearing.
**Nidulation,** nid-ū-lā'shun, *n.* nest-building.
**Niece,** nēs, *n.* daughter of a brother or sister.
**Niggardly,** nig'ard-li, *adj.* miserly; mean.
**Nightmare,** nit'mār, *n.* a violent dream.
**Nigrescent,** ni-gres'ent, *adj.* becoming black.
**Nihility,** ni-hil'it-i, *n.* nothingness.
**Nimble,** nim'bl, *adj.* brisk; active.
**Nimbus,** nim'bus, *n.* a circlet of light round the head; a rain cloud.
**Nincompoop,** nin'kum-poop, *n.* a foolish fellow.
**Nippers,** nip'ers, *n.* small pincers.
**Nipple,** nip'l, *n.* a teat.
**Nisus,** ni'sus, *n.* effort; attempt.
**Nit,** nit, *n.* the egg of insects.
**Nitrate,** nitrāt, *n.* salt of nitric acid.
**Nitre,** ni'tr, *n.* nitrate of potash.
**Nitric,** ni'trik, *adj.* containing nitre.
**Nizy,** ni'-ze, *n.* a simpleton.
**Noblesse,** no-bles', *n.* dignity; the body of nobles.
**Nocturnal,** nok-turn'al, *adj.* nightly; relating to night.
**Nocuous,** nok'ū-us, *adj.* harmful.
**Noddle,** nod'l, *n.* the head.
**Noddy,** nod'i, *n.* a sea-fowl; a simpleton.
**Node,** nōd, *n.* a knob; a knot.
**Nodose,** nō-dōs', *adj.* knotty.
**Nodular,** nod'ū-lar, *adj.* knot-like.
**Noetic,** nō-et'ik, *adj.* intellectual.
**Noggin,** nog'in, *n.* a small liquid measure.
**Noisy,** noi'zi, *adj.* turbulent; clamorous; loud.
**Noke,** nōks, *n.* a silly fellow.
**Noll,** nol, *n.* the head.
**Nomad,** nō'mad, *n.* a wanderer.
**Nomadic,** no-mad'ik, *adj.* pastoral; roving.
**Nomancy,** nō'man-si, *n.* divination from letters in a name.
**Nomenclature,** nō'men-klā-tūr, *n.* names.
**Nominal,** nom'in-al, *adj.* in name only; not real.
**Nominalism,** nom'in-al-izm, *n.* the doctrine that general terms are without corresponding reality.
**Nominee,** nom-i-nē', *n.* one nominated.
**Nomistic,** nō-mis'tik, *adj.* pertaining to sacred laws.
**Nonage,** non'āj, *n.* minority.
**Nonagenarian,** non-ā-jen-ā'ri-an, *n.* one who is ninety years old.
**Nonce,** nons, *n.* the present.
**Nonchalance,** non'shal-ans, *n.* coolness; indifference.
**Nonconductor,** non-kon-dukt'or, *n.* a non-transmitter of heat or electricity.
**Nondescript,** non'de-skript, *n.* odd; indescribable; what is not yet classed.
**Nonentity,** non-en'tit-i, *n.* a nobody.
**Nonesuch,** non'-sutch, *n.* a thing without its equal.
**Nonjuror,** non-joo'ror, *n.* one who declined to take the oath of allegiance in 1688.
**Nonpareil,** non'par-el, *n.* a kind of type; *adj.* unequalled.
**Nonplus,** non'plus, *v.* to puzzle.
**Nonsense,** non'sens, *n.* absurdity; meaningless talk.
**Nonsensical,** non-sens'ik-al, *adj.* foolish; without meaning.
**Nonsuit,** non'sūt, *n.* stoppage of a suit to secure a fresh trial.
**Noodle,** noo'dl, *n.* a witless fellow.
**Nook,** nook, *n.* a corner; a recess.
**Noose,** nooz, *n.* a running knot.
**Normal,** nor'mal, *adj.* regular; usual.
**Nosegay,** nōz'gā, *n.* a small bouquet.
**Nosology,** noz'ol'o-ji, *n.* classification of diseases.
**Nostalgia,** nos-tal'ji-ā, *n.* home-sickness.
**Nostril,** nos'tril, *n.* nose passage.
**Nostrum,** nos'trum, *n.* a quack medicine.
**Notable,** nōt'abl, *adj.* remarkable; distinguished.
**Notary,** nō-tar-i, *n.* a testifying legal officer.
**Notation,** nō-tā'shun, *n.* the act of noting by figures, signs, etc.
**Notch,** noch, *n.* a cut or indentation.
**Nothingness,** no*th*'ing-nes, *n.* want of existence; lack of value.
**Noticeable,** nō'tis-abl, *adj.* worthy of note.
**Notify,** nō'ti-fi, *v.* to make known.
**Notoriety,** nō-tō-ri'it-i, *n.* of public note.
**Notorious,** no-to'ri-us, *adj.* infamous; known to discredit.
**Noun,** nown, *n.* a word used for the name of anything, a substantive.
**Nourishment,** nur'ish-ment, *n.* sustaining food.
**Nous,** nowse, *n.* intelligence.
**Novelist,** nov'el-ist, *n.* one who writes novels.
**Novelty,** nov'el-ti, *n.* something new.
**Novitiate,** no-vish'i-āt, *n.* the state of being a novice.
**Noxious,** nok'shus, *adj.* ill-favoured; evil-smelling; bad.
**Nozzle,** noz'l, *n.* the mouth of an aperture.
**Nuance,** nū'ans, *n.* a delicate shade of difference.
**Nubile,** nū'bil, *adj.* marriageable.
**Nucleus,** nū'klē-us, *n.* a central point; the head of a comet.
**Nudge,** nudj, *v.* to touch gently.
**Nudity,** nū'dit-i, *n.* nakedness.
**Nugatory,** nū'gat-or-i, *adj.* futile.
**Nugget,** nug'et, *n.* a lump of ore.
**Nuisance,** nū'sans, *n.* something offensive.
**Nullify,** nul'i-fi, *v.* to render of no avail.
**Nullity,** nul'it-i, *n.* lack of life or force.
**Numb,** num, *adj.* dead to sensation.
**Numeral,** nū'mer-al, *n.* a figure; *adj.* pertaining to figures.
**Numeration,** nū-mer-ā'shun, *n.* the act of numbering.
**Numerator,** nā'mer-ā-tor, *n.* one who numbers.
**Numismatics,** nū-mis-mat'iks, *n.* the study of coins.
**Numskull,** num'skul, *n.* a foolish fellow.
**Nun,** nun, *n.* a female who retires to a convent.
**Nuncio,** nun'shi-o, *n.* a papal ambassador.
**Nuncupative,** nun-kū'pā-tiv, *adj.* publicly declared.
**Nunnery,** nun'er-i, *n.* a convent.
**Nuptial,** nup'shal, *adj.* relating to marriage.
**Nursery,** nur-ser-i, *n.* an apartment for children; ground set apart for bringing forward young plants.
**Nutation,** nū-tā'shun, *n.* motion of the earth's axis.
**Nutgall,** nut'gawl, *n.* an excrescence of the oak.
**Nutmeg,** nut'meg, *n.* an aromatic nut.
**Nutriment,** nū'tri-ment, *n.* nourishing food.
**Nutritious,** nū-trish'us, *adj.* possessing nourishing qualities.
**Nuzzle,** nuz'l, *v.* to rub the nose against.

## O

**Oaf,** ōf, *n.* a foolish person.
**Oak,** ōk, *n.* a tree, yielding a valuable timber.
**Oaken,** ō'ken, *adj.* composed of oak.

**Oakling,** ōk'ling, *n.* a young oak.
**Oakum,** ōk'um, *n.* loose hemp.
**Oasis,** ō-ā'sis, *n.* a fertile spot in a desert.
**Oast,** ōst, *n.* a hop kiln.
**Oat,** ōt, *n.* a plant from whose seed oatmeal is
**Oaten,** ō'ten, *adj.* relating to oats. [made.
**Oatgrass,** ōt'gras, *n.* a kind of oat used as fodder.
**Oatmeal,** ōt'mēl, *n.* flour of oats.
**Oath,** *ōth, n.* solemn declaration in God's name.
**Obbligato,** ob-li-gā'to, *n.* a special accompaniment.
**Obduracy,** ob'dū-rā-si, *n.* sternness of heart.
**Obedience,** o-bē'di-ens, *n.* dutifulness; willingness to obey. [homage.
**Obeisance,** ō-bā'sens, *n.* an act of reverence or
**Obelisk,** ō'bē-lisk, *n.* a pyramidal pillar.
**Obesity,** ō-bē'sit-i, *n.* fatness.
**Obey,** ō-bā', *v.* to act as desired; to yield to.
**Obfuscate,** ob-fus'kāt, *v.* to obscure; to confuse.
**Obi,** obē, *n.* sash of Japanese lady.
**Obit,** ō'bit, *n.* death.
**Obituary,** o-bit'-yu-a-re, *n.* relating to the death of anyone.
**Object,** ob'jekt, *n.* a thing seen or striven after; motive.
**Object,** ob-jekt', *v.* to make opposition to.
**Objection,** ob-jek'shun, *n.* opposition; act of objecting.
**Objective,** ob-jekt'iv, *adj.* comprised in the object; external to the mind.
**Objure,** ob-joor', *v.* to swear.
**Objurgation,** ob-jur-gā'shun, *n.* reproof.
**Oblate,** ob-lāt', *adj.* flattened at the poles.
**Oblation,** ob-lā'shun, *n.* a sacrifice or offering.
**Obligation,** ob-li-gā'shun, *n.* duty; debt.
**Oblique,** ob-lēk', *adj.* indirect; slanting.
**Obliterate,** ob-lit'er-āt, *v.* to efface.
**Oblivious,** ob-liv'i-us, *adj.* forgetful; out of cogniz-
**Oblong,** ob'long, *adj.* longer than broad. [ance.
**Obloquy,** ob'lo-kwi, *n.* calumny; blame.
**Obnoxious,** ob-nok'shus, *adj.* odious; offensive.
**Oboe,** ō'bō-ē, *n.* a reed instrument.
**Obovate,** ob-ō'vāt, *adj.* egg-shaped.
**Obscene,** ob-sen', *adj.* impure; indecent; lewd.
**Obscure,** obs-kūr', *v.* to conceal; *adj.* dark; indistinct.
**Obsecrate,** ob'se-krāt, *v.* to beseech.
**Obsecration,** ob-sē-krā'shun, *n.* supplication.
**Obsequies,** ob'sē-kwiz, *n.* funeral rites.
**Obsequious,** ob-sē'kwi-s, *adj.* submissive; humble; servile.
**Observance,** ob-zerv'ans, *n.* attention; a religious rite.
**Observatory,** ob-zer'vā-to-ri, *n.* a look-out; a place where astronomical observations are taken.
**Observe,** ob-zerv', *v.* to note; to remark.
**Obsession,** ob-sesh'un, *n.* persistence of attack.
**Obsidian,** ob-sid'i-an, *n.* a natural glass.
**Obsignate,** ob-sig'nāt, *v.* to confirm; to seal.
**Obsolescent,** ob-so'les'ent, *adj.* going out of use.
**Obsolete,** ob'sō-lēt, *adj.* out of date; disused.
**Obstacle,** ob'stakl, *n.* an obstruction.
**Obstetric,** ob-stet'rik, *adj.* relating to midwifery.
**Obstinacy,** ob'stin-ā-si, *n.* stubbornness.
**Obstreperous,** ob-strep'er-us, *adj.* uncontrollable; noisy.
**Obstruct,** obs-trukt', *v.* to hinder; to impede.
**Obstruction,** ob-struk'shun, *n.* the act of obstructing; obstacle.
**Obstruent,** ob'strū-ent, *adj.* obstructing.
**Obtain,** ob-tān', *v.* to gain; to hold.
**Obtest,** ob-test', *v.* to call upon to testify.
**Obtrude,** ob-trood', *v.* to intrude; to force upon.
**Obtrusive,** ob-troo'siv, *n.* presuming; apt to ob-
**Obtuse,** ob-tūs', *adj.* blunt; dull. [trude.
**Obvelation,** ob-vel-ā'shun, *n.* concealment.
**Obverse,** ob'vers, *n.* the head side of a coin.
**Obverse,** ob-vers', *adj.* turned towards one.
**Obversion,** ob-ver'shun, *n.* the act of turning frontwards. [difficulty.
**Obviate,** ob'vi-āt, *v.* to prevent; to free from
**Obvious,** ob'vi-us, *adj.* clear; indisputable; evident.
**Obvolute,** ob'vo-lūt, *adj.* turned inward.
**Ocarina,** ōk-a'rēna, *n.* a kind of mouth-organ.
**Occasion,** o-ka'zhun, *n.* a happening; an event; an opportunity. [then.
**Occasional,** o-kā'zhun-al, *adj.* occurring now and
**Occident,** ok'si-dent, *n.* the west.
**Occidental,** ok-si-dent'al, *adj.* western.
**Occipital,** ok-sip'it-al, *adj.* relating to the back of the head.
**Occiput,** ok'i-put, *n.* the back part of the skull.
**Occlude,** ok-klood', *v.* to absorb; to block up.
**Occult,** ok-kult', *adj.* hidden; abstruse; secret.
**Occultism,** ok-kult'izm, *n.* study of the occult.
**Occupant,** ok'ū-pant, *n.* a dweller.
**Occupy,** ok'ū-pi, *v.* to possess; to hold.
**Occur,** ok-kur', *v.* to happen; to appear.
**Occurrence,** ok-kur'ens, *n.* an incident.
**Ocellate,** ō'sel'at, *adj.* spotted; eye-like.
**Ochlocracy,** ok-lok'ra-si, *n.* mob-rule.
**Ochre,** o'kr, *n.* a kind of coloured clay.
**Octagon,** ok'ta-gon, *n.* an eight-sided plane.
**Octandrous,** ok-tan'drus, *adj.* having eight stamens.
**Octangular,** okt-ang'gū-lar, *adj.* with eight angles.
**Octant,** ok'tant, *n.* eighth part of a circle.
**Octave,** okt'āv, *n.* the musical eighth.
**Octavo,** ok-tā'vo, *n.* having eight leaves to a sheet.
**Octennial,** ok-ten'ni-al, *adj.* occurring every eighth year. [years old.
**Octogenarian,** ok-to-jen-ā'ri-an, *n.* a person 80
**Octroi,** ok'-trwaw, *n.* a city entrance where a tax is collected.
**Octuple,** ok'tū-pl, *adj.* eightfold.
**Ocular,** ok'ū-lar, *adj.* by actual sight; relating to
**Oculist,** ok'ū-list, *n.* an eye specialist. [the eye.
**Odd,** od, *adj.* not pairable; strange.
**Oddity,** od'it-i, *n.* something peculiar; a singular
**Odds,** odz, *n.* the difference; inequality. [person.
**Ode,** ōd, *n.* a poem for music.
**Odious,** ō'di-us, *adj.* hateful.
**Odium,** ō'di-um, *n.* hatred.
**Odontoid,** o-dont-oid, *adj.* tooth-shaped.
**Odontology,** o-dont-ol'ō-ji, *n.* the science of the
**Odorous,** o'der-us, *adj.* fragrant. [teeth.
**Odour,** o'der, *n.* smell; perfume.
**Œsophagus,** ē-sof'ā-gus, *n.* the gullet.
**Offal,** of'al, *n.* refuse; entrails.
**Offend,** of-fend', *v.* to displease.
**Offender,** of-fend'er, *n.* one who offends.
**Offer,** of'er, *v.* to propose; *n.* that which is offered.
**Offertory,** of'er-to-ri, *n.* alms given at church.
**Off-hand,** of'hand, *adj.* without demur; readily.
**Office,** of'is, *n.* position; place where clerical work is done.
**Official,** ō-fish'al, *adj.* a public officer.
**Officiate,** o-fish'i-āt, *v.* to serve; to act.
**Officious,** ō-fish'us, *adj.* meddling; forward.
**Offing,** of'ing, *n.* off the shore.
**Offscouring,** off'skowr-ing, *n.* refuse.
**Offset,** of'set, *n.* a balance; equivalent.
**Offspring,** of'spring, *n.* children.
**Oft,** oft, *adv.* often.
**Often,** of'n, *adj.* frequently.
**Ogham,** og'am, *n.* an ancient kind of Irish writing.
**Ogive,** ō'jiv, *n.* a pointed arch.
**Ogle,** o'gl, *v.* to glance at amorously.
**Ogre,** ō'gr, *n.* a monster.
**Ohm,** ōm, *n.* unit of electrical resistance.
**Oil-cloth,** oil'kloth, *n.* coloured floor-covering.
**Ointment,** oint'ment, *n.* salve.
**Old,** *adj.* aged; worn out; ancient.
**Oleaginous,** ō-lē-āj in-us, *adj.* oily; unctuous.
**Oleander,** ol-ē-an'der, *n.* an evergreen shrub.
**Oleaster,** ō-lē-as'ter, *n.* wild olive.
**Olein,** ō'lē-in, *n.* natural fat.
**Olent,** ō'lent, *adj.* redolent.
**Oleograph,** ō'lē-o-graf, *n.* an oil print.
**Oleomargarine,** ō'lē-mar'gar-ēn, *n.* artificial butter.
**Olfactory,** ol-fak'to-ri, *n.* the organ of smell.
**Oligarchy,** ol'i-gār-ki, *n.* government by a few.
**Olio,** ō'li-o, *n.* a medley.
**Olitory,** ol'i-tor-i, *adj.* relating to vegetables.
**Olivaceous,** ol-iv-ā'shus, *adj.* olive-coloured.
**Olive,** olliv, *n.* an oily fruit.
**Olive-branch,** oll'iv-bransh, *n.* the emblem of peace. [mixture.
**Olla Podrida** ol'lā-pod-rē'da, *n.* incongruous
**Omega,** ō'mē-ga, *n.* the last letter of the Greek
**Omen,** ō'men, *n.* a foreboding. [alphabet.
**Omissible,** o-mis'i-bl, *adj.* that may be left out.
**Omission,** ō-mish'un, *n.* neglect; failure.
**Omit,** ō-mit', *v.* to leave out.
**Omnibus,** om'ni-bus, *n.* a large passenger vehicle; *adj.* covering all.
**Omnifarious,** om-ni-fā-ri-us, *adj.* of every sort.
**Omniparity,** om-ni-par'it-i, *n.* equality.
**Omnipotence,** om-nip'ō-tens, *n.* indefinite power.
**Omnipresence,** om-ni-prez'ens, *n.* presence everywhere.
**Omniscient,** om-nish'ent, *adj.* all-knowing.
**Omnivorous,** om-niv'er-us, *adj.* all-devouring.
**Onager,** on'agg'er, *n.* the wild ass.
**Oneirology,** ō-ni-rol'o-ji, *n.* divination of dreams.
**Oneness,** wun'ness, *n.* singleness.

**Onerous,** ŏn'er-us, *adj.* burdensome.
**Onicolo,** o-nik'o-lo, *n.* a variety of onyx.
**Onlooker,** on'look-er, *n.* an observer.
**Onset,** on'set, *n.* a sudden attack.
**Onslaught,** on'slawt, *n.* a violent attack.
**Ontology,** ont-ol'o-ji, *n.* the science of being.
**Onus,** ō'nus, *n.* responsibility.
**Onward,** on'ward, *adj.* advancing.
**Onyx,** on'iks, *n.* a kind of agate.
**Oölidal,** ō-ol'dal, *adj.* egg-shaped.
**Oolite,** ō'o-lit, *n.* a kind of limestone.
**Oology,** ō-ol'oj-i, *n.* the study of eggs.
**Oolong,** oo'long, *n.* a kind of black tea.
**Ooze,** ooz, *v.* to percolate; *n.* soft mud.
**Opacity,** o-pas'it-i, *n.* opaqueness.
**Opal,** ō'pal, *n.* a precious stone.
**Opaque,** ō-pāk', *adj.* untransparent.
**Opera,** op'er-ă, *n.* musical drama.
**Operate,** op'er-āt, *v.* to work; to exert; to perform a surgical operation.
**Operative,** op'er-ă-tiv, *n.* a workman; a labourer; *adj.* having power to operate.
**Operculum,** o-per'kū-lum, *n.* a cover or lid.
**Operose,** op'er-ōz, *adj.* laborious.
**Ophicleide,** of'i-klid, *n.* a large brass musical instrument.
**Ophidian,** ōf-id'i-an, *adj.* relating to serpents.
**Ophiology,** of-i-ol'o-ji, *n.* the study of serpents.
**Ophthalmia,** of-*thal*'mi-a, *n.* eye inflammation.
**Opiate,** ō'pi-āt, *n.* drug containing opium.
**Opine,** o-pin', *v.* to suppose.
**Opinion,** o-pin'yun, *n.* view; belief; judgment.
**Opium,** ō'pi-um, *n.* juice of the white poppy.
**Oppilation,** op-il-ā'shun, *n.* stoppage.
**Opponent,** op-pō'nent, *n.* one who opposes.
**Opportune,** op'por-tūn, *adj.* timely; seasonable.
**Opportunity,** op-por-tū'ni-ti, *n.* a favourable chance.
**Opposite,** op'o-zit, *adj.* facing; adverse. [party.
**Opposition,** op-o-zish'un, *n.* resistance; an opposing
**Oppress,** op-pres', *v.* to burden; to press upon.
**Opprobrious,** o-prō'bri-us, *adj.* disgraceful.
**Opprobrium,** op-prō'bri-um, *n.* reproach; infamy.
**Oppugn,** ŏp-pūn', *v.* to oppose.
**Optative,** op'tă-tiv, *adj.* expressive of desire.
**Optic,** op'tik, *adj.* relating to sight.
**Optics,** op'tiks, *n.* science of light.
**Optimism,** op'tim-izm, *n.* the belief that everything is for the best.
**Option,** op'shun, *n.* power of choice.
**Optional,** op'shun-al, *adj.* left to choice.
**Opulence,** op'ū-lens, *n.* wealth.
**Opus,** ō'pus, *n.* work.
**Oracle,** or'ă-kl, *n.* a wise opinion.
**Oracular,** ō-rak'ū-lar, *adj.* authoritative.
**Oral,** ō'ral, *adj.* spoken; verbal.
**Orange,** or'anj, *n.* a well-known fruit; a colour.
**Orangeman,** or'anj-man, *n.* an Irish Protestant.
**Orangery,** or'anj-er-i, *n.* an orange plantation or garden.
**Orarian,** ō-rā'ri-an, *adj.* relating to the coast.
**Orator,** or'ă-tor, *n.* a public speaker.
**Oratorio,** or-ă-tō'ri-o, *n.* a sacred musical drama.
**Oratory,** or'ă-tor-i, *n.* the art of public speaking.
**Orb,** orb, *n.* a circle; a sphere.
**Orbicular,** orb-ik'ū-lar, *adj.* round.
**Orbit,** orb'it, *n.* course of a planet.
**Orc,** orc', *n.* a kind of whale.
**Orcadian,** ork-ā'di-an, *adj.* relating to the Orkneys.
**Orchard,** orch'ard, *n.* garden of fruit trees.
**Orchestra,** or'kes-tra, *n.* a band of musicians.
**Ordain,** or-dān', *v.* to appoint; to set apart.
**Ordeal,** or'dē-al, *n.* a severe trial. [command.
**Order,** or'der, *n.* method; rule; a fraternity; *v.* to
**Orderly,** or'der-li, *adj.* methodical; regular.
**Ordinal,** or'din-al, *adj.* a number showing place.
**Ordinance,** or'din-ans, *n.* a statute; a rite.
**Ordinary,** or'din-ar-i, *adj.* usual; common.
**Ordinate,** or'din-āt *adj.* regular; in order.
**Ordnance,** ord'nans, *n.* artillery; cannon.
**Ordonnance,** or'don-ans, *n.* harmonious combination of parts in a picture or building.
**Ordure,** or'dūr, *n.* filth.
**Ore,** ōr, *n.* crude metal.
**Oread,** ō'rē-ad, *n.* a mountain nymph.
**Organ,** or'gan, *n.* a large wind instrument; a vital part; a newspaper. [to set in operation.
**Organise,** or'gan-iz, *v.* to form parts into a whole;
**Organism,** or'gan-izm, *n.* system; organic structure.
**Organon,** or'gan-on, *n.* rules for scientific investi-
**Orgies,** or'jiz, *n.* drunken revels. [gation.
**Oriel,** ō'ri-el, *n.* projecting window.
**Orient,** ō'ri-ent, *n.* the east; *adj.*
**Orifice,** or'if-is, *n.* an opening.
**Oriflamme,** or'i-flam, *n.* the ancient "gold flame" standard of France.
**Origan,** or'i-gan, *n.* wild marjoram.
**Origin,** or'i-jin, *n.* source; cause.
**Original,** or-ij'in-al, *adj.* first in order. [original.
**Originality,** or-ij-in-al'it-i, *n.* the quality of being
**Originate,** or-ij'in-āt, *v.* to commence; to bring into existence.
**Orion,** o-ri'-on, *n.* a constellation containing 3 bright stars in a straight line.
**Orison,** or'i-son, *n.* a prayer.
**Ormer,** or'mer, *n.* an ear-shell.
**Ormolu,** or'mō-lū, *n.* brass or copper gilt.
**Ornament,** orn'ă-ment, *n.* an embellishment; a decoration.
**Ornate,** or'nāt, *adj.* adorned; decorative.
**Ornithology,** or-*nith*-ol'o-ji, *n.* science of birds.
**Orology,** or-ol'o-ji, *n.* the science of mountains.
**Orphan,** or'fan, *n.* child without father or mother.
**Orphanage,** or'fan-āj, *n.* a home for orphans.
**Orpharian,** or-fā'ri-an, *n.* a stringed instrument.
**Orpin,** or'pin, *n.* a deep gold colour.
**Orra,** or'ă, *adj.* odd; discordant.
**Orrery,** or'er-i, *n.* an instrument for illustrating the movements of the planets.
**Orthodox,** or'*tho*-doks, *adj.* according to general belief.
**Orthoepy,** or'*thō*-ĕ-pi, *n.* right pronunciation.
**Orthographer,** or*th*-og'rā-fer, *n.* a correct speller.
**Orthography,** or*th*-og'raf-i, *n.* spelling. [struction.
**Orthometry,** or*th*-om'e-tri, *n.* the art of verse con-
**Orthopædic,** or*th*-o-pē'dik, *adj.* relating to bodily
**Os,** os, *n.* a bone. [deformity.
**Oscillate,** os'il-āt, *v.* to sway; to swing.
**Oscillatory,** os'il-ă-to-ri, *adj.* swinging.
**Oscitancy,** os'it-an-si, *n.* drowsiness; denseness.
**Oscitation,** os-it-ā'shun, *n.* gaping.
**Osculate,** os'kū-lāt, *v.* to kiss.
**Osculation,** ŏs-ku-lā-shun, *n.* the act of kissing.
**Osier,** ō'zher, *n.* a kind of willow.
**Osmanli,** os-man'li, *adj.* belonging to Turkey.
**Osseous,** os'ē-us, *adj.* bony.
**Ossicle,** os'ikl, *n.* a small bone.
**Ossivorous,** os-iv'or-us, *adj.* feeding on bones.
**Ossuary,** os'ū-ar-i *n.* charnel-house.
**Ostensible,** os-ten'si-bl, *adj.* apparent; plausible.
**Ostensive,** os-ten'siv, *adj.* showing; exhibiting.
**Ostentatious,** os-ten-tā'shus, *adj.* pompous; showy.
**Osteology,** os-tē-ol'o-ji, *n.* science of bones.
**Ostiary,** os'ti-ar-i, *n.* a church doorkeeper.
**Ostracise,** os'tra'siz, *v.* to banish.
**Ostracism,** os'tra-sizm, *n.* proscription.
**Otic,** ō-tik, *adj.* relating to the ear.
**Otiose,** ō'shi-ōs, *adj.* lazy; careless.
**Otology,** ō-tol'ō-ji, *n.* science of the ear.
**Ottar, ot'ar,** *n.* a fragrant oil distilled from flowers.
**Ottoman,** ot'ō-man, *n.* a Turk; a cushioned seat.
**Oubit,** oo'bit, *n.* hairy caterpillar.
**Oubliette,** oo-bli-et', *n.* a dungeon with no side opening.
**Ouch,** owtch, *n.* a socket for setting a jewel.
**Oust,** owst, *v.* to expel; to force out.
**Outbid,** owt-bid', *v.* to bid higher than others.
**Outcry,** owt'kri, *n.* a cry of distress.
**Outdo,** owt-doo', *v.* to surpass; to outwit.
**Outface,** owt-fās', *v.* to confront; to brazen out.
**Outfit,** owt-fit, *n.* equipment.
**Outgo,** owt'gō, *n.* expenditure; what goes out.
**Outhouse,** owt'hows, *n.* a small building adjacent to the chief one.
**Outing,** owt'ing, *n.* an airing; an excursion.
**Outlandish,** owt-land'ish, *adj.* strange; vulgar; uncouth.
**Outlast,** owt-last', *v.* to last longer than.
**Outlaw,** owt'law, *n.* a proscribed person.
**Outlay,** owt'lā, *v.* to lay out; an expenditure.
**Outlet,** owt'let, *n.* means of egress.
**Outline,** owt'lin, *n.* a sketch; exterior lines of a drawing.
**Outpace,** owt-pās', *v.* to outstrip.
**Outpost,** owt'pōst, *n.* military post away from camp.
**Output,** owt'put, *n.* yield of metal or mineral.
**Outrage,** owt'rāj, *n.* insult; violence.
**Outrageous,** owt-rāj'us, *adj.* beyond reason; furious. [bitter end.
**Outrance,** owt'rans, *n.* the utmost extremity; the
**Outré,** oo-trā', *adj.* strained; extravagant; unusual.
**Outrider,** owt'ri-der, *n.* an advance rider; an attendant on horseback.

**Outright**, owt-rīt', *adv.* entirely; at once.
**Outset**, owt'set, *n.* beginning; setting out.
**Outskirt**, owt'skirt, *n.* border; suburb.
**Outstrip**, owt-strip', *v.* to leave behind; to pass.
**Outwit**, owt-wit', *v.* to overreach.
**Outwork**, owt'work, *n.* work outside the chief line of fortification.
**Ova**, ō'va, *n.* eggs.
**Oval**, ō'văl, *adj.* egg-shaped.
**Ovarious**, ō-vā'ri-us, *adj.* comprising eggs.
**Ovary**, ō'vār-i, *n.* the part where the egg is formed.
**Ovate**, o'vāt, *adj.* egg-shaped.
**Ovation**, ō-vā'shun, *n.* public homage.
**Over**, ō'ver, *prep.* higher; above; beyond.
**Overalls**, ō'ver-awlz, *n.* loose over-trousers.
**Overbearing**, ō-ver-bār'ing, *adj.* haughty.
**Overcast**, ō-ver-kast', *v.* to cloud.
**Overcharge**, ō'ver-chārj, *n.* excessive charge.
**Overdraw**, ō-ver-draw', *v.* to exaggerate; to draw excessively.
**Overgrowth**, ō-ver-growth', *n.* what is overgrown.
**Overhaul**, ō-ver-hawl', *v.* to investigate.
**Overhear**, ō-ver-hēr', *v.* to hear what was not intended.
**Overlook**, ō-ver-look', *v.* to look over; to survey.
**Overpoise**, ō-ver-poiz', *v.* to outweigh.
**Overreach**, ō-ver-rēch', *v.* to get the better of; to go too far.
**Overrun**, ō-ver-run', *v.* to run or spread over.
**Overseer**, ō-ver-sē'er, *n.* a superintendent.
**Overshot**, ō-ver-shot', *adj.* surpassed.
**Oversight**, ō-ver'sīt, *n.* a mistake; something omitted to be noted.
**Overt**, ō'vert, *adj.* open.
**Overtake**, ō-ver-tāk, *v.* to come even with.
**Overture**, ō'ver-tūr, *n.* an introductory piece of music; an offer.
**Overweening**, ō-ver-wēn-ing, *adj.* conceited.
**Overwhelm**, ō-ver-whelm', *v.* to crush; to overcome; to flow over.
**Ovicular**, ō-vik'ū-lar, *adj.* pertaining to an egg.
**Oviform**, ō'vi-form, *adj.* egg-shaped.
**Ovine**, o'vin, *adj.* concerning sheep.
**Oviparous**, ō-vip'ar-us, *adj.* egg-laying.
**Ovolo**, ō'vo'lo, *n.* an ornamental moulding.
**Ovule**, ōv'ūl, *n.* a little egg; a seed.
**Owing**, ō'ing, *adj.* due; imputable to.
**Owl**, owl, *n.* nocturnal bird.
**Own**, ōn, *v.* to possess.
**Oxen**, ōks'n, *n.* bovines used for food.
**Oxidation**, oks-id-ā'shun, *n.* act of oxidising.
**Oxide**, oks'īd, *n.* a chemical compound.
**Oxygen**, oks'i-jen, *n.* the gaseous element which sustains life.
**Oxygenate**, oks'i-jen-āt, *v.* to unite with oxygen.
**Oxygenous**, oks-ij'en-us, *adj.* pertaining to oxygen.
**Oxlip**, oks'-lip, *n.* wild flower of primula type.
**Oxymoron**, oks-i-mō'ron, *n.* ideas of contrary meaning combined.
**Oyer**, ō'yer, *n.* the hearing of trials.
**Oyez**, o'yes, *excl.* the call of a town crier.
**Oyster**, oi'ster, *n.* edible marine bivalve.
**Ozone**, ō'zōn, *n.* oxygen augmented by electric influence.

## P

**Pabulum**, pab'u-lum, *n.* food; nourishment.
**Pace**, pās, *n.* a step; a stride; speed; *v.* to measure by steps.
**Pacé**, pā'sē, *v. subj.* let it not offend.
**Pacha**, pā-shā', *n.* a Turkish governor.
**Pachalic**, pa-shā'lik, *adj.* the territory of a pacha.
**Pachyderm**, pak'i-derm, *n.* a thick-skinned animal.
**Pachypod**, pak'i-pod, *adj.* thick-footed.
**Pacific**, pā-sif'ik, *adj.* peace-making; calm; peaceful.
**Pacify**, pas'i-fī, *v.* to appease; to soothe.
**Pack**, pak, *n.* a bundle; *v.* to arrange close; to start off rapidly.
**Pack-horse**, pak'-hors, *n.* a horse used for carrying burdens.
**Packman**, pak'man, *n.* a pedlar.
**Pact**, pakt, *n.* a contract.
**Pad**, pad, *n.* anything stuffed with soft material; *v.* to stuff; to walk.
**Padar**, pad'-ar, *n.* coarse flour, groats.
**Paddle**, pad'l, *v.* to play in water with hands or feet; *v.* to move a boat by paddling.
**Paddock**, pad'ok, *n.* an inclosure.
**Padlock**, pad'lok, *n.* a hanging lock.
**Padnag**, pad'-nag, *n.* an ambling horse.
**Paean**, pē'an, *n.* song of triumph.
**Pagan**, pā'gan, *n.* a heathen.
**Page**, pāj, *n.* a boy attendant. [spectacle.
**Pageant**, paj'ant, *n.* a pompous show; public
**Pagoda**, pa-gō'da, *n.* an Eastern idol temple.
**Paillasse**, pal-yas', *n.* an under mattress of straw.
**Pain**, pān, *n.* physical or mental suffering.
**Painim**, pā'-nim, *n.* of a false faith.
**Painter**, pān'ter, *n.* an artist; one who paints; rope for fastening boat.
**Pair**, pār, *n.* a couple.
**Pairing-off**, pare'-ing-of, *n.* when two members of opposite political tendency agree to be absent from voting.
**Palace**, pal'ās, *n.* a royal or noble residence.
**Paladin**, pal'ā-din, *n.* a knight-errant.
**Palæography**, pāl-ē-o-og'raf-i, *n.* study of ancient writings. [early Stone Age.
**Palæolithic**, pāl-ē-o-lith-ik, *adj.* pertaining to the
**Palæology**, pāl-ē-ol'o-ji, *n.* study of antiquities.
**Palæontology**, pāl-ē-ont-ol'o-ji, *n.* science of fossils.
**Palatable**, pal'at-abl, *adj.* savoury; agreeable to the taste.
**Palate**, pal'āt, *n.* the roof of the mouth; taste.
**Palatial**, pal-ā'shal, *adj.* relating to or resembling a palace.
**Palatinate**, pal-at'in-āt, *n.* province of a palatine.
**Palatine**, pal'ā-tin, *adj.* enjoying royal privileges.
**Palaver**, pal-ā'ver, *n.* idle talk; a conference with natives.
**Pale**, pāl, *adj.* pallid; wan.
**Paleous**, pā'-lē-ūs, *adj.* chaff-like.
**Palette**, pal'et, *n.* oval board used by painters for colour mixing.
**Palfrey**, pal'fri, *n.* a saddle horse.
**Palilogy**, pa-lil'-o-je, *n.* word repetition.
**Palinal**, pal'in-al, *adj.* going backward.
**Palindrome**, pal'in-drōm, *n.* a word, sentence, or line that reads the same backward as forward.
**Paling**, pā'ling, *n.* a fence.
**Palingenesis**, pal-in-jen'e-sis, *n.* regeneration.
**Palinode**, pal'in-ōd, *n.* a poem of recantation.
**Palisade**, pal-is-ād', *n.* fortification of pales.
**Palisander**, pal-is-an'der, *n.* rosewood.
**Pall**, pawl, *v.* to render vapid; *n.* coffin covering.
**Palladium**, pal-ā'di-um, *n.* means of safety.
**Palliative**, pal'ya-tiv, *n.* that which mitigates.
**Pallid**, pal'id, *adj.* pale; wan.
**Pallium**, pal'i-um, *n.* a large Roman mantle.
**Pallor**, pal'or, *n.* paleness.
**Palm**, pâm, *n.* inner part of hand; a tropical tree; *v.* to pass off wrongly. [the hand.
**Palmated**, pal-mā'ted, *adj.* shaped like the palm of
**Palmer**, pâm'er, *n.* a pilgrim.
**Palmiferous**, pâm-if'er-us, *adj.* palm-bearing.
**Palmiped**, pal'-me-ped, *adj.* web footed; a swimming bird.
**Palmistry**, pal'mis-tri, *n.* divining by the hand.
**Palmitine**, pal'mit-in, *n.* fat obtained from palm oil.
**Palm-wine**, pâm'win', *n.* wine from fermented
**Palmy**, pâm'i, *adj.* prosperous. [palm sap.
**Palpable**, pal'pa-bl, *adj.* plain; visible.
**Palpebral**, pal'pē-bral, *adj.* pertaining to the eyelids.
**Palpitate**, pal'pi-tāt, *v.* to throb; to pulsate.
**Palter**, pawl'ter, *v.* to shuffle; to trifle.
**Palterer**, pawl'ter-er, *n.* a trifler.
**Paltry**, pawl'tri, *adj.* mean; trifling; contemptible.
**Paludal**, pal-ū'dal, *adj.* relating to marshes.
**Pamper**, pamp-er, *v.* to glut.
**Pamphlet**, pam'flet, *n.* an unbound book.
**Pamphleteer**, pam-flet-ēr', *n.* a pamphlet-writer.
**Pan**, pan, *n.* a shallow vessel.
**Panacea**, pan-a-sē'a, *n.* a universal cure.
**Panary**, pan'ā-ri, *adj.* relating to bread.
**Panax**, pa-naks', *n.* a kind of shrub.
**Pancake**, pan'kāk, *n.* a thin cake made in a frying pan.
**Panch**, pansh, *n.* a mat made of rope.
**Pandect**, pan'dekt, *n.* a treatise dealing with an entire science.
**Pandemic**, pan-dem'ik, *adj.* more than epidemic.
**Pandemonium**, pan-dē-mō'ni-um, *n.* assemblage of demons.
**Pander**, pan'der, *v.* to minister to; to procure.
**Pandiculation**, pan-dik-u-la'-shun, *n.* the act of stretching or yawning as in drowsiness or fatigue.
**Pandion**, pan-dī'on, *n.* a kind of osprey.
**Pane**, pān, *n.* a plate of glass.
**Panegyric**, pan-ē-jir-ik, *n.* a eulogy.
**Panel**, pan'el, *n.* a rectangular space of wainscot.
**Pang**, *n.* a sudden pain. [door or wall.

**Panic**, pan'ik, *n.* sudden fright.
**Pannage**, pan'āj, *n.* food picked up in woods by hogs.
**Pannier**, pan'i-er, *n.* a basket carried on horse- or mule-back.
**Pannikin**, pan'i-kin, *n.* a small pan.
**Panoply**, pan'ō-pli, *n.* full equipment in armour.
**Panopticon**, pan-op'ti-kon, *n.* a show-room; a prison admitting of all prisoners being seen from one point. [series of pictures on a roll
**Panorama**, pan-ō-ram'ā, *n.* a complete view; a
**Pansy**, pan'zi, *n.* a cultivated viola.
**Pant**, *v.* to breathe rapidly; to throb.
**Pantaloon**, pan-ta-loon', *n.* a pantomime buffoon.
**Pantheism**, pan'*thē*-izm, *n.* the theory that the universe is God.
**Pantheon**, pan'*thē*-on, *n.* temple dedicated to deities.
**Pantile**, pan'-tile, *n.* a gutter-tile.
**Pantograph**, pan'tō-graf, *n.* a copying instrument.
**Pantology**, pan-tol'ō-ji, *n.* universal knowledge.
**Pantometer**, pant-om'ē-ter, *n.* instrument for measuring angles.
**Pantomime**, pan'tō-mīm, *n.* dumb show; a Christmas piece.
**Papacy**, pā'pā-si, *n.* the papal office.
**Paper**, pā'per, *n.* material made from rags or fibres.
**Paphian**, pā'fi-an, *adj.* lascivious.
**Papier-mâché**, pap'yā-mā'shā, *n.* japanned pulp.
**Papilionaceous**, pa-pil-yun-ā'shus, *adj.* butterfly-shaped.
**Papillary**, pap'il-ar-i, *adj.* furnished with or resembling nipples.
**Papillote**, pap'il-ōt, *n.* a curl-paper.
**Papoose**, pa-poos', *n.* a Red Indian infant.
**Papyrus**, pa-pī'rus, *n.* paper made from an
**Par**, pār, *adj.* equal value. [Egyptian plant.
**Parable**, par'abl, *n.* an allegorical narrative.
**Parablepsis**, par-a-blep'sis, *n.* distorted vision.
**Parabola**, par-ab'ō-la, *n.* a conic section.
**Parabolic**, par-ā-bol'ik, *adj.* shown by parable.
**Paracentric**, par-a-sen'-trik, *adj.* deviating from a circular shape.
**Parachute**, par'ā-shoot, *n.* an umbrella-like apparatus used in descending from a balloon.
**Paraclete**, par'ā-klēt, *n.* an advocate; the Holy Ghost.
**Parade**, pā-rād', *v.* to march; to show off; *n.* military display; place for promenading.
**Paradigm**, par'ā-dim, *n.* an example.
**Paradise**, par'a-dis, *n.* Eden; heaven; abode of bliss. [of terms.
**Paradox**, par'ā-doks, *n.* an apparent contradiction
**Paragon**, par'ā-gon, *n.* a perfect example.
**Paragram**, par'a-gram, *n.* play on words.
**Paragraph**, par'ā-graf, *n.* a section of an article.
**Parallax**, par'al-aks, *n.* seeming change of position in a heavenly body as seen from different points.
**Parallel**, par'al-el, *n.* the same direction; similar.
**Parallelogram**, par-al-el'o-gram, *n.* a plane of four sides, the opposite sides being equal.
**Paralogy**, par-al'-o-je, *n.* false reasoning.
**Paralysis**, par-al'is-is, *n.* loss of power in any part; palsy.
**Paramount**, par'a-mownt, *adj.* dominant; superior.
**Paramour**, par'ā-moor, *n.* a lover, in an illicit
**Parang**, par-ang', *n.* a Malay knife. [sense.
**Parapet**, par'ā-pet, *n.* a breastwork of defence.
**Paraphernalia**, par-ā-fer-nā'li-ā, *n.* trappings; apparel.
**Paraphrase**, par'a-frāz, *n.* a free translation.
**Parasite**, par'as-īt, *n.* one living upon another; a sycophant.
**Paratonic**, par-ā-ton'ik, *adj.* retarding vegetation.
**Parboil**, pār'boil, *v.* partly to boil.
**Parcel**, pār'sel, *n.* a bundle.
**Parcenary**, pār'sen-ar-i, *n.* joint heirship.
**Parchment**, pārch'ment, *n.* sheepskin for writing
**Pard**, pārd, *n.* a leopard. [upon.
**Pardon**, pārd'on, *v.* to forgive; *n.* forgiveness.
**Pare**, pār, *v.* to cut off the skin of fruit, vegetables, etc.
**Paregoric**, par-ē-gor'ik, *n.* compound tincture of camphor.
**Parent**, pā'rent, *n.* a father or mother; a begetter.
**Parenthesis**, par-en'*thē*-sis, *n.* words inserted within the marks ( ).
**Parergon**, pa-rer'gon, *n.* subsidiary work.
**Paresis**, par'ē-sis, *n.* partial paralysis.
**Parhelion**, pār-hē'li-un, *n.* a mock sun.
**Pariah**, pā'ri-ā, *n.* an outcast.
**Parian**, pā'ri-an, *adj.* relating to Paros; *n.* a fine porcelain.
**Parietal**, pā-rī'et-al, *adj.* relating to or part of a
**Paring**, pā'ring, *n.* a thin strip cut off. [wall.
**Parish**, par'ish, *n.* a church district.
**Parisian**, par-iz'i-an, *n.* a resident of Paris.
**Parisyllabic**, par-i-sil-ăb'ik, *adj.* having the same number of syllables.
**Parity**, par'it-i, *n.* analogy; equality.
**Park**, pārk, *n.* enclosed pleasure-land.
**Parlance**, pār'lans, *n.* speech; talk.
**Parley**, pār'li, *v.* to discuss.
**Parlour**, pār'lor, *n.* a sitting-room.
**Parochial**, par-ō'ki-al, *adj.* relating to a parish.
**Parody**, par'o-di, *n.* a burlesque.
**Parole**, par-ōl', *n.* word of honour; pass-word.
**Parotid**, par-ot'id, *n.* the largest of the salivary glands.
**Paroxysm**, par'oks-izm, *n.* sudden fit of pain.
**Parquat**, pār-ket', *n.* the pit of a theatre.
**Parquetry**, pār'ket-ri, *n.* inlaid woodwork for floors.
**Parr**, pār, *n.* a young salmon.
**Parricide**, par'i-sid, *n.* a murderer.
**Parry**, par-i, *v.* to prevent; to ward off.
**Parse**, pārs, *v.* to state the grammatical sense of words and sentences.
**Parsee**, pār'sē, *n.* a follower of Zoroaster.
**Parsimony**, pār'si-mun-i, *n.* niggardliness; frugality. [preacher.
**Parson**, pār'son, *n.* a clergyman, minister, or
**Part**, pārt, *n.* less than the whole; character in a play.
**Partake**, pār'tāk, *v.* to have a share in, as of food.
**Parted**, pārt'ed, *adj.* separated, severed.
**Parterre**, pār'tār', *n.* a flower plot.
**Parthenogenesis**, par-*then*-o-jen'-ē-sis, *n.* reproduction of insects by the female only.
**Partial**, pār'shal, *adj.* unfair; one-sided; in part.
**Partible**, pārt'ibl, *adj.* divisible.
**Participate**, pār'tis'ip-āt, *v.* to partake.
**Participle**, pār'ti-si-pl, *n.* a word containing the qualities of both verb and noun.
**Particle**, pār'ti-kl, *n.* a jot; a minute part; an atom. [specified thing.
**Particular**, par-tik'u-lar, *adj.* special; relating to a
**Partim**, pārt'im, *adv.* in part.
**Partisan**, pār'ti-zan, *n.* an adherent.
**Partite**, pār'tit, *adj.* divided into parts.
**Partition**, pār'tish'un, *n.* a division.
**Partner**, pārt'ner, *n.* a business associate.
**Part-song**, pārt'song, *n.* a song sung in parts.
**Parturition**, pār-tū-rish'un, *n.* delivery; act of birth. [special purpose.
**Party**, pār'ti, *n.* persons acting together for any
**Parvenu**, pār'ven-ū, *n.* an upstart.
**Paschal**, pas'kal, *n.* the Passover.
**Pasquinade**, pas'kwin-ād, *n.* a lampoon.
**Pass**, pas, *v.* to move by; to elapse.
**Passable**, pas'abl, *adj.* tolerable.
**Passage**, pas'āj, *n.* act of passing; hall-way; voyage.
**Passé**, pas-ā', *adj.* faded; out of date.
**Passenger**, pas'en-jer, *n.* a traveller in a public con-
**Passer**, pas'er, *n.* one who passes. [veyance.
**Passerine**, pas'er-ēn, *adj.* relating to the sparrow
**Passible**, pas'ibl, *adj.* impressionable. [tribe.
**Passim**, pas'im, *adv.* here and there; in several places.
**Passing**, pas'ing, *adj.* going by; happening.
**Passion**, pash'un, *n.* strong emotion; excessive desire.
**Passive**, pas'iv, *adj.* inactive; unresisting.
**Passport**, pas'pōrt, *n.* licence; written permission to travel. [etc.
**Paste**, pāst, *n.* a soft cement made of flour, water,
**Pasteboard**, pāst'bōrd, *n.* card-board
**Pastel**, pas'tel, *n.* a chalk drawing.
**Pastern**, pas'tern, *n.* part of hoof.
**Pastiche**, pas-tēsh', *n.* a mixture, in music, paint-
**Pastille**, pas-tēl', *n.* a lozenge. ing, etc.
**Pastime**, pas'tim, *n.* recreation.
**Pastor**, pas-tur, *n.* a clergyman; a shepherd.
**Pasture**, past'ūr, *n.* grazing grass.
**Pat**, *adj.* to the point; apt.
**Patch**, pach, *n.* a piece sewed on; a plot; *v.* to
**Pate**, pāt, *n.* the head. [mend.
**Patella**, pā-tel'a, *n.* a small dish; the knee-pan.
**Paten**, pat'en, *n.* plate used in the eucharist.
**Patent**, pā'tent, *n.* obvious; grant of right to an invention.
**Paterfamilias**, pā-ter-fa-mil'-i-as, *n.* head of a household.

**Paternal,** pa-ter'nal, *adj.* fatherly.
**Paternoster,** pā'ter-nos'ter, *n.* Lord's Prayer.
**Path,** *path*, *n.* a way; a track.
**Pathetic,** *path*-et'ik, *adj.* touching; affecting.
**Pathetism,** *path*'et-izm, *n.* animal magnetism.
**Pathic,** *path*'ik, *adj.* relating to disease.
**Pathology,** *path*-ol'o-ji, *n.* science of diseases.
**Patibulary,** pat-ib'ū-lar-i, *n.* pertaining to a gallows.
**Patience,** pā'shens, *n.* endurance; forbearance.
**Patina,** pat'in-ā, *n.* a pan; the film of age on metal
**Patois,** pat-waw', *n.* dialect. [objects.
**Patriarch,** pā'tri-ārk, *n.* a head of a church or family.
**Patrician,** pa-trish'an, *n.* a noble.
**Patricide,** pat'ri-sīd, *n.* the murder or murderer of a father.
**Patrimony,** pat'rī-mun-i, *n.* property inherited.
**Patriot,** pā'tri-ot, *n.* one devoted to his country.
**Patristic,** pat-ris'tik, *adj.* relating to the early Christian fathers. [a camp or district.
**Patrol,** pā-trol', *v.* to guard; to go the rounds of
**Patron,** pā'tron, *n.* an encourager; a protector.
**Patronymic,** pat-rō-nim'ik, *n.* the family name.
**Patten,** pat'en, *n.* a clog; base of a column.
**Patter,** pat'er, *n.* rapid sound or utterance.
**Pattern,** pat'ern, *n.* a model.
**Pattle,** pat'l, *n.* a paddle.
**Paucity,** paw'sit-i, *n.* meagreness; fewness.
**Pauline,** paw'lin, *adj.* relating to the Apostle Paul.
**Pauper,** paw'per, *n.* one who receives parish relief.
**Pause,** pawz, *n.* cessation; *v.* to make a pause.
**Pave,** pāv, *v.* to prepare; to lay stone on a road.
**Pavid,** pav'id, *adj.* timid.
**Pavilion,** pa-vil'yun, *n.* a large tent; a domed building.
**Pavon,** pav'on, *n.* a triangular flag attached to a lance.
**Pavonine,** pav'ō-nin, *adj.* relating to or resembling the peacock. [ground with the foot.
**Paw,** *n.* the foot of an animal; *v.* to beat the
**Pawn,** *n.* a thing given as security; *v.* to pledge.
**Pawnbroker,** pawn'brō-ker, *n.* one who lends money on security of things left in his charge.
**Pax,** paks, *n.* the kiss of peace.
**Pay,** pā, *n.* salary; wages; *v.* to requite with money; to settle an account.
**Peace,** pēs, *n.* quiet; calmness; tranquillity.
**Peak,** pēk, *n.* a point; a headland.
**Peal,** pēl, *n.* a ringing. [jov.
**Peanism,** pe-'an-izm, *n.* the chanting of a song of
**Pear,** pār, *n.* a juicy fruit.
**Pearlash,** perl'ash, *n.* refined potash.
**Peasant,** pez'ant, *n.* a country labourer.
**Pease,** pēz, *n.* crushed peas.
**Peat,** pēt, *n.* decayed vegetable matter; turf.
**Pebble,** peb'l, *n.* a small rounded stone.
**Peccable,** pek'abl, *adj.* liable to sin.
**Peccadillo,** pek-a-dil'ō, *n.* a petty fault.
**Peccavi,** pek-ā'vi, *excl.* I have sinned.
**Peck,** pek, *n.* quarter of a bushel; *v.* to strike with
**Pectic,** pek'tik, *adj.* curdling. [the beak.
**Pectinal,** pek'tin-al, *adj.* comb-like.
**Pectoral,** pek'tor-ral, *adj.* pertaining to the breast.
**Peculate,** pek'ū-lāt, *v.* to embezzle.
**Peculiar,** pe-kū'li-ar, *adj.* singular.
**Pecuniary,** pe'kū-ni-ar-i, *adj.* relating to money.
**Pedagogue,** ped'ā-gog, *n.* a schoolmaster; a teacher.
**Pedal,** ped'al, *adj.* relating to the foot.
**Pedant,** ped'ant, *n.* a scholastic pretender.
**Peddle,** ped'l, *v.* to hawk goods.
**Peddling,** ped'ling, *adj.* trifling; *n.* hawking.
**Pedestal,** ped'es-tal, *n.* the base of a column.
**Pedestrian,** pe-des'tri-an, *n.* one who walks.
**Pedicure,** ped'i-kūr, *n.* treatment of corns.
**Pedigree,** ped'i-grē, *n.* particulars of lineage.
**Pediment,** ped'i-ment, *n.* the part over a portico.
**Pedobaptist,** pēd-o-bap'tist, *n.* a believer in infant baptism. [registering steps.
**Pedometer,** ped-om'ē-ter, *n.* an instrument for
**Peduncle,** pē-dung'kl, *n.* stem of flower or fruit.
**Peek,** pēk, *v.* to spy; to peer.
**Peel,** pēl, *n.* husks of fruit.
**Peep,** pēp, *v.* to look furtively.
**Peer,** pēr, *v.* to look; to pry; *n.* one of equal status; a nobleman.
**Peeress,** pēr'es, *n.* the wife of a peer.
**Peerless,** pēr'les, *adj.* unequalled; matchless
**Peevish,** pē'vish, *adj.* fretful; ill-humoured.
**Peg,** *n.* a wooden fastening pin.
**Pegasus,** peg'as-us, *n.* the winged horse; a constellation.
**Pelagic,** pe-laj'ik, *adj.* concerning the ocean.
**Pelf,** *n.* money; booty.
**Pelisse,** pe-lēs', *n.* a sleeved cloak for ladies.
**Pellet,** pel'et, *n.* a small ball.
**Pellicle,** pel'ikl, *n.* film; thin external skin.
**Pell-mell,** pēl'mel, *adv.* in a confused haste.
**Pellucid,** pel-ū'sid, *adj.* clear; transparent.
**Pelt,** *n.* raw hide; *v.* to throw out.
**Pelvis,** pel'vis, *n.* bones at the lower part of the belly.
**Pemmican,** pem'ik-an, *n.* cakes of dried meat.
**Pen,** *n.* an instrument to write with; place for confining animals; *v.* to confine.
**Penal,** pē'nal, *adj.* relating to punishment.
**Penalty,** pen'al-ti, *n.* a fine.
**Penance,** pen'ans, *n.* atonement.
**Penates,** pē-nā'tēz, *n.* household gods.
**Penchant,** pāng-shāng', *n.* bias; strong inclination.
**Pencil,** pen'sil, *n.* a pointed brush or instrument for writing or drawing.
**Pendant,** pen'dant, *n.* appendage; an ear-ring;
**Pendicle,** pen'dikl, *n.* an appendage. [a flag.
**Pending,** pend'ing, *adj.* undetermined.
**Pendulum,** pen'dū-lum, *n.* a swinging weight.
**Penetralia,** pen-ē-trā'li-a, *n.* the inner parts of a building.
**Penetrate,** pen'ē-trāt, *v.* to pierce into; to enter.
**Penetration,** pen-ē-trā'shun, *n.* discernment; entrance.
**Peninsula,** pen-in'sū-lā, *n.* a neck of land.
**Penitent,** pen'i-tent, *adj.* repentant.
**Penitentiary,** pen-i-ten'shar-i, *n.* a prison.
**Pennant,** pen'ant, *n.* a long, narrow flag.
**Pennate,** pen'āt, *adj.* winged.
**Pennon,** pen'on, *n.* flag; a pinion.
**Penny,** pēn-i, *n.* copper coin worth $\frac{1}{12}$th of a shilling.
**Pennyweight,** pen'i-weyt, *n.* 24 grains.
**Penny-wise,** pēn'i-wiz, *adj.* wise over small sums.
**Penology,** pēn-ol'ō-ji, *n.* the study of punishment.
**Pension,** pen'shun, *n.* a retiring allowance.
**Pensive,** pen'siv, *adj.* sad; thoughtful.
**Pentagon,** pen'tā-gon, *n.* a five-sided plane.
**Pentagram,** pent'ā-gram, *n.* a five-pointed star.
**Pentameter,** pen-tam'ē-ter, *n.* verse metre of 5 feet. [angles.
**Pentangular,** pent-ang'gū-lar, *adj.* having five
**Pentarchy,** pent'ārk-i, *n.* government by five people.
**Pentateuch,** pen'tā-tūk, *n.* the five books of Moses.
**Pent-house,** pent-hows, *n.* shed sloping from a main building.
**Pentroof,** pent'roof, *n.* a roof sloping only on one side. [one.
**Penultimate,** pen-ūl'tim-āt, *adj.* last syllable but
**Penumbra,** pen-um'bra, *n.* a dim shadow.
**Penurious,** pen-ūr'ri-us, *adj.* mean; stingy.
**Penury,** pen'ū-ri, *n.* excessive poverty.
**People,** pē'pl, *n.* mankind generally; inhabitants of a country.
**Pepper,** pep'r, *n.* a pungent spice.
**Pepsin,** pep'sin, *n.* a constituent of the gastric juice.
**Peptic,** pep'tik, *adj.* helpful to digestion.
**Perambulate,** per-am'bū-lāt, *v.* to walk.
**Per annum,** *n.* by the year; annually.
**Perceive,** per-sēv', *v.* to discern; to observe.
**Perception,** per-sep'shun, *n.* power or act of perceiving.
**Perch,** pēr'ch, *n.* a land measure; that on which a bird settles.
**Percipient,** per-sip'i-ent, *n.* one who perceives.
**Percolate,** per'kō-lāt, *v.* to filter through; to strain.
**Percussion,** per'cush'n, *n.* a violent collision.
**Perdition,** per-dis'un, *n.* hades; ruin.
**Perdurable,** per'dū-ra-bl, *adj.* lasting.
**Peregal,** per'e-gal, *n.* equal.
**Peregrination,** per-e-grin-ā'shun, *n.* wandering.
**Peremptory,** per'empt-o-ri, *adj.* commandful; decisive.
**Perennial,** per-en'nial, *adj.* perpetual.
**Perfect,** per'fekt, *adj.* complete; without fault.
**Perfervid,** per-fer'vid, *adj.* very eager.
**Perficient,** pēr-fish'ent, *adj.* effectual.
**Perfidious,** per-fid'i-us, *adj.* treacherous; hateful.
**Perforate,** per'fo-rāt, *v.* to pierce; to penetrate.
**Perforce,** per-fors', *adv.* by force.
**Perform,** per-form', *v.* to do; to achieve; to act;
**Perfume,** per'fūm, *n.* sweet odour. [to play.
**Perfumery,** per-fūm'er-i, *n.* stock of perfumes.
**Perfunctory,** per-funkt'o-ri, *adj.* indifferent; careless. [heart.
**Pericardium,** per-i-kārd'i-um, *n.* relating to the

**Pericarp**, per'i-kârp, *n.* shell or skin of fruits.
**Pericranium**, per-i-krā'ni-um, *n.* membrane surrounding the cranium.
**Perigee**, per'i-jē, *n.* the point of the moon's orbit nearest to the earth. [orbit nearest the sun.
**Perihelion**, per-i-hē'li-on, *n.* the point of a planet's
**Peril**, per'il, *n.* danger; *v.* to endanger.
**Perimeter**, pe-rim'et-er, *n.* outer boundary of a figure. [another.
**Perimorph**, per'i-morf, *n.* one mineral enclosing
**Period**, pē'ri-od, *n.* a series of years; an interval of time; conclusion; punctuation mark (.).
**Peripatetic**, per-i-pa-tet'ik, *adj.* walking about.
**Periphery**, per-if'er-i, *n.* a circumference.
**Periphrase**, per'i-frāz, *n.* circumlocutory speech.
**Periplus**, per'i-plus, *n.* a circumnavigation.
**Periscope**, per'-e-scope, *n.* an optical instrument used in guiding submarines.
**Perish**, per'ish, *v.* to die; to decay.
**Perispheric**, per-is-fer'ik, *adj.* globular.
**Peristaltic**, per-i-stal'tik, *adj.* worm-like.
**Peristyle**, per'i-stil, *n.* columns circling a building.
**Periwig**, per'i-wig, *n.* a small wig.
**Periwinkle**, per'i-wingk'l, *n.* a small shell-fish; a rock plant.
**Perjury**, per'jer-i, *n.* false swearing.
**Perk**, perk, *v.* to peer.
**Permanence**, per'man-ens, *n.* fixedness.
**Permeable**, per'mē-abl, *adj.* penetrable.
**Permian**, per'mi-an, *n.* strata of the Palæozoic series.
**Permissive**, per-mis'iv, *adj.* allowing.
**Permit**, per-mit', *v.* to allow.
**Permutable**, per-mūt'abl, *adj.* capable of being substituted for another.
**Pernicious**, per-nish'us, *adj.* hurtful; bad.
**Peroration**, per-o-rā'shun, *n.* the concluding part of a speech.
**Perpend**, per-pend', *v.* to consider.
**Perpendicular**, per-pen-dik'ū-lar, *adj.* upright.
**Perpetrate**, per-pe-trāt', *v.* to commit; to do.
**Perpetual**, per-pet'ū-al, *adj.* everlasting.
**Perplex**, per-pleks', *v.* to confuse.
**Perquisite**, per'kwiz-it, *n.* gift beyond wages.
**Perry**, per'i, *n.* beverage made from pears.
**Persecute**, per-se-kūt', *v.* to oppress; to afflict.
**Persecutor**, per'se-kū-tor, *n.* one who persecutes.
**Persevere**, per-sē-vēr', *v.* to persist.
**Persiflage**, per'si-flāzh, *n.* banter.
**Persist**, per-sist', *v.* to continue steadily.
**Person**, per'son, *n.* an individual.
**Personable**, per'son-abl, *adj.* of good appearance.
**Personage**, per'son-āj, *n.* an eminent person.
**Personalty**, per-son-al'ti, *n.* personal property.
**Personation**, per-son-ā'shun, *n.* the act of personating.
**Personnel**, per-son-el', *n.* persons comprised.
**Perspective**, per-spekt'iv, *n.* a view; art of drawing so as to express distance.
**Perspicaceous**, pers-pik-ā'shus, *adj.* clear; lucid.
**Perspire**, pers-plr', *v.* to sweat.
**Persuade**, pers-wād', *v.* to influence; to coax.
**Pert**, pert, *n.* saucy; lively.
**Pertain**, per-tān', *v.* to belong.
**Pertinacity**, per-tin-as'it-i, *n.* obstinate insistence.
**Pertinent**, per'tin-ent, *adj.* suitable; fit; to the point.
**Perturb**, per-turb', *v.* to agitate; to disturb.
**Peruke**, pe'rūk, *n.* a wig.
**Peruse**, per-ūz, *v.* to read.
**Pervade**, per-vād', *v.* to spread over; to penetrate.
**Perverse**, per-vers', *adj.* stubborn; contradictory; froward.
**Perversion**, per-ver'shun, *n.* a wrong use.
**Pervert**, per-vert', *v.* to mislead; to corrupt; to distort.
**Pervious**, per'vi-us, *adj.* penetrable.
**Pessimism**, pes'im-izm, *n.* the theory that things are generally bad.
**Pest**, *n.* a plague; an annoying person.
**Pester**, pes'ter, *v.* to annoy.
**Pestilent**, pes'til-ent, *adj.* noxious; infectious; corrupting.
**Pestle**, pes'l, *n.* pounding instrument.
**Petalous**, pet'al-us, *adj.* having petals.
**Petard**, pē-tard', *n.* a mortar for blowing up fortifications.
**Petary**, pē'tar-i, *n.* a peat bog.
**Petechial**, pet-ek'i-al, *adj.* fever-spotted.
**Petiole**, pet'i-ol, *n.* a leaf stalk.
**Petition**, pē-tish'un, *n.* a request; a prayer; an appeal.
**Petrel**, pet'rel, *n.* a sea-bird.
**Petrify**, pet'ri-fl, *v.* to transform to stone.
**Petrol**, pet'rol, *n.* oil fuel for motors.
**Petroleum**, pē-trō'lē-um, *n.* a crude oil.
**Petronel**, pet'ro-nel, *n.* a horse-pistol.
**Petticoat**, pet'i-kōt, *n.* a woman's under-garment.
**Pettifogger**, pet'i-fog-er, *n.* a petty lawyer.
**Pettish**, pet'ish, *adj.* peevish.
**Pettle**, pet'l, *v.* to indulge.
**Petty**, pet'i, *adj.* trifling; small.
**Petulance**, pet'ū-lans, *n.* irritability; peevishness.
**Pew**, pū, *n.* an enclosed sitting in a place of worship.
**Pewter**, pew'ter, *n.* an alloy of tin and lead.
**Phalanx**, fal'angkx, *n.* a dense body of soldiers.
**Phantasm**, fant'azm, *n.* a hallucination; a vision.
**Phantasmagoria**, fan-taz-mā-gō'ri-a, *n.* illusive
**Phantom**, fan'tom, *n.* a spectre. [images.
**Pharisaical**, far-is-ā'ik-al, *adj.* hypocritical.
**Pharmacy**, fār-'mā-si, *n.* medicine preparation.
**Pharynx**, fā'-rinks, *n.* cavity behind the nose.
**Phase**, fāz, *n.* view; aspect.
**Phenomenon**, fē-nom'ē-non, *n.* an unusual appearance.
**Phial**, fl'al, *n.* a small bottle. [ance.
**Philander**, fil-an'der, *v.* to flirt; to make love.
**Philanthropy**, fil-an'*th*ro-pi, *n.* love of mankind.
**Philately**, fil-at'ē-li, *n.* stamp collecting.
**Philharmonic**, fil-har-mon'ik, *adj.* loving harmony.
**Philippic**, fil-ip'ik, *n.* an acrimonious declamation.
**Philistine**, fil'is-tin, *n.* an uncultured person.
**Philology**, fil-ol'o-ji, *n.* study of language.
**Philomath**, fil'o-ma*th*, *n.* one devoted to learning.
**Philomel**, fil'ō-mel, *n.* the nightingale.
**Philopolemic**, fil-ō-pō-lem'ik, *adj.* eager for war or discussion. [of offspring.
**Philoprogenitiveness**, fil-ō-prō-jen'it-iv-nes, *n.* love
**Philosopher**, fil-os'ō-fer, *n.* a reasoner.
**Philotechnic**, fil-ō tek'nik, *adj.* devoted to the arts.
**Philter**, fil'ter, *n.* a love charm.
**Phlebotomy**, flē-bot'om-i, *n.* the art of vein opening.
**Phlegm**, flem, *n.* viscid matter. [ing.
**Phlegmatic**, fleg-mat'ik, *adj.* cold; sluggish.
**Phœnix**, fē'niks, *n.* an imaginary bird; a wonder.
**Phonetics**, fō-net'iks, *n.* science of articulate sounds. [repeating instrument.
**Phonograph**, fō'nō-graf, *n.* a sound recording and
**Phonography**, fon-og'raf-i, *n* shorthand.
**Phonology**, fōn-ol'ō-ji, *n.* phonetics.
**Phonotype**, fō'nō-tip, *n.* type indicating sound.
**Phosphor**, fos'for, *n.* the morning star.
**Phosphorescence**, fos-for-es'ens, *n.* luminousness.
**Phosphorus**, fos'for-us, *n.* a combustible substance.
**Phossy-jaw**, fos'i-jaw, *n.* phosphorous poisoning.
**Photogenic**, fō-tō-jen'ik, *adj.* pertaining to photography. [the action of light.
**Photograph**, fō'tō-graf, *n.* a picture produced by
**Photogravure**, fō'tō-grāv-ūr, *n.* special method of photography.
**Photology**, fō-tol'ō-ji, *n.* the science of light.
**Photophone**, fō'tō-fōn, *n.* a speech-transmitting apparatus.
**Photosphere**, fō'tō-sfēr, *n.* a sphere of light.
**Phrase**, frāz, *n.* words expressing an idea.
**Phraseology**, frāz-ē-ol'ō-ji, *n.* diction.
**Phrenetic**, fren-et'ik, *adj.* frantic.
**Phrenology**, fren-ol'ō-ji, *n.* the science of the mind as indicated by the formation of the head.
**Phrenzy**, fren'zi, *n.* madness.
**Phthisical**, tiz'ik-al, *adj.* pertaining to lung disease.
**Phylactery**, fi-lak'ter-i, *n.* a charm.
**Phyllite**, fil'lt, *n.* clay-slate.
**Phylloid**, fil'oid, *adj.* leaf-like. [nature.
**Physical**, fiz'ik-al, *adj.* pertaining to the body, or
**Physician**, fiz-ish'an, *n.* one skilled in the use of physic.
**Physicist**, fiz'i-sist, *n.* a student of nature.
**Physics**, fiz'iks, *n.* the science of nature.
**Physiognomy**, fiz-i-og'no-mi, *n.* face study.
**Physiography**, fiz-i-og'ra-fi, *n.* physical geography.
**Physiolatry**, fiz-i-ol'a-tri, *n.* nature worship.
**Physiology**, fiz-i-ol'ō-ji, *n.* the science of life.
**Physique**, fiz-ēk', *n.* physical organisation.
**Phytology**, fi-tol'ō-ji, *n.* botany.
**Piacular**, pi-ak'ū-lar, *adj.* expiatory.
**Pianist**, pi-an'ist, *n.* a pianoforte player.
**Pianoforte**, pi-an'ō-fōr'tā, *n.* a well-known keyed
**Piazza**, pi-atz'ā, *n.* a portico. [instrument.
**Pibroch**, pē'broh, *n.* an air played on the bagpipes.
**Pica**, pi'ka, *n.* a size of type; a magpie.
**Picaroon**, pik-a-roon', *n.* a pirate; a cheat.
**Picayune**, pik-ā-yoon', *n.* a small American coin.
**Piccolo**, pik'ō-lō, *n.* a small flute.
**Pick**, pik, *v.* to pierce; to gather; to choose; *n.* a striking implement.
**Pickaninny**, pik-ā-nin'i, *n.* a negro baby.
**Picket**, pik'et, *n.* an outpost guard of soldiers.

rl, *n.* articles preserved in salt and vinegar.
**ket, pik'pok-et,** *n.* a pocket rifler. [gar.
**r'nik,** *n.* an open-air pleasure party.
**_____, pik-tō'ri-al,** *adj.* pertaining to pictures.
**Picture,** pik't'ūr, *n.* a painting; a representation.
**Piebald,** pī-bawld, *adj.* varicoloured.
**Piece,** pēs, *n.* a part of anything; a play.
**Pied,** pīd, *adj.* spotted; variegated.
**Pier,** pēr, *n.* a wharf; a projecting roadway extending into the sea.
**Pierce,** pērs, *v.* to penetrate.
**Pier-glass,** pēr'glas, *n.* a mirror between windows.
**Pierian,** pī-ē'ri-an, *adj.* relating to the Muses.
**Pierrot,** pye-rō', *n.* a buffoon; a pantomime character.
**Pietism,** pī'et-izm, *n.* a doctrine of the Pietists.
**Piety,** pī'et-i, *n.* religious veneration; goodness.
**Piffle,** pif'l, *n.* foolish talk.
**Pig,** pig, *n.* a swine; a mass of metal.
**Pigeon,** pi'jn, *n.* a bird; one who is easily cheated.
**Pigment,** pig'ment, *n.* paint; colouring matter.
**Pigmy,** pig'mi, *n.* a dwarf.
**Pike,** pīk, *n.* a weapon with a spear-like head; a
**Piles,** pīlz, *n.* hæmorrhoids. [fish.
**Pilfer,** pil'fer, *v.* to steal small things.
**Pilgrim,** pil'grim, *n.* one who journeys to a holy place.
**Pill,** pil, *n.* a small medicinal ball.
**Pillage,** pil'āj, *n.* plunder.
**Pillar,** pil'ar, *n.* a detached column or support.
**Pillion,** pil'yun, *n.* a seat for a woman to ride behind a man.
**Pillory,** pil'or-i, *n.* a frame in which offenders were publicly exposed. [head upon.
**Pillow,** pil'ō, *n.* a stuffed cushion to rest the
**Pilot,** pī'lot, *n.* one who guides ships in and out of
**Pimp,** *n.* a pander. [harbour.
**Pimple,** pimp'l, *n.* a pustule.
**Pin,** pin, *n.* an instrument for fixing things together.
**Pinafore,** pin'a-fōr, *n.* a child's apron.
**Pince-nez,** pangz'nā, *n.* eye-glasses.
**Pinchbeck,** pinsh'bek, *n.* yellow alloy, sham.
**Pinchers,** pinsh'ers, *n.* pincers. [waste away.
**Pine,** pīn, *n.* a cone-bearing tree; *v.* to grieve; to
**Pineal,** pin'ē-al, *adj.* relating to the pine.
**Pinfold,** pin'fold, *n.* a pound for cattle.
**Ping, ping,** *n.* a whistling sound, as of a bullet.
**Pinion,** pin'yun, *n.* a wing; *v.* to bind.
**Pink,** *n.* light red colour; *v.* to stab.
**Pin-money,** pin'mun-i, *n.* a wife's pocket-money.
**Pinnace,** pin'ās, *n.* a small vessel.
**Pinnacle,** pin'a-kl, *n.* a turret; highest point.
**Pinnate,** pin'āt, *adj.* feather-shaped.
**Pint,** pint, *n.* a liquid measure.
**Pioneer,** pī-ō-nēr', *n.* one who clears the way for
**Pious,** pī'us, *adj.* reverential; good. [others.
**Pip,** pip, *n.* seed of certain fruits.
**Pipkin,** pip kin, *n.* a small earthen vessel.
**Pippin,** pip'in, *n.* a kind of apple.
**Piquancy,** pēk'an-si, *n.* sharpness; smartness.
**Pique,** pēk, *n.* injured pride.
**Piqué,** pē-kā', *n.* a corded cotton fabric.
**Piracy,** pī'ra-si, *n.* sea robbery.
**Pirouette,** pir-oo-et', *n.* a graceful wheeling round in a dance.
**Piscatorial,** pis-kat-ō'ri-al, *adj.* relating to fishing.
**Pisciculture,** pis-si-kul'tūr, *n.* fish-breeding.
**Piscina,** pis-ina, *n.* stoop for Holy Water.
**Pistachio,** pi'sta'chē-o, *n.* a nut.
**Pistil,** pis'til, *n.* female organ in plants.
**Pistol,** pis'tol, *n.* a hand gun.
**Piston,** pis'ton, *n.* a rod; a cylinder. [theatre.
**Pit,** pit, *n.* a hole in the earth; ground floor of a
**Pitch,** *n.* boiled tar; *v.* to cast. [who pitches.
**Pitcher,** pitch'er, *n.* a vessel for holding water; one
**Pitchpipe,** pi'ch'pip, *n.* instrument for sounding the
**Piteous,** pit'ē-us, *adj.* sorrowful; bad. [keynote.
**Pitfall,** pit'fawl, *n.* a snare.
**Pithy,** pith'i, *adj.* concise; forcible.
**Pitiable,** pit'i-abl, *adj.* sorrowful.
**Pitiful,** pit'i-ful, *adj.* worthy of pity; despicable.
**Pitsaw,** pit'saw, *n.* a two-handed vertical saw.
**Pittance,** pit'ans, *n.* a meagre allowance.
**Pity,** pit'i, *n.* sympathy.
**Pivot,** piv'ot, *n.* point on which a thing turns.
**Placable,** plāk'abl, *adj.* appeasable.
**Placard,** plak'ārd, *n.* a printed paper publicly posted.
**ace,** plās, *n.* a spot; position; office.
**_____, plās'man,** *n.* an office-holder.
**Placid,** plas'id, *adj.* serene. [another.
**Plagiarise,** plā'ji-ar-iz, *v.* to adopt the words of
**Plagiarism,** plā'ji-ar-izm, *n.* the act of plagiarising.
**Plague,** plāg, *n.* pestilence; an annoyance.
**Plaid,** plād, *n.* variegated cloth.
**Plain,** plān, *n.* level country.
**Plaint,** plānt, *n.* complaint.
**Plaintive,** plān'tiv, *adj.* sad.
**Plait,** plāt, *n.* a fold; braid; *v.* to fold or braid.
**Plan,** *n.* sketch of building or project; *v.* to design.
**Plane,** plān, *n.* a joiner's tool; a level surface.
**Planet,** plan'et, *n.* a celestial body.
**Plangent,** plan'jent, *adj.* noisy.
**Planisphere,** plan'is-fēr, *n.* a sphere projected on a plane.
**Plank,** plānk, *n.* piece of timber stouter than a board. [a common wayside British plant.
**Plantain,** plan'tān, *n.* a broad tropical plant; also
**Plantation,** plan-tā'shun, *n.* a large cultivated estate; tract where young trees are planted.
**Planter,** plan'ter, *n.* a plantation owner; one who plants.
**Plasm,** plazm, *n.* a mould; protoplasm.
**Plasma,** plaz'ma, *n.* fluid part of the blood; a kind of quartz.
**Plasmatic,** plaz-mat'ik, *adj.* formative.
**Plaster,** plās'ter, *n.* an adhesive salve; a limy composition for overlaying walls.
**Plastic,** plas'tik, *adj.* easily moulded.
**Plastron,** plas'tron, *n.* a breast covering.
**Plat,** plat, *n.* a plot of ground.
**Plateau,** pla-tō', *n.* a high plane.
**Platinum,** plat'in-um, *n.* a metal.
**Platitude,** plat'it-ūd, *n.* a stale phrase; trite remark.
**Platonic,** plat-on'ik, *adj.* pure; relating to Plato.
**Platoon,** plā-toon', *n.* half a company of soldiers.
**Platter,** plat'er, *n.* a large flat plate or dish.
**Plaudit,** plaw'dit, *n.* applause; praise.
**Plausible,** plawz'ibl, *adj.* reasonable; specious.
**Play,** plā, *n.* pastime; a game; theatre piece;
**Playful,** plā'ful, *adj.* sportive. [theatre.
**Plea,** plē, *n.* an excuse; entreaty.
**Pleasantry,** plez'an-tri, *n.* gaiety; sprightly
**Please,** plēz, *v.* to gratify. [speech.
**Plebeian,** plē-bē'yan, *adj.* vulgar; common.
**Plebiscite,** pleb'is-it, *n.* a referendum.
**Pledge,** plej, *n.* a promise; a security.
**Pleiades,** plē'yā-dēz, *n.* a cluster of stars in Taurus.
**Plenary,** plēn'ār-i, *adj.* full; complete.
**Plenipotentiary,** plen-i-po-ten'shār-i, *n.* an ambas-
**Plenish,** plen'ish, *v.* to provide. [sador.
**Plenteous,** plen'tē-us, *adj.* plentiful.
**Plentitude,** plen'it-ūd, *adj.* fulness.
**Pleonastic,** plē-ō-nas'tik, *adj.* redundant.
**Plethora,** pleth'o-ra, *n.* excess of blood; repletion.
**Pliable,** plī'abl, *adj.* pliant; flexible.
**Pliers,** plī'erz, *n.* pincers.
**Plight,** plīt, *v.* to pledge; *n.* condition; state.
**Plinth,** plinth, *n.* the square at the base of a column.
**Plod,** plod, *v.* to toil; to move steadily on.
**Plough,** plow, *n.* an implement for turning up the soil.
**Pluck,** pluk', *adj.* courage; *v.* to pull feathers off a bird.
**Plumage,** ploom'āj, *n.* feathers of a bird.
**Plumb,** plum, *n.* a leaden weight on a line; *adj.* perpendicular.
**Plumber,** plum'er, *n.* a worker in lead and piping.
**Plumb-line,** plum'lin, *n.* the line of a plummet.
**Plume,** ploom, *n.* a feather.
**Plummet,** plum'et, *n.* a weighted line.
**Plumous,** ploom'us, *adj.* feathery.
**Plump,** *adj.* fat.
**Plunder,** plun'der, *v.* to rob; *n.* spoil.
**Plunge,** plunj, *v.* to dive; to rush into; to immerse.
**Plural,** ploo'ral, *adj.* concerning more than one.
**Pluralist,** ploo'ral-ist, *n.* a holder of more than one
**Plus,** *n.* sign (+) of addition. [benefice.
**Plush,** *n.* a velvet cloth.
**Plutocracy,** ploo-tok'rā-si, *n.* government by the wealthy.
**Plutonian,** ploo-tō'ni-an, *adj.* infernal.
**Pluvial,** ploo'vi-al, *adj.* rainy.
**Ply,** plī, *v.* to work at; to importune.
**Pneumatic,** nū-mat'ik, *adj.* relating to air.
**Pneumatology,** nū-mat-ol'ō-ji, *n.* science of elastic fluids. [Athens.
**Pnyx,** niks, *n.* political meeting-place in ancient
**Poach,** pōch, *v.* to steal game; to cook eggs.
**Pock,** pok, *n.* a pustule on the skin.
**Pocket,** pok'et, *n.* a bag forming part of a garment; *v.* to take covertly.
**Pod,** pod, *n.* covering of peas, beans, etc.

**Podagra,** pō-da'grā, *n.* gout in the feet.
**Podgy,** poj'i, *adj.* short and fat.
**Poem,** pō'em, *n.* a composition in verse.
**Poetaster,** pō'et-as-ter, *n.* an inferior poet.
**Poetry,** pō'et-ri, *n.* a rhythmical embodiment of thoughts and fancies.
**Pogrom,** pō'-grom, *n.* a destructive disturbance in Russia. [painful.
**Poignant,** poi'nant, *adj.* bitter; stinging; acutely
**Point,** point, *n.* a sharp end; spot; gist of an argument; *v.* to indicate; to direct.
**Pointed,** point'ed, *adj.* sharp, direct, keen.
**Poise,** poiz, *v.* to balance.
**Poison,** poi'zn, *n.* any substance that, taken into the system, destroys or impairs life; *v.* to infect with poison.
**Polar,** pō-lar, *adj.* pertaining to the poles.
**Polarisation,** pō-lar-i-zā'shun, *n.* the act of communicating polarity. [of Poland.
**Pole,** pōl, *n.* a rod; a measure of length; native
**Pole-axe,** pōl'aks, *n.* a hatchet with a long handle.
**Polemic,** pō'lem'ik, *n.* disputant; *adj.* controver-
**Pole-star,** pōl'stâr, *n.* the north star. [sial.
**Poley,** pō'li, *adj.* without horns.
**Police,** pō-lēs', *n.* civil force.
**Policy,** pol'is-i, *n.* prudence; the art of governing.
**Polish,** pol'ish, *v.* to make glossy; to refine; *n.* the substance used to produce polish.
**Polite,** pō-lit', *adj.* courteous.
**Politic,** pol'it-ik, *adj.* discreet.
**Politics,** pol'it-iks, *n.* science of government.
**Polity,** pol'it-i, *n.* structure of a government.
**Poll,** pōl, *n.* head; a list; an election.
**Pollard,** pol'ard, *n.* a lopped tree.
**Pollen,** pol'en, *n.* the fertilising powder in flowers.
**Pollent,** pol'ent, *adj.* powerful, strong.
**Pollute,** pol-oot', *v.* to taint; to corrupt.
**Poltroon,** pol-troon', *n.* a coward.
**Polygamy,** pol-ig'am-i, *n.* plurality of wives.
**Polyglot,** pol'i-glot, *adj.* many-languaged.
**Polygon,** pol'i-gon, *n.* a many-angled figure.
**Polygram,** pol'i-gram, *n.* a figure of many lines.
**Polygraph,** pol'i-graf, *n.* a copying instrument.
**Polygraphy,** pol-ig'rā-fi, *n.* art of writing in ciphers.
**Polysyllable,** pol'i-sil-abl, *n.* word of more than three syllables.
**Polytechnic,** pol-i-tek'nik, *adj.* including many arts. [than one God.
**Polytheism,** pol-i-*thē*'izm, *n.* the doctrine of more
**Pommel,** pum'el, *n.* the knob of a saddle; *v.* to beat.
**Pomology,** pom-ol'ŏ-ji, *n.* science of fruit raising.
**Pomp,** pomp, *n.* ceremony; show; display.
**Pompom,** pom'pom, *n.* a quick-firing gun.
**Pompon,** pom'pon, *n.* a hat trimming.
**Poncho,** pon'chō, *n.* a short seamless cloak.
**Pond,** pond, *n.* a pool.
**Ponder,** pon'der, *v.* to consider.
**Ponderous,** pon'der-us, *adj.* weighty; heavy.
**Pongee,** pon'jē, *n.* silk from cocoons of wild silk-
**Poniard,** pon'yard, *n.* a small dagger. [worms.
**Pontage,** pont'āj, *n.* bridge toll.
**Pontiff,** pont'if, *n.* a high priest; the Pope.
**Pontificate,** pont-if'ik-āt, *n.* the rule of a Pope.
**Pontil,** pon-til, *n.* rod used in glass-making.
**Pontoon,** pon-toon', *n.* a floating bridge; a flat
**Pood,** pood, *n.* a Russian weight, 36 lb. [boat.
**Pool,** *n.* a small pond.
**Poor,** poor, *adj.* needy; weak; depressed.
**Pope,** pōp, *n.* the head of the Roman Catholic

**Popedom,** pōp'dom, *n.* jurisdiction of the Pope.
**Popinjay,** pop'in-jā, *n.* a fop.
**Poplar,** pop'lar, *n.* a well-known tree.
**Poplin,** pop'lin, *n.* fabric of worsted and silk.
**Poppy,** pop'i, *n.* a plant with usually red flowers, one kind yielding opium.
**Populace,** pop'ū-lās, *n.* the people.
**Popular,** pop'ū-lar, *adj.* generally liked.
**Population,** pop-ū-lā'shun, *n.* act of populating; the people in general.
**Populous,** pop'ū-lus, *adj.* full of people.
**Porcelain,** pōrs'lān, *n.* fine earthenware.
**Porch,** pōrch, *n.* a covered entrance-way.
**Porcine,** pōr'sin, *adj.* pertaining to swine.
**Pore,** pōr, *n.* minute passage in the skin.
**Porifera,** pō-rif'er-ā, *n.* sponges.
**Pork,** pōrk, *n.* flesh of swine.
**Porous,** pō'rus, *adj.* full of pores.
**Porphyry,** por'fi-ri, *n.* a variegated hard stone.
**Porpoise,** por'pus, *n.* a marine mammal.
**Porridge,** por'ij, *n.* boiled meal and water.
**Porringer,** por'in-jer, *n.* a porridge pan.

**Port,** pōrt, *n.* a harbour; an opening; a Portuguese wine; bearing; left side of a ship.
**Portable,** pōrt'abl, *adj.* movable; that can be carried.
**Portage,** pōrt'āj, *n.* carrying; price of carriage.
**Portal,** pōrt'al, *n.* a gateway; an entrance.
**Portcullis,** pōrt-kul'is, *n.* a sliding framework suspended over a gateway.
**Porte,** pōrt, *n.* the Turkish court.
**Portend,** por-tend', *v.* to forbode.
**Portentous,** por-ten'tus, *adj.* ominous. [liquor.
**Porter,** pōrt'er, *n.* one who carries parcels; a malt
**Portfolio,** pōrt-fō'li-o, *n.* case for holding papers; the office of a State minister.
**Porthole,** pōrt'hōl, *n.* gun-hole; any opening in a ship's side for air or light. [way.
**Portico,** pōr'tik-ō, *n.* a piazza; a columned entrance
**Portion,** pōr'shun, *n.* a share; a dowry.
**Portly,** pōrt'li, *adj.* dignified; corpulent.
**Portmanteau,** pōrt'-man'tō, *n.* a hand-bag.
**Portoise,** pōr'tiz, *n.* the gunwale of a boat.
**Portray,** pōr'trā', *v.* to draw; to describe.
**Portrayal,** pōrt'rā'al, *n.* the act of portraying.
**Pose,** pōz, *v.* to assume an attitude; to puzzle; *n.* attitude.
**Position,** po-zish'un, *n.* place; situation.
**Positive,** poz'it-iv, *adj.* sure; actual; absolute.
**Possess,** po-zes', *v.* to own.
**Possessor,** po-zes'or, *n.* owner. [liquor.
**Posset,** pos'et, *n.* milk curdled with wine or other
**Possible,** pos'-i'bl, *adj.* what can be done.
**Post,** pōst, *n.* an upright piece of timber; pillar; place for the receipt of mail letters; *v.* to post.
**Postal,** pōst'al, *adj.* pertaining to the post-office service.
**Post-chaise,** pōst'shāz, *n.* a stage coach.
**Post-date,** pōst'dāt, *v.* to postpone date.
**Postdiluvian,** pōst'dil-ū'vi-an, *adj.* after the Deluge.
**Poste-restante,** pōst'rest-ânt', *n.* place in post-office where letters are kept till called for.
**Posterior,** pos-tē'ri-or, *adj.* later; subsequent; rear.
**Posterity,** pos-ter'it-i, *n.* descendants.
**Post-haste,** pōst-hāst', *n.* top speed.
**Posthumous,** pōst'ū-mus, *adj.* after death.
**Postil,** pōs'til, *n.* marginal note.
**Postillion,** pōst-il'yun, *n.* a rider of a carriage horse.
**Postmeridian,** pōst'mer-id'i-an, *n.* afternoon
**Post-mortem,** pōst-mort'em, *adj.* after death.
**Post-obit,** pōst-ō'bit, *n.* bond given by heirs securing repayment of money advanced.
**Postpone,** pōst'pōn', *v.* to defer.
**Post-prandial,** pōst'pran'di-al, *adj.* after dinner.
**Postscript,** pōst'skript, *n.* writing added after a letter has been signed.
**Postulate,** pos'tū-lāt, *n.* self-evident position.
**Posture,** pos'tūr, *n.* attitude; position.
**Posy,** pō'zi, *n.* nosegay; motto on a ring.
**Pot,** *n.* an utensil; a pan.
**Potation,** pō-tā'shun, *n.* a drink.
**Potato,** pō'tā'tō, *n.* an edible tuber.
**Poteen,** pō-tēn', *n.* Irish whisky.
**Potent,** pō-tent, *adj.* powerful; having authority.
**Potentiality,** pō-ten-shi-al'it-i, *n.* a potential thing.
**Pother,** poth'er, *n.* bustle; confusion.
**Potion,** pō'shun, *n.* a dose; a draught.
**Pot-pourri,** pōt'poo'-rē, *n.* a special blending of dried flowers; a musical medley.
**Potsherd,** pot'sherd, *n.* a piece of broken pot.
**Pottage,** pot'āj, *n.* a thick soup.
**Potter,** pot'er, *v.* to trifle; *n.* a maker of earthenware.
**Pottery,** pot'er-i, *n.* earthenware.
**Pouch,** powch, *n.* a bag; a pocket.
**Poultry,** pōl'tri, *n.* fowls.
**Pounce,** powns, *v.* to fall upon; *n.* a fine powder.
**Pound,** pownd, *v.* to bruise; *n.* a standard weight.
**Poundage,** pownd'āj, *n.* duty per pound.
**Pout,** powt, *v.* to sulk.
**Powder,** pow'der, *n.* a dust; gunpowder.
**Power,** pow'er, *n.* force; strength; might.
**Pow-wow,** pow'wow, *n.* a Red Indian gathering; a friendly consultation.
**Practicable,** prak'tik-abl, *adj.* possible.
**Practical,** prak'ti-kal, *adj.* useful.
**Practice,** prak'tis, *n.* habit.
**Practise,** prak'tis, *v.t.* to do as a habit.
**Practitioner,** prak-tish'un-er, *n.* one who practises; a doctor.
**Præmunire,** prē-mū-ni'rē, *n.* the act of ignoring the governing power.
**Pragmatical,** prag-mat'ik-al, *adj.* officious; medd-
**Prairie,** prā'ri, *n.* a grassy plain. [ling.
**Prance,** prans, *v.* to strut; to ride gaily.

**Prank**, prăngk, *n.* a trick; a frolic.
**Prasinous**, pras'in-us, *adj.* light-green.
**Prate**, prāt, *v.* to talk idly or foolishly.
**Pratique**, prā-tēk', *n.* leave to trade after quarantine.
**Prawn**, *n.* a small crustacean fish.
**Pray**, prā, *v.* to entreat; to supplicate the Almighty.
**Preach**, prēch, *n.* to publicly expound religious views.
**Preacher**, prēch'er, *n.* one who preaches.
**Preamble**, prē-am'bl, *n.* introduction; preface.
**Prebend**, preb'end, *n.* stipend granted to a canon.
**Prebendary**, preb'end-ar-i, *n.* cathedral stipendiary.
**Precarious**, pre-kā'ri-us, *adj.* uncertain; doubtful.
**Precaution**, pre-kaw'shun, *n.* previous care.
**Precede**, prē-sēd', *v.* to go before.
**Precedence**, prē-sē'dens, *n.* priority.
**Precedent**, prē-sē'dent, *adj.* going before; anterior.
**Precedent**, pres'e-dent, *n.* example.
**Precentor**, pre-sen'tor, *n.* choir-leader.
**Precept**, prē'sept, *n.* doctrine; rule of action.
**Precinct**, prē'singkt, *n.* boundary.
**Precious**, presh'us, *adj.* worthy; valuable.
**Precipice**, pres'i-pis, *n.* an abyss.
**Precipitance**, prē-sip'it-ans, *n.* rash haste.
**Precipitate**, prē-sip'it-āt, *v.* to cast down.
**Precipitous**, prē-sip'it-us, *adj.* rash; steep.
**Precis**, prā-sē', *n.* an abstract or summary.
**Precise**, prē-sis, *adj.* exact.
**Precision**, prē-sizh'un, *n.* accuracy.
**Preclude**, prē-klood', *v.* to shut out.
**Preclusion**, pre-kloo'zhun, *n.* exclusion; a shutting out.
**Precocity**, pre-kos'it-i, *n.* premature development.
**Precognition**, prē-kog-nish'un, *n.* foresight.
**Preconceive**, prē-kon-sēv', *v.* to imagine; to conceive beforehand.
**Preconception**, prē-kon-sep'shun, *n.* forethought.
**Preconcerted**, prē-kon-sert'ed, *adj.* prearranged.
**Precursor**, prē-kur'sor, *n.* a forerunner.
**Predaceous**, pred-ā'shus, *adj.* ravenous; living by plunder.
**Predatory**, pred-ā-to-ri, *adj.* plundering.
**Predecessor**, prē-de-ses'or, *n.* forerunner.
**Predestination**, prē-des-tin-ā'shun, *n.* the belief that everything is foreordained.
**Predial**, prē'di-al, *adj.* connected with land; *n.* a slave.
**Predicable**, pred'ik-abl, *adj.* attributable.
**Predicament**, prē-dik'ā-ment, *n.* plight.
**Predicate**, pred'ik-āt, *v.* to affirm.
**Predication**, pred-ik-ā'shun, *n.* act of affirming.
**Predict**, prē-dikt', *v.* to fortell.
**Prediction**, prē-dik'shun, *n.* a prophecy.
**Predilection**, prē-dil-ek'shun, *n.* prepossession in favour of.
**Predisposition**, prē-dis-po-zi'shun, tendency.
**Predominate**, prē-dom'in-āt, *v.* to rule.
**Pre-eminence**, prē-em'in-ens, *n.* superiority.
**Pre-emption**, prē-em'shun, *n.* first option of buying.
**Preen**, prēn, *v.* to arrange feathers, as do birds.
**Preface**, pref'as, *n.* an introduction.
**Prefect**, prē'fekt, *n.* a governor.
**Prefer**, prē-fer, *v.* to esteem before others; to choose.
**Preferable**, pref'er-abl, *adj.* worthy of preference.
**Preference**, pref'er-ens, *n.* choice.
**Preferment**, prē-fer'ment, *n.* promotion.
**Prefigure**, prē-fig'ur, *v.* to show beforehand.
**Prefix**, prē'fiks, *n.* a letter or word put before.
**Prefix**, pre-fiks', *v.* to place before.
**Pregnant**, preg'nant, *adj.* with young; fruitful.
**Prehensile**, prē-hen'sil, *adj.* that can grasp.
**Prejudge**, prē-juj', *v.* to judge beforehand.
**Prejudice**, prej'ū-dis, *adj.* bias; prejudgment.
**Prelacy**, prel'ā'si, *n.* the office of a prelate.
**Prelate**, prel'āt, *n.* a church dignitary.
**Preliminary**, prē-lim'in-ar-i, *adj.* previous; preparatory.
**Prelude**, prel'ūd, *n.* introduction; preface.
**Premature**, prē'mā-tūr, *adj.* before its time; too hasty.
**Premeditate**, prē-med'it-āt, *v.* to plan beforehand.
**Premier**, prē'mi-er, *n.* prime minister; *adj.* first.
**Premise**, prē-mīz', *n.* to state beforehand.
**Premises**, prem'is-es, *n.* a building and its adjuncts.
**Premium**, prē'mi-um, *n.* reward; payment for insurance.
**Premonitory**, pre-mon'it-or-i, *adj.* giving prior notice of.
**Preoccupy**, prē-ok'ū-pi, *v.* to occupy beforehand.
**Prepare**, prē-pār', *v.* to get ready.
**Prepense**, prē-pens', *adj.* premeditated.
**Preponderate**, prē-pon'der-āt, *v.* to outweigh.
**Preposition**, prep-ō-zish'un, *n.* part of speech showing relation.
**Prepossessing**, prē-po-zes'ing, *adj.* in condition to invite favour.
**Preposterous**, prē-pos'ter-us, *adj.* absurd.
**Pre-Raphaelitism**, pre, raf'ā'el'i'tsm, *n.* a styled painting.
**Prerogative**, prē-rog'āt-iv, *n.* exclusive privilege.
**Presage**, pres'āj, *v.* to predict; *n.* anything that foreshows.
**Presbyter**, prez'bit-er, *n.* a priest.
**Prescience**, prē'shi-ens, *n.* foreknowledge.
**Prescribe**, prē-skrīb', *v.* to appoint; to order; to lay down.
**Prescription**, prē-skrip'shun, *n.* a written instruction for preparation of medicine; any act of directing.
**Prescriptive**, prē-skript'iv, *adj.* acquired by usage.
**Present**, pre'zent, *v.* to lay before another; to offer
**Present**, prez'ent, *n.* a gift.
**Presentable**, pre-zent-abl, *adj.* that may be presented.
**Presentient**, pre-zen'shi-ent, *adj.* pre-perceiving.
**Presentiment**, pre-sen'ti-ment, *n.* a premonition.
**Presentment**, pre-zent'ment, *n.* the act of presenting.
**Preservative**, pre-zer'vā-tiv, *n.* that which preserves.
**Preserve**, pre-zerv', *v.* to keep safe; to defend.
**President**, pres'i-dent, *n.* one at the head of a state, company, or society.
**Press**, pres, *v.* to squeeze; to clasp; *n.* printing machine; newspapers generally.
**Press-gang**, pres'gang, *n.* a body of men who in war-time forcibly carried off men to serve on warships.
**Pressing**, pres'ing, *adj.* urgent.
**Pressman**, pres'man, *n.* one who works at a printing press; a journalist.
**Prestige**, prest-ēzh', *n.* moral influence.
**Presto**, pres'to, *adv.* quickly.
**Presume**, pre-zūm', *v.* to take for granted; to arrogate.
**Presumption**, pre-zump'shun, *n.* arrogance.
**Presumptuous**, pre-zump'tū-us, *adj.* over-confident.
**Pretence**, prē-tens', *n.* excuse; assumption.
**Preterite**, pret'er-it, *adj.* gone by; *n.* past-tense.
**Pretermission**, prē-termish'un, *n.* the act of omitting.
**Preternatural**, prē-ter-nat'ū-ral, *adj.* supernatural.
**Pretext**, prē-text, *n.* semblance; excuse; pretence.
**Prevail**, prē-vāl', *v.* to overcome; to induce.
**Prevalence**, prev'āl-ens, *n.* custom; predominance.
**Prevaricate**, prē-vār'ik-āt, *v.* to equivocate.
**Prevent**, prē-vent', *v.* to hinder.
**Preventive**, prē-ven'tiv, *adj.* tending to prevent.
**Previous**, prē'vi'us, *adj.* prior.
**Prevision**, prē-vizh'un, *n.* forethought.
**Prey**, *v.* to seize upon; *n.* spoil; plunder.
**Price**, pris, *n.* sum asked for a thing; reward.
**Prick**, prik, *v.* to spur; *n.* a sharp-pointed instrument; a sting.
**Prickly**, prik'li, *adj.* thorny.
**Pride**, prid, *n.* self-esteem.
**Priest**, prēst, *n.* a religious minister.
**Priestcraft**, prēst'kraft, *n.* priestly policy.
**Prig**, prig, *n.* a conceited person.
**Prill**, pril, *v.* to grow sour.
**Prim**, prim, *adj.* precise.
**Primacy**, prī'mā-si, *n.* office of archbishop.
**Primal**, prī'mal, *adj.* first.
**Primarily**, prī'mār-i-li, *adv.* in the first place.
**Prime**, prim, *adj.* chief; fine; first; strong; full.
**Primer**, prī'mer, *n.* first book of instruction.
**Primeval**, prī-mē'val, *adj.* original; belonging to early times.
**Priming**, prim'ing, *n.* first coating of colour.
**Primitive**, prim'it-iv, *adj.* original; first.
**Primogeniture**, prī-mō-jen'it-ūr, *n.* inheritance by eldest son.
**Primordial**, prī-mōr'dī-al, *adj.* original; first in order.
**Primrose**, prim'roz, *n.* one of the primula tribe; a yellow spring bloom.
**Prince**, prins, *n.* a king's son; a ruler.
**Princess**, prin'ses *n.* a prince's consort; a king's daughter.
**Principal**, prin'si-pal, *adj.* chief; capital.
**Principia**, prin-sip'i-ā, *n.* first principles.
**Prink**, pringk, *v.* to deck for show.
**Print**, print, *v.* to mark by impression.
**Prior**, prī'or, *adj.* former; *n.* the head of a monastery.
**Priority**, prī-or'it-i, *n.* precedence.
**Prism**, prizm, *n.* a solid whose ends are similar and parallel planes, and whose sides are parallelograms.

**Prison,** priz'n, *n.* a jail; place of detention.
**Pristine,** pris'tin, *adj.* primitive original.
**Private,** prī'vāt, *adj.* alone; secret; an ordinary soldier. [manned.
**Privateer,** prī-vă-tēr', *n.* a ship of war privately
**Privation,** prī-vā'shun, *n.* destitution; act of depriving.
**Privilege,** priv'il-ej, *n.* right; special advantage.
**Privily,** priv'il-ī, *adv.* secretly.
**Privy,** priv'ī, *adj.* secret; private.
**Prize,** prīz, *n.* a reward; something seized from an
**Probable,** prob'abl, *adj.* likely. [enemy.
**Probate,** prō'bāt, *n.* legal proof of a will.
**Probation,** pro-bā'shun, *n.* trial; act of testing.
**Probative,** prō'bā-tiv, *adj.* serving for proof.
**Probe,** prōb, *v.* to search; *n.* a surgeon's instrument.
**Probity,** prō'bit-ī, *n.* sincerity; uprightness.
**Problem,** prob'lem, *n.* a question for solution.
**Problematical,** prob-lem-at'ik-al, *adj.* questionable.
**Proboscis,** prō-bōs'is, *n.* a trunk; nose.
**Procedure,** pro-sē'dūr, *n.* legal process; mode of proceeding.
**Proceed,** prō-sēd', *v.* to advance; to go on.
**Proceeds,** prō'sēds, *n.* returns; produce; rents.
**Process,** prō'ses, *n.* operation.
**Proclaim,** prō-klām', *v.* to announce publicly.
**Proclivity,** prō-kliv'it-ī, *n.* tendency; inclination.
**Procrastinate,** prō-kras'tin-āt', *v.* to postpone.
**Procreate,** prō'krē-āt, *v.* to generate. [formity.
**Procrustean.** prō-krus'tē-an, *adj.* forcing into con-
**Proctor,** prok'tor, *n.* an ecclesiastical lawyer; a university official.
**Procumbent,** prō'kum'bent, *adj.* forward-bending; lying face downward.
**Procure,** prō-kūr', *v.* to obtain.
**Prodigal,** prod'ī-gal, *adj.* extravagant; lavish.
**Prodigious,** prō-dij'us, *adj.* huge; wonderful.
**Prodigy,** prod'ī-jī, *n.* a wonder.
**Produce,** prod'ūs, *n.* yield; that which is produced.
**Produce,** prō-dūs', *v.* to yield; to bring forth.
**Product,** prod'ukt, *n.* fruit; yield; thing pro-
**Proem,** prō'em, *n.* prelude. [duced.
**Profane,** prō-fān', *adj.* secular; unholy.
**Profess,** prō-fes', *v.* to avow; to own.
**Profession,** prō-feah'un, *n.* occupation; a voca-
**Proffer,** prof'er, *v.* to offer. [tion.
**Proficient,** prō-fish'ent, *adj.* skilled; able.
**Profile,** prō'fil, *n.* outline; side view.
**Profit,** prof'it, *n.* gain; advantage.
**Profligate,** prof'li-gāt, *adj.* abandoned; dissolute.
**Profound,** prō-fownd', *adj.* deep; intense.
**Profuse,** prō-fūs, *adj.* lavish.
**Progeny,** proj'en-ī, *n.* offspring.
**Prognathous,** prog'nă-*thus*, *adj.* with projecting jaws.
**Prognosis,** prog-nō'sis, *n.* a forecast of the course of a disease. [tainment.
**Programme,** prō'gram, *n.* particulars of an enter-
**Progress,** prō-gres, *n.* advancement; improvement.
**Prohibit,** prō-hib'it, *v.* to forbid.
**Project,** prōj'ekt, *n.* a scheme; a plan.
**Project,** prō-jekt', *v.* to extend; to throw outward.
**Projectile,** prō-jekt'il, *adj.* projecting; *n.* a missile.
**Projector,** prō-jekt'or, *n.* one who forms plans.
**Prolegomena,** prō-leg-om'en-a, *n.* introduction to a treatise. [labouring classes.
**Proletarian,** prō-lē-tā'ri-an, *adj.* pertaining to the
**Prolific,** prō-lif'ik, *adj.* productive; fruitful.
**Prolix,** prō'liks, *adj.* tedious; diffuse.
**Prolixity,** pro-liks'it-ī, *n.* great length;tediousness.
**Prologue,** prō'log, *n.* introduction.
**Prolong,** prō-long', *v.* to extend. [walking.
**Promenade,** prom'en-ād, *v.* to walk; *n.* a place for
**Prominence,** prom'in-ens, *n.* conspicuousness.
**Promiscuous,** prō-mis'kū-us, *adj.* without order.
**Promise,** prom'is, *v.* to engage to do; *n.* expectation.
**Promissory,** prom'is-o-rī, *adj.* relating to a promise.
**Promontory,** prom'on-tō-rī, *n.* a headland.
**Promote,** prō-mōt', *v.* to advance; to encourage.
**Prompt,** prompt, *adj.* ready; quick; *v.* to incite.
**Promptitude,** prompt'it-ūd, *n.* readiness; quick-
**Promulgate,** prō-mul'gāt, *v.* to publish. [ness.
**Prone,** prōn, *adj.* disposed; face downward.
**Prong,** prong, *n.* branch of a fork. [pronoun.
**Pronominal,** prō-nom'in-al, *adj.* pertaining to a
**Pronounce,** prō-nowns', *v.* to speak; to utter.
**Pronunciation,** prō'nun'ce-aahun, *n.* manner of uttering words.
**Proof,** *n.* trial; evidence; a first printed impression. **Prop,** *n.* a support. [sion; *adj.* resisting.
**Propagate,** prop'ă-gāt, *v.* to produce; to spread.
**Propel,** prō-pel', *v.* to force forward.
**Propeller,** prō-pel'er, *n.* screw wheel of a steamer.
**Propensity,** prō-pen'si-ti, *n.* tendency; inclination.
**Proper,** prop'er, *adj.* correct; suitable.
**Property,** prop'er-ti, *n.* estate; inherent quality.
**Prophet,** prof'et, *n.* one who foretells.
**Prophylactic,** prof-i-lak'tik, *n.* a preventive medicine.
**Propinquity,** prō-ping'kwit-ī, *n.* proximity.
**Propitiate,** prō-pish'ī-āt, *v.* to conciliate.
**Propitious,** prō-pish'us, *adj.* favourable.
**Proportion,** prō-pōr'shun, *n.* adjustment; equality of ratios.
**Proposal,** prō-pō'zal, *n.* a suggestion; an offer.
**Propose,** prō-pōz', *v.* to offer.
**Propound,** prō-pownd', *v.* to set forth.
**Proprietor,** prō-prī'et-or, *n.* an owner.
**Propriety,** prō-prī'et-ī, *n.* fitness; good behaviour.
**Propulsion,** prō-pul'shun, *n.* act of driving forward.
**Prorogue,** prō-rōg', *v.* to postpone.
**Prosaic,** prō-zā'ik, *adj.* prosy; commonplace.
**Proscenium,** pros-ē'ni-um, *n.* the front part of a stage.
**Proscribe,** prō-skrīb', *v.* to denounce; to prohibit.
**Prosecute,** pros'ē-kūt, *v.* to sue; to follow.
**Proselyte,** pros'ē-lit, *n.* a convert.
**Prosody,** pros'o-di, *n.* the part of grammar treating on versification.
**Prospect,** pros'pekt, *n.* expectation; view; aspect.
**Prospecting,** pros-pekt'ing, *n.* searching for indications of precious minerals.
**Prospectus,** pros-pekt'us, *n.* the plan of a work or public undertaking.
**Prosper,** pros'per, *v.* to succeed.
**Prosperous,** pros'per-us, *adj.* successful.
**Prostitute,** pros'tit-ūt, *n.* a strumpet; *v.* to debase.
**Prostrate,** pros'trāt, *adj.* fallen; *v.* to throw down.
**Prosy,** prō'zi, *adj.* tedious; tiresome.
**Protagonist,** prō-tag'on-ist, *n.* a leading character.
**Protean,** prō'tē-an, *adj.* changing shape.
**Protect,** prō-tekt', *v.* to shield; to defend.
**Protection,** prō-tek'shun, *n.* preservation; defence; refuge; a fiscal policy favouring taxation of imports. [tection.
**Protégé,** pro-tā-zhā', *n.* one under another's pro-
**Protein,** prō'tē-in, *n.* the first element in any compound.
**Protest,** prō-test', *v.* to object; to declare openly.
**Prothonotary,** prō-*thon*'ō-tā-rī, *n.* a chief notary.
**Protocol,** prō-tō-kol, *n.* the original writing of a treaty.
**Protomartyr,** prō-tō-mār'ter, *n.* the first martyr.
**Protophyte,** prō'tō-fit, *n.* the lowest order of plants.
**Protoplasm,** prō'tō-plazm, *n.* living matter.
**Prototype,** prō'tō-tip, *n.* the original of a copy.
**Protozoa,** prō-tō-zō'ă, *n.* the lowest order of animal
**Protract,** prō-trakt', *v.* to prolong. [life.
**Protrude,** prō-trood,' *v.* to shoot out.
**Protuberance,** prō-tū'ber-ans, *n.* a prominence; a
**Proud,** prowd, *adj.* arrogant. [jutting out.
**Prove,** proov, *v.* to test; to demonstrate.
**Provender,** prov'en-der, *n.* dry food for horses.
**Proverb,** prov'erb, *n.* a maxim. [sight; God.
**Providence,** prov'id-ens, *n.* divine supervision; fore-
**Provident,** prov'id-ent, *adj.* prudent; thrifty.
**Province,** prov'ins, *n.* a territory; a district; a duty.
**Provincial,** prō-vin'shal, *adj.* pertaining to a province or the country; unpolished.
**Provision,** pro-vizh'un, *n.* food; what is provided.
**Proviso,** prō-vī'zo, *n.* a condition.
**Provoke,** prō-vōk', *v.* to excite to anger; to summon.
**Provost,** prov'ost, *n.* chief magistrate of a Scottish
**Prow,** *n.* fore part of a vessel. [city.
**Prowess,** prow'es, *n.* valour.
**Prowl,** *v.* to roam in quest of plunder.
**Proximity,** proks-im'it-ī, *n.* nearness.
**Proxy,** proks'ī, *n.* substitute; a deputy.
**Prude,** prood, *n.* a woman of affected modesty.
**Prudent,** proo'dent, *adj.* discreet; frugal.
**Prudential,** proo-den'shal, *adj.* discretionary.
**Prudish,** proo'dish, *adj.* over-modest; affectedly modest.
**Prurience,** proo'ri-ens, *n.* burning desire.
**Pry,** prī, *v.* to peep into; to lift with lever.
**Psalm,** sām, *n.* a sacred song.
**Psalter,** sawl'ter, *n.* psalm book.
**Psaltery,** sawl'ter-ī, *n.* a stringed instrument.
**Pseudonym,** sū'dō-nim, *n.* an assumed name.
**Psychic,** sī'kik, *adj.* relating to the soul.
**Pyschology,** sī-kol'ō-jī, *n.* the study of the mind.
**Puberty,** pū'ber-ti, *n.* adult age; maturity.

**Public,** pub'lik, *adj.* common; open; *n.* the people.
**Publican,** pub'lik-an, *n.* an inn or public-house keeper.
**Publication,** pub-lik-ā'shun, *n.* a thing published.
**Publicist,** pub'li-sist, *n.* a writer on public affairs.
**Publish,** pub'lish, *v.* to put in circulation; to pro-
**Puck,** puk, *n.* a tricksy fairy. [claim.
**Pucka, puk'a,** *adj.* substantial.
**Pucker,** puk'er, *v.* to corrugate; to wrinkle.
**Puddle,** pud'l, *n.* a small muddy pool.
**Pudenda,** pū-den'da, *n.* the genitals.
**Puerile,** pū'er-īl, *adj.* childish.
**Puff,** *v.* to blow in whiffs; to pant; *n.* whiff of air.
**Puffery,** puf'er-i, *n.* excessive laudation.
**Pug,** *n.* a dog; a fox; a monkey.
**Pugilist,** pū'jil-ist, *n.* a boxer.
**Pugnacious,** pug-nā'shus, *adj.* quarrelsome.
**Pugree,** pug'rē, *n.* a hat scarf.
**Puissant,** pū'is-ant, *adj.* powerful.
**Pull,** pool, *v.* to haul; to drag; to draw; *n.* advan-
**Pulley,** pool'i, *n.* a wheel [tage.
**Pullulate,** pul'ū-lāt, *v.* to germinate.
**Pulmonary,** pul'mon-ar-i, *adj.* pertaining to the lungs. [*v.* to make into pulp.
**Pulp,** *n.* soft part of fruit, etc.; any soft mass;
**Pulpit,** pool'pit, *n.* a preacher's desk.
**Pulsate,** pul-sāt', *v.* to throb.
**Pulse,** puls, *n.* the heart-throb.
**Pulverize,** pul'ver-īz, *v.* to reduce to powder.
**Pumice,** pum'is, *n.* a spongy volcanic stone.
**Pump,** *n.* an apparatus for raising water; a low shoe; *v.* to work a pump; to extract information.
**Pumpkin,** pump'kin, *n.* a plant of the gourd order.
**Pun,** *n.* a play upon words.
**Punch,** punsh, *n.* a drink; a tool for making holes; *v.* to poke ; to hit; to perforate.
**Puncheon,** punsh'un, *n.* a large cask; a tool.
**Punchinello,** punsh-i-nel'o, *n.* a buffoon.
**Punctilio,** pungk-til'yo, *n.* a nice point.
**Punctilious,** pungk-til'yus, *adj.* very exact.
**Punctual,** pungkt'ū-al, *adj.* exact as to time.
**Punctuate,** pungk'tū-āt, *v.* to insert points in a writing.
**Puncture,** pungk'tūr, *n.* a small hole made by a point; *v.* to prick a hole.
**Pundit,** pun'dit, *n.* a man of learning.
**Pungent,** pun'jent, *adj.* biting; keen.
**Punish,** pun'ish, *v.* to enforce a penalty; to chastise.
**Punt,** *n.* a flat-bottomed boat.
**Puny,** pū'ni, *adj.* small; feeble.
**Pup,** *n.* a young dog; *v.* to give birth to puppies.
**Pupil,** pū'pil, *n.* a scholar.
**Puppet,** pup'et, *n.* a doll.
**Puppyism,** pup'i-izm, *n.* conceit.
**Purana,** pū-rā-nā, *n.* sacred Sanskrit books.
**Pure,** pūr, *adj.* unpolluted ; real.
**Purblind,** pur'blind, *adj.* short-sighted.
**Purgatory,** pur'gā-tor-i, *n.* the place wherein, the Roman Catholic faith teaches, souls are purified after death.
**Purge,** purj, *v.* to cleanse; to clear the bowels.
**Purist,** pū'rist, *n.* one who upholds purity of style.
**Purl,** *v.* to flow gently.
**Purlieu,** pur'lū, *n.* environs; district.
**Purloin,** pur-loin', *v.* to pilfer.
**Purport,** pur'port, *n.* meaning; tendency.
**Purpose,** pur-pus, *n.* aim; object.
**Purr,** pur, *v.* to murmur, as a cat.
**Purser,** pur'ser, *n.* a ship's paymaster.
**Pursue,** pur-sū', *v.* to chase; to follow.
**Pursuivant,** pur'swi-vant, *n.* a state official.
**Pursy,** purs'i, *adj.* puffy, fat.
**Purtenance,** pur'ten-ans, *n.* that which pertains to.
**Purulent,** pūr'ū-lent, *adj.* composed of pus.
**Purvey,** pur-vā', *v.* to provide; to cater.
**Purview,** pur'vū, *n.* scope; extent.
**Pus,** *n.* matter of an ulcer.
**Push,** *v.* to press; to urge; *n.* pressure.
**Pusillanimity,** pū-sil-an-im'it-i, *n.* cowardice.
**Pustule,** pus'tūl, *m.* a pimple.
**Putative,** pū'tā-tiv, *adj.* supposed; reputed.
**Putrefaction,** pū-trē-fak'shun, *n.* decomposition.
**Putrid,** pū'trid, *adj.* rotten.
**Putty,** put'i, *n.* a cement.
**Puzzle,** puz'l, *v.* to perplex; *n.* a problem; a riddle.
**Pygmean,** pig-mē'an, *adj.* dwarfish.
**Pygmy,** pig'mi, *n.* a dwarf race.
**Pyramid,** pir'a-mid, *n.* a solid, with triangular sides sloping upward to a terminating point.
**Pyre,** pīr, *n.* a pile on which corpses are burned.
**Pyriform,** pir'i-form, *adj.* pear-shaped.
**Pyrogenous,** pir-oj'e-nus, *adj.* caused by fire.
**Pyroligneous,** pi-rō-lig'nē-us, *adj.* produced by the distillation of wood.
**Pyrology,** pī'rō'lō-ji, *n.* fire-worship.
**Pyromancy,** pī'ro-man-si, *n.* divination by fire.
**Pyrometer,** pī-rom'ē-ter, *n.* an instrument for measuring heat expansion. [fireworks.
**Pyrotechnics,** pī-rō-tek'niks, *n.* the art of making

## Q

**Quack,** kwak, *n.* a medical pretender; *v.* to cry like a duck.
**Quadrangle,** kwod'rang-gl, *n.* a square bounded by buildings.
**Quadrant,** kwod'rant, *n.* fourth part of a circle.
**Quadrat,** kwod'rat, *n.* a metal space in printing.
**Quadrate,** kwod'rāt, *n.* a square.
**Quadrel,** kwod'rel, *n.* a square piece of stone, wood, or turf. [four years.
**Quadrennial,** kwod-ren'yal, *adj.* occurring every
**Quadriceps,** kwod'ri-seps, *n.* muscle between leg and thigh.
**Quadricorn,** kwod'ri-korn, *adj.* four-horned.
**Quadricycle,** kwod'ri-sī-kl, *n.* a four-wheeled cycle.
**Quadridentate,** kwod-ri-dent'-āt, *adj.* four-toothed.
**Quadrifid,** kwod'ri-fid, *adj.* four-cleft.
**Quadriform,** kwod'ri-form, *adj.* of fourfold form.
**Quadrilateral,** kwod-re-lat'er-al, *adj.* four-sided.
**Quadrille,** kwad'ril, *n.* a square dance.
**Quadrisyllable,** kwod-ri-sil'ā-bl, *n.* word of four syllables.
**Quadrumanous,** kwod-room'a-nus, *adj.* four-handed.
**Quadruped,** kwod'roo-ped, *n.* four-footed animal.
**Quadruple,** kwod-roo'pl, *v.* to multiply by four; *adj.* fourfold.
**Quaff,** kwof, *v.* to drink copiously.
**Quagmire,** kwag'mīr, *n.* boggy land; a marsh.
**Quail,** kwāl, *n.* an edible bird.
**Quaint,** kwānt, *adj.* odd; old-fashioned.
**Quake,** kwāk, *v.* to tremble. [of Friends.
**Quaker,** kwā'ker, *n.* a member of the Society
**Qualify,** kwol'i-fī, *v.* to render legal or capable.
**Quality,** kwol'it-i, *n.* character; rank; nature.
**Qualm,** kwām, *n.* nausea.
**Quandary,** kwon'dar-i, *n.* perplexity; a hard plight.
**Quant,** kwont, *n.* a pole used in boats.
**Quantity,** kwon'tit-i, *n.* amount; bulk.
**Quantum,** kwōn'tum, *n.* amount.
**Quaquaversal,** kwā-kwā-vers'al, *adj.* facing all ways.
**Quarantine,** kwor'an'ten, *n.* confinement to one place to avoid spread of infection.
**Quarl,** kwārl, *n.* fireclay covering for retorts.
**Quarrel,** kwor'el, *n.* a dispute; a brawl; a square of glass.
**Quarry,** kwor'i, *n.* a stone-pit; game pursued.
**Quartan,** kwawr'tan, *adj.* happening every fourth
**Quarter,** kwawr'ter, *n.* a fourth part. [day.
**Quarterdeck,** kwawr'ter-deck, *n.* upper deck.
**Quarterly,** kwawr'ter-li, *adj.* held every three months. [who attends to the supplies.
**Quartermaster,** kwawr'ter-mā-ster, *n.* an officer
**Quartette,** kwawr-tet', *n.* music for four parts.
**Quartz,** kwortz, *n.* rock crystal.
**Quash,** kwosh, *v.* to annul; to crush.
**Quasi,** kwā'sī, *conj.* and *adv.* as it were.
**Quassia,** kwāsh'a, *n.* tonic bark.
**Quaternion,** kwā-ter'ni-on, *n.* a set of four.
**Quatrain,** kwot'rān, *n.* a stanza of four lines.
**Quaver,** kwā'ver, *v.* to tremble; to shake the voice; *n.* a note half the length of a crochet.
**Quay,** kē, *n.* a landing-place.
**Queen,** kwēn, *n.* a saucy woman.
**Queasy,** kwē'zi, *adj.* fastidious.
**Queen,** kwēn, *n.* a female sovereign; wife of a
**Queer,** kwēr, *adj.* odd; dubious. [king.
**Quell,** kwel, *v.* to stop; to subdue.
**Quench,** kwench, *v.* to allay; to destroy.
**Querist,** kwēr'ist, *n.* a questioner.
**Quern,** kwurn, *n.* a stone for corn grinding.
**Querulous,** kwer'ū-lus, *adj.* irritable; complaining.
**Query,** kwēr'i, *n.* a question.
**Quest,** kwest, *n.* search; pursuit.
**Question,** kwest'yun, *n.* an inquiry; a debatable point.
**Queue,** kū, *n.* a tail; a file of persons.
**Quibble,** kwib'l, *n.* a cavil; an evasion.
**Quick, kwik,** *adj.* nimble; rapid; living.
**Quicklime,** kwik'lim, *n.* lime.

**Quicksand,** kwik'sand, *n.* shifting sand.
**Quickset,** kwik'set, *adj.* consisting of living shrubs.
**Quicksilver,** kwik'sil-ver, *n.* mercury.
**Quid,** kwid, *n.* a bit of chewing tobacco; slang; a sovereign.
**Quiddity,** kwid'it-i, *n.* a cavil.
**Quiddle,** kwid'l, *v.* to trifle.
**Quidnunc,** kwid-nungk', *n.* a pretender to knowledge.
**Quiescence,** kwi-es'ens, *n.* state of repose.
**Quiet,** kwi'et, *adj.* at peace; silent; still.
**Quill,** kwil, *n.* a reed; a feather-pen; *v.* to plait.
**Quilt,** kwilt, *n.* a bed cover.
**Quince,** kwins, *n.* a fruit.
**Quincentenary,** kwin'sent'en-ā-ri, *adj.* relating to 500 years; *n.* a 500th anniversary.
**Quincunx,** kwin'kungks, *n.* an arrangement of five things in a square, with one in the centre.
**Quinine,** kwin-in, *n.* an antipyretic.
**Quinnat,** kwin'at, *n.* the king-salmon.
**Quinquangular,** kwin-kwang'gū-lar, *adj.* having five angles. [every five years.
**Quinquennial,** kwin-kwen'-i-ăl, *adj.* occurring
**Quinsy,** kwin'zi, *n.* inflammation of tonsils.
**Quint,** kwint, *n.* sequence of five.
**Quintal,** kwint'al, *n.* a hundred weight.
**Quintessence,** kwint'es-ens, *n.* concentrated extract. [parts.
**Quintette,** kwin-tet', *n.* music arranged for five
**Quintuple,** kwin'tū-pl, *adj.* fivefold.
**Quip,** kwip, *n.* a *sibe*; sharp retort.
**Quire,** kwir, *n.* 24 sheets.
**Quirk,** kwirk, *n.* a quibble; a quick turn.
**Quit,** kwit, *v.* to pay; to release; to depart.
**Quitch,** kwich, *n.* couch-glass.
**Quitclaim,** kwit'klām, *n.* deed of release.
**Quite,** kwit, *adv.* completely.
**Quitrent,** kwit'rent, *n.* a rent by which other obligations are discharged.
**Quittance,** kwit'ans, *n.* a discharge from obligation.
**Quitter,** kwit'er, *n.* a hoof sore; one who deserts.
**Quiver,** kwiv'er, *v.* to tremble; *n.* a case for arrows.
**Quixotic,** kwiks-ot'ik, *adj.* absurdly romantic.
**Quiz,** kwiz, *v.* to banter; *n.* a comical fellow.
**Quoin,** koin, *n.* a corner.
**Quoits,** koits, *n.* a game with iron rings.
**Quondam,** kwon'dam, *adj.* former.
**Quop,** kwop, *v.* to move.
**Quorum,** kwō'rum, *n.* number sufficient for business.
**Quota,** kwō'tă, *n.* a proportionate part
**Quote,** kwōt, *v.* to cite.
**Quoth,** kwōth, *v.t.* said, used only when followed by its subject.
**Quotidian,** kwō-tid'i-an, *adj.* daily.
**Quotient,** kwō'shent, *n.* result of division.
**Quotum,** kwō'-tum, *n.* share; proportion.
**Quran,** ku'rān, same as Koran.

## R

**Rabate,** ra-bāt', *v.* to beat down.
**Rabbi,** rab'ī, *n.* a Jewish doctor of law.
**Rabble,** rab'l, *n.* mob.
**Rabid,** rab'id, *adj.* furious; mad.
**Raccoon,** rak-koon', *n.* a small American wild animal.
**Race,** rās, *n.* mankind; a breed; a speed contest.
**Raceme,** ra-sēm', *n.* a cluster.
**Rachis,** rā'kis, *n.* the spine.
**Racial,** rā'si-al, *adj.* relating to race.
**Raciness,** rā'si-ness, *n.* strength of flavour; spiritedness.
**Rack,** rak, *n.* an instrument of torture; framework for holding articles.
**Racket,** rak'et, *n.* clamour.
**Rack-rent,** rak'rent, *n.* rent to the utmost value.
**Raconteur,** ra-kong-ter', *n.* a narrator of stories.
**Raddle,** rad'l, *v.* to wrathe together; to intertwine.
**Radial,** rā'di-al, *adj.* pertaining to a ray or radius.
**Radiant,** rā'di-ant, *adj.* luminous; brilliant.
**Radiator,** rā-di-ā'tor, *n.* apparatus for throwing out light or heat.
**Radical,** rad'ik-al, *adj.* extreme; *n.* an ultra Liberal.
**Radicate,** rad'-e-kate, *v.* to plant deeply; to root.
**Radicle,** rad'i-kl, *n.* a small root; plant embryo.
**Radiometer,** ra-de-om'-e-ter, *n.* an instrument for measuring angles.
**Radius,** rā'di-us, *n.* semi-diameter.
**Raffle,** raf'l, *v.* to throw dice for a prize.
**Raft,** *n.* pieces of timber fastened together for floating upon.
**Rafters,** raf'ters, *n.* roof timbers.
**Ragamuffin,** rag'ă-muf-in, *n.* a low fellow.
**Rage,** rāj, *n.* excessive anger; object of desire.
**Ragged,** rag'ed, *adj.* tattered; jagged; uneven.
**Ragout,** rā-goo', *n.* a seasoned stew.
**Raid,** rād, *n.* inroad; hostile invasion for plunder.
**Rail,** rāl, *n.* a bar of metal or wood.
**Raillery,** rāl'er-i, *n.* banter. [or cars to pass over.
**Railway,** rāl'wā, *n.* a road laid with rails for trains
**Raiment,** rā'ment, *n.* clothing; vesture.
**Rainbow,** rān'bō, *n.* bow in the clouds caused by the refraction and reflection of the sun's rays.
**Rajah,** ra'ja, *n.* an Indian nobleman.
**Rake,** rāk, *n.* a garden tool; a dissolute fellow; *v.* to scrape.
**Raki,** rak'ē, *n.* a spirituous liquor drunk in the East.
**Rally,** ral'i, *v.* to unite.
**Rambling,** ram'bling, *adj.* wandering; desultory.
**Ramenta,** ra-men-'ta, *n.* thin brown scales.
**Ramification,** ram-if-ik-ā'shun, *n.* a subdivision.
**Ramose,** rā'mōs, *adj.* branching.
**Rampant,** ramp'ant, *adj.* unbridled; *n.* an heraldic term applied to figures of animals on their hind legs.
**Rampart,** ram'part, *n.* wall round a fortified place.
**Ranch,** ransh, *n.* a cattle range; stock farm.
**Rancid,** ran'sid, *adj.* sour; musty.
**Rancorous,** rangk'er-us, *adj.* malignant; spiteful.
**Random,** ran'dom, *adj.* haphazard
**Rankle,** rangk'l, *v.* to fester.
**Rankness,** rangk'nes, *n.* sourness.
**Ransack,** ran'sak, *v.* to plunder; to search through. [for freedom.
**Ransom,** ran'som, *v.* to redeem; *n.* price paid
**Ranula,** ran'-ū-la, *n.* tumour on the tongue of cattle.
**Rapacious,** rap-ā'shus, *adj.* greedy.
**Raphaelism,** raf'-ā-el-izm, *n.* the art principles of Raphael.
**Rapids,** rap'ids, *n.* rapid current in a river.
**Raploch,** rap'loh, *n.* homespun.
**Rapparee,** rap-ar-ē', *n.* a wild Irish rover.
**Rappee,** ra'pē, *n.* snuff.
**Rappel,** rā-pel', *n.* a drum call.
**Rapt,** rapt, *adj.* overcome with ecstasy.
**Rare,** rār, *adj.* uncommon.
**Rarefaction,** rā-rē-fak'shun, *n.* expansion of
**Rarefy,** rā'ri-fi, *v.* to make porous. [bodies.
**Rarity,** rā'ri-ti, *n.* an uncommon thing.
**Rascality,** ras-kal'it-i, *n.* villainy.
**Rase,** rāz, *v.* to erase; to demolish.
**Rasp,** rasp, *v.* to grate; *n.* a rough file.
**Ratable,** rā'ta-bl, *adj.* liable to be rated.
**Ratan,** rā-tan', *n.* a cane; a kind of palm.
**Ratchet,** rat'shet, *v.* check for a toothed wheel.
**Rate,** rāt, *v.* to chide; to estimate; *n.* tax; value; standard.
**Ratification,** rat-if-ik-ā'shun, *n.* sanction.
**Ratio,** rā-shi-o, *n.* rate relation of one quantity to
**Ration,** rā-shun, *n.* allowance. [another.
**Rational,** rash'un-al, *adj.* reasonable.
**Ratline,** rat'lin, *n.* a small ship's rope.
**Rat's-bane,** rats'bān, *n.* rat poison.
**Rattan,** rat'-tan, *n.* the rattle of a drum.
**Ratteen,** rat'-ēn', *n.* thick kind of woollen.
**Ratten,** rat'en, *v.* to demolish a workman's tools because of disobedience to trades-union.
**Ratting,** rat'ing, *n.* setting dogs to kill rats; deserting principles; working for lower wages than
**Rattle,** rat'l, *v.* to clatter. [others.
**Raucous,** rāw'cus, *adj.* hoarse.
**Ravel,** rav'el, *v.* to untwist.
**Ravelin,** rav'el-in, *n.* a detached fortification.
**Raven,** rā'ven, *n.* a species of crow.
**Ravenous,** rav'en-us, *adj.* greedy; hungry; voracious.
**Ravine,** rā-vēn', *n.* a gorge; hollow between hills.
**Ravish,** rav'ish, *v.* to transport with joy; to carry off by force; to violate.
**Rawhead,** raw'hed, *n.* a spectre.
**Rayah,** rā'yā, *n.* a non-Mohammedan subject of
**Raze,** rāz, same as Rase. [Turkey.
**Razor,** rā'zor, *n.* a shaving instrument.
**Re-absorb,** rē-ab-sorb', *v.* to absorb afresh.
**React,** rē-akt', *v.* to act one on another; to return an impulse.
**Reagent,** rē-ā'jent, *n.* a substance that reacts.
**Real,** rē'al, *adj.* actual; true; sincere.
**Realise,** rē'al-iz, *v.* to comprehend; to convert into money. [exists.
**Reality,** rē-al'it-i, *n.* truth; certainty; that which
**Realm,** relm, *n.* a kingdom.
**Realty,** rē'al-ti, *n.* real estate.

**Ream**, rēm, *n.* 20 quires. [the rear.
**Rearguard**, rēr'gärd, *n.* the guard that protects
**Reason**, rēz'n, *n.* intellect; the reasoning faculty; motive.
**Reassert**, rē-sert, *v.* to assert anew.
**Reassure**, rē-ă-shoor, *v.* to assure again.
**Rebatement**, rē-bāt'ment, *n.* deduction.
**Rebellion**, rē-bel'yun, *n.* sedition; opposition to established government.
**Rebuff**, rē-buf', *n.* a check; repulse.
**Rebuke**, rē-būk', *v.* to reprove; to chide.
**Rebus**, rē'bus, *n.* a riddle.
**Rebut**, rē-but', *v.* to repel.
**Recalcitrant**, rē-kal'si-trant, *adj.* refractory.
**Recantation**, rē-kan-tā'shun, *n.* the act of recanting.
**Recapitulate**, rē-kap-it'ū-lāt, *v.* to reiterate; to recall; to summarise. [back.
**Reception**, rē-kap'shun, *n.* reprisal; act of taking
**Recede**, rē-sēd', *v.* to retreat; to draw back.
**Receipt**, rē-sēt', *n.* an acknowledgment; a recipe.
**Recent**, rē-sut, *adj.* fresh, newly happened.
**Recension**, rē-sen'shun, *n.* a critical revision.
**Receptacle**, rē-sept'a-kl, *n.* a place for holding things.
**Recess**, rē-ses', *n.* a cavity; a niche; vacation.
**Recession**, rē-sesh'un, *n.* act of ceding back.
**Recherché**, rā-sher'shā, *adj.* refined; tasty; rare.
**Recipe**, res'i-pē, *n.* a prescription; formula for making up compounds of food, etc.
**Recipient**, rē-sip'i-ent, *n.* one who receives.
**Reciprocal**, rē-sip'ro-kal, *adj.* mutual; alternating.
**Reciprocate**, rē-sip'ro-kāt, *v.* to interchange; to requite.
**Reciprocity**, res-i-pros'it-i, *n.* interchange.
**Recital**, rē-sī'tal, *n.* repetition of words or music; narration.
**Reckless**, rek'les, *adj.* heedless.
**Reclaim**, rē-klām', *v.* to claim back; to recover.
**Recluse**, rē-kloos', *n.* one who lives in solitude.
**Recoct**, re-kokt, *v.* to cook over.
**Recognise**, rek'og-niz, *v.* to know.
**Recoil**, rē-koil', *v.* to rebound. [remembering.
**Recollection**, rek-ō-lek'shun, *n.* memory; act of
**Recommendation**, rek-ō-mend-ā'shun, *n.* advice; commendation.
**Recompense**, rek'om-pens, *n.* reward; remuneration. [sistent.
**Reconcile**, rek'on-sīl, *v.* to pacify; to render con-
**Recondite**, rek'on-dīt, *adj.* profound; abstruse.
**Reconnaissance**, re-kon'ā-sans, *n.* act of reconnoitring.
**Reconnoitre**, rek-on-oi'tr, *v.* to survey with a view to military operations.
**Record**, rē-kord', *v.* to enroll; to write an account of. [account.
**Record**, rek'ord, *n.* a register; a history; an
**Recorder**, rē-kord'er, *n.* a municipal judge.
**Recount**, rē-kownt', *v.* to relate.
**Recoup**, rē-koop', *v.* to indemnify.
**Recourse**, rē-kōrs', *n.* resort; application for aid.
**Recover**, rē-kuv'er, *v.* to regain.
**Recreant**, rek'rē-ant, *adj.* cowardly; mean.
**Recreation**, rek-rē-ā'shun, *n.* diversion; relaxation.
**Recrement**, rek'rē-ment, *n.* refuse. [accusation.
**Recrimination**, rē-krim-in-ā'shun, a retorted
**Recrudescent**, rē-kroo-des'ent, *adj.* growing sore again.
**Recruit**, re-kroot', *n.* a new soldier; *v.* to supply deficiency; to improve in health. [gram.
**Rectangle**, rek'tang-gl, *n.* a right-angled parallelo-
**Rectify**, rek'ti-fī, *v.* to amend. [straight lines.
**Rectilinear**, rek-ti-lin'ē-ar, *adj.* bounded by
**Rectitude**, rek'ti-tūd, *n.* integrity; uprightness.
**Rector**, rek'tor, *n.* a parish clergyman.
**Rectum**, rek'tum, *n.* the third of the large intestines.
**Recumbent**, re-kum'bent, *adj.* reclining.
**Recuperative**, re-kū'per-ā-tiv, *adj.* recovering.
**Recur**, re-kur', *v.* to return; to resort.
**Recusant**, rek'ū-zant, *n.* one who refuses to conform.
**Redactor**, re-dakt'or, *n.* an editor.
**Redden**, red'n, *v.* to make red.
**Redeemer**, rē-dē'mer, *n.* the Saviour; one who redeems.
**Redintegrate**, re-din'tē-grāt, *v.* to renew.
**Redivivus**, re-de-vī'vus, *adj.* come into existence again; restored.
**Red-letter**, red'let'r, *adj.* marked with red letters; remarkable, as a day.
**Redolent**, red'ō-lent, *adj.* diffusing a sweet odour.
**Redoubt**, re-dowt', *n.* a small outer fort.
**Redoubtable**, re-dowt'abl, *adj.* formidable.
**Redound**, re-downd', *v.* to conduce.
**Redress**, re-dres', *n.* recompense; *v.* to remedy.
**Red-hot**, redhot, *adj.* hot to the degree of redness.
**Red-tape**, red-tāp', *n.* formality; official routine.
**Reduce**, rē-dūs', *v.* to diminish; to subdue.
**Redundant**, re-dun'dant, *adj.* excessive.
**Reduplicate**, re-dū'plik-āt, *v.* to double again.
**Reef**, rēf, *n.* a chain of rocks; part of a sail.
**Reek**, rēk, *n.* smoke; vapour.
**Reel**, rēl, *v.* to dance; *n.* spool.
**Re-eligible**, rē-el'ij-ibl, *adj.* eligible again.
**Re-enactment**, rē-en-akt'ment, *n.* the act of acting afresh. [strengthen.
**Re-enforce**, rē-en-fors', *v.* to enforce again; to
**Re-export**, re-eks'port, *v.* to export again what has been imported.
**Refectory**, re-fekt'or-i, *n.* refreshment hall in monasteries and convents.
**Refer**, re-fer', *v.* to appeal; to submit to another.
**Refine**, re-fin, *v.* to purify.
**Reflect**, re-flekt', *v.* to think; to throw back.
**Reflex**, rē'fleks, *adj.* turned backward; *n.* a reflection.
**Reflorescence**, rē-flor-es'ens, *n.* reflowering.
**Refluence**, ref'loo-ens, *n.* a flowing back.
**Reform**, re-form', *v.* to change for the better.
**Reformatory**, re-form'at-ō-ri, *n.* a house of correction for juvenile offenders.
**Refract**, rē-frakt', *v.* to bend; to turn aside.
**Refractory**, re-frakt'or-i, *adj.* unruly.
**Refrain**, re-frān', *v.* to abstain.
**Refrangible**, rē-fran'jibl, *adj.* that may be refracted.
**Refresher**, re-fresh'er, *n.* fee to counsel for continued service; that which, or one who, refreshes.
**Refrigerate**, rē-frij'er-at, *v.* to make cool.
**Refuge**, ref'ūj, *n.* shelter. [alien.
**Refugee**, ref-ū-jē', *n.* one who takes refuge; an
**Refulgence**, re-ful'jens, *n.* brightness; lustre; splendour.
**Refund**, re-fund', *v.* to repay. to reimburse.
**Refurbish**, re-fur'-bish, *v.* to polish, to scour a second time.
**Refusal**, re-fū'zal, *n.* denial.
**Refuse**, ref'ūs, *n.* dregs; dross; waste matter.
**Refutation**, ref-ū-tā'shun, *n.* proof of error.
**Regal**, rē'gal, *adj.* royal.
**Regale**, rē'gāl', *v.* to refresh.
**Regalia**, rē-gāl'yā, *n.* insignia; ensigns of royalty.
**Regatta**, re-gat'ā, *n.* boat or yacht races.
**Regenerate**, re-jen'er-āt, *v.* to produce anew.
**Regent**, rē'jent, *n.* deputy ruler.
**Regicide**, rej'is-īd, *n.* murderer of a king.
**Régime**, rā-zhēm', *n.* administration; dietary.
**Regiment**, rej'i-ment, *n.* a body of soldiers.
**Register**, rej'is-ter, *n.* a list; a record.
**Registrar**, rej'is-trar, *n.* a recorder.
**Registry**, rej'is-tri, *n.* office of registration.
**Regnant**, reg'nant, *adj.* reigning.
**Regression**, rē-gresh'un, *n.* return.
**Regret**, rē-gret', *n.* sorrow; lament.
**Regular**, reg'ū-lar, *adj.* orderly; uniform; periodical. [a depth.
**Regurgitate**, rē-gur'ji-tāt, *v.* to pour back from
**Rehabilitate**, re-hab-il'it-āt, *v.* to restore.
**Rehearsal**, re-her'sal, *n.* a trial performance.
**Rehearse**, rē-hers', *v.* to repeat; to practise.
**Reign**, reyn, *n.* rule; prevalence.
**Reimbursement**, rē-im-burs'ment, *n.* act of repaying.
**Rein**, reyn, *n.* strap of a bridle; *v.* to curb.
**Reins**, reynz, *n.* the kidneys.
**Reinsure**, rē-in-shoor', *v.* to insure again.
**Reiterate**, rē-it'er-āt, *v.* to repeat often.
**Rejoinder**, rē-join'der, *n.* a reply.
**Rejuvenate**, rē-joo'ven-āt, *v.* to make young again.
**Relapse**, re-laps', *n.* a falling back; *v.* to fall back.
**Relative**, rel'ā-tiv, *adj.* having relation to.
**Relaxation**, rē-laks-ā'shun, *n.* recreation; slackening.
**Relay**, rē-lā', *n.* fresh supply; *v.* to lay again.
**Release**, re-lēs', *v.* to free; to discharge.
**Relegation**, rel-ē-gā'shun, *n.* a sending away; exile.
**Relentless**, re-lent'less, *adj.* without relenting; un-
**Relevancy**, rel'e-van-si, *n.* pertinence. [pitying.
**Reliance**, re-lī'ans, *n.* trust; confidence.
**Relic**, rel'ik, *n.* a memorial; a corpse.
**Relics**, *n. pl.* portions of bodies of saints.
**Relict**, rel'ikt, *n.* a widow.
**Relief**, re-lēf', *n.* succour; release from.
**Relievo**, rē-lē'vō, *n.* figures in relief.

**Religion, re-lij'un,** *n.* piety; belief; system of worship.
**Relinquish, re-lingk'wish,** *v.* to give up; to resign.
**Reliquary, rel'ik-wer-i,** *n.* casket for holding relics.
**Relish, rel'ish,** *v.* to enjoy; *n.* something tasty.
**Reluctance, re-luk'tans,** *n.* unwillingness.
**Remainder, re-mān'der,** *n.* what remains.
**Remand, re-mand',** *v.* to postpone; to send back.
**Remedial, re-mē'di-al,** *adj.* curative.
**Remembrancer, re-mem'bran-ser,** *n.* a memento; an exchequer officer.
**Reminiscence, rem-in-is'ens,** *n.* remembrance; a past event recalled.
**Remise, re-mīz',** *v.* to render back; to release.
**Remission, rē-mish'on,** *n.* relinquishment; relief.
**Remissness, re-mis'nes,** *n.* the act of being remiss; negligence.
**Remit, re-mit',** *v.* to pardon; to resign; to transmit.
**Remittent, re-mit'ent,** *adj.* alternately increasing and abating.
**Remnant, rem'nant,** *n.* a fragment; what is left after main part has been removed.
**Remonstrate, re-mon'strāt,** *v.* to urge against.
**Remorse, re-mors',** *n.* penitent anguish; regret.
**Removal, re-moov'al,** *n.* the act of removing.
**Remunerative, re-mū'ner-at-iv,** *adj.* lucrative; profitable.
**Renaissance, rē-nā'sans,** *n.* a new birth.
**Renal, rē'nal,** *adj.* relating to the kidneys.
**Rendering, ren'der-ing,** *n.* an impersonation; act of returning; a version.
**Rendezvous, rāng'dā-voo,** *n.* a meeting place.
**Renegade, ren'ē-gād,** *n.* an apostate; a deserter.
**Renewal, re-nū'al,** *n.* act of renewing.
**Rennet, ren'et,** *n.* inner membrane of a calf's stomach.
**Renounce, rē-nowns',** *v.* to cast off; to forsake.
**Renovate, ren'ō-vāt,** *v.* to renew.
**Rent,** rent, *n,* money received for use of property; a fissure; *v.* torn.
**Renunciation, rē-nun-si-ā'shun,** *n.* act of renouncing; abandonment.
**Repair, re-pār',** *v.* to restore.
**Repartee, rep-ar-tē',** *n.* a smart retort.
**Repeal, re-pēl',** *v.* to revoke; to rescind.
**Repeat, re-pēt',** *v.* to do again; to rehearse.
**Repeater, re-pēt'er,** *n.* anything that repeats; a striking watch.
**Repel, re-pel',** *v.* to drive back.
**Repent, re-pent',** *v.* to regret; to be penitent.
**Repertory, re-per'to-ri,** *n.* a treasury.
**Repine, re-pīn,** *v.* to murmur; to fret.
**Replenish, re-plen'ish,** *v.* to re-stock.
**Replete, re-plēt,** *adj.* full.
**Replevin, re-plev'in,** *n.* a writ to determine the legality of a seizure of goods.
**Replica, rep'li-ka,** *n.* a copy done by the original artist.
**Replication, rep-li-kā'shun,** *n.* rejoinder.
**Repone, re-pōn',** *v.* to replace.
**Reposal, re-pō'zal,** *n.* act of reposing.
**Repository, re-poz'it-ō-ri,** *n.* a store-house.
**Repoussé, rā-poo-sā',** *adj.* raised in relief by hammering.
**Reprehend, rep-re-hend',** *v.* to chide; to blame.
**Represent, rep-re-zent',** *v.* to show; to personate.
**Repress, re-pres',** *v.* to hold back.
**Reprieve, re-prēv',** *v.* to suspend a death sentence.
**[illegible]id, rep'ri-mand,** *v.* to reprove.
**re-pri'zal,** *n.* seizure in retaliation.
**[illegible], re-prōch,** *v.* to censure, to contemn.
**Reprobate, rep'rō-bāt,** *n.* a depraved person; *v.* to
**Reproof, re-proof',** *n.* censure. [disapprove.
**Reptile, rep'til,** *n.* a crawling animal.
**Republic, re-pub'lik,** *n.* a commonwealth; state governed without a sovereign.
**Repudiation, re-pū-di-ā'shun,** *n.* a rejection; disclamation.
**Repugnant, re-pug'nant,** *adj.* offensive; hostile.
**Repulse, re-puls',** *v.* to repel; to force back.
**Repute, re-pūt',** *n.* good character; *v.* to hold in esteem.
**Request, re-kwest',** *v.* to ask; to solicit.
**Requiem, rē'kwi-em,** *n.* a mass for the dead.
**Requirement, re-kwīr'ment,** *n.* demand; thing re-
**[illegible]d.**
**[illegible], rek'wiz-it,** *adj.* necessary; needful.
**[illegible], re-kwi'tal,** *n.* recompense.
**[illegible]se, rēr'mows,** *n.* a bat.
**Rescind, rēsind',** *v.* to repeal.
**Rescission, re-sizh'un,** *n.* the act of rescinding.
**Rescript, rē'skript,** *n.* an edict.
**Rescue, res'kū,** *v.* to save; to deliver.
**Research, rē-serch',** *n.* investigation.
**Resent, rē-zent',** *v.* to resist; to be angered at.
**Reservation, rez-er-vā'shun,** *n.* a proviso; reserved land. [retain.
**Reserve, re-serv',** *n.* caution; coldness; *v.* to
**Reservoir, rez'er-vwawr,** *n.* place where water is collected.
**Residence, res'id-ens,** *n.* a dwelling.
**Residuum, re-zid'ū-um,** *n.* the residue; what remains. [mission.
**Resignation, rez-ig-nā'shun,** *n.* patience; sub-
**Resile, re-zil',** *v.* to recoil; to leap from.
**Resilience, re-zil'-e-ens,** *n.* the act of springing back; elasticity.
**Resin, rēz'in,** *n.* a substance exuded from certain
**Resistance, re-zis'tans,** *n.* opposition. [trees.
**Resolute, rez'ō-lūt,** *adj.* determined; fixed.
**Resolve, re-zolv',** *v.* to decide; to analyse.
**Resonance, rez'ō-nans,** *n.* sonority; reverberation.
**Resort, re-zort',** *n.* place much frequented; *v.* to have recourse.
**Resource, re-zors',** *n.* expedient; source of aid;
**Respect, res-pekt',** *n.* regard; esteem. [means.
**Respirator, res'pir-ā-tor,** *n.* an apparatus to breathe through in bad weather.
**Respite, res'pit,** *n.* delay; suspension of punishment.
**Resplendent, res-plen'dent,** *adj.* glowingly bright.
**Respond, res-pond',** *v.* to reply.
**Responsible, res-pon'sibl,** *adj.* accountable.
**Responsions, res-pon'shuns,** *n.* the University "little go."
**Responsive, res-pons'iv,** *adj.* answering.
**Restaurateur, res-tō'rā-ter,** *n.* a restaurant keeper
**Restitution, res-ti'tū'shun,** *n.* restoration of rights.
**Restive, res'tiv,** *adj.* stubborn; unwilling.
**Restoration, res-to-rā'shun,** *n.* recovery.
**Restraint, re-strānt',** *n.* repression.
**Restriction, re-strik'shun,** *n.* restraint; limitation.
**Resultant, re-zult'ant,** *n.* the thing resulting.
**Resume, re-zūm',** *v.* to begin again. [the dead.
**Resurrection, rez-ur-ek'shun,** *n.* a raising from
**Resuscitate, re-sus'it-āt,** *v.* to revive; to restore.
**Retail, rē-tāl',** *v.* to sell in detail to consumers.
**Retainer, rē-tān'er,** *n.* an attendant; advance fee paid to secure services.
**Retaliate, re-tal'i-āt,** *v.* to strike back.
**Retard, re-tārd',** *v.* to delay; to hinder.
**Retch, rech,** *n.* ineffectual attempt to vomit.
**Retention, re-ten'shun,** *n.* act of retaining.
**Reticence, ret'i-sens,** *n.* reserve; silence.
**Reticular, ret-ik'ū-lar,** *adj.* like network.
**Retina, ret'i-nā,** *n.* the inner coating of the eye.
**Retinue, ret'in-ū,** *n.* body of retainers.
**Retort, re-tort',** *v.* to answer back sharply.
**Retort, re-tort',** *n.* a chemical vessel.
**Retraction, re-trak'shun,** *n.* withdrawal.
**Retreat, re-trēt',** *n.* place of retirement; act of retiring; *v.* to draw back.
**Retrenchment, re-trench'ment,** *n.* curtailment.
**Retribution, ret-ri-bū'shun,** *n.* requital.
**Retrievable, re-trēv'abl,** *adj.* that may be regained.
**Retrocede, rē-trō-sēd',** *v.* to go back; to give back.
**Retrograde, ret'rō-grād,** *adj.* going backward.
**Retrospect, ret'rō-spekt,** *n.* view of past scenes.
**Reunion, rē-ūn'yun,** *n.* union after separation.
**Reveal, re-vēl',** *v.* to show; to make known.
**Revel, rev'el,** *n.* a boisterous feast.
**Revelation, rev-el-ā'shun,** *n.* disclosure.
**Revenge, re-venj',** *n.* vengeance; desire for retaliation; *v.* to injure in retaliation.
**Revenue, rev'ē-nū,** *n.* income, especially of a State.
**Reverberate, re-ver'ber-āt,** *v.* to resound; to echo.
**Revere, re-vēr',** *v.* to adore; to respect.
**Reverie, rev'er-i,** *n.* a day dream; meditation.
**Reverse, re-vers',** *n.* misfortune; *adj.* turned backward; *v.* to turn in the opposite direction.
**Reversion, re-ver'shun,** *n.* succession in expectancy. [facing.
**Revetment, re-vet'ment,** *n.* a retaining wall or
**Review, re-vū,** *n.* an inspection; a periodical; *v.* to inspect; to consider again.
**Revile, re-vīl',** *v.* to reproach; to defame.
**Revise, re-vīz',** *v.* to examine and correct.
**Revive, re-vīv',** *v.* to re-animate; to refresh.
**Revocable, rev'o-ka-bl,** *adj.* that can be revoked.
**Revolt, re-volt',** *n.* act of rebellion; *v.* to rebel; to turn away.
**Revolution, rev-ō-lū'shun,** *n.* a sweeping governmental change; a motion round a centre.
**Revolver, re-vol'ver,** *n.* a pistol with revolving barrel.

**Revulsion,** re-vul'shun, *n.* disgust; repugnance.
**Rhadamanthine,** rad-ă-man'thin, *adj.* judicially inflexible.
**Rhapsody,** rap'sŏ-dĭ, *n.* a rambling discourse or writing.
**Rhenish,** ren'ish, *adj.* pertaining to the Rhine.
**Rhetoric,** ret'ŏ-rik, *n.* elegance of form in speaking or writing.
**Rheum,** room, *n.* fluid secreted by the glands.
**Rhino,** rī'no, *n.* slang for money.
**Rhinoceros,** rī-nŏs'er-us, *n.* huge African mammal.
**Rhinoscope,** rī'no-skōp, *n.* an instrument for examining the nose.
**Rhomb,** rom, *n.* a figure of four equal sides but unequal angles.
**Rhomboid,** rom'boid, *n.* a figure like a rhomb, but with the opposite sides only equal.
**Rhyme,** rīm, *n.* verse with accordant sounds of the line endings.
**Rhythm,** rĭ*th*m, *n.* a measured arrangement of words according to sound.
**Rialto,** rē-al'tō, *n.* an old Venetian exchange; a bridge over the Grand Canal.
**Ribaldry,** rib'ald-rĭ, *n.* obscurity; scurrility.
**Ribbon,** rib'on, *n.* a narrow strip of silk.
**Rick,** rik, *n.* a pile of hay or straw.
**Rickets,** rik'ets, *n.* a children's disease.
**Ricochet,** rik-o-shā', *n.* rebounding shot.
**Riddance,** rid'ans, *n.* deliverance; a moving away.
**Riddle,** rid'l, *n.* a puzzle; a sifter; *v.* to solve.
**Ridge,** rij, *n.* an elevation; an upper protuberance.
**Ridicule,** rid'ik-ūl, *n.* derision.
**Rife,** rīf, *adj.* abounding.
**Riff-raff,** rif-răf, *n.* the rabble.
**Rifle,** rī'l, *n.* a gun with grooved bore.
**Rift,** rift, *n.* a cleft; a fissure.
**Righteous,** rīt'yus, *adj.* upright; virtuous.
**Rightful,** rīt'ful, *adj.* just; legal; proper.
**Rigid,** rij'id, *adj.* stiff; severe; exact.
**Rigmarole,** rig'mă-role, *n.* nonsense; confused statement.
**Rigorous,** rig-or-us, *adj.* severe.
**Rill,** ril, *n.* a small brook.
**Rime,** rīm, *n.* hoar-frost.
**Rind,** rind, *n.* skin of fruit; bark.
**Rinderpest,** rin'der-pest, *n.* an infectious cattle disease.
**Ringbolt,** ring'bolt, *n.* a ring through the head of a bolt.
**Ringleader,** ring'lē'dr, *n.* leader of a gang.
**Ringlet,** ring'let, *n.* a curl.
**Ringworm,** ring'worm, *n.* a skin disease.
**Rinse,** rins, *v.* to cleanse with water.
**Riotous,** rī'o-tus, *adj.* tending to riot.
**Riparian,** rip-ā'rĭ-an, *adj.* pertaining to a river bank.
**Ripen,** rī'pen, *v.* to mature.
**Rippling,** rip'ling, *adj.* in ripples.
**Risible,** riz'ibl, *adj.* causing laughter.
**Ritual,** rit'ū-al, *n.* formula; ceremonial; book of religious rites.
**Rival,** rī'val, *n.* a competitor.
**Rivet,** riv'et, *n.* a one-headed bolt that is fastened by having its other end hammered to a head.
**Road-hog,** rōd'-hog, *n.* a reckless motorist or cyclist.
**Road-stead,** rōd'sted, *n.* place near shore where ships can anchor.
**Roan,** rōn, *adj.* dark variegated colour.
**Robbery,** rob'er-ĭ, *n.* theft.
**Robust,** rō'bust, *adj.* strong; hardy.
**Rochet,** rŏch'et, *n.* a vestment worn by bishops.
**Rocket,** rok'et, *n.* a firework projectile.
**Rococo,** ro-kō'ko, *adj.* an architectural style full of ornamental details.
**Rod,** rod, *n.* a twig; a pole; 5½ yards.
**Rodent,** rō'dent, *n.* a gnawing mammal; *adj.* gnawing.
**Roe,** rō, *n.* eggs of fish; female deer.
**Rogation,** rō-gā'shun, *n.* the litany; supplication.
**Roguery,** rō'ger-ĭ, *n.* fraud; mischief.
**Roil,** roil, *v.* to disturb or stir up.
**Rôle,** rōl, *n.* part sustained by an actor.
**Rollicking,** rol'ik-ing, *adj.* sportful; frolicsome.
**Romance,** rō-mans', *n.* an exciting fiction.
**Romanesque,** rō-man-esk', *adj.* pertaining to romance; architectural style.
**Romantic,** ro-man'tik, *adj.* sentimental; fanciful.
**Romp,** romp, *n.* a frolicsome girl; a game.
**Rondeau,** ron'dō, *n.* a special form of poem.
**Rondle,** ron'-dle, *n.* a small circular tower built at the foot of a fort.
**Rood,** rood, *n.* quarter of an acre; the figure of the cross.
**Rookery,** rook'er-ĭ, *n.* collection of rooks' nests; a crowded lot of old buildings.
**Rool,** rool, *v.* to ruffle.
**Roost,** roost, *v.* to perch; *n.* a perch.
**Root,** root, *n.* the part of a plant which is embedded in the earth and draws sap from the soil.
**Ropewalk,** rōp'wawk, *n.* place where ropes are made.
**Ropy,** rō-pĭ, *adj.* stringy.
**Roseate,** ro'zē-āt, *adj.* blooming; rosy.
**Rosebud,** rōz'bud, *n.* the bud of a rose.
**Rosette,** ro-zet', *n.* a ribbon rose.
**Rosewater,** rōz'waw-ter, *n.* water tinctured with rose essence.
**Roster,** ros'ter, *n.* a list of persons selected for duty.
**Rostral,** ros'tral, *adj.* beak-like.
**Rostrum,** ros'trum, *n.* a sale platform.
**Rosy,** rō-zĭ, *adj.* red; rose-lined; of good promise.
**Rot,** rot, *v.* to putrefy; to decompose.
**Rotary,** rō'tar-ĭ, *adj.* revolving.
**Rote,** rōt, *n.* repeating from memory.
**Rotunda,** rō-tun'dă, *n.* a round house.
**Rotundity,** rō-tun'dĭ-tĭ, *n.* roundness.
**Rouble,** rōo'bl, *n.* a Russian coin.
**Roué,** roo-ā', *n.* a fashionable profligate.
**Rouge,** rooj, *n.* face-colouring powder.
**Rough,** ruf, *adj.* uneven; coarse.
**Rough-cast,** ruf'kast, *adj.* rude; *n.* plaster mixed with gravel.
**Rough-shod,** ruf'shod, *adj.* having shoes armed with points.
**Roulade,** roo-lăd', *n.* a musical embellishment.
**Round,** round, *adj.* circular; globular; plump.
**Roundelay,** rown'de-lā, *n.* an ancient song.
**Roundrobin,** round-rob'in, *n.* a writing signed in circular form so that one name does not have a more prominent position than another.
**Rout,** rowt, *n.* a rabble; an assembly; a defeat.
**Route,** root, *n.* course; road.
**Routine,** roo-tēn', *n.* the regular course.
**Row,** rō', *v.* to propel by oars.
**Row,** rā'ow, *n.* a noise; a quarrel.
**Rowdyism,** ra'ow'dĭ-izm, *n.* rude conduct.
**Rowel,** row'el, *n.* the wheel of a spur.
**Rowlock,** rō'lok, *n.* an oar rest.
**Royalist,** roĭ'al-ist, *n.* an adherent to a king.
**Royalty,** roĭ'al-tĭ, *n.* a kingship.
**Rubato,** roo-ba'-to, *adj.* lengthening some notes at the expense of others.
**Rubber,** rub'ber, *n.* product of caoutchouc; stage in a card game.
**Rubbish,** rub'ish, *n.* refuse; waste material.
**Rubble,** rub'l, *n.* small undressed stones.
**Rubicon,** roobĭ'con, *n.* a famous river.
**Rubicund,** roo'bĭ-kund, *adj.* red.
**Rubidium,** roo-bid'ĭ-um, *n.* a white metallic element.
**Rubric,** roo'brik, *n.* service directions in prayer-books.
**Ruby,** roo'bĭ, *n.* a precious stone.
**Ructation,** ruk-ta'shun, *n.* the act of belching.
**Rudder,** rud'er, *n.* a helm.
**Ruddy,** rud'ĭ, *adj.* red.
**Rudimental,** roo-dĭ-mental', *adj.* elementary.
**Rue,** roo, *v.* to regret.
**Ruff,** ruf, *n.* a plaited cloth worn round the neck.
**Ruffian,** ruf'ĭ-an, *n.* a brutal fellow.
**Ruffle,** ruf'l, *v.* to agitate; to annoy; to form like a ruff.
**Rug,** rug, *n.* a traveller's knee-wrap.
**Rugged,** rug'ed, *adj.* rough; stormy.
**Ruinous,** roo'inus, *adj.* destructive.
**Rule,** rool, *n.* government; minor order.
**Rum,** rum', *n.* a strong liquor; *adj.* queer, comical.
**Rumbling,** rum'bling, *n.* a low continuous sound.
**Ruminant,** roo'min-ant, *n.* a cud-chewing animal.
**Rump,** rump, *n.* the buttocks.
**Rumple,** rump'l, *v.* to wrinkle; to crush.
**Runagate,** run'a-gāt, *n.* a vagabond; a wanderer.
**Runaway,** run'ă-wā, *n.* a fugitive.
**Rundle,** run'dl, *n.* rung of a ladder; a bull.
**Runlet,** run'let, *n.* a small cask.
**Rupee,** roo-pē, *n.* an Indian coin.
**Rupture,** rup'tŭr, *v.* to fracture; *n.* hernia.
**Rural,** roo'ral, *adj.* rustic.
**Ruse,** rooz, *n.* a trick.
**Rush,** rush, *n.* a marsh plant.
**Russet,** rus'et, *adj.* reddish brown.
**Rustic,** rus'tik, *adj.* rural.
**Rustle,** rus'l, *v.* to make a *soft* sound; to hasten.
**Rusty,** rust'ĭ, *adj.* covered with rust.
**Rut,** rut, *n.* the track of a wheel.
**Ruthless,** roo*th*'les, *adj.* pitiless.
**Rye,** rī, *n.* a kind of grain.
**Ryot,** rī'ot, *n.* a Hindu tiller of the soil.

# S

**Sabbatarian,** sab-ba-ta'ri-an, *n.* one who strictly observes Sunday as the Sabbath.
**Sabbath,** sab'ath, *n.* day of rest. *See* General Information.
**Sable,** sā'bl, *n.* an animal of the weasel species; *adj.* black; of sable fur.
**Sabot,** sā-bō', *n.* a wooden shoe.
**Sabre,** sā'br, *n.* a broad-bladed sword.
**Sabulous,** sab'ū-lus, *adj.* sandy, gritty.
**Saccharite,** sak'ā'rit, *n.* a fine kind of feldspar.
**Sachem,** sā'chem, *n.* an American Indian chief.
**Sachet,** sa-chā, *n.* a bag of perfume.
**Sack,** sak, *n.* a coarse bag; a loose garment.
**Sackbut,** sak'but, *n.* a wind instrument
**Sackcloth,** sak'kloth, *n.* a coarse cloth.
**Sacrament,** sak'rā-ment, *n.* the eucharist.
**Sacrifice,** sak'ri-fis, *v.* to kill and offer up to God, to yield up with loss. [sacred things.
**Sacrilegious,** sak-ril-ē'jus, *adj.* profane; violating
**Sacrist,** sā'krist, *n.* a sacristan; a sexton.
**Saddle,** sad'l, *n.* a rider's seat.
**Sadiron,** sad'I-urn, *n.* a smoothing-iron.
**Safety-valve,** sāf'ti-valv, *n.* valve of a steam boiler to obviate bursting.
**Sag,** sag, *v.* to bend; to give way.
**Saga,** sā'ga, *n.* a general name of those old-time compositions which embrace the history and mythology of the Northern European races.
**Sagacious,** sā-gā'shus, *adj.* shrewd; of ready perception.
**Sage,** sāj, *adj.* wise; discreet; *n.* a wise man; a herb.
**Sagittaria,** saj-it-ā'ri-ā, *n.* a species of aquatic plants.
**Sagum,** sā'gum, *n.* a Roman military cloak.
**Sail-loft,** sāl'loft, *n.* loft where sails are made.
**Sainfoin,** sān'foin, *n.* a fodder plant.
**Saint,** sānt, *n.* an eminently pious person.
**Salaam,** sā-lām', *n.* Mahommedan word of salutation; homage; *v.* to make the salaam.
**Salamander,** sal'ā-man-der, *n.* a striped yellow and black amphibian.
**Salary,** sal'ar-I, *n.* wages; stipend.
**Salient,** sā'lI-ent, *adj.* prominent.
**Saline,** sā'lIn, *adj.* salty.
**Saliva,** sal-I'vā, *n.* spittle.
**Salivary,** sal'I-var-I, *adj.* pertaining to saliva.
**Sallow,** sal'ō, *adj.* pale yellow.
**Sally,** sal'I, *n.* a sudden rush out, as of troops; witty ebullition; *v.* to rush out suddenly.
**Salmagundi,** sal-mā-gun'dI, *n.* a pot-pourri.
**Salon,** sā-long', *n.* a reception room.
**Saloon,** sā-loon', *n.* a large hall.
**Saltant,** sal'tant, *adj.* leaping, dancing.
**Salubrious,** sal-oo'brI-us, *adj.* healthful; wholesome.
**Salutary,** sal'ū-tar-I, *adj.* wholesome, beneficial.
**Salvage,** sal'vaj, *n.* that which is saved; reward for saving a ship or cargo at sea.
**Salvation,** sal'vā'shun, *n.* redemption; deliverance.
**Salver,** sal'ver, *n.* a small tray.
**Salvo,** sal'vo, *n.* a salute with guns; an exception.
**Salvor,** sal'vor, *n.* one who saves cargo.
**Sambo,** sam'bo, *n.* a negro.
**Samiel,** sā'mi-el, *n.* an Arabian simoon.
**Sampler,** sam'pler, *n.* one who samples; a piece of embroidery.
**Sanatory,** san'ā-to-rI, *adj.* conducive to health.
**Sanctify,** sangk'ti-fI, *v.* to make holy.
**Sanction,** sangk'shun, *n.* ratification; *v.* to ratify; to confirm.
**Sanctity,** sangk'tit-I, *n.* holiness; piety.
**Sanctum,** sangk'tum, *n.* a sacred place.
**Sand,** sand, *n.* fine strong particles.
**Sandal,** san'dal, *n.* a loose slipper.
**Sandix,** san'dIks, *n.* red lead.
**Sangfroid,** sang-frwo', *n.* coolness; self-possession; indifference.
**Sanguine,** sang-gwin', *adj.* hopeful; confident.
**Sanguineous,** sang-gwin'ē-us, *adj.* abounding in blood.
**Sanidine,** san'I-dIn, *n.* a variety of orthoclase.
**Sanitarium,** san-it-ā'ri-um, *n.* a health institution.
**Sanitary,** san'it-ar-I, *adj.* hygienic.
**Sanity,** san'it-I, *n.* saneness; soundness of mind.
**Sans,** sanz, *prep.* without.
**Sapient,** sā'pI-ent, *adj.* wise.
**Sapling,** sap-ling, *n.* a young tree.
**Saponaceous,** sap-o-nā'shus, *adj.* soapy.
**Saporific,** sap-o-rif'ik, *adj.* imparting flavour.
**Sapphire,** saf'Ir, *n.* a blue precious stone.
**Saracen,** sar'ā-sen, *n.* an Arab of the Middle Ages.
**Sarafan,** sar'a-fan, *n.* a gala dress.
**Sarcasm,** sār'kasm, *n.* a scornful remark; irony.
**Sarcenet,** sār-sē-net', *n.* a kind of fine silk.
**Sarcoma,** sār-kō'ma, *n.* kind of tumour.
**Sarcosis,** sār-kō'sis, *n.* a fleshy tumour.
**Sardonic,** sār-don'ik, *adj.* bitter; forced; malignant, as laughter.
**Sartorial,** sār-tō'rI-al, *adj.* relating to tailoring.
**Satanic,** sa-tan'ik, *adj.* devilish.
**Satchel,** sach'el, *n.* a small hand-bag.
**Satellite,** sat'el-It, *n.* a small star, one of a group attendant upon a planet; an obsequious follower.
**Satiety,** sā-tI'et-I, *n.* surfeit.
**Satin,** sat'in, *n.* a thick lustrous kind of silk.
**Satinet,** sat-in-et', *n.* a thin kind of satin.
**Satire,** sat-Ir, *n.* literary ridicule; spoken ridicule.
**Satisfy,** sat'is-fI, *v.* to gratify; to supply to the full.
**Saturate,** sat'ū-rāt, *v.* to fill to excess; to soak.
**Saturnalia,** sat-ur-nā'lI-ā, *n.* unrestricted revelry.
**Saturnine,** sat'ur-nIn, *adj.* gloomy; sad.
**Satyr,** sā'ter, *n.* a sylvan god, part god and part man.
**Saucy,** saw'sI, *adj.* pert; mischievous; insolent.
**Sault,** sawlt, *n.* an assault, a leap.
**Saunter,** sawn'ter, *v.* to lounge around; to stroll.
**Sausage,** saw'sāj, *n.* chopped meat stuffed into a skin. [barian.
**Savage,** sav'āj, *adj.* uncivilized; wild; *n.* a bar-
**Savant,** sav-ang', *n.* a learned person.
**Saviour,** sāv'yer, *n.* one who saves; Jesus.
**Savour,** sā'vor, *n.* flavour; taste.
**Saw,** saw, *n.* a saying.
**Sawyer,** saw'yer, *n.* one who saws.
**Scabbard,** skab'ard, *n.* sword sheath.
**Scabious,** skā'bi-us, *adj.* scabby.
**Scabrous,** skā'brus, *adj.* rough; harsh; covered with small points.
**Scaffold,** skaf'old, *n.* a temporary wooden erection; platform upon which criminals are put to death.
**Scaglıola,** skal-yō'lā, *n.* imitation marble.
**Scalade,** skā-lād', *n.* an escalade.
**Scald,** skwald, *v.* to burn with a hot liquid; *n.* an ancient Scandinavian poet.
**Scale,** skāl, *n.* a balance; covering of fish; *v.* to climb.
**Scalene,** skā-lēn', *adj.* having three unequal sides.
**Scallop,** skol'up, *n.* an oyster-like bivalve with sinuous ridges; a shallow dish.
**Scalp,** skalp, *n.* outer covering of the skull; *v.* to cut off the scalp.
**Scalpel,** skal'pel, *n.* surgical knife.
**Scamillus,** ska-mil'-us, *n.* an unmoulded block placed beneath the pedestal of a statue.
**Scan,** skan, *v.* to scrutinise; to count poetic feet.
**Scandalise,** skan'dal-Iz, *v.* to shock; to disgrace.
**Scant,** skant, *adj.* meagre; insufficient.
**Scantling,** skant'ling, *n.* a small piece of wood.
**Scanty,** skan'tI, *adj.* small; narrow; not full.
**Scape-goat,** skāp'gōt, *n.* one who is made to answer for the defaults of another.
**Scapular,** skap'ū-lar, *adj.* relating to the shoulder.
**Scar,** skār, *n.* mark left by wound; a cicatrice; a rugged bank.
**Scarcity,** skār'sit-I, *n.* deficiency; rareness.
**Scarecrow,** skār'krō, *n.* an effigy or thing put up to frighten away birds.
**Scarf,** skārf, *n.* a loose garment for neck or shoulders; a cravat.
**Scarfskin,** skārf'-skin, *n.* the surface skin.
**Scarify,** skar'I-fI, *v.* to scratch and cut the skin.
**Scarp,** skārp, *n.* a steep stone.
**Scathing,** skayth'-ing, *adj.* withering; destroying.
**Scathless,** skā*th*'les, *adj.* unharmed.
**Scavenger,** skav'en-jer, *n.* a street cleaner.
**Scenery,** sē'ner-I, *n.* natural landscape; painted representations on the stage.
**Sceptre,** sep'tr, *n.* staff borne by monarchs as emblem of supreme authority.
**Schedule,** shed'ūl, *n.* a list; an inventory.
**Schemer,** skē'mer, *n.* one who schemes.
**Schism,** sizm, *n.* church disunion.
**Scholar,** skol'ar, *n.* a student; a learned man.
**Scholastic,** skol-as'tik, *adj.* relating to schools.
**Scholiast,** skō'-le-ast, *n.* an ancient annotator of classical notes.
**Schooner,** skoo'ner, *n.* a two-masted vessel.
**Science,** sI'ens, *n.* classified knowledge.
**Scimitar,** sim'it-ār, *n.* a curved Turkish sword.

**Scintillation,** sin-til-ā'shun, *n.* the act of sparkling; a twinkling shining.
**Scion,** sī'on, *n.* an offshoot; a descendant.
**Scirtopod,** sir'to-pod, *adj.* fitted for leaping.
**Scissors,** siz'ors, *n.* a clipping instrument.
**Sconce,** skons, *n.* a candlestick; a fort; a skull.
**Scorify,** skor'if-ī, *v.* to reduce to scoria.
**Scoriæ,** skor'iē, *n.* volcanic ashes.
**Scorn,** skorn, *n.* contempt; disdain.
**Scot-free,** skot'frē, *adj.* free from payment.
**Scotia,** skō'shi-ā, *n.* Scotland. [graceful conduct.
**Scoundrelism,** skown'drel-izm, *n.* baseness; dis-
**Scourge,** skurj, *n.* a whip made for punishing purposes; *v.* to whip excessively.
**Scout,** skowt, *n.* one sent out to watch the operations of an enemy; *v.* to reject.
**Scow,** skow, *n.* a flat-bottomed boat.
**Scowl,** skowl, *v.* to wrinkle the brows in anger; to frown deeply.
**Scrabble,** skrab'l, *v.* to scrawl.
**Scraggy,** skrag'i, *adj.* lean; bony; rough.
**Scramble,** skram'bl, *v.* to clutch eagerly; to climb.
**Scranch,** skranch, *v.* to crunch.
**Scratch,** scrach, *v.* to rub with the nails; to tear the surface. [marks.
**Scrawl,** skrawl, *v.* to scribble; to make rough
**Scrawny,** skraw'ni, *adj.* raw-boned.
**Screech,** skrēch, *v.* to scream; to cry in shrill tone.
**Screed,** skrēd, *n.* a shred; a piece of wood used for levelling plaster.
**Screen,** skrēn, *n.* anything which shelters or conceals. [screw.
**Screw,** skroo, *n.* a spiral nail; *v.* to fasten with a
**Scribe,** skrīb, *n.* a writer.
**Scrip,** skrip, *n.* a wallet; certificate of shares.
**Script,** skript, *n.* type in imitation of writing.
**Scriptural,** skript'ū-ral, *adj.* according to the Scriptures. [contracts.
**Scrivener,** skriv'en-er, *n.* one who draws up
**Scrofulous,** skrof'ū-lus, *adj.* afflicted with scrofula.
**Scroll,** skrōl, *n.* a writing that can be rolled up; an architectural ornament.
**Scrubby,** skrub'i, *adj.* mean; stunted.
**Scruff,** skruff, *n.* nape of the neck.
**Scruple,** skroo'pl, *n.* conscientious hesitation; 20 grains.
**Scrutinise,** skroo'tin-īz, *v.* to examine minutely.
**Scruto,** skroo'to, *n.* a movable stage-trap.
**Scud,** skud, *v.* to call or run swiftly.
**Scull,** skul, *n.* a short oar; a boat; *v.* to propel by oars.
**Scullery,** skul'er-i, *n.* place for kitchen utensils.
**Scullion,** skul'yun, *n.* an inferior kitchen servant.
**Sculptor,** skulp'tor, *n.* a carver in stone or wood.
**Scum,** skum, *n.* refuse; froth.
**Scupper,** skup'er, *n.* a hole through which water is run off from a ship's deck.
**Scuppet,** skup'et, *n.* a shovel.
**Scurf,** skurf, *n.* dry scale.
**Scurrilous,** skur'il-us, *adj.* abusive; vulgar.
**Scut,** skut, *n.* the short tail of a rabbit.
**Scutiform,** skū'ti-form, *adj.* formed like a shield.
**Scuttle,** skut'l, *v.* to sink a ship by cutting holes in it.
**Scythe,** sith, *n.* a grass cutting tool; a sickle.
**Sea,** sē, *n.* a large body of salt water.
**Sea-borne,** sē'born, *adj.* carried by sea.
**Seal,** sēl, *n.* an aquatic animal; a stamp with device; *v.* to affix a seal.
**Seam,** sēm, *n.* a joining where two edges are stitched together; a vein of mineral.
**Seamstress,** sēms'tres, *n.* a needlewoman.
**Seance,** sā'ãngs, *n.* public gathering.
**Sea-pie,** sē'pī, *n.* a dish of meat and paste.
**Sear,** sēr, *v.* to scorch; to cauterise.
**Sea-room,** sē'room, *n.* the open sea.
**Season,** sē'zn, *n.* a period of time; *v.* to make tasty.
**Sebaceous,** sē-bā'shus, *adj.* pertaining to fat.
**Secant,** sē'kant, *adj.* cutting; dividing into two parts.
**Secco,** sek'ko, *n.* a fresco in which the colours look as though they have been sunk into the plaster. [out; separate.
**Secede,** se-seed', *v.* to withdraw from union; go
**Secession,** sē-sesh'on, *n.* separation.
**Seclude,** sē-klood', *v.* to place in retirement.
**Second,** sek'und, *adj.* next after the first; inferior; *n.* one who supports; the 60th part of a minute.
**Secondary,** sek'un-da-ri, *adj.* subordinate.
**Secrecy,** sē'kres-i, *n.* privacy.
**Secretary,** sek're-tar-i, *n.* one employed to write; a chief departmental officer.
**Secrete,** sē-krēt', *v.* to hide.
**Sectarianism,** sek-ta'ri-an-izm, *n.* sect devotion.
**Sector,** sek'tor, *n.* a mathematical instrument.
**Secular,** sek'ū-lar, *adj.* temporal; worldly.
**Security,** sē-kū'rit-i, *n.* safety; a thing pledged.
**Sedan,** sē-dan', *n.* a portable chair-conveyance.
**Sedate,** sē-dāt', *adj.* calm; quiet.
**Sedentary,** sed'en-tā-ri, *adj.* inactive; sitting.
**Sedge,** sej, *n.* a coarse grass.
**Sedimentary,** sed-i-men'tār-i, *adj.* relating to sediment.
**Seditious,** sē-dish'us, *adj.* connected with sedition.
**Seduce,** sē-dūs', *v.* to allure; to entice from virtue.
**Sedulous,** sed'ū-lus, *adj.* diligent; assiduous.
**See,** sē, *n.* a diocese; *v.* to behold.
**Seedling,** sēd'ling, *n.* a plant from the seed.
**Seemingly,** sēm'ing-li, *adv.* in appearance.
**Seemly,** sēm'li, *adj.* proper; becoming.
**Seesaw,** sē'saw, *n.* an up and down movement.
**Seethe,** sēth, *v.* to boil; to concoct.
**Seggar,** seg'ar, *n.* clay shell in which fine pottery is baked.
**Segment,** seg'ment, *n.* a section.
**Segregate,** seg'rē-gāt, *v.* to separate.
**Seigniory,** sēn'yor-i, *n.* dominion; lordship; manor.
**Seismic,** sīs'mik, *adj.* pertaining to earthquake.
**Seismometer,** sīs'mom'ē-ter, *n.* an apparatus for measuring earth tremors.
**Seizin,** sē'zin, *n.* possession.
**Seizure,** sēz'ūr, *n.* the act of seizing.
**Select,** sē-lekt', *adj.* choice; *v.* to choose.
**Selenography,** sē-lē-nog'raf-i, *n.* description of the moon. [gratification.
**Self-denial,** self-de-nī'al, *n.* denial of personal
**Selfishness,** sel'fish-nes, *n.* absorption in self-interest.
**Self-love,** self'love, *n.* love of one's self.
**Self-will,** self'wil, *n.* wilfulness; obstinacy.
**Selvage,** sel'vāj, *n.* edge of cloth.
**Semaphore,** sem'ā-fōr, *n.* a signalling apparatus.
**Sematology,** sē-mat-ol'ō-ji, *n.* the science of verbal signs.
**Semblance,** sem'blans, *n.* likeness.
**Semese,** se-mēs', *adj.* half-eaten.
**Semibreve,** sem'i-brēv, *n.* the longest note in music.
**Semicolon,** sem'i-kō-lon, *n.* a punctuation mark (;).
**Seminal,** sem'i-nal, *adj.* relating to seed.
**Seminary,** sem'in-ari, *n.* a superior school.
**Semitic,** sem-it'ik, *adj.* pertaining to the descendants of Shem.
**Semivowel,** sem-i-vow'el, *n.* a half-vowel.
**Sempiternal,** sem-pi-ter'nal, *adj.* endless; perpetual.
**Senator,** sen'a-tor, *n.* member of a senate.
**Seneschal,** sen'e-shal, *n.* a steward.
**Senile,** sē'nil, *adj.* old.
**Seniority,** sē-ni-or'it-i, *n.* priority in age or length of service.
**Sennit,** sen'it, *n.* a sort of cordage.
**Sensation,** sen-sā'shun, *n.* feeling.
**Sense,** sens, *n.* intelligence; meaning; feeling.
**Sensitive,** sen'sit-iv, *adj.* easily affected.
**Sensual,** sen'shoo-al, *adj.* carnal; relating to the senses.
**Sentence,** sen'tens, *n.* a decision.
**Sententious,** sen-ten'shus, *adj.* pithy in sentences; pompous in speech.
**Sentient,** sen'shent, *adj.* feeling; perceiving.
**Sentiment,** sen'ti-ment, *n.* feeling; thought; sensibility.
**Sentry,** sen'tri, *n.* a sentinel; a guard.
**Separable,** sep'ar-abl, *adj.* capable of separation.
**Sepoy,** sē-poi', *n.* native Indian soldier.
**Sepsis,** sep'sis, *n.* rottenness.
**Septan,** sep'tan, *adj.* occurring every seventh day.
**Septangular,** sept-ang'gu-lar, *adj.* with seven angles.
**Septenary,** sep'te-nār-i, *n.* consisting of seven.
**Septennial,** sep-ten'ni-al, *adj.* occurring every seven
**Septic,** sep'tik, *adj.* making putrid. [years.
**Septuagint,** sep'tū-ā-jint, *n.* Greek version of the Old Testament.
**Sepulchre,** sep'ul-ker, *n.* a tomb.
**Sequence,** sē'kwens, *n.* succession.
**Sequestrate,** sē-kwes'trāt, *v.* to separate; to dis-
**Seraglio,** sē-ral'yo, *n.* palace; harem. [perse.
**Seraphic,** ser-af'ik, *adj.* angelic.
**Sere,** sēr, *adj.* withered.
**Serenade,** ser-e-nād', *n.* an out-door night-song.
**Serenity,** ser-en'it-i, *n.* calmness.
**Serf,** serf, *n.* a slave.
**Sergeant,** sär'jent, *n.* a non-commissioned officer.

**Serial**, sē'ri-al, *adj.* appearing periodically; *n.* a story issued in a series.
**Seriatim**, sē-ri-ā'tim, *adv.* one following another.
**Serious**, sē'ri-us, *adj.* grave.
**Sermon**, ser'mon, *n.* a discourse on a text.
**Serpent**, ser'pent, *n.* a snake; a bass wind instrument.
**Serrate**, ser'āt, *adj.* toothed.
**Serried**, ser'id, *adj.* massed; crowded.
**Serum**, sē'rum, *n.* the pale yellow part of the blood.
**Serviceable**, ser'vis-abl, *adj.* useful.
**Servility**, ser-vil'it-i, *n.* humble submission.
**Servitude**, serv'it-ūd, *n.* service.
**Sessile**, ses'il, *adj.* branching direct from the stem.
**Session**, sesh'un, *n.* a sitting.
**Setaceous**, sē-tā'shus, *adj.* composed of bristles.
**Seton**, sē'ton, *n.* thread for keeping wound open.
**Settee**, set-ē', *n.* a kind of sofa.
**Setter**, set'er, *n.* a sporting dog.
**Sever**, sev'er, *v.* to divide.
**Severally**, sev'er-al-i, *adv.* separately.
**Severalty**, sev'er-al-ti, *n.* sole tenancy.
**Severity**, sē-ver'it-i, *n.* rigour.
**Sew**, sō, *v.* to stitch.
**Sewer**, sō'er, *n.* one who sews.
**Sex**, seks, *n.* character of maleness and femaleness.
**Sexagenarian**, sek-sā-jen-ā'ri-an, *n.* a person of sixty.
**Sexennial**, seks-en'ni-al, *adj.* happening every six years.
**Sextant**, seks'tant, *n.* an instrument for measuring angles.
**Sextile**, seks'til, *n.* the position of two planets when 60° apart.
**Sexton**, seks'ton, *n.* an under officer of a church.
**Sextuple**, seks'tupl, *adj.* sixfold.
**Sexual**, seks'ū-al, *adj.* relating to sex.
**Shabby**, shab'i, *adj.* ragged; seedy.
**Shabrack**, shab'rak, *n.* the saddle cloth of an officer's charger.
**Shackles**, shak'lz, *n.* fetters; handcuffs.
**Shades**, shādz, *n.* place where dead are deposited; obscure gloom.
**Shaft**, shaft, *n.* an arrow; a handle; entrance to a mine.
**Shaggy**, shag'i, *adj.* rough.
**Shagreen**, shā-grēn', *n.* a kind of leather.
**Shah**, shā, *n.* ruler of Persia.
**Shako**, shak'ō, *n.* a military head-dress.
**Shale**, shāl, *n.* slaty rock; husk.
**Shallop**, shal'op, *n.* a boat. ledge.
**Shallowness**, shal'ō-nes, *n.* lack of fullness of know-
**Sham**, sham, *n.* pretence; artificiality.
**Shambles**, sham'blz, *n.* slaughtering place used by butchers.
**Shambling**, sham'bling, *adj.* shuffling.
**Shamefaced**, shām'fāsd, *adj.* bashful.
**Shampoo**, sham-poo', *v.* to wash and cleanse.
**Shanty**, shant'i, *n.* a hut.
**Shapely**, shāp'li, *adj.* well-formed.
**Shard**, shārd, *n.* a shell; a fragment.
**Shark**, shārk, *n.* a large sea-fish; a swindler.
**Sharper**, shārp'er, *n.* a cheat.
**Sharp-witted**, sharp'wit-ted, *adj.* having a nicely discerning mind.
**Shatter**, shat'ter, *v.* to break in pieces.
**Shaver**, shā'ver, *n.* a sharp dealer; one who shaves.
**Shawl**, shawl, *n.* a shoulder wrap.
**Shawm**, shawm, *n.* an ancient reed instrument.
**Sheading**, sheed'ing, *n.* one of the six divisions of the Isle of Man.
**Sheaf**, shēf, *n.* a bundle of things tied round.
**Shear**, shēr, *v.* to clip.
**Sheathe**, shēth, *v.* to cover; to replace in scabbard.
**Sheave**, shēv, *n.* wheel of a pulley.
**Shebeen**, she-been', *n.* a place where excisable liquors are illegally sold.
**Sheen**, shēn, *v.* brightness.
**Sheepishness**, shēp-ish-ness; *n.* bashfulness.
**Sheep's-eye**, shēps-ī, *n.* a wistful glance.
**Sheep-shank**, shēp'shangk, *n.* a nautical knot; shank of a sheep.
**Sheer**, shēr, *v.* to turn aside; *adj.* clear; precipitous.
**Sheers**, shērs, *n.* apparatus for lifting weights.
**Sheet**, shēt, *n.* bed linen; piece of paper; sail-rope.
**Sheet-anchor**, shēt'ang-kor, *n.* a large anchor.
**Shekel**, shē'kel, *n.* a Jewish coin, worth about 2*s.* 6*d.*
**Shelf**, sheif, *n.* board for holding things; ledge of rock.
**Shelter**, shel'ter, *n.* place of protection; refuge.
**Shelve**, shelv, *v.* to set aside; to provide shelves.
**Shepherd**, shep'herd, *n.* a sheep-tender.

**Sherbet**, sher'bet, *n.* a drink made of water, sugar, and lemon.
**Sheriff**, sher'if, *n.* an officer of the law.
**Sherry**, sher'i, *n.* a strong Spanish wine.
**Shibboleth**, shib'bō-leth, *n.* watchword.
**Shield**, shēld, *n.* a piece of defensive armour held in front of the body.
**Shiftless**, shift'les, *adj.* resourceless; dull.
**Shillalah**, shil-ā'lā, *n.* a cudgel.
**Shingle**, shing'gl, *n.* a thin board; coarse gravel.
**Shiny**, shī'ni, *adj.* glossy; clear.
**Shipping**, ship'ing, *n.* ships in general.
**Shipwreck**, ship'rek, *n.* wreck of a ship.
**Shipwright**, ship'rīt, *n.* a ship-constructor.
**Shire**, shīr, *n.* a county; district under a sheriff.
**Shivery**, shiv'er-i, *adj.* quaky; loose.
**Shoal**, shōl, *n.* a multitude, especially of fish.
**Shock**, shok, *n.* a collision; a pile of sheaves.
**Shoddy**, shod'i, *n.* a kind of cloth made from rags; sham.
**Shoeblack**, shoo'blak, *n.* one who blacks shoes.
**Shoot**, shoot, *v.* to fire a gun; *n.* a young branch.
**Shop-lifter**, shop'lift-er, *n.* a shop-thief.
**Shopping**, shop'ing, *n.* the act of going to shops to make purchases.
**Shorthand**, short'hand, *n.* stenography.
**Shorts**, shorts, *n.* bran; coarse meal.
**Shoulder**, shōl'der, *n.* the joint connecting the arm and body.
**Shoulder-blade**, shōl'der-blād, *n.* scapula.
**Shove**, shuv, *v.* to push.
**Shovel**, shuv'el, *n.* a tool for throwing earth.
**Showery**, show'er-i, *adj.* rainy.
**Showy**, shō'i, *adj.* gaudy. ket balls.
**Shrapnel**, shrap'nel, *n.* shell charged with mus-
**Shred**, shred, *n.* a fragment; *v.* to tear into small pieces.
**Shrewd**, shrood, *adj.* keen; alert; cunning.
**Shrievalty**, shreev'al-te, *n.* the office of a sheriff.
**Shrimp**, shrimp, *n.* a small crustacean.
**Shrine**, shrin, *n.* an altar; a reliquary.
**Shrinkage**, shrink'āj, *n.* contraction.
**Shrive**, shrīv, *v.* to hear confession.
**Shrivel**, shriv'el, *v.* to wrinkle.
**Shroffage**, shrof'aje, *n.* the inspection of coins, and the separation of the good from the bad.
**Shroud**, shrowd, *n.* part of a ship's rigging; winding sheet.
**Shrove-tide**, shrōv'tīd, *n.* days preceding Lent.
**Shrubbery**, shrub'er-i, *n.* a plantation of shrubs.
**Shrug**, shrug, *v.* to draw up the shoulders.
**Shudder**, shud'er, *n.* a sudden tremor; *v.* to tremble.
**Shuffle**, shuf'l, *v.* to evade; to alter the positions of.
**Shunt**, shunt, *v.* to turn aside.
**Shuttle**, shut'l, *n.* an instrument that conveys weft to and fro within the web of a loom.
**Shyness**, shī'ness, *n.* bashfulness.
**Sibilant**, sib'il-ant, *adj.* hissing.
**Sic**, sik, *adj.* thus in the original, referring to what looks like an error.
**Sickle**, sik'l, *n.* a reaping-hook.
**Sickly**, sik'li, *adj.* feeble.
**Sideboard**, sīd'bord, *n.* a side table, with cup-
**Sidereal**, sī-dē'rē-al, *adj.* starry boards.
**Sidle**, sī'dl, *v.* to go side foremost.
**Siege**, sēj, *n.* a besiegement; military attempt to destroy or gain possession of a fortified place.
**Sierra**, sē-er'rā, *n.* a ridge of mountains.
**Siesta**, sī-es'tā, *n.* an after-dinner sleep.
**Sieve**, siv, *n.* a strainer.
**Sigh**, sī, *n.* a deep breathing; a lament.
**Sightly**, sīt'li, *adj.* pleasing.
**Sign**, sin, *n.* a token; an omen; *v.* to write a signature.
**Signal**, sig'nal, *n.* a sign that warns. ture.
**Signalise**, sig'nal-īz, *v.* to render distinguished.
**Signature**, sig'nā-tūr, *n.* a name signed or im-
**Signet**, sig'net, *n.* a seal. pressed.
**Significant**, sig-nif'ik-ant, *adj.* important; ex-
**Silex**, sī'lex, *n.* silica. pressive.
**Silica**, sil'i'kā, *n.* a flinty mineral.
**Siliqua**, sil'i-kwa, *n.* pod with seeds adherent to both sutures.
**Silk**, silk, *n.* fibre produced by a worm; cloth woven from this.
**Silken**, sil'ken, *adj.* silk-like.
**Silkworm**, silk'worm, *n.* the worm that produces silk cocoons.
**Sill**, sil, *n.* the foot of a window or door.
**Sillibub**, sil'i-bub, *n.* any light composite liquor.
**Silliness**, sil'i-nes, *n.* foolishness.
**Silo**, sī'lō, *n.* ditch for ensilage.
**Silt**, silt, *n.* sediment.

**Silva,** sil'vă, *n.* forest trees collectively.
**Silvan,** sil'van, *adj.* relating to woods.
**Silvery,** sil'ver-i, *adj.* bright; like silver.
**Simian,** sim'yan, *adj.* ape-like.
**Simile,** sim'il-ē, *n.* a similitude.
**Simmer,** sim'er, *v.* to boil gently.
**Simony,** sī'mo-ni, *n.* dealing in church preferments.
**Simoom,** sim-oom', *n.* a hot wind.
**Simous,** sī'mus, *adj.* flat-nosed.
**Simper,** sim'per, *v.* to smile affectedly.
**Simplicity,** sim-plis'it-i, *n.* artlessness.
**Simplify,** sim'pli-fī, *v.* to make plain.
**Simulate,** sim-ū'lāt, *v.* to assume.
**Simultaneous,** sim-ul-tā-nē-us, *adj.* at the same time.
**Sin,** sin, *n.* violation of duty or divine law.
**Sinapism,** sin'ap-izm, *n.* a mustard plaster.
**Sincerity,** sin-ser'it-i, *n.* honesty.
**Sinciput,** sin'si-put, *n.* front of the head.
**Sine, sin,** *n.* a straight line from the end of an arch.
**Sinecure,** sī'nē-kūr, *n.* an office without labour.
**Sinew,** sin'ū, *n.* a tendon; a muscle.
**Single,** sing'gl, *adj.* one; unmarried.
**Single-minded,** sing'l-mīnd'ed, *adj.* upright; sincere.
**Singlet,** sing'glet, *n.* an undershirt.
**Singular,** sing'gū-lar, *adj.* uncommon; rare; peculiar.
**Sinister,** sin'is-ter, *adj.* unlucky; evil.
**Sinistrous,** sin'is-trus, *adj.* left-sided; wrong.
**Sinking-fund,** singk'ing-fund, *n.* fund for reducing public debt.
**Sinuosity,** sin-ū-os'it-i, *adj.* the quality of winding.
**Sinuous,** sin'-u-us, *adj.* winding, snake-like.
**Siphon,** sī'fon, *n.* tube for drawing off liquor.
**Sirdar,** sir-dăr', *n.* a Persian or Egyptian chief.
**Sire, sir,** *n.* a father.
**Siren,** sī'ren, *n.* an enticing woman; a sea-nymph.
**Sirloin, sir'loin,** *n.* loin of beef.
**Sirocco,** si-rok'o, *n.* a hot wind.
**Situation,** sit-ū-ā'shun, *n.* location.
**Sizable,** sī'za-bl, *adj.* of suitable size; bulky.
**Sizar,** sī'zar, *n.* a lower Cambridge student.
**Size,** sīz, *n.* bulk; magnitude; a gluey substance.
**Skein,** skān, *n.* a roll of yarn; kind of thread.
**Skeleton,** skel'ē-ton, *n.* frame of an animal.
**Skep,** skep, *n.* a large wicker basket open at the
**Sketch,** sketch, *n.* an outline. [top.
**Skewer,** skū'er, *n.* a pin for holding meat together.
**Skid,** skid, *n.* a drag; *v.* to slip.
**Skilful,** skil'ful, *adj.* expert.
**Skillet,** skil'et, *n.* small boiler.
**Skimmings,** skim'ings, *n.* skimmed matter.
**Skinflint,** skin'flint, *n.* a miserly person.
**Skirmish,** skir'mish, *n.* a light military encounter.
**Skittish,** skit'ish, *adj.* easily frightened; fickle.
**Skiver,** skī'ver, *n.* split sheep-skin.
**Skull,** skul, *n.* bone of the head.
**Sky-rocket,** skī'rok-et, *n.* a firework projectile.
**Sky-sail,** skī'sāl, *n.* small sail above the royal.
**Slake,** slāk, *v.* to quench.
**Slander,** slan'der, *n.* defamation.
**Slang,** slang, *n.* vulgar language.
**Slash,** slash, *v.* to cut; to hit out at random.
**Slat,** slat, *n.* a thin piece of wood.
**Slattern,** slat'ern, *n.* a slovenly person.
**Slaty,** slā'ti, *adj.* like, or consisting of, slate.
**Slaughter,** slaw'ter, *n.* carnage; butchery.
**Slaver,** slāv'er, *n.* a slave-vessel.
**Slaver,** slāv'er, *n.* saliva running from the mouth.
**Slavery,** slāv'er-i, *n.* bondage.
**Sledge,** slej, *n.* a heavy hammer; a sleigh.
**Sleek,** slēk, *adj.* smooth; glossy.
**Sleeper,** slē'per, *n.* one who sleeps; a timber support for rails, etc.
**Sleet,** slēt, *n.* a mixture of rain and hail.
**Sleeve,** slēv, *n.* arm-cover.
**Sleigh,** slā, *n.* a vehicle with runners for sliding over the snow.
**Sleight,** slīt, *n.* trick; cunning.
**Sleuth-hound,** slooth'hownd, *n.* a dog that follows game by scent.
**Slight,** slīt, *n.* neglect; a snub; *adj.* small; feeble.
**Slimy,** slī-mi, *adj.* moist; sticky.
**Slink,** slingk, *v.* to sneak away.
**Slipper,** slip'er, *n.* a low, easy shoe.
**Slippery,** slip'er-i, *adj.* in condition to cause one's feet to slip; uncertain; shifting.
**Sloe,** slō, *n.* the blackthorn and its fruit.
**Slogan,** slō'gan, *n.* a war-cry.
**Sloop,** sloop, *n.* a one-masted boat.
**Slop,** slop, *v.* to spill; *n.* dirty water.
**Slope,** slōp, *n.* slant; an incline.
**Sloppy,** slop'i, *adj.* wet and muddy.
**Slot,** slot, *n.* a socket; the footmark of a deer.
**Sloth,** slōth, *n.* laziness; an animal.
**Slough,** slow, *n.* a boggy spot.
**Slough,** sluf, *n.* cast-off skin of a serpent; *v.* to cast off, like a slough.
**Sloven,** sluv'en, *n.* a slattern.
**Sludge,** sluj, *n.* thick mud.
**Slug, slug,** *n.* a shell-less snail.
**Sluggard,** slug'erd, *n.* a lazy person; a drone.
**Sluice,** slooss, *n.* a floodgate.
**Slum,** slum, *n.* a mean street or neighbourhood.
**Slump,** slump, *v.* to sink in.
**Slur,** slur, *v.* to sully; *n.* a reproach; a stain.
**Slut,** slut, *n.* a slattern. [held in the hand.
**Small-arms,** smawl'ărms, *n.* fire-arms that can be
**Smart-money,** smărt'mun-i, *n.* money paid for a recruit's release before being sworn in.
**Smatter,** smat'er, *v.* to talk or write superficially.
**Smear,** smēr, *v.* to daub; to soil.
**Smelt,** smelt, *n.* a small fish.
**Smelter,** smelt'er, *n.* one who smelts; a place for smelting.
**Smirch,** smirch, *v.* to smear; to cloud; to degrade.
**Smirk,** smerk, *n.* an affected smile.
**Smock,** smok, *n.* blouse; chemise.
**Smoky,** smō'ki, *adj.* sending forth smoke; covered with smoke.
**Smother,** smuth'er, *v.* to suffocate; to stifle.
**Smouldering,** smōld'er-ing, *adj.* burning slowly.
**Smudge,** smuj, *v.* to smear with smoke or dirt; *n.* a dirty mark. [gally.
**Smuggle,** smug'l, *v.* to import or export goods ille-
**Smuttiness,** smut'i-nes, *n.* dirt caused by smoke; obscenity. [refreshment.
**Snack,** snak, *n.* a small portion; a share; a light
**Snaffle,** snaf'l, *n.* a bridle with a slender bit.
**Snag,** snag, *n.* a shoot; a tooth standing out; a knot.
**Snappish,** snap'ish, *adj.* harsh in reply; peevish.
**Snarl,** snărl, *v.* to growl.
**Snathe,** snāth, *n.* the handle of a scythe.
**Sneer,** snēr, *v.* to scoff; *n.* scorn; disdain.
**Sneeze,** snēz, *v.* to eject air violently through the nostrils.
**Sniff,** snif, *v.* to draw air audibly up the nose.
**Snigger,** snig'er, *v.* to laugh in a half-suppressed way.
**Snivel,** sniv'el, *v.* to whine; *n.* running of the nose.
**Snob,** snob, *n.* a pretentious person; one who affects a higher position than he can rightfully
**Snood,** snood, *n.* a fillet. [claim.
**Snore,** snōr, *v.* to breathe audibly in sleep.
**Snort,** snort, *v.* to force air noisily through the nose.
**Snow,** snō, *n.* frozen vapour; *v.* to fall in flakes of frozen vapour.
**Snub,** snub, *v.* to check; to slight; *n.* a rebuke.
**Snuffers,** snuf'ers, *n.* instrument for snuffing candles.
**Snuffles,** snuf'lz, *n.* obstruction in the nose.
**Soak,** sōk, *v.* to drench; to steep.
**Soap,** sōp, *n.* a compound of oils or fats and alkali, divided broadly into toilet soaps and domestic soaps. Pears' Soap is the leading toilet soap.
**Soar,** sōr, *v.* to fly aloft.
**Sobriety,** sō-brī'et-i, *n.* temperance; seriousness.
**Sobriquet,** sō-brē-kā', *n.* a nickname.
**Sociable,** sō'sha-bl, *adj.* social; friendly; familiar.
**Socialism,** sō'shal-izm, *n.* communism in its varied forms.
**Society,** so-sī'et-i, *n.* a community; an association; the fashionable world; social intercourse.
**Sociology,** sō-shi-ol'o-ji, *n.* science of social exist-
**Sock,** sok, *n.* a short stocking. [ence.
**Socket,** sok'et, *n.* a cavity for holding something
**Sodality,** sō-dal'it-i, *n.* fellowship. [inserted.
**Sodomy,** sod'ō-mi, *n.* an unnatural crime.
**Soggy,** sog'i, *adj.* wet; soaky.
**Soil, soil,** *n.* land; earth; *v.* to tarnish.
**Soirée,** swaw-rā', *n.* an evening party.
**Sojourn,** sō'jurn, *v.* to abide.
**Solace,** sol'ās, *n.* comfort; consolation; *v.* to console. [cement.
**Solder,** sōl'der, *v.* to fasten together with metallic
**Soldier,** sōl'jer, *n.* a man in military service.
**Sole,** sōl, *n.* a fish; bottom part of foot or boot; alone.
**Solecism,** sol'ē-sizm, *n.* incorrect language; unfit-
**Solely,** sōl'li, *adv.* singly; only. [ness.
**Solemnity,** sol-em'nit-i, *n.* sacred ceremony; gravity.

**Solicit,** sol-is'it, *v.* to request; to entreat.
**Solidarity,** sol-id-ăr'it-i, *n.* singleness of interest.
**Solidity,** sol-id'it-i, *n.* firmness.
**Soliloquise,** so-lil'ō-kwiz, *v.* to talk to one's self.
**Solitude,** sol'it-ūd, *n.* seclusion; a lonely spot.
**Solo,** sō'lō, *n.* performance by one voice or one instrument.
**Soluble,** sol'ū-bl, *adj.* dissolvable.
**Solution,** so-lū'shun, *n.* explanation; process of dissolving; the result of the dissolving.
**Solve,** solv, *v.* to disentangle; to settle.
**Sombre,** som'br, *adj.* gloomy; dark; melancholy.
**Somersault,** sum'er-sawlt, *n.* a leap in which the leaper turns round and alights on his feet.
**Somnambulist,** som-nam'bū-list, *n.* a sleep-walker.
**Somniferous,** som-nif'er-us, *adj.* causing sleep.
**Somnolent,** som'no-lent, *adj.* sleepy; drowsy.
**Sonata,** sō-nä'tä, *n.* a musical composition in three or more movements.
**Sonnet,** son'et, *n.* a poem in 14 lines.
**Sonorous,** so-nō'rus, *adj.* resonant.
**Soot,** soot, *n.* dust from smoke.
**Soothe,** sooth, *v.* to pacify; to calm; to console.
**Soothsayer,** sooth'sā-er, *n.* a fortune-teller.
**Sophism,** sō'fizm, *n.* a plausible fallacy.
**Sophist,** sō'fist, *n.* a fallacious reasoner.
**Sophisticate,** sō-fist'ik-āt, *v.* to corrupt; to adulterate.
**Soporific,** so'por'-if-ic, *adj.* sleep-producing.
**Soprano,** so-prä'no, *n.* the highest voice (treble); one who sings in such a voice.
**Sorcery,** sor'ser-i, *n.* magic.
**Sordid,** sor'did, *adj.* mean; avaricious.
**Sorrel,** sor'el, *n.* an acid plant; *adj.* rather red.
**Sorrowful,** sor'ō-ful, *adj.* sad; regretful; melancholy.
**Sorry,** sor'i, *adj.* sad for something done, or for some person; worthless.
**Sortie,** sor'tē, *n.* a sally of troops from a besieged place.
**Sot,** sot, *n.* a drunkard.
**Soubrette,** soo-bret', *n.* a coquettish maid-servant in a comedy.
**Sough,** sow, *v.* to sigh, as the wind.
**Soul,** sōl, *n.* the spirit; life; intellect.
**Sounding,** sownd'ing, *n.* the act of ascertaining the depth of water.
**Soundness,** sownd'nes, *n.* health; vital completeness.
**Soup,** soop, *n.* a nutritious concoction made by boiling meat or vegetables in stock.
**Source,** sōrs, *n.* origin; a spring.
**Souse,** sows, *v.* to duck; to plunge into water.
**Soutaine,** soo-tān', *n.* a cassock.
**Souvenir,** soov-nēr', *n.* a keepsake.
**Sovereign,** sov'e-rin, *n.* ruler; a gold coin formerly worth 20*s.*; *adj.* supreme.
**Sow,** sow, *n.* a female pig.
**Sow,** sō, *v.* to scatter seed for it to grow.
**Spa,** spaw, *n.* a mineral-water spring.
**Space,** spās, *n.* room; distance; interval.
**Span,** span, *n.* nine inches; a period of time.
**Spangle,** spang'gl, *n.* a small boss of shining metal; *v.* to deck with spangles.
**Spaniel,** span-yel, *n.* a sporting dog.
**Spank,** spangk, *v.* to slap.
**Spanker,** spangk'er, *n.* a sail; anything dashing; a fast horse.
**Spar,** spär, *n.* a mast or beam; a mineral.
**Spareness,** spär'nes, *n.* leanness.
**Sparerib,** spär'rib *n.* ribs of pork
**Sparkish,** spärk'ish, *adj.* gay; volatile.
**Sparse,** spärs, *adj.* thin; scattered.
**Spartan,** spär'tan, *adj.* severe; hardy.
**Spasm,** spazm, *n.* a cramp; sudden twitching.
**Spatula,** spat'ū-la, *n.* a trowel; knife for spreading ointment.
**Spavin,** spav'in, *n.* a disease of the joints in horses.
**Spawn,** spawn, *n.* fish eggs.
**Spay,** spā', *v.* to castrate.
**Special,** spesh'al, *adj.* specific; distinctive.
**Specie,** spē'shi, *n.* cash.
**Species,** spē'shēs, *n.* a kind; a class.
**Specific,** spes-if'ik, *adj.* definite; *n.* a remedy
**Specify,** spes'if-i, *v.* to designate.
**Specious,** spē'shus, *adj.* plausible.
**Speckle,** spek'l, *v.* to mark with specks; *n.* a small speck.
**Spectacle,** spek'tă-kl, *n.* a scene; a sight; a pageant.
**Spectacles,** spek'tă-klz, *n.* eye-glasses.
**Spectator,** spek-ta'tor, *n.* an eye-witness.
**Spectral,** spek'tral, *adj.* ghostly.
**Spectroscope,** spek'tro-skōp, *n.* an instrument used in examining spectra.
**Speculation,** spek-ū-lā'shun, *n.* investment; conjecture.
**Speculative,** spek'ū-lă-tiv, *adj.* theoretical.
**Speculum,** spek'ū-lum, *n.* a reflector.
**Speechless,** spēch'les, *adj.* dumb.
**Speedy,** spē'di, *adj.* quick; swift; rapid.
**Spelter,** spel'ter, *n.* impure zinc.
**Spendthrift,** spend'*th*rift, *n.* a prodigal.
**Sperm,** *n.* animal seed; spawn.
**Spermaceti,** sper-mă-set'i, *n.* whale oil.
**Spherical,** sfer'ik-al, *adj.* globular.
**Spheroid,** sfēr'oid, *n.* a thing of sphere form but not completely round.
**Sphincter,** sfingkt'er, *n.* a muscle that contracts an aperture round which it is placed.
**Sphinx,** sfingks, *n.* a mythological monster with the head of a woman and the body of a lioness.
**Spicery,** spi'ser-i, *n.* spices.
**Spicular,** spik'ū-lar, *adj.* sharp-pointed.
**Spicy,** spi'si, *adj.* tasty; pungent; showy.
**Spigot,** spig'ot, *n.* peg for a faucet.
**Spike,** spik, *n.* a large nail; an ear of corn.
**Spindle,** spin'dl, *n.* a pin round which yarn is spun.
**Spine,** spin, *n.* the backbone.
**Spinster,** spin'ster, *n.* an unmarried woman; a woman who spins.
**Spiracle,** spir'a-kl, *n.* breathing-hole.
**Spiral,** spi'ral, *adj.* winding like the thread of a screw.
**Spire,** spir, *n.* a steeple.
**Spirit,** spir'it, *n.* vital force; soul; liveliness.
**Spirited,** spir'it-ed, *adj.* lively.
**Spiritual,** spir'it-ū-al, *adj.* holy; divine; not material.
**Spirituality,** spir'-it-ū-al'it-i, *n.* holiness; immateriality.
**Spirituous,** spir'it-ū-us, *adj.* ardent; volatile.
**Spit,** spit, *n.* saliva; an iron prong for roasting meat; *v.* to eject saliva from the mouth.
**Spite,** spit, *n.* a grudge; malice.
**Spittoon,** spit-oon', *n.* a spit-box.
**Splay-footed,** splā'foot-ed, *adj.* with feet turned outward.
**Spleen,** splēn, *n.* anger; melancholy; the milt.
**Splendour,** splen'der, *n.* brilliancy; magnificence.
**Splenetic,** splen-et'ik, *a lj.* morose; peevish.
**Splenic,** splen'ik, *adj.* relating to the spleen.
**Splice,** splis, *v.* to unite by interweaving or overlapping.
**Splint,** splint, *n.* thin piece of wood for holding fractured bones in place.
**Splinter,** splin'ter, *n.* a fragment of wood, glass, etc.
**Spoil,** spoil, *v.* to impair; to rob; *n.* plunder; booty.
**Spokesman,** spōks'man, *n.* one who speaks for himself and others.
**Spoliation,** spō-li-ā'shun, *n.* pillage; plunder.
**Spondyl,** spon'dil, *n.* a joint.
**Sponge,** spunj, *n.* a soft, porous marine substance.
**Sponsor,** spon'sor, *n.* surety; a godfather.
**Spontaneous,** spon-tā'nē-us, *adj.* voluntary; of one's own accord.
**Spontoon,** spon-toon', *n.* a short pike.
**Spool,** spool, *n.* a hollow cylinder for holding yarn.
**Sporadic,** spō-rad'ik, *adj.* scattered, applied to epidemics.
**Spore,** spōr, *n.* a seed germ.
**Sporran,** spor'an, *n.* pouch worn in front of a kilt.
**Sport,** sport, *n.* amusement, usually out-door.
**Sportful,** spōrt'ful, *adj.* full of sport; playful.
**Spousal,** spouz'al, *adj.* nuptial.
**Spouse,** spouz, *n.* husband or wife.
**Sprain,** sprān, *v.* to strain; *n.* an overstrain of the ligaments.
**Sprawl,** sprawl, *v.* to spread; to be stretched out.
**Spree,** sprē, *n.* a carousal.
**Sprightly,** sprit'li, *adj.* lively.
**Springe,** sprinj, *n.* a trap; a snare.
**Spring-tide,** spring'tid, *n.* tide at the period of the new and full moon.
**Springy,** spring'i, *adj.* full of springs; elastic.
**Sprite,** sprit, *n.* a spirit.
**Sprod,** sprod, *n.* a second-year salmon.
**Sprout,** sprowt, *v.* to shoot; to bud; *n.* shoot of a plant.
**Spry,** spri, *adj.* nimble.
**Spumus,** spū'mus, *adj.* frothy.
**Spunk,** spungk, *n.* pluck; touchwood.
**Spur,** spur, *n.* an instrument with sharp points worn on a horseman's heels and used for goading horses.
**Spurious,** spū'ri-us, *adj.* counterfeit.
**Spurt,** spurt, *v.* to throw out; *n.* a short sudden effort.
**Sputter,** sput'er, *v.* to speak indistinctly.
**Spy,** spi, *n.* one who gets information for others secretly; *v.* to watch secretly; to look; to detect.
**Squab,** skwob, *adj.* short and fat; *n.* a young pigeon.

**Squabble,** skwob'l, *v.* to dispute noisily.
**Squadron,** skwod'ron, *n.* a small fleet; a company of cavalry.
**Squalid,** skwol'id, *adj.* foul; mean; dirty.
**Squall,** skwawl, *n.* gust of wind; a violent scream.
**Squalor,** skwawl'or, *n.* dirt; filth; raggedness.
**Squamous,** skwā'mus, *adj.* scaly. [scatter.
**Squander,** skwon'der, *v.* to spend foolishly; to
**Square,** skwār, *adj.* having four equal sides; *v.* to make square.
**Squash,** skwosh, *v.* to crush; to press flat; *n.* a sort of gourd. [to sit on the ground.
**Squat,** skwot, *adj.* short and thick; crouching; *v.*
**Squatter,** skwot'er, *n.* a settler on new land.
**Squaw,** skwaw, *n.* a Red Indian wife.
**Squeak,** skwēk, *n.* a sharp, quick sound; *v.* to make such a sound.
**Squeamish,** skwē'mish, *adj.* dainty; fastidious.
**Squeeze,** skwēz, *v.* to crush or press; to hug.
**Squill,** skwil, *n.* a bulbous rooted plant of the Liliaceæ order.
**Squint,** skwint, *v.* to look obliquely.
**Squire,** skwīr, *n.* a knight's attendant; a gallant; a country landowner.
**Squirm,** skwirm, *v.* to wriggle; to shrink.
**Squirt,** skwirt, *v.* to eject in a stream.
**Stab,** stab, *v.* to sound with a sharp weapon.
**Stability,** stă-bil'it-i, *n.* steadiness; firmness.
**Stable,** stā'bl, *adj.* firm; durable; *n.* shelter for horses. [chimneys; *v.* to pile.
**Stack,** stak, *n.* pile of hay or grain; group of
**Staddle,** stad'l, *n.* a support.
**Stadium,** stā'di-um, *n.* a Greek length measure, 606¾ English feet.
**Staff,** staf, *n.* a stick; a bâton; lines and spaces for music characters; special officers.
**Stage,** stāj', *n.* the theatre; a raised platform; halting place on a journey.
**Stage-coach,** stāj'kōch, *n.* coach plying for hire between certain stages.
**Stagger,** stag'er, *v.* to shock; to reel.
**Staggers,** stag'erz, *n.* a disease in horses.
**Stagnation,** stag-nā'shun, *n.* inaction; absence of movement.
**Staid,** stād, *adj.* steady; serious.
**Stake,** stāk, *n.* a sharp-pointed stock; a post; anything wagered; *v.* to wager; to pledge.
**Stalactite,** stal-ak'tīt, *n.* pendant of limestone in caves.
**Stale,** stāl, *adj.* tasteless; worn out.
**Stalk,** stawk, *n.* stem; *v.* to walk with long strides.
**Stall,** stawl, *n.* division of a stable; a bench on which articles are arranged for sale; special seat for clergy in a church; a certain seat in a theatre.
**Stallion,** stal'yun, *n.* a male horse for breeding.
**Stalwart,** stawl'wert, *adj.* robust; sturdy.
**Stamen,** stā'men, *n.* male organ of a flower.
**Stamina,** stam'in-ā, *n.* the chief strength.
**Stammer,** stam'er, *v.* to speak with impediment; *n.* hesitating utterance.
**Stampede,** stam-pēd', *n.* sudden panic among and rushing away of horses, cattle, etc.
**Stanch,** stānsh, or staunch, stawnsh, *adj.* firm in principle; sound; *v.* to arrest the flow.
**Stanchion,** stansh'un, *n.* a bar or beam used as a support.
**Standard,** stand'ard, *n.* an ensign; an established measure or quality; a test.
**Stannary,** stan'ār-i, *n.* tin mine; *adj.* relating to tin mines.
**Stanza,** stan'zā, *n.* a verse.
**Staple,** stā'pl, *n.* iron hoop; mart for merchandise; chief products.
**Starboard,** stār'bōrd, *adj.* right side of a ship.
**Starchy,** stārch'i, *adj.* stiff; precise.
**Stark,** stārk, *adv.* wholly; *adj.* downright.
**Starry,** stār'i, *adj.* adorned with stars.
**Startle,** stār'tl, *v.* to frighten; to alarm.
**State,** stāt, *n.* the whole community; *v.* to declare.
**Statedly,** stāt'ed-li, *adj.* at fixed times.
**Stately,** stāt'li, *adj.* dignified; grand.
**State-room,** stāt'room, *n.* a bedroom on a vessel.
**Statesman,** stāts'man, *n.* a politician; one skilled in government.
**Statics,** stat'iks, *n.* the science of bodies at rest.
**Station,** stā'shun, *n.* an assigned post; rank: stopping place on a railway.
**Stationary,** stā'shun-ar-i, *adj.* fixed; settled.
**Stationery,** stā'shun-er-i, *n.* things sold by a stationer. [figures.
**Statistics,** sta-tis'tiks, *n.* a collection of facts and
**Statue,** stat'ū, *n.* an image carved in stone or metal.
**Statuette,** stat-ū-et',*n.* a small statue.
**Status,** stāt'us, *n.* condition; rank.
**Statute,** stat'ūt, *n.* a law; an Act of Parliament.
**Staunch,** stawnsh, *adj.* firm; steadfast.
**Stave,** stāv', *n.* a narrow piece of wood; *v.* to break; to thrust away.
**Stay,** stā, *v.* to remain; to abide.
**Stays,** stāz, *n.* a bodice; a corset; any support.
**Steady,** sted'i, *adj.* firm; regular; sober.
**Steak,** stāk, *n.* a slice of beef.
**Steal,** stēl, *v.* to rob.
**Stealth,** stelth, *n.* a secret act.
**Steam,** stēm, *n.* vapour of heated water.
**Stearine,** stē'ā-rin, *n.* chief component of solid fat.
**Steatite,** stē'ā-tīt, *n.* soapstone. [knives.
**Steel,** stēl, *n.* hardened iron; tool for sharpening
**Steelyard,** stēl'yārd, *n.* balance for weighing.
**Steeple,** stēp'l, *n.* a spire.
**Steer,** stēr, *n.* an ox; *v.* to guide.
**Steerage,** stēr'āj, *n.* guidance; the fore part of a ship.
**Stellar,** stel'ar, *adj.* relating to stars.
**Stench,** stensh, *n.* an evil odour.
**Stencil,** sten'sil, *n.* a piece of thin metal containing letters or design cut out which can be printed on another surface by passing ink or paint brush over it.
**Stenography,** sten-og'rā-fi, *n.* shorthand.
**Stentorian,** sten-tō'ri-an, *adj.* loud-toned.
**Step-child,** step'child, *n.* child to whom one is parent only by marriage.
**Step-father,** step'fāther, *n.* father by marriage.
**Stepmother,** step'mother, *n.* mother by marriage.
**Steppe,** step, *n.* an uncultivated plain.
**Sterile,** ster'il, *adj.* barren.
**Stern,** stern, *adj.* severe; *n.* rear of ship; hind part.
**Stern-chase,** stern'chās, *n.* a chase in which one ship keeps close to the stern of another.
**Sternum,** stern'um, *n.* the breast-bone.
**Sternutation,** stern-ū-tā'shun, *n.* the act of sneezing.
**Stertorous,** ster'to-rus, *adj.* breathing heavily; snoring.
**Steward,** stū'ard, *n.* a manager of an estate; a waiter on a liner.
**Stickle,** stik'l, *v.* to contend stubbornly.
**Stifle,** stī'fl, *v.* to smother; to suppress.
**Stigma,** stig'mā, *n.* a blot; mark of disgrace.
**Stigmatise,** stig'mā-tīz, *v.* to brand.
**Stiletto,** stil-et'ō, *n.* a small dagger.
**Still-born,** stil'bawrn, *adj.* dead at birth.
**Stilt,** stilt, *n.* a stick used to elevate a person when walking.
**Stimulant,** stim'ū-lant, *n.* that which stimulates; an alcoholic beverage.
**Stingy,** stin'ji, *adj.* niggardly; mean.
**Stink,** stingk, *n.* a bad smell.
**Stint,** stint, *v.* to limit; *n.* a limit.
**Stipend,** stī'pend, *n.* salary, pay.
**Stipulate,** stip'ū-lāt, *v.* to contract; to prescribe terms.
**Stirrup,** stir'up, *n.* a rest for a horseman's foot.
**Stitch,** stich, *v.* to sew.
**Stockade,** stok-ād', *n.* an enclosure of pointed stakes.
**Stockbroker,** stok'brō'ker, *n.* a dealer in stocks and
**Stocking,** stok'ing, *n.* hose. [shares.
**Stocks,** stoks, *n.* public funds.
**Stoic,** stō'ik, *n.* one indifferent to pain or pleasure.
**Stolid,** stol'id, *adj.* stupid; dull. [belly.
**Stomach,** stum'ak, *n.* the organ of digestion; the
**Stomacher,** stum'ak-er, *n.* breast covering.
**Stone,** stōn, *n.* a mineral; a gem; a weight of 14 lb.; *v.* to cast stones.
**Stook,** stook, *n.* a group of sheaves set up.
**Stoppage,** stop'āj, *n.* the act of stopping.
**Stopper,** stop'per, *n.* a plug for bottle or vessel.
**Storage,** stōr'āj, *n.* place where things are stored; rent for storing.
**Store,** stōr, *n.* a shop; a warehouse; a quantity.
**Storied,** stōr'id, *adj.* historical; containing stories.
**Stot,** stot, *n.* a young ox.
**Stout,** stowt, *adj.* plump; large; strong.
**Stove,** stōv, *n.* place for a fire.
**Stowage,** stō'āj, *n.* act of stowing; room for articles stowed away. [apart.
**Straddle, strad'l,** *v.* to sit astride; to walk with legs
**Straight,** strāt, *adj.* direct; in a right line.
**Straightforward,** strāt-for'werd, *adj.* in a direct course; upright.
**Straightway,** strāt'wā, *adv.* immediately.

**Strain, strān,** *n.* a sound; music; *v.* to stretch; to filter; to overtask.
**Strainer, strān'er,** *n.* a filtering apparatus.
**Strait, strāt,** *adj.* narrow; strict.
**Strait-jacket, strāt'jak-et,** *n.* jacket used for restraining the arms of lunatics.
**Strake, strāk,** *n.* iron band of a wheel; a breadth of ship-planking.
**Strand, strand,** *n.* shore; a thread of rope; *v.* to run aground.
**Strangle, strang'gl,** *v.* to choke.
**Strangles, strang'glz,** *n.* a disease in young horses.
**Strapping, strap'ing,** *adj.* tall; big; fine.
**Stratagem, strat'ā-jem,** *n.* an artifice; a trick.
**Strategist, strat'ē-jist,** *n.* one skilled in military tactics.
**Strath, strath,** *n.* a valley through which a river runs. [being stratified.
**Stratification, strat-if-ik-ā'shun,** *n.* the condition of
**Stratum, strā'tum,** *n.* a layer of earth.
**Streak, strēk,** *n.* a stripe; *v.* to mark with streaks.
**Streamer, strēm'er,** *n.* a long narrow flag; a beam of light.
**Strenuous, stren'ū-us,** *adj.* resolute; active; vigorous.
**Stress, stres,** *n.* pressure; force.
**Stretch, strech,** *v.* to strain; to draw out.
**Stretcher, strech'er,** *n.* a litter; that which stretches.
**Strew, stroo,** *v.* to scatter.
**Striated, strī'ā-ted,** *adj.* marked with stripes.
**Strickle, strik'l,** *n.* a straight-edge; instrument for levelling.
**Strict, strikt,** *adj.* exact; severe; rigid.
**Stricture, strikt'ūr,** *n.* censure; contraction.
**Stridulous, strid'ū-lus,** *adj.* harsh-sounding.
**Strife, strīf,** *n.* contention.
**Strike, strik,** *v.* to hit; *n.* cessation from work by body of work-people in order to enforce or resist demands.
**Striking, strī'king,** *adj.* impressive.
**Stringent, strin'jent,** *adj.* urgent; exacting; hard-pressing.
**Stripling, strip'ling,** *n.* a youth.
**Structure, strukt'ūr,** *n.* a building; a frame.
**Struggle, strug'l,** *n.* a striving; a contention.
**Strumpet, strum'pet,** *n.* a wanton.
**Stub, stub,** *n.* a small stump of a tree.
**Stubble, stub'l,** *n.* stumps of grain.
**Stubborn, stub'orn,** *adj.* obstinate.
**Stucco, stuk'ō,** *n.* plaster.
**Stud, stud,** *n.* a set of horses; a small button.
**Studio, stu'dī-o,** *n.* an artist's workshop.
**Study, stŭd'ī,** *n.* room for study; application.
**Stuff, stuf,** *n.* a fabric; useless things.
**Stultify, stul'ti-fī,** *v.* to make foolish.
**Stumbling-block, stum'bling-blok,** *n.* an obstacle to progress.
**Stump, stump,** *n.* stub of a tree.
**Stun, stun,** *v.* to confound; to stupefy.
**Stupe, stūp,** *n.* cloth used in applying fomentation.
**Stupefy, stū'pē-fī,** *v.* to make dull.
**Stupendous, stū-pen'dus,** *adj.* wonderful; amazing; immense.
**Stupidity, stū-pid'it-ī,** *n.* dullness; foolishness.
**Stupor, stū'por,** *n.* torpor of mind.
**Sturdy, stur'dī,** *adj.* strong; hardy; stout.
**Stutter, stut'er,** *v.* to stammer.
**Sty, stī,** *n.* pen for swine; boil on the eye.
**Stygian, stij'ī-an,** *adj.* infernal.
**Style, stīl,** *n.* manner; title; filament of a pistil; pin of a dial.
**Styptic, stip'tik,** *adj.* that stops bleeding.
**Suasion, swā'zhun,** *n.* persuasion.
**Suave, swāv,** *adj.* pleasant; bland.
**Sub, sub,** *n.* a subordinate; a portion of wage in advance.
**Subacid, sub-as'id,** *adj.* rather sour.
**Subaltern, sub-al'tern,** *n.* subordinate.
**Subalternate, sub-al-ter'nāt,** *adj.* following by turns.
**Subaqueous, sub-āk'wē-us,** *adj.* being under water.
**Subdue, sub-dū',** *v.* to conquer; to overcome.
**Suberous, sū'ber-us,** *adj.* cork-like.
**Subject, sub'jekt,** *adj.* being under authority; liable; *n.* one who is under another; member of a state.
**Subject, sub-jekt',** *v.* to bring under power; to expose; to subdue.
**Subjoin, sub-join',** *v.* to annex.
**Subjoinder, subjoin'der,** *n.* a remark succeeding another.
**Subjugate, sub-jū-gāt',** *v.* to subdue.
**Subjunctive, sub-jungkt'iv,** *adj.* subjoined; added.
**Sublimate, sub'lim-āt,** *v.* to raise up; to exalt; to purify by heat.
**Sublime, sub-līm',** *adj.* lofty; noble; grand.
**Sublunary, sub'loo-na-ri,** *adj.* relating to the world, or things beneath the moon.
**Submarine, sub-mā-rēn',** *adj.* under the sea.
**Submit, sub-mit',** *v.* to yield; to refer to.
**Subordinate, sub-or'din-āt,** *adj.* inferior.
**Suborn, sub-orn',** *v.* to bribe; to cause to commit perjury.
**Subpœna, sū-pē'nā,** *n.* a summons to a witness.
**Subpolar, sub-pō'lar,** *adj.* below the poles.
**Subscribe, sub-skrīb',** *v.* to contribute; to give to sign.
**Subsequent, sub'sē-kwent,** *adj.* coming after.
**Subserve, sub-serv',** *v.* to serve subordinately; to help.
**Subside, sub-sīd',** *v.* to abate; to sink down.
**Subsidy, sub'si-dī,** *n.* money aid.
**Subsistence, sub-sist'ens,** *n.* means of support; the condition of living.
**Subsoil, sub'soil,** *n.* a layer of earth below the surface earth.
**Sub-species, sub-spē'shēz,** *n.* a subdivision of a species.
**Substantial, sub-stan'shal,** *adj.* real; tangible.
**Substantiate, sub-stan'shi-āt,** *v.* to prove; to support.
**Substitute, sub'stit-ūt,** *v.* to put in place of.
**Substratum, sub-strā'tum,** *n.* an under stratum.
**Substructure, sub-strukt'ūr,** *n.* foundation; under structure.
**Subterfuge, sub'ter-fūj,** *n.* an evasion.
**Subterranean, sub-ter-ā'nē-an,** *adj.* underground.
**Subtile, sub'til,** *adj.* thin; fine; artful.
**Subtle, sut'l,** *adj.* artful; cunning.
**Subtract, sub-trakt',** *v.* to deduct.
**Suburban, sub-ur'ban,** *adj.* relating to suburbs.
**Subvention, sub-ven'shun,** *n.* a giving in aid; a subsidy.
**Subversion, sub-ver'shun,** *n.* an overthrowing; ruin.
**Successful, suk-ses'ful,** *adj.* prosperous; having achieved that which was aimed at.
**Successive, suk-ses'iv,** *adj.* following in order.
**Succinct, suk-singkt,** *adj.* short, clear.
**Succour, suk'ur,** *v.* to aid; to relieve.
**Succulence, suk'ū-lens,** *n.* juciness.
**Succumb, suk-um',** *v.* to yield.
**Sucker, suk'er,** *n.* that which sucks; piston of a pump; a shoot; a river fish.
**Sudorific, sū-dō-rif-ik,** *adj.* causing perspiration.
**Suds, suds,** *n.* soap and water.
**Sue, sū,** *v.* to prosecute; to entreat.
**Sufferance, suf-er-ans,** *n.* endurance; permission.
**Sufficiency, suf-ish'en-sī,** *n.* plenty.
**Suffocate, suf'ō-kāt,** *v.* to smother.
**Suffragan, suf'rā-gan,** *n.* an assistant bishop.
**Suffrage, suf'rāj,** *n.* a vote; testimony.
**Suffragette, suf-rā-jet',** *n.* a female advocate of women's franchise.
**Suffragist, suf-rā-jist,** *n.* an upholder of votes for women.
**Suggest, sui-jest',** *v.* to hint; to intimate.
**Suggilation, sui-il-ā'shun,** *n.* mark from a blow.
**Suicidal, sū-i-sī'dal,** *adj.* of the nature of suicide.
**Suit, sūt,** *n.* action at law.
**Suitable, sūt'abl,** *adj.* proper; befitting.
**Suite, swēt,** a body of followers; a set of articles of furniture; a series of rooms.
**Suitor, sū'tor,** *n.* a lover; one who sues at law.
**Sulkiness, sulk'i-nes,** *n.* sullenness.
**Sullen, sul'en,** *adj.* morose; sulky.
**Sulphurous, sul'fur-us,** *adj.* of the nature of sulphur.
**Sultan, sul'tan,** *n.* the monarch of Turkey.
**Sultana, sul-tā'nā,** *n.* mother, wife, or daughter of a sultan.
**Sultry, sul'tri,** *adj.* hot; close.
**Summary, sum'ār-i,** *adj.* short; *n.* an abstract.
**Summit, sum'it,** *n.* top.
**Summon, sum'on,** *v.* to call.
**Sump, sump,** *n.* pit for receiving fusing metal.
**Sumptuous, sumpt'ū-us,** *adj.* costly; rich; splendid.
**Sunbeam, sun'bēm,** *n.* a sun ray.
**Sundial, sun'dī-al,** *n.* an instrument for telling the time by means of the sun's shadow cast by a style.
**Sundry, sun'dri,** *adj.* several.
**Sunstroke, sun'strōk,** *n.* a disease resulting from exposure to the sun.
**Sup, sup,** *v.* to swallow liquid; to take supper.
**Super, sū'per,** *n.* a stage supernumerary.
**Superable, sū'per-abl,** *adj.* capable of being overcome.
**Superabundance, sū-per-ā-bun'dans,** *adj.* more than enough.

**Superannuate, sū-per-an'ū-āt,** *v.* to grant a pension
**Superb, sū-perb',** *adj.* magnificent. [to.
**Supercargo, sū-per-kär'go,** *n.* an officer having charge of a ship's cargo.
**Superciliary, sū-per-sil'i-ar-i,** *adj.* above the eyebrow. [bearing.
**Supercilious, sū-per-sil'i-us,** *adj.* proud; over-
**Supereminent, sū-per-em'in-ent,** *adj.* eminent in a high degree. [more than is necessary.
**Supererogation, sū-per-er-ō-gā'shun,** *n.* a doing of
**Superficial, sū-per-fish'al,** *adj.* shallow; on the surface.
**Superfluous, sū-per'floo-us,** *adj.* unnecessary.
**Superinduce, sū-per-in-dūs',** *v.* to bring upon; to superadd.
**Superintendent, sū-per-in-tend'ent,** *n.* an overseer.
**Superiority, sū-pē-ri-or'it-i,** *n.* excellence; higher rank; advantage.
**Superlative, sū-per'lă-tiv,** *adj.* best; in the highest degree.
**Supernatural, sū-per-nat'ū-ral,** *adj.* miraculous; spiritual. [prescribed number.
**Supernumerary, sū-per-nū'mer-ar-i,** *adj.* above the
**Superscription, sū-per-skrip'shun,** *n.* act of superscribing; that which is written on the outside.
**Supersensible, sū-per-sens'ibl,** *adj.* beyond the senses.
**Supersession, sū-per-sesh'un,** *n.* a setting aside.
**Superstition, sū-per-stish'un,** *n.* belief in supernatural agents, visions, omens, etc.
**Superstructure, sū-per-strukt'ūr,** *n.* structure above the foundation.
**Supervene, sū-per-vēn',** *v.* to happen; to come unexpectedly.
**Supervision, sū-per-vizh'un,** *n.* superintendence.
**Supine, sū-pīn',** *adj.* lying on the back; lazy; in-
**Supplant, sup-plant',** *v.* to displace. [different.
**Supple, sup'l,** *adj.* pliant. [tion; *v.* to add to.
**Supplement, sup'lē-ment,** *n.* an appendix; an addi-
**Supplicate, sup-li-kāt,** *v.* to entreat; to pray.
**Supply, sup-plī',** *v.* to furnish; to provide; *n.* that which is supplied.
**Supportable, sup-port'abl,** *adj.* that can be supported. [spurious.
**Supposititious, sup-poz-it-ish'us,** *adj.* imaginary;
**Suppression, sup-presh'un,** *n.* the act of suppressing.
**Suppuration, sup-ur-ā'shun,** *n.* the forming of pus.
**Supremacy, sū-prem'ā-si,** *n.* the condition of being supreme.
**Sural, sū'ral,** *adj.* relating to the calf of the leg.
**Surcharge, sur-chärj',** *v.* to overcharge; *n.* an overload.
**Surcingle, sur'sing-gl,** *n.* a girth for holding a saddle; girdle of a cassock.
**Surcoat, sur'kōt,** *n.* an overcoat.
**Surd, surd,** *n.* a quantity incapable of being precisely indicated by numbers, or without root.
**Surety, shoor'ti,** *n.* one who guarantees; certainty.
**Surf, surf,** *n.* foam made by waves.
**Surfeit, sur'fit,** *v.* to cloy; *n.* excess.
**Surgeon, sur'jun,** *n.* one who practises surgery.
**Surly, sur'li,** *adj.* morose; mean; crabbed.
**Surmise, sur-mīz',** *v.* to suspect.
**Surmountable, sur-mownt'abl,** *adj.* capable of being overcome.
**Surname, sur'nām,** *n.* family name.
**Surplice, sur'plis,** *n.* garment worn by clergymen and priests.
**Surplus, sur'plus,** *n.* excess; more than required.
**Surprise, sur-prīz',** *n.* act of taking unawares; amazement.
**Surrender, sur-en'der,** *v.* to yield up; to resign.
**Surreptitious, sur-ep-tish'us,** *adj.* done by stealth.
**Surrogate, sur'ō-gāt,** *n.* a deputy.
**Survey, sur-vā',** *v.* to look; to examine; to measure land; *n.* view; examination.
**Survivor, sur-vī'vor,** *n.* one who outlives another.
**Susceptible, sus-sep'tibl,** *adj.* impressionable; sensitive.
**Suspect, sus-pekt',** *v.* to doubt.
**Suspense, sus-pens',** *n.* uncertainty; an anxious waiting. [prolong.
**Sustain, sus-tān',** *v.* to uphold; to maintain; to
**Sustenance, sus'ten-ans,** *n.* food; maintenance.
**Suture, sū'tūr,** *n.* a seam; the sewing up of a wound; joint of the skull.
**Suzerain, sū'zē-rān,** *n.* a paramount ruler or lord.
**Swab, swob,** *n.* a mop; *v.* to cleanse with a mop.
**Swaddle, swod'l,** *v.* to swathe.
**Swagger, swag'er,** *v.* to brag.
**Swain, swān,** *n.* a peasant; a lover; a youth.
**Swale, swāl,** *n.* a shady place.
**Swallow, swol'ō,** *n.* a migratory bird; *v.* to take down the throat.
**Sward, swawrd,** *n.* grass; turf; lawn.
**Swarthy, swawr'thi,** *adj.* dark-skinned.
**Swath, swawth,** *n.* a line of grass or corn cut down with the scythe.
**Swathe, swāth,** *v.* to bind with bandages.
**Sway, swā',** *v.* to govern; to wield; to influence;
**Sweat, swēt,** *n.* perspiration. [*n.* rule.
**Sweepstakes, swēp'stāks,** *n.* a sort of private lottery on a race or other contest.
**Swell, swēl,** *v.* to dilate; *n.* a fop.
**Swelter, swēl'ter,** *v.* to suffer from excessive heat.
**Swill, swil,** *v.* to drench; to wash; to drink eagerly.
**Swimmingly, swim'ing-li,** *adv.* as if swimming;
**Swindler, swind'ler,** *n.* a cheat. [smoothly.
**Swingle, swing'gl,** *v.* to beat flax.
**Swinish, swī'nish,** *adj.* piggish; gross.
**Switch, swich,** *n.* a straight twig; a movable rail; *v.* to beat with a switch; to turn aside by switch rail.
**Swivel, swiv'el,** *n.* a ring that turns on a staple.
**Swoon, swoon,** *v.* to faint; *n.* a fainting fit.
**Swoop, swoop,** *v.* to sweep down upon.
**Sybarite, sib'ā-rit,** *n.* one given up to luxury.
**Sycophant, sik'ō-fant,** *n.* a fawning flatterer.
**Syllable, sil'ā-bl,** *n.* a letter or combination of letters forming one sound.
**Syllabus, sil'ā-bus,** *n.* a compendium; an outline.
**Syllogism, sil'ō-jizm,** *n.* an argument consisting of two propositions and a conclusion.
**Sylph, silf,** *n.* a fairy.
**Sylvan, sil'van,** *adj.* relating to woods.
**Symbol, sim'bol,** *n.* an emblem; a token; a type.
**Symmetry, sim'ē-tri,** *n.* the condition of proper proportion of parts.
**Sympathetic, sim-pā-*thet*'ik,** *adj.* compassionate.
**Symphony, sim'fo-ni,** *n.* an orchestral composition.
**Symposium, sim-pō'zi-um,** *n.* banquet of philosophers; a feast.
**Symptomatic, sim-to-mat'ik,** *adj.* relating to symptoms.
**Synagogue, sin'ā-gog,** *n.* a Jewish church.
**Synchronal, sing'krō-nal,** *adj.* happening simultaneously. [prolong a note of music.
**Syncopate, sing'kō-pāt,** *v.* to contract a word; to
**Syncope, sing'kō-pē,** *n.* the omission of letters in a word; a swoon.
**Syndic, sin'dik,** *n.* a magistrate.
**Synod, sin'od,** *n.* an ecclesiastical body.
**Synonym, sin'ō-nim,** *n.* a word having the same meaning as another word.
**Synoptical, sin-op'tikl,** *adj.* offering a general view.
**Syntax, sin'taks,** *n.* the proper arrangement of words in sentences. [separate parts.
**Synthesis, sin'*the*-sis,** *n.* making a whole out of
**Syringe, sir'inj,** *n.* an instrument for injecting
**Syrup, sir'up,** *n.* sweet juice. [liquids.
**System, sis'tem,** *n.* a formulated method; methodical arrangement; the human organism.

## T

**Tab, tab,** *n.* a small tag or flap.
**Tabard, tab'ard,** *n.* an old-time military tunic.
**Tabby, tab'i,** *adj.* brindled; *n.* a kind of watered silk.
**Tabefaction, tab-e-fak'shun,** *n.* a wasting away.
**Tabella, tă-bel'ă,** *n.* a medicated lozenge.
**Tabernacle, tab'er-nak'l,** *n.* place of worship; tent.
**Tabernacular, tab-er-nak'yu-lar,** *adj.* latticed.
**Tabid, tab'id,** *adj.* wasted by disease.
**Table, tā'bl,** *n.* a flat board supported by legs; a list.
**Tableau, tab-lō',** *n.* a picture.
**Tableaux vivants, tab'lo vē'vangs,** *n.* human representations of pictures.
**Table d'hôte, tā'bl-dōt,** *n.* a fixed-price meal at hotel or restaurant.
**Table-land, tā'bl-land,** *n.* an elevated flat tract of land.
**Tablet, tab'let,** *n.* a small flat surface for painting or writing upon.
**Taboo, tă-boo',** *n.* a prohibition.
**Tabour, tā'bor,** *n.* a small drum.
**Tabret, tă'bret,** *n.* a small tabour.
**Tabulate, tăb'u-lāt,** *v.* to arrange in tabular form.
**Tachometer, ta-kom'ē-ter,** *n.* an instrument for measuring velocity.
**Tacit, tăss-'it,** *adj.* silent; implied.
**Taciturn, tas'it-urn,** *adj.* reserved; silent.
**Tack, tack,** *n.* a nail; *v.* to veer.

**Tacking**, tak'ing, *v.* changing the course of a sailing vessel.
**Tackle**, tak'l, *n.* apparatus for raising weights; fishing implements; *v.* to catch hold of.
**Tackling**, tak'ling, *n.* harness; ship-rigging.
**Tacky**, tak'i, *adj.* sticky.
**Tact**, takt, *n.* discernment; alertness; skill.
**Tactics**, tak'tiks, *n.* science of manœuvring in warfare.
**Tactile**, tak'til, *adj.* susceptible of touch.
**Tactual**, tak'tū-al, *adj.* relating to touch.
**Tael**, tail, *n.* a Chinese weight.
**Taffeta**, taf'ē-tă, *n.* a kind of silk.
**Taffrail**, taf'rel, *n.* upper part of ship's stern.
**Tag**, tag, *n.* any small thing tacked to another.
**Taggers**, tag'ers, *n.* thin sheet iron.
**Tail**, tāl, *n.* caudal appendage.
**Tailor**, tāl-'or, *n.* maker of men's clothes.
**Taint**, tānt, *v.* to infect; *n.* corruption; infection.
**Take**, tāk, *v.* to acquire; get; seize.
**Talc**, tălk, *n.* a flaky, translucent mineral.
**Talent**, tal'ent, *n.* ability; natural gift; a weight.
**Talesman**, tā'lez-man, *n.* one chosen to supply vacancy in jury complement.
**Talion**, ta'le-un, *n.* the law of retaliation.
**Talisman**, tal'iz-man, *n.* a charm.
**Talk**, tŏrk, *v.* to speak, to converse.
**Talkative**, tawk'ăt-iv, *adj.* loquacious.
**Tall**, torl, *adj.* of high stature.
**Tallith**, tal'*ith*, *n.* Jewish prayer mantle.
**Tallow**, tal'ō, *n.* melted animal fat.
**Tally**, tal'i, *n.* a record by notched sticks; *v.* to agree.
**Talon**, tal'on, *n.* claw of a bird of prey.
**Talus**, tā'lus, *n.* slope of a rampart.
**Talpa**, tal'pa, *n.* a mole.
**Tamarin**, tam'a-rin, *n.* a small South American monkey.
**Tambour**, tam'boor, *n.* a small drum.
**Tambourine**, tam-boo-rēn', *n.* a shallow drum held in the hand.
**Tamper**, tam'per, *v.* to interfere with.
**Tampon**, tam'pon, *n.* a plug.
**Tan**, tan, *adj.* light brown colour; *v.* to convert skins into leather; to beat.
**Tandem**, tan'dem, *adv.* one before the other.
**Tang**, tang, *n.* a strong taste; tongue of a buckle.
**Tangent**, tan'jent, *n.* a line that touches a curve without cutting into it.
**Tangible**, tan'je-bl, *adj.* within reach by touch, possible.
**Tank**, tank, *n.* a water container; a military motor vehicle.
**Tankard**, tangk'ard, *n.* a drinking vessel.
**Tannery**, tan'er-i, *n.* place where leather is tanned.
**Tantalising**, tan'tal-iz-ing, *adj.* teasing; tormenting.
**Tantamount**, tan'tă-mownt, *adj.* equivalent.
**Tap**, tap, *v.* to strike gently; to pierce; to let out liquid; *n.* a pipe through which liquors are drawn.
**Tape**, tāp, *n.* a narrow fillet or band.
**Taper**, tā'per, *n.* a small wax candle; *v.* to diminish gradually.
**Tapestry**, tap'-es-tri, *n.* hangings woven and sewn.
**Tape-worm**, tāp'wurm, *n.* an intestinal worm.
**Tapir**, ta'pir, *n.* a thick-skinned quadruped with a flexible proboscis with the nostrils at the end.
**Tapis**, tă-pē', *n.* carpet.
**Tappets**, tap'pets, *n.* small arms connected with the valves of the cylinder of an engine.
**Tap-room**, tăp'room, *n.* room where liquors are served.
**Tap-root**, tăp'root, *n.* the central root.
**Tappet**, tăp'et, *n.* a machine lever.
**Tar**, tah, *n.* resin; a sailor.
**Tardy**, tär'di, *adj.* late.
**Tare**, tär, *n.* allowance weight for cask or bag; a
**Target**, tär'get, *n.* a mark to shoot at. [weed.
**Targum**, tär'gum, *n.* the Aramaic versions of the Old Testament.
**Tarn**, tärn, *n.* a small lake.
**Tarnish**, tär'nish, *v.* to soil; to taint.
**Tarpaulin**, tär-paw'lin, *n.* tar-covered canvas.
**Tarry**, tär-ri, *v.* to linger; to delay.
**Tart**, tärt, *n.* an article of pastry; *adj.* sour.
**Tartan**, tar'tan, *n.* Scottish plaid pattern.
**Tartuffe**, tär-toof', *n.* a hypocrite.
**Task**, task, *n.* lesson; an imposed duty.
**Tassel**, tas'l, *n.* a bunch of silk.
**Taste**, tāst, *v.* to partake of; to try the flavour of; *n.* discernment.
**Tatter**, tat'er, *n.* a rag; *v.* to tear into pieces.
**Tatterdemalion**, tat-ter-de-male'yun, *n.* a ragged fellow.
**Tattle**, tat'l, *n.* idle gossip; *v.* to prate.
**Tattoo**, tă-too', *n.* a drum and bugle call to soldiers; designs pricked into the skin.
**Taunt**, tawnt, *v.* to deride.
**Taut**, tawt, *adj.* tight.
**Tautology**, taw-tol'ō-ji, *n.* needless repetition.
**Taw**, taw, *n.* a marble; *v.* to dress white leather.
**Tawdry**, taw'dri, *adj.* gaudy.
**Tawny**, taw'ni, *adj.* brownish yellow.
**Tax**, taks, *n.* a public rate; *v.* to impose a tax.
**Taxi**, or **Taxi-cab**, *n.* a public vehicle.
**Taxidermy**, taks-i-der'mi, *n.* the art of preserving skins.
**Taximeter**, taximētr, *n.* device for registering fares on taxis.
**Teacher**, tēch'er, *n.* an instructor.
**Tea**, tē, *n.* shrub with leaves used as an infusion.
**Teak**, teek, *n.* an East Indian tree. Used largely in shipbuilding.
**Team**, tēm, *n.* two or more horses.
**Tear**, tēer, *n.* water from the eye.
**Tear**, tāre, *v.* to rend.
**Tease**, tēz, *v.* to annoy; to raise nap on cloth.
**Teasel**, tēz'l, *n.* bur used in cloth dressing.
**Teat**, tēt, *n.* the nipple.
**Technical**, tek'ni-kl, *adj.* scientific; pertaining to an art or a profession.
**Tectonic**, tek-ton'ik, *adj.* relating to building.
**Ted**, ted, *v.* to spread new-mown grass.
**Tedious**, tē'di-us, *adj.* irksome.
**Teem**, tēm, *v.* to be full.
**Teens**, tēnz, *n.* years of age between 12 and 20.
**Teetotum**, tē-tō'tum, *n.* a spinning toy.
**Tegular**, teg'ū-lar, *adj.* pertaining to tiles.
**Telary**, tel'a-re, *adj.* resembling a web.
**Teleology**, tel-ē-ol'-ō-ji, *n.* science of final causes.
**Telepathy**, tel'ē-path-i, *n.* thought transmission.
**Telephone**, tel-e-phōn, *n.* instrument transmitting the voice to a distance.
**Telephote**, tel'ē-fōt, *n.* an electrical instrument for reproducing images of objects at a distance.
**Telescope**, tēl-es-cōpe, instrument for seeing distant objects.
**Telesia**, te-le'zhe-a, *n.* a sapphire; a gem.
**Teller**, tel'er, *n.* paying officer at a bank; one who tells.
**Telluric**, tel-ū'rik, *adj.* relating to the earth.
**Temerarious**, tem-e-ra're-us, *adj.* rash; unreasonably adventurous.
**Temerity**, te-mer'it-i, *n.* rashness.
**Temper**, tem'per, *n.* frame of mind; mood; *v.* to moderate; to soften.
**Temperance**, tem'per'anse, *n.* sobriety.
**Temperate**, tem'perāt, *adj.* moderate.
**Temperature**, tem'per-at-ūr, *n.* condition in reference to heat or cold.
**Tempestuous**, tem-pest'ū-us, *adj.* stormy; violent.
**Temple**, temp'l, *n.* place of worship.
**Templet**, tem'plet, *n.* pattern for moulding.
**Tempo**, tem'pō, *n.* time; rhythm. [spiritual.
**Temporal**, tem'po-ral, *adj.* transient; worldly; un-
**Temporary**, tem'po-rā-ri, *adj.* only for a time.
**Temporise**, tem'pō-rīz, *v.* to compromise; to delay.
**Tempt**, tempt, *v.* to test; to allure.
**Temulence**, tem'ū-lens, *n.* intoxication.
**Tenable**, ten'ă-bl, *adj.* maintainable.
**Tenacity**, ten-as'it-i, *n.* firmness.
**Tenaculum**, te-nak'ū-lum, *n.* a surgical instrument for handling veins. [rental.
**Tenancy**, ten'an-si, *n.* the holding of property at a
**Tench**, tentch, *n.* a fresh-water fish having small deeply embedded scales.
**Tend**, tend, *v.* to guard; to watch.
**Tender**, ten'der, *n.* a fuel car attached to a locomotive; an offer; *adj.* soft; delicate.
**Tendon**, ten'don, *n.* a ligament.
**Tendril**, ten'dril, *n.* spiral shoot of a plant.
**Tenebrous**, ten'ē-brus, *adj.* gloomy.
**Tenement**, ten'ē-ment, *n.* a dwelling; an apartment.
**Tenet**, ten'et, *n.* opinion; doctrine; principle.
**Tennis**, ten'iss, *n.* game with ball and racket, played usually under cover.
**Tenon**, ten'on, *n.* piece of timber fitting in a mortice.
**Tenor**, ten'or, *n.* continued course; purport; part in music between bass and alto; a tenor singer.
**Tense**, tens, *n.* time-expressing inflection of a verb; *adj.* tightly stretched.
**Tentacle**, ten'tă-kl, *n.* feeler of insects.
**Tentative**, ten'tă-tiv, *adj.* experimental.

**Tentory,** tent'ur-e, *n.* a tent covering or awning.
**Tenuity,** ten-ū'it-i, *n.* thinness; slenderness.
**Tenure,** ten'ūr, *n.* the act of holding.
**Tepid,** tep'id, *adj.* lukewarm.
**Teraphim,** ter-ā-fim, *n.* household gods.
**Tercentenary,** ter-sen'te-nā-ri, *n.* a 300th anniversary. [conduct.
**Tergiversation,** ter-jiv-er-sā'shun, *n.* shiftiness of
**Term,** term, *n.* a limited time; an expression.
**Termagant,** ter'mā-gant, *n.* a hot-tempered woman: a shrew.
**Terminal,** ter'min-al, *adj.* final; ending.
**Terminology,** ter-min-ol'ō-ji, *n.* explanation of terms used.
**Tern,** tern, *n.* an aquatic fowl.
**Terpsichorean,** terp'sik-o-re-an, *adj.* pertaining to dancing.
**Terrace,** ter'as, *n.* an elevated bank; an elevated row of houses; a flat roof.
**Terrapin,** ter'ra-pin, *n.* a species of fresh water tortoise. [land and water.
**Terraqueous,** ter-āk'wē-us, *adj.* composed of both
**Terrene,** ter-ēn', *adj.* relating to the earth.
**Terrestrial,** ter-es'tri-al, *adj.* pertaining to the earth.
**Terrigenous,** ter-rij'-e-nus, *adj.* produced from or of the earth.
**Territory,** ter'it-o-ri, *n.* country; state; domain.
**Terror,** ter'ur, *n.* excessive fear.
**Terse,** ters, *adj.* concise; short; forcible.
**Tertian,** ter'shi-an, *adj.* happening every three days. [squares or tiles.
**Tesselate,** tes'el-āt *v.* to put down tesselated
**Testacea,** tes-tā'shi-ā, *n.* shelled animals.
**Testamentary,** tes-tā-ment'ār-i, *adj.* relating to a will. [examination.
**Testamur,** test-ā'mur, *n.* university certificate of
**Testator,** tes-tā'tor, *n.* a man who leaves a will.
**Tester,** tes'ter, *n.* bed canopy; an earthen pot.
**Testicle,** tes'ti-kl, *n.* seed-secreting gland.
**Testify,** tes'ti-fi, *v.* to bear witness.
**Testudinal,** tes-tu'de-nal, *adj.* relating to or resembling the tortoise.
**Testy,** test'i, *adj.* fretful.
**Tetanus,** tet'ā-nus, *n.* cramp in the muscles; lock-
**Tetchy,** tech'i, *adj.* touchy; peevish. [jaw.
**Tether,** teth'er, *v.* to restrain a beast by tying it with a rope; *n.* tethering rope.
**Tetragon,** tet'rā-gon, *n.* a figure with four angles.
**Teutonic,** tew-ton'ik, *adj.* German.
**Tew,** tew, *v.* to toil; to work up; to worry.
**Tewee,** tew'ee, *n.* a smoke flue or pipe.
**Textile,** teks'til, *adj.* woven.
**Textual,** teks'tū-al, *adj.* relating to or comprised in the text.
**Thack,** *thak*, *n.* thatch (Old English).
**Thallium,** *thal*'i-um, *n.* a metal resembling lead.
**Thanatoid,** *than*'ā-toid, *adj.* ghastly; deadly.
**Thane,** *thān*, *n.* an Anglo-Saxon noble.
**Thanks,** *thanks*, *n.* expression of gratitude.
**Thatch,** *thach*, *n.* a straw roof; *v.* to cover with straw.
**Thaw,** *thaw*, *v.* to melt after frost.
**Theatre,** *thē*'ā-ter, *n.* a playhouse; place for exhibitions or lectures; any scene of action.
**Theave,** *thēv*, *n.* a first year's ewe.
**Theme,** *thēm*, *n.* subject. [government.
**Theocracy,** *thē*-ok'rā-si, *n.* a state of divine
**Theologian,** *thē*-ō-lō'ji-an, *n.* one learned in theology.
**Theology,** *the*ol-o-gy, *n.* the science of religion.
**Theomorphic,** *thē*-ō-mor'ik, *adj.* in the form of a god. [presence.
**Theophany,** *thē*-of'an-i, *n.* manifestation of divine
**Theorem,** *thē*'ō-rem, *n.* a proposition submitted for
**Theory,** *thē*'ō-ri, *n.* abstract principles. [proof.
**Theotechny,** *thē*-ō-tek'ni, *n.* divine intervention.
**Therapeutics,** *thera*'pū-tics, *n.* science of healing.
**There,** *thair*, *adj.* of position.
**Therm,** *thurm*, *n.* heat unit.
**Thermal,** *thēr*'mal, *adj.* pertaining to heat.
**Thermostat,** *ther*'mo-stat, *n.* a heat regulator.
**Thesis,** *thē*'sis, *n.* subject propounded for discussion.
**Thespian,** *thesp*'i-an, *adj.* relating to tragedy; also applied to acting generally.
**Theurgy,** *thē*'ur-ji, *n.* supernatural magic.
**Thew,** *thū*, *n.* sinew.
**Thible,** *thi*'bl, *n.* a porridge stirrer.
**Thicket,** *thik*'et, *n.* low, closely set trees or shrubs.
**Thief,** *th*'eef, *n.* one who steals.
**Thievery,** *thēv*'er-i, *n.* theft; roguery.
**Thigh,** *thi*, *n.* top part of leg.
**Thill,** *thil*, *n.* cart-shaft.
**Thimble,** *thimb*'l, *n.* finger-cap used in sewing.
**Think,** *th*'ink, *v.* to cogitate.
**Thistle,** this'l, *n.* a prickly plant, the emblem of Scotland.
**Thole,** *thol*, *v.* to endure; to wait patiently.
**Thong,** *thong*, *n.* a leather strap.
**Thorough,** *thur*'ō, *adj.* complete.
**Thought,** *thawt*, *n.* the action of the mind; reasoning power; idea; meditation.
**Thousand,** *thow*'zand, *n.* ten hundred.
**Thraldom,** *thrawl*'dom, *n.* slavery.
**Thrash,** *thrash*, *v.* to beat.
**Thread,** *thred*, *n.* a small twist of fibre; a filament; *v.* to insert a thread.
**Threadbare,** *thred*'bār, *adj.* worn out; hackneyed.
**Threat,** *thret*, *n.* a menace.
**Threnody,** *thren*'ō-di, *n.* ode of lament.
**Threshold,** *thresh*'old, *n.* door-sill.
**Thrift,** *thrift*, *n.* frugality.
**Throat,** *thrōt*, *n.* the front part of the neck.
**Throe,** *thrō*, *n.* extreme pain.
**Throng,** *throng*, *n.* a crowd.
**Throttle,** *throt*'l, *n.* the windpipe; *v.* to choke.
**Throughout,** *throo*-owt', *prep.* in every part; all through.
**Thrum,** *thrum*, *n.* unused ends of weaver's yarn; *v.* to play carelessly with the fingers.
**Thrush,** *thrûsh*, *n.* a disease; a song-bird.
**Thrust,** *thrûst*, *v.* to push away with force.
**Thud,** *thud*, *n.* the dull sound of a blow or fall.
**Thug,** *thug*, *n.* an East Indian robber.
**Thule,** *thūl*, *n.* the most northerly part.
**Thumbscrew,** *thum*'skroo, *n.* an old instrument of punishment.
**Thump,** *thump*, *v.* to strike.
**Thunderbolt,** *thun*'der-bōlt, *n.* shaft of lightning.
**Thunderstruck,** *thun*'der-struk, *adj.* suddenly
**Thwack,** *thwak*, *v.* to thump. [amazed.
**Thwart,** *thwawrt*, *adj.* crosswise; *v.* to oppose.
**Tibial,** tib'i-al, *adj.* relating to the large bone of the leg.
**Tice,** tis, *v.* to entice. [ing of bedding.
**Tick,** tik, *v.* to click; *n.* credit; an insect; cover-
**Tickle,** tik'l, *v.* to please; to titillate.
**Tide,** tid, *n.* flow of the sea.
**Tide-gate,** tid'gāt, *n.* gate that shuts in the tide.
**Tidemill,** tid'mil, *n.* mill worked by tidal water.
**Tidings,** tid'ings, *n.* news.
**Tidy,** ti'di, *adj.* neat; spruce.
**Tier,** tēr, *n.* a row.
**Tierce,** tērs, *n.* a 42-gallon cask.
**Tiff,** tif, *n.* a pettish quarrel.
**Tiffany,** tif'an-i, *n.* a kind of silk.
**Tiffin,** tif'fin, *n.* a small meal between breakfast and dinner—in India.
**Tight,** tit, *adj.* firm.
**Tile,** til, *n.* a small square of baked clay.
**Tillage,** til'āj, *n.* cultivation.
**Tilt,** tilt, *v.* to incline; *n.* a thrust.
**Tilth,** *tilth*, *n.* depth of soil; cultivated land.
**Timber,** tim'ber, *n.* building wood.
**Timbre,** tim'br, *n.* quality of tone.
**Timbrel,** tim'brel, *n.* a kind of tambourine.
**Timely,** tim'li, *adj.* in due time; when wanted.
**Time-server,** tim'serv-er, *n.* one who shapes his views to his own interests.
**Timid,** tim'id, *adj.* bashful; faint-hearted.
**Timon,** ti'mon, *n.* a helm.
**Timothy,** tim'ō-*thi*, *n.* a kind of grass.
**Tincture,** tingk'tūr, *n.* a solution.
**Tinder,** tin'der, *n.* kindling material.
**Tinea,** tin'ē-a, *n.* generic name of certain skin
**Tinfoil,** tin'foil, *n.* thin leaves of tin. [diseases.
**Tinge,** tinj, *v.* to colour. [sensation.
**Tingle,** ting'gl, *v.* to impart or feel a thrilling
**Tinker,** tingk'er, *n.* a mender of tin and metal ware.
**Tinkle,** tingk'l, *v.* to make sharp sounds.
**Tinsel,** tin'sel, *n.* gaudy dress material.
**Tiny,** ti'ni, *adj.* very small.
**Tip,** tip, *n.* gratuity; a hint; a tap; *v.* to slant.
**Tippet,** tip'et, *n.* small mantle.
**Tipstaff,** tip'staf, *n.* a constable.
**Tipsy,** tip'si, *adj.* drunk.
**Tirade,** tir'ād, *n.* an outburst of abuse.
**Tire,** tir, *v.* to weary; to dress.
**Tirret,** tir'rit, *n.* a manacle.
**Tissue,** tis'ū, *n.* cloth of gold or silver; the body's organic structure.
**Titania,** ti-ta'ne-a, *n.* the queen of Fairyland.
**Tithe,** *tith*, *n.* a tenth part; church tax.
**Titillate,** tit'il-āt, *v.* to tickle.

**Title,** tī'tl, *n.* appellation of rank; right; *v.* to
**Titter,** tit'er, *v.* to laugh restrainedly. [name.
**Tittle,** tit'l, *n.* a jot.
**Tittle-tattle,** tit'l-tat'l, *n.* idle gossip.
**Titubation,** tit-yu-ba'shun, *n.* the act of rocking to and fro; a stumbling; tottering.
**Titular,** tit'ū-lar, *adj.* nominal.
**Toast,** tōst, *n.* bread scorched; a sentiment; *v.* to toast bread; to drink to.
**Toboggan,** tō-bog'an, *n.* a sled for sliding down snow slopes.
**Tocsin,** tok'sin, *n.* an alarm-bell.
**Tod,** tod, *n.* 28 lb. of wool.
**Toddy,** tod'i, *n.* sweetened water and liquor.
**Toga,** tō'gā, *n.* an ancient Roman mantle.
**Toggle,** tog'gl, *n.* a small wooden pin with tapering ends.
**Toilsome,** toil'sum, *adj.* wearisome.
**Tokay,** tō-kā', *n.* an Hungarian wine.
**Token,** tō'ken, *n.* a keepsake; a sign.
**Tolerable,** tol'er-abl, *adj.* capable of being endured; passable.
**Toll,** tōl, *n.* tax for right of passage ; *v.* to strike a bell.
**Tolsey,** tol'se, *n.* a commercial exchange; a toll-booth.
**Tomahawk,** tom'ă-hawk, *n.* an Indian hatchet.
**Tomb,** toom, *n.* a grave.
**Tomboy,** tom'boi, *n.* a romping girl.
**Tome,** tōm, *n.* a large book.
**Tomtom,** tom'tom, *n.* a flat drum used chiefly by natives in India.
**Ton,** tun, *n.* 2,240 lb., or 20 cwt.
**Tone,** tōn, *n.* sound; quality of voice.
**Tongs,** tongs, *n.* a fire implement.
**Tonic,** ton'ik, *n.* a strengthening mixture.
**Tonsorial,** ton-so're-al, *adj.* pertaining to a barber.
**Tool,** tool, *n.* a workman's implement; one who is utilised by another.
**Toothsome,** tooth'sum, *adj.* palatable.
**Topaz,** tō'paz, *n.* a precious stone.
**Tope,** tōp, *n.* a large fish; an Indian tumulus.
**Toper,** tō'per, *n.* a drunkard.
**Taphaceous,** to-fa'shus, *adj.* sandy, gritty.
**Topic,** top'ik, *n.* a subject for converse or writing.
**Topography,** top-og'raf-i, *n.* description of places.
**Topple,** top'l, *v.* to fall.
**Torch,** torch, *n.* a light of combustible material held in the hand.
**Torment,** tor'ment, *n.* anguish.
**Torment,** tor-ment', *v.* to torture; to vex.
**Tornado,** tor-na'do, *n.* a very violent storm of small extent.
**Torpid,** tor'pid, *adj.* sluggish; dull.
**Torrent,** tor'ent, *n.* a swift stream; a rapid out-
**Torrid,** tor'id, *adj.* hot and dry. [pouring.
**Torsion,** tor'shun, *n.* the act of twisting.
**Torso,** tor'sō, *n.* trunk of a statue.
**Tort,** tort, *n.* a wrong.
**Tortile,** tort'il, *adj.* twisted.
**Tortuous,** tort'ū-us, *adj.* winding; twisted.
**Torture,** tor'tūr, *n.* excessive pain.
**Toss,** tos, *v.* to throw.
**Total,** tō'tal, *n.* the entire sum; *adj.* complete;
**Totter,** tōt'er, *v.* to walk unsteadily. [full.
**Touching,** tuch'ing, *adj.* affecting; pathetic.
**Tough,** tuf, *adj.* tenacious; hardy.
**Tourist,** toor'ist, *n.* one who makes a tour.
**Touse,** towz, *v.* to pull.
**Tout,** towt, *v.* to push for custom. [by a rope.
**Tow,** tō, *n.* combed flax; *v.* to pull through water
**Toward,** tō'ward, *adj.* apt; *prep.* in the direction of.
**Towel,** tow'el, *n.* a cloth for wiping the skin.
**Tower,** tow'er, *n.* a high building; a fortress; *v.* to rise high.
**Toxic,** tōk-sik, *adj.* poisonous.
**Trace,** trās, *n.* a mark; a footstep; *v.* to track.
**Trachea,** tra'ke-a, *n.* the windpipe.
**Track,** trak, *v.* to trace; *n.* a road.
**Tract,** trakt, *n.* a space of territory; a small religious treatise.
**Tractable,** trakt'abl, *adj.* docile; easy to manage.
**Traction,** trak'shun, *n.* act of drawing.
**Trade,** trād, *n.* business; commerce; industry; *v.* to buy or sell.
**Trade-mark,** trād'mārk, *n.* a patented distinguishing device.
**Trade-wind,** trād'wind, *n.* a constant sea-wind.
**Tradition,** trā-dish'un, *n.* unwritten memorials.
**Traduce,** tra-dūs', *v.* to vilify.
**Traffic,** traf'ik, *n.* trade. [tragic drama.
**Tragedy,** traj'ē-di, *n.* a fatal occurrence; a
**Trail,** trāl, *n.* a track; *v.* to track.

**Train,** trān, *v.* to teach; *n.* a line of railway carriages.
**Train-oil,** trān'oil, *n.* oil from the fat of whales.
**Trait,** trā, *n.* a characteristic; a feature.
**Traitor,** trā'tor, *n.* one who betrays.
**Traject,** tra-jek't, *v.* to throw or cast over.
**Tram,** tram, *n.* tram-car.
**Trammel,** tram'el, *v.* to hamper; to entangle.
**Tramp,** tramp, *v.* to go on foot; *n.* a vagrant.
**Trample,** tramp'l, *v.* to tread upon.
**Trance,** trans, *n.* a vision.
**Tranquil,** trang'kwil, *adj.* calm.
**Transact,** trans-akt', *v.* to perform.
**Transcend,** tran-send', *v.* to surpass.
**Transcribe,** trans-krib', *v.* to copy.
**Transept,** trans'ept, *n.* a cross aisle.
**Transfer,** trans-fer', *v.* to convey.
**Transfiguration,** trans-fig-ūr-ā'shun, *n.* a change of form.
**Transfix,** trans-fiks', *v.* to pierce through.
**Transform,** trans-form, *v.* to alter.
**Transfuse,** trans-fūz', *v.* to instil.
**Transgressor,** trans-gres'or, *n.* one who errs; a sinner.
**Transient,** tran'shent, *adj.* fleeting; passing; temporary.
**Translate,** trans-lāt', *v.* to interpret; to render into another language; to transfer.
**Translucent,** trans-loo'sent, *adj.* pellucid.
**Transmarine,** trans-mā-rēn', *adj.* beyond the sea.
**Transmigration,** trāns-mi-grā'shun, *n.* passing from one body or country to another.
**Transmit,** trans-mit', *v.* to send.
**Transmontane,** trans-mōn'tān, *adj.* across a mountain. [of.
**Transmute,** trans-mūt', *v.* to change the substance
**Transparent,** trans-pā'rent, *adj.* to clear.
**Transpire,** trans-pīr', *v.* to happen; to exhale; to emit. [place.
**Transplant,** trans-plant', *v.* to re-plant in another
**Transport,** trans-port', *v.* to convey.
**Transport,** trans'port, *n.* rapture; a convict.
**Transpose,** trans-pōz, *v.* to interchange.
**Transprint,** trans-print', *v.* to print in wrong places.
**Transude,** trans'ūd,' *v.* to pass through pores.
**Transverse,** trans-vers', *adj.* crosswise.
**Trap,** trap, *v.* to snare; *n.* a snaring apparatus.
**Trapan,** trā-pan', *v.* to ensnare.
**Trap-door,** trap'dōr, *n.* a floor door.
**Trash,** trash, *n.* worthless stuff.
**Travail,** trav'āl, *v.* to labour in pain; *n.* childbirth. [journey.
**Travel,** trav'el, *n.* journeying; *v.* to walk; to
**Travesty,** trav'es-ti, *n.* burlesque; *v.* to burlesque.
**Trawl,** trawl, *v.* to fish by dragging a trawl.
**Treachery,** trech'er-i, *n.* trickery; betrayal.
**Treadle,** tred'l, *n.* lever moved by the foot in mechanical operations.
**Treason,** trē'zn, *n.* disloyalty.
**Treasure,** trezh'ūr, *n.* accumulated wealth; valuables; *v.* to hoard. [free entertainment.
**Treat,** trēt, *v.* to discourse upon; to entertain; *n.*
**Treble,** treb'l, *adj.* threefold; *n.* highest part in
**Trefoil,** trē'foil, *n.* clover. [music.
**Trellis,** trel'is, *n.* lattice-work.
**Tremble,** trem'bl, *v.* to shake; to shiver.
**Tremolo,** trem'ō-lō, *n.* a quivering note.
**Trenchant,** trench'ant, *adj.* severe; cutting.
**Trencher,** trensh'er, *n.* wooden plate.
**Trend,** trend, *n.* tendency.
**Trental,** trent'al, *n.* service of thirty masses.
**Trepan,** trē-pan', *v.* to ensnare; to perforate the skull; *n.* saw used in trepanning.
**Trepid,** trep'id, *adj.* quaking with alarm.
**Trepidation,** trēp'i-dā'shun, *n.* state of alarm, trembling.
**Trespass,** tres'pas, *v.* to infringe; to obtrude unlawfully on another man's property.
**Tress,** tres, *n.* a lock of hair.
**Trestle,** tres'l, *n.* a support.
**Tret,** tret, *n.* allowance for waste.
**Triad,** trī'ad, *n.* three together. [an attempt.
**Trial,** trī'al, *n.* an examination; a test; a hearing;
**Triangle,** trī-ang'gl, *n.* a three-angled figure.
**Triarchy,** trī'ar-ke, *n.* government by 3 persons.
**Tribe,** trīb, *n.* a race; a family.
**Tribulation,** trīb-ū-lā'shun, *n.* distress; severe affliction.
**Tribunal,** trī-bū'nal, *n.* a court of justice.
**Tribute,** trib'ūt, *n.* tax paid by a conquered country; an acknowledgment.
**Trice,** trīs, *n.* an instant.
**Trick,** trik, *n.* a dodge; an artifice.

**Trickle, trik'l,** *v.* to drip.
**Tricolour, trī'kul-er,** *n.* a three-coloured flag; national flag of France.
**Tricycle, trī'si-kl,** *n.* a three-wheeled velocipede.
**Trident, trī'dent,** *n.* a three-pronged sceptre.
**Triennial, trī-en'i-al,** *adj.* occurring every third year. [act idly.
**Trifle, trī'fl,** *n.* anything of little value; *v.* to talk or
**Trifoliate, trī-fō'li-āt,** *adj.* three-leaved.
**Trifurcate, trī-fur'kāt,** *adj.* three-branched.
**Trigger, trig'er,** *n.* spring of a gun.
**Trigon, trī'gon,** *n.* a three-cornered figure.
**Trigonometry, trig-ō-nom'ē-tri,** *n.* science of triangles.
**Trilateral, trī-lat'er-al,** *adj.* having three sides.
**Triliteral, trī-lit'er-al,** *adj.* having three letters.
**Trill, tril,** *v.* to make a quivering sound.
**Trilocular, trī-lok'ū-lar,** *adj.* three-celled.
**Trim, trim,** *v.* to put in order.
**Trimmer, trim'er,** *n.* a time-serving politician.
**Trinal, trī'nal,** *adj.* threefold.
**Trinket, tringk'et,** *n.* a small personal ornament.
**Trinodal, trī-nō'dal,** *adj.* three-jointed.
**Trinomial, trī-nō'mi-al,** *adj.* consisting of three parts. [formers.
**Trio, trē'o,** *n.* a musical composition for three per-
**Trip, trip,** *v.* to take short quick steps; to stumble; to go wrong; *n.* a false step; an excursion.
**Tripartite, trip'ār-tīt,** *adj.* in three parts.
**Tripe, trip,** *n.* the part of the entrails of ruminating animals used as food.
**Tripedal, trī'ped-al,** *adj.* having three feet.
**Triphthong, trif'thong,** *n.* union of three vowels in one syllable.
**Triple, trip'l,** *adj.* threefold.
**Tripod, trī'pod,** *n.* a three-legged stand.
**Triptych, trip'tik,** *n.* a set of tablets or paintings in three sections.
**Trisect, trī-sekt',** *v.* to divide into three.
**Trisyllable, trī'sil-ā-bl,** *n.* word of three syllables.
**Trite, trīt,** *adj.* stale; hackneyed.
**Triton, trī'ton,** *n.* a marine demi-god.
**Triturate, trit'ū-rāt,** *v.* to grind to fine powder.
**Triumph, trī'umf,** *n.* victory.
**Triune, trī'un,** *adj.* three in one.
**Trivet, triv'et,** *n.* a thing supported on three feet.
**Trivial, triv'i-al,** *adj.* trifling.
**Trivium, triv'i-um,** *n.* the liberal arts—grammar, rhetoric, and logic.
**Trochee, trō'kē,** *n.* a metrical foot of an accented and an unaccented syllable.
**Troll, trōl,** *v.* to sing; *n.* a Norse hill spirit.
**Trollop, trol'op,** *n.* a slattern. [ment.
**Trombone, trom-bōn',** *n.* a brass musical instru-
**Tromometer, trō-mom'ē-ter,** *n.* instrument for measuring earthquake shocks.
**Troop, troop,** *n.* a company of soldiers.
**Trophy, trō'fi,** *n.* a memorial of victory.
**Tropics, trop'iks,** *n.* the torrid zone.
**Troth, troth,** *n.* faith; fidelity.
**Troubadour, troo'bā-door,** *n.* a wandering poet of the Middle Ages.
**Trough, trof,** *n.* a long hollow vessel.
**Troupe, troop,** *n.* a company.
**Trousseau, troo-sō',** *n.* a bride's outfit.
**Trover, trō'ver,** *n.* an action to recover goods wrongfully held.
**Trow, trow,** *v.* to presume; to suppose.
**Trowel, trow'el,** *n.* tool for handling mortar.
**Troy-weight, troi'wāt,** *n.* system in which 12 oz. equal 1 lb.
**Truant, troo'ant,** *n.* a strayer from duty; one who stays from school.
**Truce, troos,** *n.* temporary peace.
**Truck, truk,** *n.* a hand vehicle; *v.* to barter.
**Truculent, truk'ū-lent,** *adj.* savage; fierce.
**Trudge, truj,** *v.* to jog along.
**Trug, trug,** *n.* gardener's basket. [truth.
**Truism, troo'izm,** *n.* an axiom; a self-evident
**Trumpery, trump'er-i,** *n.* rubbish.
**Trumpet, trump'et,** *n.* a brass musical wind instrument; *v.* to proclaim loudly.
**Truncate, trungk'āt,** *v.* to cut off.
**Truncheon, trun'shun,** *n.* a club; a bludgeon.
**Trundle, trund'l,** *v.* to roll.
**Truss, trus,** *n.* a supporting bandage for ruptures; bundle of hay; *v.* to pack close.
**Trust, trust,** *n.* credit; faith; confidence
**Truth, trooth,** *n.* fact; reality; fidelity.
**Tryst, trist,** *n.* a meeting-place. [insects.
**Tsetse-flies, tsēt'sē-flies,** *n.* disease-spreading
**Tube, tūb,** *n.* a hollow pipe; a tunnel-way.
**Tubular, tū'bū-lar,** *adj.* tubiform.
**Tucker, tuk'er,** *n.* a kind of bib.
**Tuft-hunter, tuft'hunt-er,** *n.* one who eagerly courts higher society.
**Tuition, tū-ish'un,** *n.* teaching.
**Tumbler, tumb'ler,** *n.* a drinking-glass; an acrobat.
**Tumbrel, tum'brel,** *n.* a two-wheeled cart; a ducking-stool; the kind of cart used for conveying French Revolutionary prisoners to the guillotine.
**Tumid, tū'mid,** *adj.* swollen.
**Tumult, tū-mult,** *n.* uproar; commotion.
**Tumulus, tū-mū-lus,** *n.* a grave mound; a barrow.
**Tun, tun,** *n.* a large cask; 252 gallons.
**Tuna, tū'na,** *n.* prickly pear.
**Tune, tūn,** *n.* a musical strain.
**Tunic, tū'nik,** *n.* a loose over-garment; a membrane. [earth.
**Tunnel, tun'el,** *n.* a passage-way cut through the
**Tunny, tūn'i,** *n.* a large tasty fish.
**Turban, tur'ban,** *n.* an Oriental head-dress.
**Turbid, tur'bid,** *adj.* muddy.
**Turbine, tur'bin,** *n.* a horizontal water-wheel.
**Turbulent, turb'ū-lent,** *adj.* tumultuous.
**Tureen, tū-rēn',** *n.* a large dish for holding soup.
**Turgent, tur'jent,** *adj.* swelling.
**Turgid, tur'jid,** *adj.* bloated.
**Turmoil, tur'moil,** *n.* uproar; trouble; disorder.
**Turncoat, turn'kōt,** *n.* one who turns from principles previously held.
**Turnery, turn'er-i,** *n.* the art of turning in a lathe; articles turned.
**Turnpike, turn'pike,** *n.* a road on which are toll
**Turpitude, tur'pit-ūd,** *n.* baseness. [gates.
**Turret, tur'et,** *n.* a little tower.
**Tusk, tusk,** *n.* a protruding tooth of boar, and elephant.
**Tutelage, tū'tel-āj,** *n.* guardianship.
**Tutor, tū'tor,** *n.* an instructor
**Twaddle, twod'l,** *n.* foolishness.
**Tweed, twēd,** *n.* a kind of cloth.
**Tweezers, twē'zers,** *n.* small pincers for pulling out
**Twiddle, twid-l,** *v.* to fidget with. [hairs.
**Twilight, twī'līt,** *n.* dusk.
**Twill, twil,** *n.* ribbed fabric; *v.* to weave in diagonal ribs.
**Twin, twin,** *n.* a pair; one of two born at a birth.
**Twinge, twinj,** *v.* to feel a darting pain.
**Twinkle, twingk'l,** *v.* to sparkle.
**Twirl, twerl,** *v.* to whirl.
**Twist, twist,** *v.* to wind.
**Twit, twit,** *v.* to reproach.
**Twitch, twich,** *v.* to jerk. [swallows.
**Twitter, twit'er,** *v.* to make a tremulous noise, as
**Tympan, tim'pan,** *n.* a printer's frame on which sheets are laid for printing.
**Tympanum, tim'pa-num,** *n.* drum of the ear.
**Type, tip,** *n.* printing letter; an emblem; a model.
**Typewriter, tip'ri-ter,** *n.* a writing machine.
**Typist, ty'pist,** *n.* user of a writing machine.
**Tyranny, tir'an-i,** *n.* oppression; cruelty.
**Tyre, tir,** *n.* the outer band of a wheel.
**Tyro, tir'o,** *n.* a beginner.
**Tyrrhenian, ti-rē'ni-an,** *adj.* Etruscan.

## U

**Uberty, yu'ber-te,** *n.* abundance.
**Ubiquity, ū-bik'wit-i,** *n.* omnipresence.
**Udder, ud'er,** *n.* mammary glands.
**Udometer, yu-dom'e-ter,** a rainfall-measuring instrument.
**Ugly, ug'li,** *adj.* disagreeable to the eye; plain.
**Uitlander, wit'lan-der,** *n.* Outlander [Dutch.]
**Ukase, u'kās,** *n.* a Russian decree.
**Ulcer, ul'ser,** *n.* a sore.
**Uliginose, ū-lij'in-ōs,** *adj.* growing in swamps.
**Ulna, ul'na,** *n.* one of the two long bones of the forearm.
**Ulster, ul'ster,** *n.* a kind of overcoat.
**Ulterior, ul-tē'ri-or,** *adj.* farther; lying beyond.
**Ultimate, ul'tim-āt,** *adj.* last; farthest.
**Ultra, ul'trā,** *adj.* extreme.
**Ultramarine, ul-tra-mā-rēn',** *adj.* beyond the seas.
**Ultramontane, ul-tra-mon'tān,** *adj.* beyond the mountains.
**Ultra-violet rays,** *n.* healing emanations.
**Ultroneous, ul-trō'nē-us,** *adj.* spontaneous.
**Ululation, u'lu-lā-shun,** *n.* act of howling.
**Umbel, um'bel,** *n.* head of a flower.
**Umber, um'ber,** *adj.* a brown colour.
**Umbles, um'blz,** *n.* a deer's entrails.
**Umbrage, um'brāj,** *n.* resentment; leafy shade.

**Umpire,** um'pir, *n.* one who decides a dispute.
**Unadmonished,** un-ad-mon'isht, *adj.* not cautioned.
**Unadulterated,** un-a-dul'ter-a-ted, *adj.* genuine; unmixed.
**Unaffected,** un-a-fek'ted, *adj.* with sincerity.
**Unanimity,** ū-nan-im'it-i, *n.* accord.
**Unanswerable,** un-an'ser-abl, *adj.* irrefutable.
**Unawares,** un'ā-wārz, *adv.* unexpectedly.
**Unbecoming,** un-be-kum'ing, *adj.* indecorous.
**Unbend,** un-bend', *v.* to relax. [indecent.
**Unblushing,** un-blush'ing, *adj.* without shame.
**Uncanonical,** un-kan-on'ik-al, *adj.* contrary to the
**Uncanny,** un-kan-i, *adj.* weird. [canons.
**Unceremonious,** un-ser-e-mō'ni-us, *adj.* without formality.
**Unchurch,** un-church', *v.* to deprive of church rights. [in ancient MSS.
**Uncial,** un'shal, *n.* the large written characters
**Uniform,** un'se-form, *adj.* hook shaped.
**Uncle,** ung'kl, *n.* a father's or mother's brother.
**Uncongenial,** un-kon-jē'ni-al, *adj.* not congenial.
**Unconscionable,** un-kon'shun-abl, *adj.* unjust; unreasonable.
**Unconstrained,** un-kon-strane'd, *adj.* voluntary.
**Uncouth,** un-kooth', *adj.* awkward; rude; unmannerly.
**Unction,** ungk'shun, *n.* act of anointing; a fervour.
**Undaunted,** un-dawnt'ed, *adj.* bold, courageous.
**Under,** un'der, *prep.* beneath. [through.
**Undergo,** un'-der-gō', *v.* to endure; to pass
**Undergraduate,** un-der-grad'ū-āt, *n.* a student who has not taken his degree.
**Undergrowth,** undergro'th, *n.* shrubs growing below trees.
**Underhand,** un'der-hand, *adj.* secret.
**Underling,** un'der-ling, *n.* an under agent.
**Undermine,** un-der-min', *v.* to dig under; to injure secretly. [from beneath.
**Underpin,** un-der-pin', *v.* to prop up; to support
**Undershot,** un-der-shot', *adj.* moved by water passing beneath a water-wheel.
**Understand,** un-der-stand', *v.* to comprehend.
**Understrapper,** un'der-strap-er, *n.* one performing inferior duties. [funerals.
**Undertaker,** un-der-tāk'er, *n.* one who manages
**Underworld,** un'der-wurld, *n.* the home of departed souls.
**Underwrite,** un-der-rit', *v.* to insure.
**Undeserved,** un-de-zervd', *adj.* not merited.
**Undulate,** un'-dū-lāt, *v.* to move in wave-like manner; to cause vibration. [biguity.
**Unequivocal,** un-e-kwiv'o-kal, *adj.* without am-
**Uneventful,** un-e-vent'ful, *adj.* devoid of interesting events.
**Unfailing,** un-fa'ling, *adj.* inexhaustible.
**Unfaithful,** un-fayth'ful, *adj.* not true to promise or vows; unworthy of trust.
**Unfeeling,** un-feel'ing, *adj.* insensible to the feeling of others; hard; cruel.
**Unfledged,** un-flejd', *adj.* immature.
**Unguent,** ung'gwent, *n.* an ointment.
**Unhallowed,** un-hal'ōd, *adj.* unholy.
**Unicorn,** ū'ni-korn, *n.* fabulous monster.
**Uniflorous,** ū-ni-flō'rus, *adj.* one-flowered.
**Uniform,** ū'ni-form, *n.* regimental dress; livery; *adj.* undeviating. [agreement.
**Union,** ūn'yun, *n.* concord; unity; harmony;
**Uniparous,** ū-nip'ar-us, *adj.* producing one at a birth.
**Unique,** ū-nēk', *adj.* alone in kind; without equal.
**Unison,** ū'nis-on, *n.* concord.
**Unit,** ū'nit, *n.* a single thing; the least whole number.
**Unity,** ū'ni-ti, *n.* concord; agreement in aim.
**Univalve,** ū'ni-valv, *n.* a shell with only a single valve.
**Universe,** ūn'i-vers, *n.* the whole system of created things. [of sounds.
**Univocal,** ū-niv'ō-kal, *adj.* of one meaning; unison
**Unjust,** un'just, *adj.* unfair, contrary to justice.
**Unless,** un'les, *conj.* if not, except. [untidy.
**Unkempt,** un-kempt', *adj.* uncombed; rough;
**Unman,** un-man, *v.* to dishearten; to deprive of manly qualities.
**Unmitigated,** un-mit'e-gā-ted, *adj.* not lightened in effect.
**Unnerve,** un-nerv', *v.* to deprive of nerve; to weaken. [to the usages of debate.
**Unparliamentary,** un-pār-li-ment'ar-i, *adj.* opposed
**Unprincipled,** un-prin'si-pld, *adj.* devoid of principle.
**Unravel,** un-rav'el, *v.* to solve; to disentangle.
**Unsophisticated,** un-so-fis'ti-ka-ted, *adj.* pure, simple.
**Unsullied,** un-sul'id, *adj.* pure; unspotted.
**Unthankful,** un-thangk'ful, *adj.* not grateful; unwelcome.
**Upas,** ū'pas, *n.* a tree of poisonous sap.
**Upbraid,** up-brād', *v.* to reprove; to reproach.
**Upheaval,** up-hēv'al, *n.* a heaving up.
**Uphill,** up'hil, *adj.* difficult; rising.
**Uphold,** up-hold', *v.* to maintain; to hold up.
**Upholsterer,** up-hol'ster-er, *n.* one who supplies furniture.
**Upland,** up'land, *n.* high ground.
**Uppish,** up'pish, *adj.* snobbish; assuming.
**Uprightness,** up'rit-nes, *n.* integrity; erectness.
**Uproar,** up'rōr, *n.* disorder; clamour.
**Upset,** up'set', *v.* to overthrow; to discompose.
**Upshot,** up'shot, *n.* the end; the conclusion.
**Upstart,** up'start, *n.* a parvenu.
**Uranography,** ū-ran-og'rā-fi, *n.* descriptive astron-
**Urban,** ur'ban, *adj.* relating to a city. [omy.
**Urbane,** ur-bān', *adj.* polite; courteous.
**Urchin,** ur'chin, *n.* a child; an elf; a hedgehog.
**Urdu,** oor'doo, *n.* the Hindustani language.
**Urgency,** ur'jen-si, *n.* pressing necessity.
**Urine,** ū'rin, *n.* fluid secreted by the kidneys.
**Urn,** urn, *n.* a vase.
**Ursiform,** ur'si-form, *adj.* bear-like.
**Usage,** ū'sāj, *n.* custom; treatment.
**Usance,** yu'zans, *n.* use; interest on money.
**Use,** ūs, *n.* the act of using; employment; utility; *v.* to utilise.
**Usher,** ush'er, *n.* doorkeeper; under-teacher.
**Ustulation,** us-tu-la'shun, *n.* burning; scorching.
**Usual,** ū'zhū-al, *adj.* customary.
**Usufruct,** ū'sū-frukt, *n.* temporary use of property.
**Usurp,** ū-zurp', *v.* to seize and hold illegally.
**Usury,** ū'zhū-ri, *n.* excessive interest for money lent.
**Utensil,** ū-ten'sil, *n.* a vessel; an implement.
**Uterine,** ū'ter-in, *adj.* born of the same mother by a different father; relating to the womb.
**Utilise,** ū-ti-liz, *v.* to employ.
**Utility,** ū-til'it-i, *n.* usefulness; profit.
**Utmost,** ut'most, *adj.* extreme.
**Utopian,** yu-tō'pē-an, *adj.* imaginary, visionary.
**Utter,** ut'er, *v.* to speak; *adj.* extreme; farthest.
**Utricular,** ū-trik'ū-lar, *adj.* containing little bladders or cells.
**Uveous,** ū'vē-us, *adj.* grape-like.
**Uxorious,** ugz-ō'ri-us, *adj.* unduly devoted to a wife.

## V

**Vacant,** vā'kant, *adj.* empty.
**Vacate,** va-kate', *v.* to lease; to surrender possession of. [tion.
**Vaccination,** vak'sin-ā'shun, *n.* protective inocula-
**Vachery,** vash'-er-e, *n.* a cow pen; a dairy.
**Vacillate,** vas'il-āt, *v.* to waver.
**Vacuum,** vak'ū-um, *n.* an empty space.
**Vade mecum,** vā'de-me-kum, *n.* a pocket companion or note-book.
**Vafrous,** va'-frus, *adj.* sly; cunning; crafty.
**Vagabond,** vag'a-bond, *n.* a vagrant; an idle per-
**Vagary,** vā-ga'ri, *n.* a freak; a whim. [son.
**Vagrant,** vā'grant, *n.* an idle wanderer.
**Vague,** vāg, *adj.* indefinite.
**Vain,** vān, *adj.* unreal; worthless; conceited.
**Valance,** val'ans, *n.* bed drapery.
**Vale,** vāl, *n.* a valley. [*adj.* bidding farewell.
**Valedictory,** val-ē-dikt'ō-ri, *n.* a farewell address;
**Valet,** val'ā, *n.* personal servant to a gentleman.
**Valetudinarian,** val-ē-tū-din-ā'ri-an, *n.* a person of infirm health.
**Valiant,** val'i-ant, *adj.* brave; heroic.
**Valid,** val'id, *adj.* legal; regular; sound.
**Valise,** val-ēs', *n.* travelling bag.
**Valley,** val'i, *n.* a plain lying between hills.
**Vallum,** val'um, *n.* a rampart.
**Valour,** val'or, *n.* courage; bravery.
**Valuable,** val'ū-abl, *adj.* possessing value.
**Valve,** valv, *n.* cover to an aperture.
**Vamp,** vamp, *v.* to mend; to improvise an accompaniment; *n.* upper leather of shoe; a dangerous woman.
**Van,** van, *n.* the front of an army or fleet; *n.* a covered waggon.
**Vandyke,** van-dik', *n.* an indented border or collar; *v.* to indent.
**Vane,** vān, *n.* a weathercock; a flag or banner.
**Vanguard,** van'gārd, *n.* the front line of an army.

**Vanish,** van'ish, *v.* to fade or dissolve away; to disappear.
**Vanity,** van'it-i, *n.* empty pride; conceit.
**Vanquish,** vang'kwish, *v.* to subdue.
**Vantage,** vant'āj, *n.* advantage; opportunity.
**Vapid,** vap'id, *adj.* insipid.
**Vapour,** vā'por, *n.* aeriform matter arising from a heated fluid; *v.* to boast.
**Variation,** vā'ri-ā'shun, *n.* a varying; change; diversity.
**Varicose,** vā'ri-kōs, *adj.* enlarged; dilated.
**Variety,** vā-rī'ĕt-i, *n.* difference; change; a class.
**Variorum,** vā-ri-ō'rum, *n.* an edition of a work with notes from various previous editions.
**Varlet,** vär'let, *n.* a scoundrel; a footman.
**Varnish,** vär'nish, *n.* glossy resinous liquid.
**Vary,** vār'i, *v.* to alter; to diversify.
**Vascular,** vas'kū-lar, *adj.* relating to vessels of animal or vegetable bodies.
**Vase,** vāz, *n.* an ornamental vessel of earthenware
**Vaseline,** vas'e-lin, *n.* petroleum jelly. [or metal.
**Vassal,** vas'al, *n.* a retainer.
**Vast,** vâst, *adj.* stupendous; immense.
**Vat,** vat, *n.* a large vessel for holding liquor.
**Vaticinate,** va-tis'in-āt, *v.* to foretell.
**Vaudeville,** vōd'vil, *n.* a song; an entertainment.
**Vault,** vawlt, *n.* a tomb; *v.* to leap.
**Vaunt,** vawnt, *n.* a boast; *v.* to boast.
**Veal,** vēl, *n.* flesh of a calf.
**Vedette,** ve-det', *n.* a mounted sentry.
**Veer,** vēr, *v.* to turn.
**Vegetation,** vej-ē-tā'shun, *n.* plant life.
**Vehemence,** vē-hē'mens, *n.* impetuosity; violence.
**Vehicle,** vē'ikl, *n.* a carriage; any kind of conveyance. [conceals an object; a disguise.
**Veil,** vāl, *n.* covering for the face; anything that
**Vein,** vān, *n.* a blood-vessel; a streak; a current.
**Veldt,** velt, *n.* a South African grassy plain.
**Vellicate,** vel'ik-āt, *v.* to twitch.
**Vellum,** vel'um, *n.* parchment.
**Velocity,** vel-os-it-i, *n.* speed; swiftness.
**Velvet,** vel'vet, *n.* a silk pilecloth.
**Venal,** vē'nal, *adj.* mercenary; sordid.
**Vend,** vend, *v.* to sell.
**Vendor,** ven'dor, *n.* one who sells.
**Veneer,** ve-nēr', *n.* a thin surface of superior wood over an inferior; surface show; *v.* to overlay.
**Venerable,** ven'er-abl, *adj.* worthy of reverence.
**Venery,** vēn'er-i, *n.* hunting; sexual commerce.
**Vengeance,** ven'jens, *n.* revenge; retribution.
**Venial,** vē'ni-al, *adj.* pardonable.
**Venison,** ven'i-zn, *n.* the flesh of the deer.
**Venom,** ven'om, *n.* poison.
**Venous,** vē'nus, *adj.* pertaining to veins.
**Vent,** vent, *n.* an air opening; escape.
**Ventage,** vent'age, *n.* a small opening.
**Ventilation,** ven-til-ā'shun, *n.* state of being ventilated.
**Ventral,** ven'tral, *adj.* pertaining to the belly.
**Ventricle,** vent'rikl, *n.* a small opening in an animal body.
**Ventriloquism,** ven-tril'ō-kwizm, *n.* the art of uttering sounds as if they came from other places or persons.
**Venture,** vent'ūr, *n.* an enterprise; *v.* to hazard.
**Venue,** ven'ū, *n.* place where an action can be brought.
**Veracity,** vēr-as'it-i, *n.* a truth; sincerity.
**Verandah,** vēr-an'dā, *n.* an open portico.
**Verbal,** ver'bal, *adj.* by word of mouth; oral.
**Verbatim,** ver-bā'tim, *adv.* word for word.
**Verbiage,** verb'i-āj, *n.* profusion of words.
**Verdant,** ver'dant, *adj.* green; flourishing.
**Verdict,** ver'dikt, *n.* decision. [etc.
**Verdigris,** ver'di-gris, *n.* the rust of copper, brass,
**Verecund,** ver'e-kund, *adj.* shy; modest; bashful.
**Verge,** verj, *n.* border; edge.
**Verger,** verj'er, *n.* a mace-bearer; a cathedral
**Verify,** ver'if-i, *v.* to confirm. [beadle.
**Verisimilitude,** ver-i-sim-il'it-ūd, *n.* appearance of truth; probability.
**Veritable,** ver'e-ta-bl, *adj.* genuine; conforming to truth or fact.
**Verjuice,** ver'joos, *n.* juice of green fruit.
**Vermicelli,** ver-mi-chel-i, *n.* tube-shaped paste.
**Vermicular,** ver-mik'ū-lar, *adj.* worm-like.
**Vermilion,** ver-mil'yun, *n.* a bright red colour.
**Vermin,** ver'min, *n.* noxious insects and animals.
**Vernacular,** ver-nak'ū-lar, *adj.* native.
**Vernal,** ver'nal, *adj.* relating to spring.
**Versant,** ver'sant, *adj.* familiar.
**Versatile,** vers'ā-til, *adj.* turning easily; of varied
**Verse,** vers, *n.* poetry; a stanza. [capacity.
**Version,** versh'un, *n.* translation; edition; account.
**Verst,** verst, *n.* a Russian measure of distance.
**Vertebra,** vert'e-bra, *n.* the joint of the backbone.
**Vertex,** ver'teks, *n.* the summit.
**Vertical,** vert'ik-al, *adj.* perpendicular.
**Vertigo,** ver'ti-gō, *n.* dizziness.
**Verve,** verv, *n.* energy; vital power.
**Vesicle,** ves'ik-l, *n.* small bladder, blister, or cell.
**Vespers,** ves'pers, *n.* evening service.
**Vessel,** ves'el, *n.* a ship; a utensil.
**Vest,** vest, *n.* a waistcoat; *v.* to clothe; to place in possession.
**Vestibule,** vest'ib-ūl, *n.* entrance hall, corridor, or
**Vestige,** vest'ij, *n.* a trace. [porch.
**Vestry,** ves'tri, *n.* a room in which church vestments are kept and church officials meet; the assembly of church officials.
**Vesuvian,** ves-ū'vi-an, *n.* a kind of match.
**Veteran,** vet'er-an, *n.* one who has served long; an aged person.
**Veterinary,** vet'er-in-ar-i, *adj.* pertaining to the curing of diseases of animals; *n.* a practitioner of this art.
**Veto,** vē'to, *n.* prohibition; power of rejection.
**Vex,** veks, *v.* to harass; to annoy.
**Via,** via, *n.* by way of.
**Viable,** vī'abl, *adj.* capable of existing.
**Viaduct,** vī'ā-dukt, *n.* a bridge-like structure crossing a valley and uniting with roads at each end.
**Vial,** vī'al, *n.* a small bottle.
**Viands,** vī'ands, *n.* food; victuals.
**Vibrate,** vī'brāt, *v.* to oscillate. [clergyman.
**Vicar,** vik'ar, *n.* substitute; deputy; a parish
**Vice,** vis, *n.* wickedness; a blemish; a screw-press.
**Vice-consul,** vis-kon'sul, *n.* one acting for a Consul.
**Vicegerent,** vis-jē'rent, *adj.* acting for another.
**Viceroy,** vis'roi, *n.* a king's deputy.
**Vicinage,** vis'in-āj, *n.* neighbourhood.
**Vicious,** vish'us, *adj.* wicked; base; immoral.
**Vicissitude,** vi-sis'it-ūd, *n.* change; trial.
**Victim,** vik'tim, *n.* one who is sacrificed or deluded.
**Victor,** vik'tor, *n.* conqueror.
**Victuals,** vit'lz, *n.* food.
**Vide,** vī'dē, *imperf. of verb,* see.
**Viduous,** vid'ū-us, *adj.* widowed.
**Vie,** vī, *v.* to contend.
**View,** vū, *v.* to behold; *n.* the prospect.
**Vigesimal,** vi-jes'im-al, *adj.* twentieth.
**Vigil,** vij'il, *n.* a watching in the night.
**Vigilant,** vij'il-ant, *adj.* watchful; alert.
**Vignette,** vin-et', *n.* a small engraving or small photo portrait.
**Vigour,** vik'or, *n.* strength; energy; force.
**Viking,** vī'king, *n.* an old Scandinavian pirate
**Vile,** vil, *adj.* base; mean; wicked. [leader.
**Vilify,** vil'ē-fī, *v.* to defame; to slander.
**Villa,** vil'ā, *n.* suburban residence.
**Village,** vil'āj, *n.* a small collection of houses.
**Villain,** vil'an, *n.* a scoundrel.
**Villenage,** vil'en-āj, *n.* a kind of servitude that existed in the Middle Ages.
**Vim,** vim, *n.* vigour; energy; "go."
**Vindicate,** vin'di-kāt, *v.* to defend; to maintain.
**Vindictive,** vin-dik'tiv, *adj.* desiring revenge.
**Vinegar,** vin'e-gar, *n.* culinary acetic acid.
**Vineyard,** vin'yard, *n.* field where grapes are grown.
**Vintner,** vint'ner, *n.* a wine dealer.
**Viola,** vi-ō-la, *n.* a tenor violin.
**Violate,** vī'o-late, *v.* to disobey; to transgress.
**Violence,** vī'ō-lens, *n.* force.
**Violin,** vio-lin, *n.* a fiddle.
**Violoncello,** vē-ō-lon-chel'ō, *n.* a double-bass viol.
**Viperous,** vī'per-us, *adj.* malignant; venomous.
**Virago,** vi-rā'go, *n.* a termagant; a violent-tempered woman.
**Virgin,** ver'jin, *n.* a chaste maiden.
**Virginal,** ver'jin-al, *adj.* maidenly; *n.* an old keyed instrument.
**Virgule,** ver'gūl, *n.* a small rod; a comma.
**Viridity,** vir-id'it-i, *n.* greenness.
**Virile,** vir'il, *adj.* strong; manly.
**Virtu,** ver'too, *n.* objects of art and antiquity; a love of such things.
**Virtual,** vir'tū-al, *adj.* in effect.
**Virtue,** ver'tū, *n.* moral worth; purity; duty.
**Virtuoso,** ver-tū-ō'zo, *n.* one devoted to objects of vertu; a skilled musician, painter, etc.
**Virulent,** vir'ū-lent, *adj.* malignant.
**Virus,** vī'rus, *n.* contagious matter.
**Visage,** viz'āj, *n.* the face; the countenance.

**Viscera,** vis'er-ă, *n.* the bowels.
**Viscid,** vis'id, *adj.* sticky.
**Visible,** viz'ibl, *adj.* perceptible.
**Vision,** vizh'un, *n.* the sense of seeing; anything seen; a dream.
**Visit,** viz'it, *v.* to attend; to pay calls on.
**Visor,** vī'sor, *n.* the mask portion of a helmet.
**Vista,** vis'tă, *n.* a view through an avenue.
**Visual,** vizh'ū-al, *adj.* pertaining to sight.
**Vital,** vī'tal, *adj.* relating to life; essential.
**Vitamin,** vit-a-min, *n.* substance essential in foods to normal nutrition and growth.
**Vitiate,** vish'i-āt, *v.* to corrupt; to annul.
**Vitreous,** vit'rē-us, *adj.* glass-like.
**Vituperate,** vī-tū'per-āt, *v.* to abuse.
**Vivacity,** vi-vas'it-i, *n.* animation.
**Vivid,** viv'id, *adj.* bright; striking.
**Viviparous,** vi-vip'ar-us, *adj.* producing young alive. [mals.
**Vivisection,** viv-i-sek'shun, *n.* dissection of live ani-
**Vixen,** viks'en, *n.* a female fox; a termagant.
**Vizard,** viz'ard, *n.* a mask.
**Vizier,** vi'zĕr, *n.* Turkish official.
**Vocal,** vō'kal, *adj.* having, or uttered by, a voice.
**Vocalist,** vō'kal-ist, *n.* a singer.
**Vocation,** vō-kā'shun, *n.* occupation; trade.
**Vociferous,** vo-sif'er-us, *adj.* noisy; clamorous.
**Voe,** vō, *n.* a creek.
**Vogue,** vōg, *n.* fashion; common use.
**Voice,** vois, *n.* uttered sound.
**Void,** void, *adj.* empty; *n.* vacancy.
**Volant,** vō'lant, *adj.* flying.
**Volatile,** vol'ă-til, *adj.* flighty; evaporating quickly.
**Volcano,** vol-kā'no, *n.* a burning mountain.
**Voles,** vōls, rodents, including water rats.
**Volition,** vō-lish'un, *n.* will power.
**Volley,** vol'i, *n.* a simultaneous discharge of fire-
**Volt,** vōlt, *n.* unit of electro-motive force. [arms.
**Voluble,** vol'ū-bl, *adj.* fluent of speech.
**Volume,** vol'ūm, *n.* dimension; quantity; a book.
**Voluntary,** vol'un-tă-ri, *adj.* of free choice.
**Volunteer,** vol-un-tēr', *v.* to offer; *n.* one who serves voluntarily.
**Voluptuous,** vo-lup'tū-us, *adj.* sensual.
**Vomit,** vom'it, *v.* to throw up.
**Voodoo,** voo'doo, *n.* negro witchcraft.
**Voracity,** vo-ras'it-i, *n.* greediness.
**Vortex,** vor'teks, *n.* whirlpool. [service.
**Votary,** vō'tă-ri, *n.* one devoted to a pursuit or
**Vote,** vōt, *n.* the expression of choice; suffrage; *v.* to select by voting.
**Votive,** vō'tiv, *adj.* given by vow.
**Vouch,** vowch, *v.* to attest.
**Vouchsafe,** vowch-sāf', *v.* to deign; to grant.
**Vow,** vow, *n.* a sacred promise to perform a certain act; *v.* to make such a promise.
**Vowel,** vow'el, *n.* a simple open sound; one of the five letters—a, e, i, o, u.
**Voyage,** voi'āj, *n.* a journey by sea.
**Vulcanise,** vul'kan-īz, *v.* to combine with sulphur.
**Vulgar,** vul'gar, *adj.* low; coarse; common.
**Vulnerable,** vul'ner-ăbl, *adj.* capable of being injured.
**Vulpine,** vul'pin, *adj.* concerning the fox.
**Vulture,** vul'ture, *n.* carrion-eating bird.
**Vying,** vī'ing, *v.* emulating; competing.

## W

**Wadding,** wod'ing, *n.* soft cotton material used for stuffing.
**Waddle,** wod'l, *v.* to walk like a duck.
**Wade,** wād, *v.* to walk in water.
**Wadi,** wod'e, *n.* a valley containing the bed of a mountain river, usually dry in summer.
**Wafer,** wā'fer, *n.* a thin cake; a little round pasty substance formerly used in sticking letters.
**Waft,** woft, *v.* to float.
**Wag,** wag, *v.* to move from side to side.
**Wage,** wāj, *n.* pay for service; *v.* to carry on.
**Wager,** wā'jer, *n.* a bet.
**Waggery,** wag'er-i, *n.* sportiveness.
**Waggon,** wag'on, *n.* a four-wheeled vehicle for conveying goods. [found ownerless.
**Waif,** wāf, *n.* a homeless wanderer; anything
**Wail,** wāl, *n.* a cry of lament; *v.* to lament.
**Wain,** wān, *n.* a waggon.
**Wainscot,** wān'skot, *n.* a wooden wall lining.
**Waist,** wāst, *n.* the part of the body immediately
**Wait,** wāt, *v.* to tarry. [above the hips.
**Waiter,** wā'ter, *n.* an attendant.
**Waits,** wates, *n.* members of a musical band who play and sing in the streets at Christmas time.
**Waive,** wāv, *v.* to relinquish. [waken.
**Wake,** wāk, *n.* a watch; track of a vessel; *v.* to
**Wale,** wāl, *n.* a streak caused by a stripe; a ridge in cloth.
**Walk,** wawk, *v.* to proceed by footsteps; *n.* gait.
**Wallet,** wol'et, *n.* a small bag; a knapsack.
**Wall-eye,** wawl'I, *n.* a white, or blind, eye.
**Wallop,** wol'op, *v.* to flog. [in vice.
**Wallow,** wol'ō, *v.* to roll about, as in mire; to live
**Walnut,** wal'nut, *n.* tree and its nut.
**Waltz,** wawlts, *n.* a round dance.
**Wampum,** wom'pum, *n.* Indian bead-money.
**Wan,** won, *adj.* pale.
**Wand,** wond, *n.* a slender stick; a rod of authority.
**Wander,** won'der, *v.* to rove.
**Wane,** wān, *v.* to decrease; *n.* decline.
**Want,** wont, *n.* condition of need.
**Wanton,** won'tun, *adj.* loose; frolicsome; licen-
**War,** wawr, *n.* armed conflict of nations. [tious.
**Warble,** wawr'bl, *v.* to sing with trills.
**Ward,** waw'rd, *n.* a person under guardianship; custody; *v.* to guard.
**Wardage,** wawr'daje, *n.* money paid for services of policemen as watchmen.
**Warden,** wawr'dn, *n.* a guardian, a keeper.
**Wardrobe,** wawrd'rōb, *n.* a place for storing clothes in; apparel.
**Ward-room,** wawrd'room, *n.* officers' mess-room on a warship.
**Ware,** wār, *n.* merchandise; goods.
**Warfare,** wawr'fare, *n.* hostilities; war.
**Warily,** wā'ril-i, *adv.* cautiously.
**Warm,** wawrm, *adj.* moderately hot.
**Warn,** wawrn, *v.* to caution.
**Warp,** wawrp, *n.* the lengthwise yarn in a weaver's loom; *v.* to twist; to pervert.
**Warrant,** wor'ant, *n.* security; writ; *v.* to guarantee; to justify.
**Warren,** wor'en, *n.* ground where rabbits burrow.
**Wart,** wawrt, *n* a hard excrescence on the skin.
**Wary,** wā'ri, *adj.* cautious; cunning.
**Wase,** waze, *n.* a cushion of hay or straw used between the head and a load to relieve pressure.
**Wash,** wosh, *v.* to make clean with water.
**Wash-board,** wosh'bord, *n.* board round the bottom of the walls of a room; a rubbing board.
**Washer,** wosh'er, *n.* a ring for lessening friction.
**Washing,** wash'ing, *n.* clothes sent to a laundry.
**Washy,** wosh'i, *adj.* watery; feeble.
**Waspish,** wosp'ish, *adj.* pettish; snappy.
**Wassail,** wos'āl, *n.* spiced liquor.
**Waste,** wāst, *n.* unnecessary loss; refuse.
**Wastrel,** wayst'trel, *n.* refuse; a profligate.
**Watchet,** wot'chet, *adj.* a shade of blue.
**Watchword,** woch'werd, *n.* password; motto.
**Water,** waw'ter, *v.* to pour water; to irrigate; *n.* transparent liquid.
**Water-brash,** waw'ter-brash, *n.* a mouth affection.
**Water-colour,** waw'ter-kul'ur, *n.* a diluted colour.
**Waterhen,** waw'ter-hen, *n.* the gallinule; a water
**Waterman,** waw'ter-man, *n.* a boatman. [fowl.
**Water-melon,** waw'ter-mel-un, *n.* a luscious fruit.
**Waterproof,** waw'ter-proof, *n.* an article rendered impervious to water. [waters gather.
**Watershed,** waw'ter-shed, *n.* a district where
**Waterspout,** waw'ter-spowt, *n.* a whirling column of water spouting into the air.
**Wattle,** wot'l, *n.* a twig; a hurdle.
**Wave,** wāv, *n.* a moving swell of water; an undulation; *v.* to make undulatory movements.
**Wave-length,** wāv'length, *n.* term used in wireless
**Waver,** wā'ver, *v.* to hesitate. [telegraphy.
**Waxen,** waks'en, *adj.* wax-like.
**Waybill,** wā'bil, *n.* a list of passengers and goods in a public conveyance.
**Wayfarer,** wā'fār-er, *n.* a traveller.
**Waylay,** wā-lā', *v.* to attack from ambush.
**Wayward,** wā'werd, *adj.* froward; wilful.
**Weak,** wēk, *adj.* feeble.
**Weal,** wēl, *n.* welfare.
**Wealth,** wel*th*, *n.* riches. [a child.
**Wean,** wēn, *v.* to alienate; to discontinue suckling
**Weapon,** wep'un, *n.* a fighting implement.
**Wear,** wār, *v.* to use; to have on the person, as
**Weary,** wē'ri, *adj.* tired. [clothes.
**Weather,** wet*h*'er, *n.* the state of the atmosphere.
**Weathercock,** wet*h*'er-kok, *n.* a vane.
**Weathergage,** wet*h*'er-gāj, *n.* the position of a ship to the windward of another.
**Weatherglass,** wet*h*'er-glas, *n.* a barometer.
**Weave,** wēv, *v.* to interlace threads; as in a loom.

**Weazen, wēz'n,** *adj.* dried up; thin. [brane.
**Webbed,** webd, *adj.* having toes united by a mem-
**Wedge,** wej, *n.* a cleaving tool; a piece of wood or metal used for holding anything in place.
**Wedlock,** wed'lok, *n.* marriage.
**Wee,** wē, *adj.* very small.
**Weed,** wēd, *n.* a useless plant.
**Weedy,** wē'dī, *adj.* full of weeds.
**Week,** wēk, *n.* seven days.
**Ween,** wēn, *v.* to think; to fancy.
**Weep,** wēp, *v.* to shed tears.
**Weetless,** weet'les, *adj.* unknowing.
**Weevil,** wēv'il, *n.* beetle harmful to plants.
**Weft, weft,** *n.* the wool of cloth.
**Weight,** wāt, *n.* gravity; heaviness; importance.
**Weir,** weer, *n.* a dam in a river or stream to raise the water.
**Weird,** wērd, *adj.* wild; eerie; unearthly.
**Welcome,** wel'kum, *adj.* agreeable; *n.* a warm re-
**Weld, weld,** *v.* to unite. [ception.
**Welfare,** wel'fār, *n.* good fortune; happiness.
**Welkin,** wel'kin, *n.* the sky.
**Well, wel,** *n.* source of water; *adj.* in good health.
**Well-being,** wel-bē'ing, *n.* welfare.
**Well-bred,** wel-bred', *adj.* well-born; refined.
**Well-spring,** wel'spring, *n.* source.
**Welsh,** welch, *n.* people of Wales.
**Welsher,** wel'cher, *n.* a cheat on race-courses.
**Welt, welt,** *n.* edging round a shoe; *v.* to sew on a
**Welter,** wel'ter, *v.* to wallow. [welt.
**Wench,** wensh, *n.* a girl.
**Wend,** wend, *v.* to go; to betake.
**Wet, wet,** *n.* moisture; rain; *v.* to moisten.
**Wether,** weth'er, *n.* a castrated sheep.
**Whack,** hwak, *v.* to strike.
**Whale,** hwāl, *n.* the largest marine mammal.
**Whalebone,** hwāl'bōn, *n.* elastic substance obtained from the jaws of whales.
**Whang,** hwang, *n.* a leather thong.
**Wharf,** hwawrf, *n.* quay to load or unload ships upon or from.
**Wheat,** hwēt, *n.* cereal supplying flour for bread.
**Wheaten,** hwē'ten, *adj.* made of wheat.
**Wheedle,** hwēd'l, *v.* to coax.
**Wheel,** hwēl *n.* a circular frame turning on an axis.
**Wheelbarrow,** hwēl'bar-ō, *n.* a hand vehicle.
**Wheelwright,** hwēl'rit, *n.* a wheel-maker.
**Wheeze,** hwēz, *v.* to breathe heavily.
**Whelm,** hwelm, *v.* to overwhelm.
**Whelp,** hwelp, *n.* a puppy.
**Where,** hwhār, *adv.* at what place?
**Whereas,** hwār-az', *adv.* considering; when in fact.
**Wherret,** hwer'ret, *v.* to trouble; to tease; to hurry.
**Wherry,** hwer'i, *n.* a shallow boat.
**Whet,** hwet, *v.* to sharpen.
**Whether,** hweth'er, *pron.* which of the two?
**Whetstone,** hwet'stōn, *n.* a sharpening tool.
**Whey,** hwey, *n.* thin part of milk.
**Whiff,** hwif, *n.* a puff of air or smoke.
**Whiffle,** hwif'l, *v.* to scatter; to talk foolishly.
**Whiffletree,** hwif'l-trē, *n.* part of a waggon.
**Whilom,** hwī'lom, *adv.* at one time; formerly.
**Whim,** hwim, *n.* a caprice; a freak.
**Whimper,** hwim'per, *v.* to whine.
**Whin,** hwin, *n.* gorse or furze.
**Whine,** hwin, *v.* to murmur.
**Whinny,** hwin'i, *v.* to neigh.
**Whip,** hwip, *n.* a lash with a handle; *v.* to lash.
**Whip-hand,** hwip'-hand, *n.* to obtain mastery over.
**Whir,** hwer, *n.* a buzzing sound.
**Whirl,** hwerl, *v.* to revolve quickly.
**Whirlwind,** hwerl'wind, *n.* a rotating wind.
**Whisk,** hwisk, *n.* a kind of brush; *v.* to beat, as an egg.
**Whiskey,** hwis'ki, *n.* spirit made from barley.
**Whisper,** hwisp'er, *v.* to speak low down.
**Whist,** hwist, *n.* a card game.
**White, hwit,** *adj.* of the colour of snow.
**Whitewash,** hwit'wosh, *v.* to coat with lime-water.
**Whither,** hwith'er, *adv.* where; to what place?
**Whitlow,** hwit-lo, *n.* painful inflammation of fingers.
**Whittle,** hwit'l, *v.* to cut with a knife; *n.* a kind
**Whiz,** hwiz, *n.* a hissing sound. [of knife.
**Whole, hōl,** *n.* total.
**Wholesale,** hōl'sāl, *adj.* buying in large quantities to sell again.
**Wholesome,** hōl'sum, *adj.* good; sound
**Whoop,** hwoop, *v.* to shout.
**Whooping Cough,** hoop'ing-kof, *n.* See Hooping Cough.

**Whorl,** hworl, *n.* a cluster.
**Whore,** hōr, *n.* a strumpet.
**Why,** hul, *adv.* an interrogation.
**Wick, wik,** *n.* the twisted threads or blazing part in the centre of lamps or candles.
**Wicked,** wik'ed, *adj.* sinful.
**Wicker,** wik'er, *adj.* made of twigs.
**Wicket,** wik'et, *n.* a small gate.
**Wide,** wid, *adj.* broad.
**Widen,** wid'en, *v.* to broaden.
**Widow,** wid'ō, *n.* a woman whose husband is dead.
**Widower,** wid'ō-er, *n.* a man whose wife is dead.
**Width,** wid*th*, *n* breadth.
**Wield,** wēld, *v.* to handle.
**Wife,** wif, *n.* a woman whose husband is alive.
**Wig,** wig, *n.* artificial hair for the head.
**Wiggle,** wig'l, *v.* to squirm.
**Wight,** wit, *n.* a person.
**Wigwam,** wig'wam, *n.* an Indian hut.
**Wild,** wild, *adj.* savage; desert; stormy.
**Wilderness,** wil'der-nes, *n.* a desert.
**Wile,** wil, *n.* a sly action.
**Wilful,** wil'ful, *adj.* obstinate.
**Will,** wil, *n.* volition; intention.
**Willingness,** wil'ing-nes, *n.* readiness.
**Willow,** wil'o, *n.* tree furnishing osiers.
**Wimble,** wim'bl, *adj.* lively; brisk; nimble.
**Win,** win, *v.* to gain; to allure.
**Wince,** wins, *v.* to flinch.
**Winch,** winsh, *n.* a crank; a hoisting apparatus.
**Wind,** wind, *n.* a current of air.
**Windage,** wind'āj, *n.* the difference between a gun's diameter and that of a ball.
**Wind-bound,** *adj.* detained by contrary winds.
**Windfall,** wind fawl, *n.* an unexpected boon.
**Wind-gall,** wind-gawl, *n.* tumour on a horse's fetlock.
**Winding-sheet,** wind'ing-shēt, *n.* shroud.
**Windlass,** wind'lass, *n.* a weight-raising machine on a ship.
**Window,** wind'ō, *n.* an opening for light.
**Window-sash,** win'dō-sash, *n.* frame in which glass is set.
**Windpipe,** wind'pīp, *n.* the trachea.
**Windward,** wind'werd, *adv.* towards the wind.
**Wine-bibber,** win'bib-er, *n.* a great wine-drinker.
**Wing,** wing, *n.* the limb of a bird used in flying; *v.* to take flight.
**Winning,** win'ing, *adj.* attractive.
**Winnow,** win'ō, *v.* to sift.
**Winter,** win-ter, *n.* the coldest season.
**Wire,** wir, *n.* a thread of metal.
**Wireless,** wir-les, *n.* colloquialism for wireless telegraphy.
**Wire-puller,** wir'pool-er, *n.* an intriguer; one who
**Wiry,** wir'i, *adj.* tough. [controls secretly.
**Wise,** wiz, *adj.* discreet; just.
**Wiseacre,** wiz'āk-er, *n.* one who assumes wisdom.
**Wish,** wish, *n.* desire.
**Wisket,** wisk'et, *n.* a basket.
**Wisp,** wisp, *n.* bundle of straw or hay.
**Wistful,** wist'ful, *adj.* attentive.
**Wit,** wit, *n.* ready sense
**Witch,** wich, *n.* a woman of supposed magical power.
**Witchery,** wich'er-i, *n.* enchantment.
**Withdrawal,** *with*-draw'al, *n.* a moving or taking
**Withe,** *with*, *n.* a willow twig. [back.
**Wither,** *with*'er, *v.* to dry up.
**Withers,** *with*'erz, *n.* the neck-joint of a horse.
**Withhold,** *with*-hold', *v.* to hold back.
**Withstand,** *with*-stand', *v.* to oppose.
**Withy,** *with*'e, *n.* a species of willow.
**Witness,** wit'nes, *n.* one who bears testimony.
**Wit-snapper,** wit'snap-er, *n.* one who affects wit.
**Witticism,** wit'te-sizm, *n.* a brilliant saying.
**Wizard,** wiz'ard, *n.* a sorcerer; a conjurer.
**Woe,** wō, *n.* grief; sadness.
**Womanhood,** woom'an-hood, *n.* the condition of being a woman.
**Wonder,** wun'der, *n.* surprise.
**Wont,** wōnt, *adj.* accustomed.
**Wonted,** wōnt'ed, *adj.* customary.
**Woo,** woo, *v.* to make love to.
**Wood,** wood, *n.* timber; a small forest.
**Woodcut,** wood'kut, *n.* a wood engraving.
**Wooden,** wood'en, *adj.* made of wood; stupid.
**Woodland,** wood'land, *n.* forest land.
**Wooer,** woo'er, *n.* a lover.
**Woof,** woof, *n.* weft.
**Wool,** wool, *n.* the hair of sheep, etc.
**Woollen,** wool'en, *adj.* made of wool.
**Word,** wurd, *n.* an oral or written sign.

**Wording,** werd'ing, *n.* manner of expression.
**Wordy,** werd'i, *adj.* verbose.
**Work,** werk, *n.* labour; toil; a composition.
**Workhouse,** werk'hows, *n.* house of refuge for the poor.
**Workman,** werk'man, *n.* an artisan; a labourer.
**World,** wurld, *n.* the earth.
**Worldly,** werld'li, *adj.* pertaining to the world.
**Worm,** werm, *n.* an earth-feeding animal; thread of a screw.
**Worry,** wer'i, *n.* trouble; vexation; *v.* to bite savagely.
**Worship,** wer'ship, *n.* devotion; adoration.
**Worst,** werst, *adj.* the most wicked.
**Worsted,** wers'ted, *n.* consisting of combed wool.
**Wort,** wert, *n.* a plant.
**Worth,** wer*th*, *n.* value; price.
**Wot,** wot, *v.* to know.
**Wound,** woond, *n.* an injury; *v.* to injure.
**Wraith,** rā*th*, *n.* a ghost.
**Wrangle,** rang'gl, *v.* to quarrel; to dispute.
**Wrangler,** rang'gler, *n.* one who wrangles; one who achieves a first mathematical position at Cambridge University.
**Wrap,** rap, *v.* to fold.
**Wrath,** r*ath*, *n.* anger; fury.
**Wreath,** rē*th*, *n.* a garland.
**Wreck,** rek, *n.* a destroyed ship; *v.* to ruin.
**Wrench,** rench, *v.* to wrest.
**Wrest,** rest, *v.* to force from.
**Wrestle,** res'l, *v.* to contend with; to try to throw
**Wretch,** rech, *n.* a miserable person. [down.
**Wriggle,** rig'l, *v.* to twist.
**Wring,** ring, *v.* to twist; to strain.
**Wrinkle,** ring'k'l, *n.* a crease.
**Wrist,** rist, *n.* the joint connecting the hand with
**Writ, rit,** *n.* a legal summons. [the arm.
**Write,** rit, *v.* to inscribe.
**Writhe,** ri*th*, *v.* to twist; to be distorted with pain.
**Wrong,** rong, *n.* injustice; injury.
**Wroth,** rō*th*, *v.* angry.
**Wrought-iron,** rawt'i-urn, *n.* malleable iron containing very little carbon.
**Wry,** ri, *adj.* twisted.

## X

**X-rays,** Ex-rāis, *n.* Radium emanations.
**Xangti,** zang'ti, *n.* the Chinese name for Supreme Being.
**Xanthine,** zan'*thin*, *n.* yellow dyeing matter.
**Xanthous,** zan'*thus*, *adj.* yellow.
**Xebec,** zē'bek, *n.* a small vessel.
**Xerasia,** zēr-ā'si-a, *n.* a hair disease.
**Xerophagy,** zē-rof'ā-ji, *n.* habit of living on dry food.
**Xiphoid,** zif'oid, *adj.* sword-fish shaped.
**Xylocarp,** zi'lo-karp, *n.* a woody fruit.
**Xylonite,** zi'lo-nit, *n.* a celluloid material.
**Xylophagous,** zi'lof'ā-gus, *adj.* feeding on wood.
**Xylophone,** zi'lō-fōn, *n.* a wooden musical instrument.
**Xyst,** zist, *n.* an athletic court. [ing bones.
**Xyster,** zist'er, *n.* a surgical instrument for scrap-

## Y

**Yacca,** yak'a, *n.* a West Indian evergreen.
**Yacht,** yot, *n.* a pleasure vessel.
**Yak,** yak, *n.* Tibet ox, used for draught.
**Yam,** yam, *n.* a tropical root.
**Yammer,** yam'er, *v.* to lament.
**Yank,** yangk, *v.* to jerk.
**Yankee,** yang'kē, *n.* an American.
**Yap,** yap, *v.* to yelp like a cur.
**Yard,** yārd, *n.* a measure of 3 feet; an enclosed space; a ship's beam.
**Yardstick,** yārd'stik, *n.* a stick 3 feet long.
**Yarely,** yare'le, *adj.* quickly.
**Yarn,** yārn, *n.* spun wool cotton, flax, or silk; a sailor's story.
**Yarrish,** yar'rish, *adj.* a dry rough taste.
**Yarrow,** yar'ō, *n.* an herb.
**Yatsghan,** yat'ta-gan, *n.* a long Turkish sword.
**Yawl,** yawl, *n.* a ship's boat.
**Yawn,** yawn, *n.* act of gaping; *v.* to gape
**Yaws,** yaws, *n.* a serious disease.
**Yea,** yā, *adv.* affirmative; yes.
**Yean,** yēn, *v.* to bring forth young.
**Year,** yēr, *n.* a period of 12 months.
**Yearling,** yēr'ling, *n.* an animal a year old.
**Yearn,** yern, *v.* to desire eagerly.
**Yeast,** yeest, *n.* a fungous growth used for fermentation.
**Yelk,** yelk, *n.* yolk.
**Yell,** yel, *v.* to utter a sharp cry.
**Yellow,** yel'ō, *adj.* of a bright gold colour.
**Yelp,** yelp, *v.* to bark shrilly.
**Yen,** yen, *n.* a Japanese coin.
**Yeoman,** yō'man, *n.* a farmer; a freeholder.
**Yes,** yes, *adv.* word of affirmation or agreement.
**Yesterday,** yes'ter-dā, *n.* the day last past.
**Yet,** yet, *adv.* in addition; besides
**Yew,** yoo, *n.* an evergreen tree.
**Yex,** yeks, *v.* to hiccough.
**Yiddish,** yid'ish, *n.* a dialect used by Jews.
**Yield,** yēld, *v.* to produce.
**Yoke,** yōk, *n.* bondage.
**Yoke-fellow,** yōk'fel-ō, *n.* an associate.
**Yokel,** yō'kel, *n.* a country bumpkin.
**Yolk,** yōk, *n.* yellow of an egg.
**Yonder,** yon'der, *adv.* at a distance within sight.
**Yonker,** yunk'er, *n.* a youngster, an agile girl.
**Yore,** yōr, *n.* ancient days.
**Young,** yung, *adj.* not long born; *n.* the offspring of animals.
**Youth,** yōoth, *n.* state of youngness; a young man.
**Yucca,** yuk-a, *n.* a flowering plant.
**Yuck,** yuk, *v.* to itch.
**Yule,** yool, *n.* the old-time name of Christmas.

## Z

**Zabra,** zā'bra, *n.* a small Spanish vessel.
**Zaccho,** zak'ko, *n.* the lowest portion of the pedestal of a column.
**Zamia,** zā'mi-ā, *n.* a genus of plants.
**Zanella,** zā-nel'a, *n.* a twilled fabric for covering
**Zany,** zā'ni, *n.* a buffoon. [umbrellas.
**Zareba,** zar'e-ba, *n.* a stockade, an encampment.
**Zax,** zaks, *n.* a slater's hammer.
**Zeal,** zēl, *n.* ardour.
**Zebra,** zē'bra, *n.* a striped African equine.
**Zebu,** zē-boo, *n.* the humped ox.
**Zeine,** ze'in, *n.* a proteid found in Indian corn.
**Zend,** zend, *n.* early Persian language.
**Zend-Avesta,** zend-ā-vest'ā, *n.* the ancient writings of the Parsees.
**Zenith,** zen'i*th*, the highest point of the heavens.
**Zephyr,** zef'er, *n.* a gentle wind.
**Zero,** zē'ro, *n.* nothing; the point from which a thermometer is graduated.
**Zest,** zest, *n.* eagerness; relish.
**Zetetic,** ze-tet'ic, *n.* a seeker.
**Zibeline,** zi'be-lin, *n.* a fur of the sable kind.
**Zigzag,** zig'zag, *adj.* this way and that.
**Zincode,** zing'kōd, *n.* positive pole of a galvanic battery.
**Zincography,** zing'kog'ra-fi, *n.* a process of printing from zinc plates.
**Zingari,** zing'a-ri, *n.* gypsies.
**Zither,** si*th*'er, *n.* a flat-stringed musical instrument.
**Zodiac,** zō'di-ak, *n.* imaginary inner circle in the heavens containing the twelve signs through which the sun travels.
**Zoetrope,** zō-e-trōp, *n.* a toy showing moving pictures.
**Zoic,** zō'ik, *adj.* relating to animals.
**Zoilean,** zo-i-le'an, *adj.* severe and bitter criticism.
**Zone,** zōn, *n.* a girdle; a division of the earth.
**Zoochemy,** zo-ok'e-me, *n.* chemistry pertaining to animals.
**Zoography,** zō'og-rā-fi, *n.* description of animals.
**Zoolite,** zō'o-lit, *n.* fossil animal substance.
**Zoology,** zō'ol-ō-ji, *n.* the natural history of animals.
**Zoophyte,** zō'ō-fit, *n.* a plant-like animal, as the sponge.
**Zoospore,** zō'ō-spōr, *n.* a spore capable of moving.
**Zootomy,** zō-ot'ō-mi, *n.* the anatomy of animals.
**Zouave,** zwāv, *n.* a soldier in certain infantry regiments of the French army.
**Zulu,** zoo'loo, *n.* an African Kaffir race.
**Zygomatic,** zig'o-mat'ik, *adj.* pertaining to the cheekbone.
**Zygon,** zī'gon, *n.* a connecting bar.
**Zyme,** zim, *n.* a germ supposed to cause zymotic disease; a ferment.
**Zymotic,** zi-mot'ik, *adj.* pertaining to fermentation.
**Zythum,** zī'*thum*, *n.* a liquor made from wheat and malt.

# SYNONYMS AND ANTONYMS

PEARS—THE PURE SOAP

*For particulars of Pears Famous Toilet Preparations turn to end of Book*

# Pears' Dictionary of

# Synonyms and Antonyms

## Or Words of same meaning and their Opposites

*It contains many words of importance likely to be consulted by scholars, students, literary men and the general public.*

## A

**Abandon,** *Syn.* Surrender, vacate, forgo, quit, relinquish, desert, forsake. *Ant.* Keep, hold, haunt, retain, defend, cherish, seek, prosecute.

**Abase,** *Syn.* Sink, lower, depress, bring low, degrade. *Ant.* Elevate, raise, exalt, promote.

**Abash,** *Syn.* Humiliate, mortify, humble, confuse. *Ant.* Embolden, inspirit, encourage.

**Abate,** *Syn.* Decrease, subside, lessen, mitigate. *Ant.* Amplify, develop, revive, continue.

**Abbreviate,** *Syn.* Compress, condense, contract, abridge. *Ant.* Expand, amplify, enlarge.

**Abdicate,** *Syn.* Surrender, resign, relinquish, abandon. *Ant.* Usurp, assert, occupy, retain.

**Abduction,** *Syn.* Seizure, deprivation, abstraction. *Ant.* Restoration, restitution, replacement.

**Aberration,** *Syn.* Insanity, idiocy, hallucination, deviation. *Ant.* Progression, tenor, line, order, law, principle, continuity, consecutiveness.

**Abeyance,** *Syn.* Dormancy, suspension. *Ant.* Resuscitation, operation, renewal.

**Abhor,** *Syn.* Dislike, despise, loathe, detest, hate. *Ant.* Desire, crave, relish, love.

**Ability,** *Syn.* Competency, talent, skill, faculty. *Ant.* Maladroitness, incapacity, weakness.

**Abject,** *Syn.* Sordid, wretched, servile, squalid, degraded. *Ant.* Arrogant, noble, esteemed.

**Abjure,** *Syn.* Disown, disavow, deny, renounce. *Ant.* Acknowledge, cherish, vindicate.

**Able,** *Syn.* Vigorous, gifted, capable, talented, clever. *Ant.* Unqualified, inefficient, weak.

**Abnegation,** *Syn.* Abjuration, renunciation, denial. *Ant.* Licence, indulgence, assertion.

**Abnormal,** *Syn.* Eccentric, divergent, exceptional, erratic. *Ant.* Natural, regular, normal.

**Abode,** *Syn.* Quarters, berth, residence, place, stay, home. *Ant.* Bivouac, tent, perch, halt.

**Abolish,** *Syn.* Expunge, cancel, annul, make void, destroy. *Ant.* Repair, restore, promote.

**Abominate,** *Syn.* Detest, loathe, abhor. *Ant.* Love, like, desire.

**Abound,** *Syn.* Revel, be plentiful, flourish, swarm, teem, luxuriate. *Ant.* Lessen, vanish, decay, die, drain, evaporate, waste.

**About,** *Syn.* Roughly, approximately, concerning, near, almost. *Ant.* Exactly, precisely, away, afar.

**Abridge,** *Syn.* Condense, curtail, lessen, shorten, abbreviate. *Ant.* Spread out, expand, amplify.

**Abrogate,** *Syn.* Annul, set aside, cancel, abolish. *Ant.* Confirm, re-enact, enact.

**Abrupt,** *Syn.* Rough, harsh, blunt, curt, coarse, sudden. *Ant.* Courteous, smooth, gliding.

**Abscond,** *Syn.* Hide, disappear, depart, decamp. *Ant.* Appear, emerge, show.

**Absence,** *Syn.* Lack, failure, inattention, want. *Ant.* Attention, existence, appearance.

**Absolute,** *Syn.* Arbitrary, certain, autocratic, despotic, unconditional, perfect. *Ant.* Responsible, conditioned, conditional, imperfect.

**Absolve,** *Syn.* Clear, free, forgive, pardon, acquit. *Ant.* Convict, obligate, bind, compel, charge.

**Absorb,** *Syn.* Suck up, drink in, engross, consume. *Ant.* Distract, dissipate, exude, emit.

**Abstain,** *Syn.* Desist, keep back, stop, cease, forbear, refrain. *Ant.* Exceed, indulge.

**Abstemious,** *Syn.* Frugal, sober, moderate. *Ant.* Intemperate, greedy, gluttonous.

**Abstract,** v. *Syn.* Steal, take away, remove, part, detach, separate. *Ant.* Return, restore, unite.

**Abstruse,** *Syn.* Dark, obscure, deep, profound, hidden. *Ant.* Easy, plain, lucid, simple, patent.

**Absurd,** *Syn.* Foolish, stupid, ridiculous, irrational. *Ant.* Logical, sound, rational, sensible.

**Abusive,** *Syn.* Scurrilous, rude, opprobrious, insolent. *Ant.* Courteous, kind, respectful.

**Abyss,** *Syn.* Chasm, pit, deep, gulf. *Ant.* Mound, surface.

**Academical,** *Syn.* Learned, collegiate. *Ant.* Uncollegiate, illiterate.

**Accede,** *Syn.* Concur, accept, comply with, consent. *Ant.* Protest, refuse, decline, dissent.

**Accelerate,** *Syn.* Hurry, press forward, urge on, speed. *Ant.* Hinder, retard, clog, obstruct.

**Accent,** *Syn.* Emphasis, rhythm, stress. *Ant.* Flow, monotony, smoothness.

**Accessible,** *Syn.* Conversible, easy, affable. *Ant.* Difficult, cold, distant.

**Accession,** *Syn.* Extension, addition, arrival. *Ant.* Subsidence, drain, ebb, efflux, departure.

**Accessory,** n. *Syn.* Colleague, associate, accomplice. *Ant.* Rival, adversary, foe.

**Acclivity,** *Syn.* Incline, rise, ascent. *Ant.* Descent, declivity.

**Accommodating,** *Syn.* Conciliatory, yielding, polite, obliging. *Ant.* Imperious, rude.

**Accompany,** *Syn.* Escort, join, attend, consort. *Ant.* Discard, leave, abandon.

**Accomplish,** *Syn.* Complete, finish, attain, fulfil, execute. *Ant.* Spoil, mar, baffle, destroy.

**Accord,** *Syn.* Allow, grant, harmonize, consent, agree. *Ant.* Refuse, deny, differ, disagree.

**Accost,** *Syn.* Stop, greet, hail, invoke, salute, address. *Ant.* Ignore, avoid, shun.

**Accountable,** *Syn.* Delegated, amenable, liable, responsible. *Ant.* Despotic, supreme, absolute.

**Accredited,** *Syn.* Trusted, confidential, acknowledged. *Ant.* Distrusted, unacknowledged.

**Accumulate,** *Syn.* Gather, hoard, store, mass, collect. *Ant.* Waste, scatter, disperse.

**Accuracy,** *Syn.* Precision, strictness, correctness. *Ant.* Incorrectness, slovenliness, looseness.

**Accuse,** *Syn.* Criminate, cite, impeach, charge. *Ant.* Release, acquit, discharge, vindicate.

**Accustom,** *Syn.* Reconcile, familiarize, habituate. *Ant.* Wean, estrange, dishabituate.

**Acerbity,** *Syn.* Roughness, sourness, acrimony. *Ant.* Gentleness, mildness, sweetness.

**Achieve,** *Syn.* Effect, execute, perform, gain, do, accomplish. *Ant.* Fail, lose, miss.

**Acknowledge,** *Syn.* Profess, accept, own, recognize, admit, avow. *Ant.* Deny, disown, disclaim.

**Acme,** *Syn.* Meridian, apex, zenith, summit. *Ant.* Depth, nadir, foundation, floor, base.

**Acquiesce,** *Syn.* Comply, agree, repose, assent. *Ant.* Object, demur, dissent.

**Acquire,** *Syn.* Reap, get, procure, earn, gain. *Ant.* Miss, surrender, lose.

**Acquit,** *Syn.* Dismiss, absolve, discharge. *Ant.* Sentence, impeach, accuse, charge.

**Acrid,** *Syn.* Sour, harsh. *Ant.* Luscious, sweet.

**Acrimonious,** *Syn.* Sarcastic, ill-natured, acrid, biting, sharp. *Ant.* Pleasant, sweet, smooth.

**Across,** *Syn.* Transversely, against, athwart. *Ant.* Parallel, along, lengthwise.

**Actual,** *Syn.* Authentic, real, certain, demonstrable. *Ant.* Fabulous, virtual, possible.

**Actuate,** *Syn.* Impel, incite, incline, induce, instigate. *Ant.* Prevent, hinder, retard, deter.

**Acumen,** *Syn.* Sagacity, talent, discernment, sharpness, point. *Ant.* Indiscernment, dulness.
**Acute,** *Syn.* Distressing, severe, piercing, astute, keen, pointed. *Ant.* Stolid, heavy, obtuse.
**Adage,** *Syn.* Proverb, by-word, saw, motto, saying, maxim. *Ant.* Harangue, disquisition.
**Adapt,** *Syn.* Conform, suit, accommodate, fit. *Ant.* Misapply, misconform, misfit.
**Addicted,** *Syn.* Inclined, prone, given to. *Ant.* Indisposed, disinclined, unaddicted.
**Adduce,** *Syn.* Import, add, offer, advance, cite, apply, allege. *Ant.* Deduce, deduct, withdraw.
**Adept,** *Syn.* Master, handy, adroit, expert. *Ant.* Tyro, inexpert, clumsy, awkward.
**Adequate,** *Syn.* Able, capable, fit, sufficient, equal. *Ant.* Incompetent, insufficient, unequal.
**Adhere,** *Syn.* Cling, join, fix, unite, attach, hold, cleave, cohere. *Ant.* Sever, secede, divide.
**Adhesive,** *Syn.* Tenacious, sticky. *Ant.* Inadhesive, non-viscous.
**Adipose,** *Syn.* Oleaginous, corpulent, obese. *Ant.* Thin, bony, skinny.
**Adjacent,** *Syn.* Bordering, nigh, close, neighbouring, near. *Ant.* Separate, distant, remote.
**Adjourn,** *Syn.* Delay, defer, suspend, postpone. *Ant.* Complete, conclude, hasten, urge, expedite.
**Adjunct,** *Syn.* Acquisition, aid, auxiliary, appendage, addition. *Ant.* Hindrance, drawback.
**Adjure,** *Syn.* Command, urge, enjoin, conjure. *Ant.* Defy, prohibit, dissuade, warn, dare.
**Adjust,** *Syn.* Classify, suit, right, affix, collocate, harmonize. *Ant.* Confuse, disorder, confound.
**Administer,** *Syn.* Perform, execute, dispense, afford, give, accord, award. *Ant.* Deny, resign, undertake, refuse.
**Admire,** *Syn.* Affect, applaud, love, extol, approve. *Ant.* Slight, despise, mislike, contemn.
**Admissible,** *Syn.* Right, fair, probable, allowable. *Ant.* Wrong, unfair, absurd, improper.
**Admit,** *Syn.* Avow, own, confess, allow, permit, receive. *Ant.* Disavow, repudiate, deny, disallow.
**Admonish,** *Syn.* Rebuke, censure, caution, forewarn. *Ant.* Urge, incite, abet, encourage.
**Adopt,** *Syn.* Avow, elect, take, affiliate, select. *Ant.* Disown, disavow, repudiate, decline.
**Adorn,** *Syn.* Decorate, ornament, bedeck, beautify. *Ant.* Bare, strip, despoil, impoverish, spoil.
**Adroit,** *Syn.* Clever, dexterous, skilful, handy. *Ant.* Unskilful, clumsy, awkward.
**Adulation,** *Syn.* Cringing, fawning, praise, incense, sycophancy, compliment, flattery. *Ant.* Satire, sarcasm, defamation, obloquy, detraction.
**Adulterate,** *Syn.* Vitiate, corrupt, debase. *Ant.* Genuine, make pure.
**Advantage,** *Syn.* Interest, good, success, gain. *Ant.* Obstruction, inferiority, frustration.
**Advent,** *Syn.* Coming, arrival, approach. *Ant.* Exodus, exit, departure.
**Adventitious,** *Syn.* Irregular, superfluous, redundant. *Ant.* Intrinsic, pertinent, proper.
**Adventurous,** *Syn.* Hazardous, chivalrous, rash, fearless, gallant, enterprising, daring, brave, bold. *Ant.* Cautious, nervous, cowardly.
**Adverse,** *Syn.* Unfavourable, contrary, conflicting, opposite, opposed to. *Ant.* Fortunate, amicable, friendly, favourable.
**Adversity,** *Syn.* Affliction, trouble, distress, misfortune. *Ant.* Success, happiness, good-luck.
**Advisable,** *Syn.* Beneficial, desirable, expedient, judicious, politic. *Ant.* Undesirable, inexpedient, injudicious, impolitic, unadvisable.
**Advise,** *Syn.* Inform, acquaint, incite, urge, persuade, counsel, warn, admonish. *Ant.* Misadvise, mislead, curb, restrain, remonstrate, expostulate, deter.
**Advocate,** n. *Syn.* Supporter, upholder, counsellor, pleader. *Ant.* Impugner, accuser, adversary.
**Affect,** *Syn.* Pretend, feign, influence, move, assume, favour, like. *Ant.* Repel, shun, dislike.
**Affectation,** *Syn.* Assumption, hypocrisy, pretence. *Ant.* Artlessness, simplicity, naturalness.
**Affection,** *Syn.* Desire, love, bent, condition. *Ant.* Repulsion, indifference, insensibility.
**Affiliate,** *Syn.* Adopt, incorporate, graft, annex. *Ant.* Disjoin, sever, disaffiliate, disannex.
**Affinity,** *Syn.* Harmony, analogy, similarity, connection. *Ant.* Discordance, dissimilarity.
**Affirm,** *Syn.* Maintain, declare, testify, swear, assert. *Ant.* Oppose, doubt, dispute, deny.
**Affix,** *Syn.* Subjoin, annex, attach. *Ant.* Separate, disunite, detach.
**Affliction,** *Syn.* Pain, grief, trial, trouble. *Ant.* Pleasure, boon, alleviation, relief, consolation.
**Affluence,** *Syn.* Riches, wealth, plenty. *Ant.* Indigence, penury, scarcity, want.
**Affront,** *Syn.* Indignity, wrong, abuse, insult, outrage. *Ant.* Apology, courtesy, homage.
**Aforesaid,** *Syn.* Foregoing, stated, above-mentioned. *Ant.* Subjoined, following.
**Against,** *Syn.* Counter, across, opposing, opposite, over. *Ant.* Suiting, aiding, for, with.
**Agent,** *Syn.* Promoter, cause, influence, force, actor, doer. *Ant.* Counteractor, counteragent.
**Aggrandize,** *Syn.* Enrich, ennoble, promote. *Ant.* Debase, enfeeble, depress.
**Aggravate,** *Syn.* Wound, provoke, exasperate. *Ant.* Diminish, assuage, soothe.
**Aggregate, Aggregation,** *Syn.* Whole, mass, sum. *Ant.* Unit, disunion, division, dissipation.
**Aggression,** *Syn.* Incursion, assault, offence, attack, invasion. *Ant.* Retreat, repulsion, retaliation.
**Agile,** *Syn.* Sprightly, swift, quick, ready, brisk, fleet, active, nimble. *Ant.* Inert, awkward.
**Agitate,** *Syn.* Shake, ruffle, excite, trouble, disturb. *Ant.* Smooth, pacify, allay, compose.
**Ago,** *Syn.* Since, gone, past. *Ant.* Hereafter, hence, future, coming.
**Agreeable,** *Syn.* Amiable, grateful, pleasant, obliging. *Ant.* Offensive, disagreeable.
**Agreeably,** *Syn.* Consistently, conformably, suitably. *Ant.* Impertinently, inconsistently.
**Aid,** *Syn.* Abet, protect, befriend, assist, help. *Ant.* Baffle, discourage, resist, oppose.
**Ailment,** *Syn.* Disease, illness, sickness, complaint. *Ant.* Vigour, health, sanity, recovery.
**Aim,** n. *Syn.* Design, end, mark, purpose, drift, bent. *Ant.* Overlooking, shunning.—v. *Syn.* Mean, intend, design, level, seek. *Ant.* Ignore, disregard, shun.
**Akin,** *Syn.* Allied, congenial, similar, cognate, related. *Ant.* Hostile, uncongenial, alien.
**Alacrity,** *Syn.* Compliance, activity, quickness. *Ant.* Repugnance, slowness.
**Alarming,** *Syn.* Ominous, frightful, terrible. *Ant.* Enticing, alluring, encouraging, assuring.
**Alert,** *Syn.* Vigilant, prepared, nimble, brisk, active. *Ant.* Oblivious, absent, lazy, sleepy.
**Alienate,** *Syn.* Wean, estrange. *Ant.* Bind, entail, endear, retain.
**Alike,** *Syn.* Akin, same, equal, identical, resembling. *Ant.* Different, dissimilar, apart, unlike.
**Alive,** *Syn.* Safe, alert, vivacious, lively, breathing, living. *Ant.* Defunct, lifeless, cold, dead.
**Allay,** *Syn.* Calm, pacify, soften, appease, quiet, soothe. *Ant.* Stir, aggravate, rouse, excite.
**Allege,** *Syn.* Aver, assert, affirm, declare. *Ant.* Repel, quash, gainsay.
**Allegiance,** *Syn.* Homage, fealty, loyalty, obedience. *Ant.* Treason, resistance, rebellion.
**Alleviate,** *Syn.* Soothe, assuage, lessen, lighten. *Ant.* Augment, enhance, aggravate.
**Alliance,** *Syn.* Partnership, union, co-operation, treaty. *Ant.* Discord, divorce, enmity.
**Alloyed,** *Syn.* Adulterated, impaired, mixed. *Ant.* Genuine, complete, perfect, absolute, pure.
**Allure,** *Syn.* Decoy, tempt, attract, seduce, entice. *Ant.* Warn, scare, terrify, deter, alarm.
**Allusion,** *Syn.* Insinuation, reference. *Ant.* Mention, specification.
**Ally,** *Syn.* Assistant, supporter, companion, friend. *Ant.* Baffler, adversary, opponent.
**Alteration,** *Syn.* Change, difference, variation. *Ant.* Conservation, retention.
**Altercation,** *Syn.* Brawl, affray, wrangle, dispute. *Ant.* Harmony, agreement, concord, unanimity.
**Amalgamate,** *Syn.* Unite, compound, mix, fuse. *Ant.* Disperse, disunite, decompose, separate.
**Amass,** *Syn.* Store up, gather, collect. *Ant.* Spend, scatter, waste, dissipate, divide.
**Amazement,** *Syn.* Surprise, wonder, awe, astonishment. *Ant.* Composure.
**Ambiguous,** *Syn.* Uncertain, doubtful, vague. *Ant.* Lucid, unequivocal, necessary, clear.
**Ambition,** *Syn.* Emulation, aspiration. *Ant.* Moderation, indifference, inertia.
**Amenable,** *Syn.* Docile, subject, pliant, dependent. *Ant.* Obstinate, unamenable, autocratic, independent.
**Amend,** *Syn.* Reform, rectify, correct, repair. *Ant.* Mar, corrupt, spoil, blemish, tarnish.
**Amenity,** *Syn.* Geniality, blandness, mildness, pleasantness. *Ant.* Rigour, harshness.
**Amiable,** *Syn.* Lovely, engaging, benevolent, kind, good. *Ant.* Ill-natured, hateful, disagreeable.

**Amicable,** *Syn.* Sociable, kind, friendly. *Ant.* Adverse, unkind, unfavourable, unfriendly.
**Amity,** *Syn.* Good-will, sociableness, peace, friendliness. *Ant.* Hatred, asperity, acrimony, hostility, indifference, distance, coolness.
**Amnesty,** *Syn.* Absolution, dispensation, oblivion, remission, acquittal, pardon. *Ant.* Account, infliction, punishment, penalty.
**Ample,** *Syn.* Full, roomy, spacious, copious, liberal, large. *Ant.* Bare, stinted, mean, scant.
**Amplify,** *Syn.* Extend, swell, augment, increase, enlarge, enrich. *Ant.* Condense, curtail.
**Amputate,** *Syn.* Clip, curtail, lop, prune. *Ant.* Produce, augment, enlarge, extend.
**Analogy,** *Syn.* Parity, affinity, relation. *Ant.* Disharmony, dissimilarity, disproportion.
**Analysis,** *Syn.* Partition, separation, dissection. *Ant.* Coalition, aggregation, composition.
**Ancillary,** *Syn.* Auxiliary, useful, subservient, assistant. *Ant.* Inoperative, alien, inappropriate, insubservient.
**Anguish,** *Syn.* Agony, excruciation, torture, grief, pain. *Ant.* Ecstasy, enjoyment, pleasure, ease.
**Animated,** *Syn.* Brisk, lively, inspirited, excited, roused. *Ant.* Tame, flat, indolent, sluggish.
**Animation,** *Syn.* Activity, alertness, vivacity, life. *Ant.* Stolidity, deadness, dolefulness, dulness.
**Animosity,** *Syn.* Ill-will, anger, malice, enmity, strife, feud, aversion, hatred. *Ant.* Concord, harmony, fellow-feeling, sympathy, friendship.
**Annex,** *Syn.* Append, attach, add. *Ant.* Disunite, detach, withdraw.
**Annihilate,** *Syn.* Destroy, abolish, efface, extinguish, end, nullify. *Ant.* Perpetuate, cultivate, augment, tend, foster, preserve, conserve, keep.
**Annul,** *Syn.* Repeal, abolish, revoke, nullify, quash, cancel. *Ant.* Re-enact, maintain.
**Anomaly,** *Syn.* Eccentricity, exception, irregularity. *Ant.* Normality, regularity, conformity.
**Answer,** *Syn.* Reply, retort, repartee, solution, confutation, response. *Ant.* Query, interrogation, summons, defiance, question.
**Antagonism,** *Syn.* Animosity, opposition, hostility. *Ant.* Alliance, amity.
**Antagonistic,** *Syn.* Hostile, inimical, opposing, adverse. *Ant* Friendly, harmonious, aiding.
**Anterior,** *Syn.* Earlier, previous, foregoing, prior. *Ant.* Consequent, later, posterior.
**Anticipate,** *Syn.* Forecast, meet, foretaste, expect, prejudge, forestall. *Ant.* Cure, undo, recall, recollect, remember.
**Antipathy,** *Syn.* Aversion, bitterness, hatred, dislike. *Ant.* Harmony, congeniality, kindliness.
**Antiquated,** *Syn.* Obsolete, old-fashioned, quaint, bygone. *Ant.* Modern, stylish, modish.
**Antithesis,** *Syn.* Antagonism, opposition, contrast. *Ant.* Sameness, identity.
**Anxious,** *Syn.* Watchful, restless, concerned, uneasy, careful. *Ant.* Unconcerned, ease.
**Apathetic,** *Syn.* Impassive, frigid, cold, stoical, unfeeling. *Ant.* Sensitive, careful, anxious.
**Ape,** v. *Syn.* Represent, imitate, mimic. *Ant.* Change, modify, vary.
**Apocryphal,** *Syn.* Spurious, doubtful, obscure. *Ant.* Undisputed, current, authentic, palpable.
**Apology,** *Syn.* Excuse, exculpation, plea, justification. *Ant.* Insult, injury, offence, charge.
**Apothegm,** *Syn.* Saying, saw, maxim, dictum, adage, proverb. *Ant.* Discourse, sermon.
**Appal,** *Syn.* Daunt, scare, terrify, alarm, affright. *Ant.* Reassure, assure, rally, encourage.
**Apparent,** *Syn.* Clear, unmistakable, plain, obvious. *Ant.* Real, hidden, minute, inapparent, dubious.
**Appeal,** *Syn.* Call upon, refer, cite, invite, accost. *Ant.* Abjure, defy, disavow, protest.
**Appease,** *Syn.* Quiet, stay, satisfy, mitigate, assuage, pacify. *Ant.* Inflame, provoke, excite.
**Appellation,** *Syn.* Term, title, designation, style, name. *Ant.* Non-description, namelessness.
**Append,** *Syn.* Attach, subjoin, supplement, affix. *Ant.* Detach, disconnect, disengage, separate.
**Applause,** *Syn.* Eulogy, approval, encomium, laudation, plaudit, praise. *Ant.* Blame, contempt, dissatisfaction, denunciation.
**Applicable,** *Syn.* Conducive, pertinent, available. *Ant.* Inapplicable, inconducive, unavailable.
**Appoint,** *Syn.* Order, allot, instal, determine, fix. *Ant.* Suspend, withdraw, recall, cancel.
**Apportion,** *Syn.* Appoint, administer, divide, share, grant, allot, deal. *Ant.* Cancel, resume, withhold, refuse, retain, reserve.
**Apposite,** *Syn.* Meet, fit, consistent, timely, fitting, suitable. *Ant.* Unfitting, impertinent.
**Appraise,** *Syn.* Price, estimate, survey, value. *Ant.* Condemn, discard, undervalue.
**Appreciate,** *Syn.* Regard, prize, value, respect, esteem. *Ant.* Ignore, misjudge, misconceive.
**Apprise** or **Apprize,** *Syn.* Advise, publish, disclose, inform, tell. *Ant.* Mislead, mystify.
**Approbation,** *Syn.* Consent, assent, praise, approval. *Ant.* Refusal, blame, censure.
**Approve,** *Syn.* Promote, second, support, praise, like. *Ant.* Disown, blame, censure, dislike.
**Approximate,** *Syn.* Abut, border, resemble. *Ant.* Diverge, recede, vary, differ.
**Arbitrary,** *Syn.* Absolute, selfish, imperious, dictatorial, harsh, despotic. *Ant.* Limited, obliging, lenient, modest, mild.
**Arbitrate,** *Syn.* Decide, compose, adjust, settle. *Ant.* Appeal, claim, dispute.
**Ardent,** *Syn.* Hot, keen, zealous, fervent, warm. *Ant.* Unimpassioned, indifferent, cold, cool.
**Arduous,** *Syn.* Precipitous, steep, lofty, hard, difficult. *Ant.* Trivial, light, easy.
**Arid,** *Syn.* Sterile, dry. *Ant.* Fertile, dewy.
**Arouse,** *Syn.* Cheer, provoke, disturb, excite, stir. *Ant.* Quiet, still, compose, pacify, allay.
**Arraign,** *Syn.* Charge, indict, censure, accuse, summon. *Ant.* Release, discharge, acquit.
**Arrange,** *Syn.* Sort, deal, place, array, group, order. *Ant.* Disperse, disturb, confuse, derange.
**Array,** v. *Syn.* Draw up, place, attire, dress, adorn, rank, equip, deck. *Ant.* Divest, jumble, disarrange, disarray.—n. *Syn.* Parade, show, order. *Ant.* Jumble, disorder, disarray.
**Arrogance,** *Syn.* Vainglory, self-conceit, loftiness, hauteur, haughtiness. *Ant.* Shyness, modesty, deference, servility.
**Arrogate,** *Syn.* Demand, assert, assume, claim. *Ant.* Resign, waive, forgo.
**Ascend,** *Syn.* Scale, tower, go up, surmount, mount, rise. *Ant.* Descend, go down.
**Ascertain,** *Syn.* Learn, detect, confirm, find out, prove. *Ant.* Suppose, surmise, conjecture.
**Ascribe,** *Syn.* Charge, allege, refer, impute, assign. *Ant.* Disconnect, exclude.
**Aspect,** *Syn.* Air, view, exposure, appearance, side, phase, face, front. *Ant.* Rear, obverse.
**Asperity,** *Syn.* Severity, tartness, sharpness, bitterness, acrimony, harshness. *Ant.* Sweetness, softness, mildness.
**Aspiration,** *Syn.* Hope, endeavour, wish, aim, desire. *Ant.* Aversion, aimlessness, apathy.
**Assemble,** *Syn.* Call, muster, amass, collect, gather. *Ant.* Dismiss, go away, scatter.
**Assent,** n. *Syn.* Approval, acquiescence, consent, acknowledgment, agreement. *Ant.* Disclaimer, disavowal, difference.
**Assert,** *Syn.* Claim, allege, affirm, state, maintain, declare. *Ant.* Abandon, waive, contradict.
**Assiduity,** *Syn.* Application, exertion, perseverance. *Ant.* Inconstancy, inattention.
**Assign,** *Syn.* Advance, entrust, consign, specify, refer, allege. *Ant.* Refuse, retain, resume.
**Assimilate,** *Syn.* Absorb, engross, match. *Ant.* Reject, contrast, part, separate.
**Associate,** *Syn.* Helpmate, consort, ally, friend, companion. *Ant.* Antagonist, foe, alien, rival.
**Assorted,** *Syn.* Classified, selected, chosen, separated. *Ant.* Unclassified, confused, mixed.
**Assuage,** *Syn.* Calm, lessen, abate, pacify, moderate, soften. *Ant.* Provoke, incite, excite.
**Assume,** *Syn.* Feign, claim, usurp, presume, take. *Ant.* Prove, grant, concede, surrender, allow, waive.
**Assurance,** *Syn.* Promise, self-reliance, boldness, arrogance. *Ant.* Consternation, timidity.
**Assure,** *Syn.* Certify, uphold, convince, encourage, inform, promise, advise. *Ant.* Unsettle, warn, discourage, deter, discomfit, deceive, mislead.
**Astonishing,** *Syn.* Striking, surprising, wondrous. *Ant.* Trite, ordinary, common, foreseen.
**Astute,** *Syn.* Acute, sharp, knowing, shrewd, crafty. *Ant.* Stolid, undiscriminating, unobserving, dull.
**Asunder,** *Syn.* In twain, divided, disunited, apart, separate. *Ant.* Together, united, close, in one.
**Athletic,** *Syn.* Robust, brawny, powerful, vigorous, strong. *Ant.* Unbraced, nerveless, puny, weak.
**Atom,** *Syn.* Bit, speck, mote, particle, molecule. *Ant.* Lump, aggregate, whole, mass.
**Atrocious,** *Syn.* Flagrant, cruel, outrageous, wicked, monstrous. *Ant.* Humane, generous, noble, laudable.
**Attach,** *Syn.* Connect, conciliate, unite, fix, add, apply, fasten. *Ant.* Repel, detach, untie.

**Attain,** *Syn.* Grasp, secure, gain, get, win, earn, arrive at, master, extend, reach. *Ant.* Resign, abandon, miss, forfeit, fail, lose.
**Attempt,** *Syn.* Strive, endeavour, effort, attack. *Ant.* Drop, shun, abandon, disregard.
**Attend,** *Syn.* Follow, consort, serve, wait on, observe, notice, heed, listen. *Ant.* Desert, forsake, leave, disregard, wander.
**Attention,** *Syn.* Care, study, heed, regard, notice. *Ant.* Absence, distraction, remission.
**Attenuate,** *Syn.* Contract, narrow, reduce. *Ant.* Swell, dilate, expand, increase, broaden.
**Attest,** *Syn.* Involve, prove, support, affirm, vouch for, witness, certify, assert, aver, vouch. *Ant.* Upset, exclude, disprove, contradict, deny.
**Attribute,** v. *Syn.* Impute, charge, ascribe, apply. *Ant.* Dissever, dissociate, disconnect.
**Attrition,** *Syn.* Friction, abrasion, chafing. *Ant.* Smoothing, easing.
**Attune,** *Syn.* Adjust, harmonize, temper. *Ant.* Dislocate, disarrange, unstring.
**Audacity,** *Syn.* Temerity, rashness, boldness. *Ant.* Timidity, caution.
**Augmentation,** *Syn.* Improvement, acquisition, supply, amplification, increase. *Ant.* Curtailment, reduction, impoverishment, diminution.
**Augury,** *Syn.* Divination, prediction, prophecy. *Ant.* Observation, science, experience.
**Auspicious,** *Syn.* Opportune, fortunate, encouraging, favourable, lucky, propitious. *Ant.* Inauspicious, discouraging, unfavourable.
**Austere,** *Syn.* Sour, harsh, strict, morose, severe, stern, hard. *Ant.* Tender, kindly, affable.
**Authentic,** *Syn.* True, original, real, genuine. *Ant.* Disputed, false, spurious, unreliable.
**Authority,** *Syn.* Sway, rule, right, power, control, ground. *Ant.* Wrong, usurpation, weakness.
**Autocratic,** *Syn.* Absolute, despotic, independent. *Ant.* Limited, constitutional, dependent.
**Auxiliary,** *Syn.* Helping, assisting, assistant, conducive, promotive, accessory, helpful. *Ant.* Obstructive, superfluous, unassisting.
**Available,** *Syn.* Suitable, helpful, convertible, useful. *Ant.* Unavailable, inapplicable, useless.
**Avenge,** *Syn.* Retaliate, right, vindicate. *Ant.* Forgive, remit, condone, forgo, pardon.
**Aver,** *Syn.* Declare, depose, affirm, assert. *Ant.* Repudiate, disclaim, disavow, deny.
**Average,** *Syn.* Middle, medium, mean. *Ant.* Defect, excess, extreme.
**Averse,** *Syn.* Loath, backward, indisposed, hostile. *Ant.* Desirous, prone, eager, ready.
**Aversion,** *Syn.* Antipathy, distaste, hatred. *Ant.* Sympathy, liking, affection, desire, love.
**Avidity,** *Syn.* Longing, greed, desire, avarice. *Ant.* Repugnance, nausea, insensibility, apathy, coldness.
**Avoid,** *Syn.* Shirk, escape, elude, forsake, desert, abandon, shun. *Ant.* Seek, address, court.
**Award,** *Syn.* Give, allot, divide, grant, accord. *Ant.* Misapportion, retain, withdraw, refuse.
**Aware,** *Syn.* Cognizant, informed, sensible, conscious. *Ant.* Ignorant, insensible.
**Awful,** *Syn.* Portentous, dreadful, terrible, appalling, direful, fearful. *Ant.* Alluring, common place, unastonisbing, unimposing, innocuous.
**Awkward,** *Syn.* Boorish, uncouth, unhandy, clumsy. *Ant.* Handy, adroit, skilful, clever.
**Axiom,** *Syn.* Maxim, truism, aphorism, truth. *Ant.* Absurdity, nonsense.

## B

**Babbling,** *Syn.* Gossip, tattling, blabbing, prating. *Ant.* Taciturnity, refrain, reserve, reticence.
**Backslider,** *Syn.* Apostate, recreant, renegade. *Ant.* Bigot, zealot, adherent, professor.
**Baffle,** *Syn.* Mar, foil, perplex, defeat, confound, thwart, elude, frustrate. *Ant.* Advance, assist, promote, enforce, abet, aid.
**Balance,** *Syn.* Adjust, equalize, pit, poise, weigh. *Ant.* Overbalance, mispoise, cant, tilt, upset.
**Balk,** *Syn.* Baffle, defeat, hinder, stop, foil, frustrate, thwart, bar. *Ant.* Instigate, encourage, advance, promote, abet, aid.
**Bandy,** *Syn.* Pass, cross, exchange, interchange. *Ant.* Stifle, close, drop, silence, quash, straight.
**Banish,** *Syn.* Expatriate, relegate, exclude, eject, dispel, abandon, expel. *Ant.* Harbour, consider, protect, foster, cherish.
**Banter,** *Syn.* Raillery, jeering, chaff, badinage. *Ant.* Argument, discourse, discussion.
**Barbarous,** *Syn.* Gross, atrocious, uncouth, cruel, brutal, uncivilized, strange, rude. *Ant.* Urbane. humane, refined, civilized, polite.
**Bargain,** *Syn.* Haggling, chaffer, higgling, profit, business. *Ant.* Misprofit, loss.
**Base,** a. *Syn.* Corrupt, shameful, mean, sordid, low, dishonourable, vile. *Ant.* Correct, pure, honoured, esteemed, noble, exalted, lofty.
**Bashful,** *Syn.* Reserved, retiring, shy, diffident, modest. *Ant.* Pert, forward, impudent, bold.
**Bask,** *Syn.* Dally, lounge, repose, luxuriate. *Ant.* Drudge, slave, toil, work.
**Battle,** *Syn.* Action, combat, contest, conflict, fight. *Ant.* Mediation, council, truce, peace.
**Bauble,** *Syn.* Knicknack, plaything, trifle, toy. *Ant.* Jewel, ornament, gem, valuable.
**Bawl,** *Syn* Bellow, roar, halloo, vociferate, shout. *Ant.* Mumble, mutter, whisper.
**Beaming,** *Syn.* Beautiful, radiant, bright, shining. *Ant.* Wan, dingy, opaque, dull.
**Bear,** *Syn.* Produce, endure, fill, entertain, waft, undergo, suffer, maintain, lift, carry. *Ant.* Resist, decline, refuse, drop.
**Bearing,** *Syn.* Course, direction, position, conduct, mien, aspect, manner, behaviour. *Ant.* Misobservation, misdirection.
**Beatitude,** *Syn.* Beatification, bliss, blessedness. *Ant.* Punishment, pain, misery.
**Beauty,** *Syn.* Embellishment, fairness, grace, loveliness. *Ant.* Bareness, ugliness.
**Because,** *Syn.* As, consequently. *Ant.* Independently, irrespectively.
**Becoming,** *Syn.* Seemly, comely, decorous, proper, fit, neat. *Ant.* Unsuitable, indecent, ungraceful, uncomely, unbeseeming.
**Befall,** *Syn.* Betide, occur, happen. *Ant.* Spare, pass, miss.
**Befitting,** *Syn.* Proper, suitable, becoming, fitting. *Ant.* Unsuitable, unbefitting, unseemly.
**Befriend,** *Syn.* Defend, protect, support, countenance. *Ant.* Annoy, decry, thwart, oppose.
**Beg,** *Syn.* Pray, implore, entreat, request, ask. *Ant.* Require, extort, exact, insist.
**Beggarly,** *Syn.* Scant, stingy, wretched, poor. *Ant.* Liberal, prodigal, stately, princely, noble.
**Beggary,** *Syn.* Indigence, penury, want. *Ant.* Plenty, riches, affluence.
**Behaviour,** *Syn.* Action, proceeding, bearing. *Ant.* Misbehaviour, misdemeanour.
**Behest,** *Syn.* Trust, mandate, instruction, injunction. *Ant.* Discretion, non-interference, liberty.
**Behold,** *Syn.* Descry, view, discern, look. *Ant.* Blink, miss, ignore, overlook.
**Beholden,** *Syn.* Indebted, obliged, bound. *Ant.* Unbound, unobliged, unindebted.
**Belief,** *Syn.* Reliance, creed, opinion, avowal, trust, faith. *Ant.* Rejection, denial, distrust, unbelief.
**Bellicose,** *Syn.* Irascible, pugnacious. *Ant.* Pacific, peaceful.
**Belligerent,** *Syn.* Rival, adverse, opposed, fighting, contending. *Ant.* Appeased, peaceful, pacific.
**Belonging,** *Syn.* Property, cognate, related. *Ant.* Unimplied, alien, irrelevant, unrelated.
**Bend,** *Syn.* Submit, stoop, yield, condescend, bow, deflect, lean, bias, tend, incline, deviate, curve. *Ant.* Crush, break, stiffen, stand, advance.
**Beneath,** *Syn.* Under, underneath, below. *Ant.* Aloft, overhead, over, above.
**Benediction,** *Syn.* Benison, approval, blessing. *Ant.* Disapproval, malediction, curse.
**Benefaction,** *Syn.* Bequest, gift, boon, gratuity, grant. *Ant.* Disfavour, reservation, deprivation.
**Beneficent,** *Syn.* Bountiful, benevolent, benignant. *Ant.* Oppressive, griping, hard.
**Beneficial,** *Syn.* Salubrious, salutary, profitable. *Ant.* Hurtful, noxious, prejudicial.
**Benefit,** *Syn.* Profit, good, avail, service, boon. *Ant.* Injury, calamity, damage, loss.
**Benevolence,** *Syn.* Liberality, benignity, charity, goodwill, kindness. *Ant.* Ill-will, barbarity, harshness, unkindness.
**Bent,** *Syn.* Leaning, turn, intention, bias, direction, inclination. *Ant.* Aversion, indisposition.
**Bequeath,** *Syn.* Leave, will, devise, leave by will, grant, give. *Ant.* Alienate, withhold.
**Bereave,** *Syn.* Strip, spoil, reduce, deprive, rob. *Ant.* Benefit, enrich, satisfy, replenish.
**Beseech,** *Syn.* Beg, crave, ask, pray, entreat. *Ant.* Coerce, command, exact, insist.
**Beseeming,** *Syn.* Decent, suitable, behoving, befitting. *Ant.* Improper, unsuitable, unseemly.
**Beset,** *Syn.* Besiege, encircle, environ, hem. *Ant.* Abandon, liberate.

**Besotted,** *Syn.* Doltish, drunk, stupefied, intoxicated. *Ant.* Unbiassed, clear, temperate, sober.
**Bespeak,** *Syn.* Indicate, provide, forestall, betoken. *Ant.* Countermand, resign, belie.
**Bestow,** *Syn.* Grant, award, give, confer. *Ant.* Seize, transfer, reserve, withdraw, withhold.
**Betide,** *Syn.* Happen, occur. *Ant.* (see Befall).
**Betimes,** *Syn.* Readily, preparedly, early. *Ant.* Belatedly, sluggishly, slowly.
**Betray,** *Syn.* Reveal, ensnare, dupe, deceive. *Ant.* Fence, cherish, foster, guard, protect.
**Better,** *Syn.* Rectify, amend, improve, meliorate. *Ant.* Make worse.
**Bevy,** *Syn.* Flock, galaxy, parterre, assembly. *Ant.* Mob, herd, crew, gang.
**Bewail,** *Syn.* Mourn for, rue, deplore, lament. *Ant.* Rejoice, hail, exult.
**Bewilder,** *Syn.* Confuse, perplex, puzzle, dazzle, daze. *Ant.* Enlighten, instruct, inform, guide.
**Bewitch,** *Syn.* Captive, charm, enchant. *Ant.* Disenchant, disillusion.
**Beyond,** *Syn.* More, further, over. *Ant.* Less, near, close, here.
**Bicker,** *Syn.* Dispute, jar, quarrel, wrangle. *Ant.* Converse, gossip, chat.
**Bid,** *Syn.* Offer, order, direct, instruct, request, tell. *Ant.* Restrain, deter, forbid.
**Bide,** *Syn.* Bear, expect, await, stay, tarry, wait. *Ant.* Rebel, protest, abjure, resist, depart, quit.
**Bigoted,** *Syn.* One-sided, narrow-minded, prejudiced. *Ant.* Liberal, broad, large-minded.
**Bind,** *Syn.* Restrict, oblige, twine, lace, fasten, tie, fetter. *Ant* Liberate, free, acquit, loose, untie.
**Biting,** *Syn.* Sarcastic, piercing, pungent. *Ant.* Flattering, genial, pleasant.
**Bitter,** *Syn.* Acrid, intense, sad, severe, tart, sour, harsh. *Ant.* Licht, genial, pleasant, sweet.
**Blacken,** *Syn.* Vilify, asperse, decry, bedaub. *Ant.* Eulogize, clear, vindicate.
**Blame,** *Syn.* Reprove, condemn, reproach, censure. *Ant.* Approve, praise, exonerate, acquit.
**Blameless,** *Syn.* Irresponsible, innocent, pure. *Ant.* Guilty, faulty, answerable, criminated.
**Blanch,** *Syn.* Whiten, bleach. *Ant.* Colour, darken.
**Bland,** *Syn.* Benign, gentle, mild, soft. *Ant.* Rough, abrupt, harsh.
**Blasphemy,** *Syn.* Impiety, swearing. *Ant.* Godliness, veneration, reverence.
**Blast,** v. *Syn.* Wither, shrivel, blight. *Ant.* Swell, expand, restore.—n. *Syn.* Gale, squall, blare, burst, breeze. *Ant.* Gentle breeze, zephyr.
**Blatant,** *Syn.* Braying, clamorous, bellowing. *Ant.* Gentle, low-toned, quiet.
**Blazon,** *Syn.* Disseminate, circulate, signalize, notify. *Ant.* Bury, shroud, hush, suppress, hide, cover.
**Bleach,** *Syn.* Blanch, whiten. *Ant.* Soil, darken.
**Bleak,** *Syn.* Nipping, exposed, cold, blank. *Ant.* Balmy, verdant, sheltered, warm.
**Blemish,** *Syn.* Defect, dishonour, disgrace, daub, stain, fault, speck, flaw, blot, blur, spot. *Ant.* Intactness, honour, purity.
**Blench,** *Syn.* Shrink, recoil, shy, start. *Ant.* Stand, face, dare.
**Blend,** *Syn.* Mingle, merge, fuse, combine, mix. *Ant.* Divide, separate, run.
**Blessing,** *Syn.* Thanks, benediction, felicitation. *Ant.* Damage, curse, thanklessness, malediction.
**Bliss,** *Syn.* Rapture, ecstasy, joy. *Ant.* Misery, suffering, condemnation.
**Blithe,** *Syn.* Gay, bright, happy, joyous, merry, light. *Ant.* Sullen, dejected, dull, heavy.
**Block,** *Syn.* Fill, stop. *Ant.* Clear, open.
**Bloodthirsty,** *Syn.* Savage, cruel, inhuman, gory, bloody. *Ant.* Merciful, kind, humane.
**Blooming,** *Syn.* Young, blossoming, fair, flourishing. *Ant.* Old, waning, fading.
**Blot,** *Syn.* Stain, blur, erase, spot, spoil, obscure. *Ant.* Manifest, cleanse, clear, elucidate.
**Bluff,** *Syn.* Rough, coarse, rude, surly, blunt, frank, abrupt, bold, open, bare. *Ant.* Reserved, polished, courteous, cliff.
**Blunder** *Syn.* Slip, oversight, error. *Ant.* Correction, foresight, ratification, truthfulness.
**Blunt,** v. *Syn.* Tranquillize, repress, subdue. *Ant.* Vitalise, excite, suscitate, sharpen, quicken.
**Blush,** *Syn.* Guiltiness, shame, aspect, bloom. *Ant.* Effrontery, boldness, purity, innocence.
**Bode,** *Syn.* Augur, herald, prophesy, predict, foretell. *Ant.* Remember, record, relate.
**Bodily,** *Syn.* Altogether, unitedly, wholly. *Ant.* Spiritual, gradually, ghostly, partially.
**Boisterous,** *Syn.* Stormy, violent, loud. *Ant.* Serene, calm, peaceful.
**Bold,** *Syn.* Daring, valiant, dauntless, forward, fearless. *Ant.* Retiring, bashful, shy, timid.
**Bolster,** *Syn.* Tinker, sustain, aid, help, prop, support. *Ant.* Relax, dispirit, depress.
**Bombast,** *Syn.* Fustian, pomposity, inflatedness, bluster. *Ant.* Humility, refrain, moderation.
**Bond,** *Syn.* Compact, association, chain, fastening, tie. *Ant.* Discretion, option, freedom.
**Bondage,** *Syn.* Serfdom, subjection, servitude. *Ant.* Liberation, independence, liberty.
**Bonny,** *Syn.* Buxom, lively, pretty, fair. *Ant.* Ill-favoured, uncomely, dull.
**Bonus,** *Syn.* Benefit, boon, premium. *Ant.* Discount, penalty, fine.
**Bootless,** *Syn.* Profitless, useless. *Ant.* Profitable.
**Booty,** *Syn.* Pillage, loot, plunder. *Ant.* Penalty, confiscation, fine, restitution.
**Border,** *Syn.* Hem, band, edge, brim, verge, brink. *Ant.* Centre, space, tract, land.
**Bore,** *Syn.* Weary, pierce, perforate. *Ant.* Delight, gratify, please.
**Botch,** *Syn.* Mar, spoil, clump, cobble, patch. *Ant.* Handle, mend, trim, fine-draw.
**Bother,** *Syn.* Tease, annoy, vex, stir, pester, worry, fuss. *Ant.* Quiet, peace, composure.
**Bound,** n. *Syn.* Border, confine, enclosure, limit. *Ant.* (see Border).—v. *Syn.* Restrict, limit, confine. *Ant.* Spread out, extend, open, enlarge.—v. *Syn.* Skip, spring, frisk, jump, leap. *Ant.* Creep, crawl, limp, hobble.
**Bounty,** *Syn.* Charity, generosity, gift, liberality. *Ant.* Stinginess, hardness, closeness, illiberality.
**Bower,** *Syn.* Alcove, arbour, shady recess. *Ant.* Open place.
**Braid,** *Syn.* Plait, weave, bind. *Ant.* Dishevel, unbind.
**Branch,** *Syn.* Scion, twig, sprig, spray, shoot, limb, bough, member. *Ant.* House, race, stem, stock, trunk.
**Brand,** v. *Syn.* Mark, disgrace, denounce. *Ant.* Decorate, honour, distinguish.—n. *Syn.* Mark, infamy, stigma, disgrace. *Ant.* Honour, badge, decoration.
**Brawl,** *Syn.* Shout, roar, scold, wrangle. *Ant.* Softness, whisper.
**Brawny,** *Syn.* Stout, robust, strong, muscular. *Ant.* Feeble, delicate, fragile, weak, lean.
**Breach,** *Syn.* Violation, quarrel, gap, rupture. *Ant.* Healing, conservation, integrity.
**Break,** *Syn.* Violate, subdue, split, smash, sever, burst, rend, shiver, rupture, fracture. *Ant.* Obey, observe, rally, protect, piece, heal.
**Breath,** *Syn.* Exhalation, expiration, inspiration, respiration. *Ant.* Dying, perishing, passing.
**Breathless,** *Syn.* Absorbed, eager, exhausted. *Ant.* Fresh, unexcited, collected, calm, cool.
**Breeding,** *Syn.* Air, manners, training, nurture. *Ant.* Ignorance, ill-training, ill-manners.
**Brevity,** *Syn.* Terseness, succinctness, conciseness, closeness. *Ant.* Prolixity, extension, length.
**Bridle,** *Syn.* Master, control, govern, curb. *Ant.* Discharge, vent, relax, liberate, loosen.
**Bright,** *Syn.* Witty, happy, lucid, burnished, shining. *Ant.* Cheerless, slow, dead, dull, opaque.
**Brilliant,** *Syn.* Lustrous, shining, radiant, flashing. *Ant.* (see Bright).
**Brisk,** *Syn.* Nimble, alert, active, lively, quick. *Ant.* Sluggish, dull, heavy, slow.
**Bristling,** *Syn.* Swarming, crowded, stocked, full. *Ant.* Vacant, devoid, scant, nude, bare.
**Broach,** *Syn.* Suggest, launch, start, moot. *Ant.* Bottle, cork, seal, reserve.
**Broad,** *Syn.* Generic, liberal, ample, wide. *Ant.* Refined, bigoted, limited, confined, narrow.
**Broadcast,** *Syn.* Extensively, dispersed, abroad. *Ant.* Discreetly, partially, locally, sparingly.
**Brook,** v. *Syn.* Undergo, tolerate, bear. *Ant.* Reject, resent, resist.
**Browbeat,** *Syn.* Cow, overbear, bully. *Ant.* Support, rally, encourage.
**Brunt,** *Syn.* Shock, assault, onset, attack, impulse. *Ant.* Repulse, resistance.
**Brutal,** *Syn.* Vindictive, violent, cruel, dense, stolid, beastly, brutish, ruthless, rude, savage. *Ant.* Polished, generous, humane.
**Bubble,** *Syn.* Trash, froth, dream, toy, trifle. *Ant.* Good, jewel, reality, treasure, prize.
**Buffoon,** *Syn.* Jester, clown, wag. *Ant.* Prig, visionary, pedant, genius, wit.
**Bugbear,** *Syn.* Ogre, spook, spirit, gorgon, goblin, hobgoblin. *Ant.* (see Spectre).

**Bulky,** *Syn.* Ample, large, heavy, unwieldy, huge. *Ant.* Thin, airy, slight, light, small.
**Bully,** *Syn.* Braggadocio, swaggerer, swashbuckler. *Ant.* Whimperer, cringer.
**Bungler,** *Syn.* Novice, lubber, clown, botcher. *Ant.* Artist, master, adroit, adept.
**Buoyant,** *Syn.* Cheerful, hopeful, light, spirited. *Ant.* Desponding, dejected, joyless, heavy.
**Burden,** n. *Syn.* Difficulty, grief, obstruction, load, weight. *Ant.* Lightness, airiness, ease.
**Burke,** *Syn.* Strangle, shelve, stifle. *Ant.* Ventilate, eliminate, foster, propound.
**Burlesque,** *Syn.* Comic, caricature, satire, travesty. *Ant.* Grave, tragic, severe, pure, classic.
**Burnish,** *Syn.* Gloss, polish, glaze, brighten. *Ant.* Frost, bedim, abrade, dull, scratch.
**Burst,** *Syn.* Disrupt, shatter, shiver, explode. *Ant.* Stand, hold, cohere.
**Business,** *Syn.* Affair, duty, interest, office, trade, vocation, occupation. *Ant.* Inactivity, leisure.
**Bustle,** *Syn.* Flurry, hurry, haste, energy, stir, business. *Ant.* Indolence, vacation, idleness.
**Busy,** *Syn.* Occupied, diligent, industrious. *Ant.* Unoccupied, indolent, lazy, idle.
**Buxom,** *Syn* Shapely, bonny. *Ant.* Ill-shaped, slender, lean.

## C

**Cabal,** *Syn.* League, plot, faction, gang, confederacy. *Ant.* Synod, empire, council, legislation.
**Cabalistic,** *Syn.* Occult, symbolical, mystic. *Ant.* Simple, lucid, practical, patent.
**Cachinnation,** *Syn.* Cackle, titter, giggle, grin. *Ant.* Whimper, whine.
**Cadaverous,** *Syn.* Ashy, pallid, bloodless, pale. *Ant.* Chubby, sanguine, rosy.
**Caducity,** *Syn.* Delicacy, transience, senility, decline. *Ant.* Vitality, freshness, youth, vigour.
**Caitiff,** *Syn.* Villain, churl, rogue, rascal. *Ant.* Patriot, gentleman, worthy.
**Cajole,** *Syn.* Dupe, cheat, delude, coax, lure, tempt. *Ant.* Warn, scold, rate, chide.
**Calamitous,** *Syn.* Unfortunate, unlucky, fatal. *Ant.* Advantageous, propitious, auspicious.
**Calamity,** *Syn.* Blight, mishap, misfortune, disaster. *Ant.* Boon, blessing, godsend.
**Calculate,** *Syb.* Rate, weigh, estimate. *Ant.* Stake, risk, chance, hit, guess.
**Calculating,** *Syn.* Guarded, far-sighted, careful, cautious, wary. *Ant.* Careless, rash, obtuse.
**Calibre,** *Syn.* Power, force, ability, diameter, gauge. *Ant.* Its correlative, as mind, etc.
**Called,** *Syn.* Termed, yclept, designated, named. *Ant.* Misdesignated, misnamed, unnamed.
**Calm,** *Syn.* Appease, still, allay, pacify, smooth. *Ant.* Heat, lash, ruffle, excite, stir.
**Calumny,** *Syn.* Backbiting, libel, slander. *Ant.* Panegyric, eulogy, vindication.
**Cancel,** *Syn.* Erase, discharge, repeal, quash. *Ant.* Confirm, enact, enforce
**Candid,** *Syn.* Ingenious, artless, frank, sincere, open, honest, fair. *Ant.* Reserved, close.
**Canon,** *Syn.* Law, test, rule. *Ant.* Misrule, irregularity, misguidance.
**Canvass,** *Syn.* Request, discuss, sift, solicit votes, question. *Ant.* Pass, admit, disregard, ignore.
**Capability,** *Syn.* Facility, capacity, talent, aptitude. *Ant.* Difficulty, awkwardness, dulness.
**Capacious,** *Syn.* Wide, comprehensive, spacious. *Ant.* Petty, confined, limited, narrow.
**Capital,** *Syn.* Principal, important, chief. *Ant.* Mean, minor, subordinate.
**Capitulate,** *Syn.* Submit, surrender, yield. *Ant.* Contend, struggle, resist.
**Capricious,** *Syn.* Crotchety, whimsical, fickle, uncertain. *Ant.* Constant, decided, unchanging.
**Captious,** *Syn.* Fretful, touchy, critical, cross. *Ant.* Laudatory, approving, complimentary.
**Captivating,** *Syn.* Bewitching, charming. *Ant.* Uncaptivating, loathsome, hideous.
**Care,** *Syn.* Prudence, wariness, thrift, custody, regard. *Ant.* Incaution, remissness, temerity, neglect.
**Caricature,** *Syn.* Travesty, parody, mimicry. *Ant.* Fidelity, justice, portraiture.
**Carnage,** *Syn.* Butchery, slaughter, *Ant.* Quarter, deliverance, ransom.
**Carnal,** *Syn.* Impure, base, animal, sensual. *Ant.* Exalted, pure, ethereal, spiritual.
**Carnival,** *Syn.* Masquerade, rout, revel. *Ant.* Retirement, Lent, fast.
**Carol,** *Syn.* Chant, trill, chirp, sing, hum, whistle. *Ant.* Dirge, cry, croak, whine.
**Carouse,** *Syn.* Revel, banquet, feast, festivity. *Ant.* Abstinence, starvation, fast.
**Carp,** *Syn.* Cavil, censure, canvass, object. *Ant.* Assent, endorse, compliment, admit, allow.
**Carriage,** *Syn.* Vehicle, mien, gait, walk, conduct, bearing. *Ant.* Misconduct, slouching.
**Case,** *Syn.* Subject, fact, plight, event. *Ant.* Conjecture, theory, fancy, hypothesis.
**Cast,** v. *Syn.* Frame, project, impel, pitch, fling, throw, hurl. *Ant.* Break, ignore, carry, retain, erect, raise.—n. *Syn.* Manner, style, air, form, stamp, mould. *Ant.* Abnormity, deformity, malformation.
**Caste,** *Syn.* Race, rank, class, order. *Ant.* Disrepute, taboo, degradation.
**Castigate,** *Syn.* Cane, whip. *Ant.* Caress, decorate, reward.
**Casual,** *Syn.* Incidental, accidental. *Ant.* Fixed, certain, regular.
**Casuistry,** *Syn.* Straw-splitting, quibble, fallacy. *Ant.* Common sense, conscience, reason.
**Catastrophe,** *Syn.* Blow, reverse, calamity, disaster, revolution. *Ant.* Godsend, success, triumph.
**Catechumen,** *Syn.* Novice, pupil, learner, tyro. *Ant.* Savant, teacher, doctor, master.
**Categorical,** *Syn.* Distinct, absolute, affirmative, positive, plain. *Ant.* Mystical, hazy, uncertain.
**Category,** *Syn.* Class, sort, order, kind, state. *Ant.* Being, truth, essence.
**Cause,** v. (see **Produce**).—n. *Syn.* Action, suit, motive, reason, agent, origin, source. *Ant.* Preventive, issue, production, end, effect, result.
**Caustic,** *Syn.* Sarcastic, biting, irritating, pungent, burning. *Ant.* Tame, flat, soothing, mild.
**Caution,** *Syn.* (see **Care**, and **Calculating**).
**Cease,** *Syn.* Pause, end, quit, abstain, desist, stop, intermit. *Ant.* Everlasting, ceaseless. (See **Eternal**.)
**Celebrated,** *Syn.* Notable, famous, glorious, eminent, famed. *Ant.* Mean, unknown, obscure.
**Celebrity,** *Syn.* Renown, distinction, star, glory, fame. *Ant.* Cipher, disgrace, obscurity.
**Celerity,** *Syn.* Fleetness, quickness, velocity, haste, speed. *Ant.* Sluggishness, inertness, slowness.
**Celestial,** *Syn.* Divine, radiant, angelic, heavenly. *Ant.* Infernal, mortal, human, earthly.
**Cement,** *Syn.* Unite, bond, bind, perpetuate. *Ant.* Disintegrate, dissociate, dissolve, detach.
**Censure,** v. (see **Blame**).—*Syn.* Rebuke, upbraid, scold, chide, reprove, stricture, blame. *Ant.* Commendation, approbation, eulogy, praise.
**Central,** *Syn.* Convenient, accessible, mediate. *Ant.* Inconvenient, inaccessible, remote.
**Centralize,** *Syn.* Collect, fix, concentrate. *Ant.* Divide, distribute, disseminate, disperse.
**Ceremonious,** *Syn.* Prim, formal, punctilious. *Ant.* Bluff, blunt, brusque.
**Ceremony,** *Syn.* Rite, solemnity, pageant, display. *Ant.* (see **Fashion**).
**Certain,** *Syn.* Assured, actual, real, sure, regular, fixed, true. *Ant.* Doubtful, irregular, exceptional.
**Certainty,** *Syn.* Conviction, confidence, positiveness. *Ant.* Indecision, irregularity, casualty.
**Certify,** *Syn.* Evidence, declare, testify, attest, aver. *Ant.* Misadvise, disavow, disprove.
**Cessation,** *Syn.* Pause, rest, stop, respite, lull, halt, stopping. *Ant.* Incessancy, continuance.
**Cession,** *Syn.* Surrender, yielding, concession. *Ant.* Vindication, usurpation, retention.
**Chaff,** *Syn.* Trash, frivolity, nonsense, banter. *Ant.* Gist, pith, reason, substance, sense.
**Chaffer,** *Syn.* Boggle, stickle, higgle, bargain, haggle. *Ant.* Negotiate, agree, close.
**Challenge,** v. *Syn.* Canvass, brave, dare, summon, defy. *Ant.* Concede, grant, allow, pass.
**Champion,** n. *Syn.* Protector, defender, combatant, warrior, hero. *Ant.* Coward, traitor, deserter.
**Chance,** n. *Syn.* Luck, fortune, hazard, accident. *Ant.* Design, causation, sequence, rule, law.
**Change,** v. *Syn.* Veer, shift, diversify, modify, alter, vary. *Ant.* Hold, last, stand, clinch, fix.
**Changeless,** *Syn.* Reliable, firm, steady, settled, regular. *Ant.* Irresolute, unsteady, irregular.
**Characteristic,** *Syn.* Singularity, speciality, distinction. *Ant.* Generality, nondescription.
**Charge,** *Syn.* Carry, accuse, load, enjoin, direct. *Ant.* Liberate, acquit, free, clear.
**Charitable,** *Syn.* Liberal, beneficent, benign, kind. *Ant.* Selfish, unkind, uncharitable.
**Charm,** v. *Syn.* Entrance, delight, lay, enchant, bewitch. *Ant.* Repel, annoy, disturb, rouse, excite.—n. *Syn.* Fascination, enchantment, spell. *Ant.* Fear, repulsion, disenchantment.

**Chary,** *Syn.* Wary, shy, cautious, careful. *Ant.* Eager, profuse, lavish, liberal.
**Chaste,** *Syn.* Nice, simple, spotless, modest, pure. *Ant.* Flashy, gaudy, corrupt, impure.
**Chasten,** *Syn.* Afflict, correct, discipline, purify. *Ant.* Spoil, pamper, corrupt, indulge.
**Chatter,** *Syn.* Prattle, cackle, jabber, rattle. *Ant.* Conversation, sense, reason.
**Cheek,** n. *Syn.* Rebuff, set-back, repulse. *Ant.* Liberty, freedom, encouragement.—v. *Syn.* Control, stay, stop, curb. *Ant.* Abet, allow, license.
**Cheerful,** *Syn.* Joyous, blithe, sunny, happy, bright, gay, lively. *Ant.* Sullen, gloomy.
**Cherish,** *Syn.* Value, nourish, promote, nurse. *Ant.* Check, discard, abandon, stifle.
**Chicanery,** *Syn.* Trickery, shift, subtlety, artifice. *Ant.* Fairness, candour, openness.
**Chide,** *Syn.* Admonish, blame, rebuke, reprove, scold. *Ant.* Compliment, flatter, applaud.
**Chieftain,** *Syn.* Leader, head man, chief, captain. *Ant.* Minion, vassal, retainer, follower.
**Childish,** *Syn.* Paltry, trifling, silly, weak. *Ant.* Politic, wise, manly, resolute, strong.
**Chivalrous,** *Syn.* High-minded, spirited, valiant. *Ant.* Ungentlemanly, dastardly, unhandsome.
**Choice,** n. *Syn.* Election, selection, adoption, option. *Ant.* Refusal, rejection, compulsion.—adj. *Syn.* Rare, dainty, precious, exquisite, select. *Ant.* Cheap, inferior, ordinary, common.
**Choleric,** *Syn.* Impetuous, testy, hasty. *Ant.* Stoical, placid, serene, cool.
**Chronicle,** v. *Syn.* Register, record. *Ant.* No record.
**Chuckle,** *Syn.* Cackle, crow, grin. *Ant.* Whine, whimper, wail, cry.
**Churlish,** *Syn.* Unneighbourly, unsociable, niggardly. *Ant.* Sociable, neighbourly, hospitable.
**Cipher,** *Syn.* Rush, pin, straw, trifle, nothing. *Ant.* Star, colossus, celebrity, something, big-wig.
**Circuitous,** *Syn* Winding, round about, devious, indirect. *Ant.* Straight, direct, linear.
**Circular,** *Syn.* Spherical, round. *Ant.* Direct, lineal.
**Circulate,** *Syn.* Travel, spread, publish, diffuse. *Ant.* Cease, hush, avert, suppress.
**Circumference,** *Syn.* Outline, circuit, enclosure. *Ant.* Transversion, bi-section, crossing, diameter,
**Circumlocution,** *Syn.* Ambiguousness, verbosity, periphrasis. *Ant.* Simplicity, directness, point.
**Circumscribe,** *Syn.* Restrict, confine, enclose, limit, define. *Ant.* Distend, expand, unfence.
**Circumspect,** *Syn.* Vigilant, heedful, careful, wary, cautious. *Ant.* Reckless, careless, incautious.
**Circumstance,** *Syn.* Topic, fact, situation, event, point, detail. *Ant.* Unreality, non-fact.
**Cite,** *Syn.* Refer to, name, quote, summon, call. *Ant.* Discredit, reject, dismiss, discard.
**Citizen,** *Syn.* Subject, burgess, inhabitant, townsman. *Ant.* Exile, visitor, foreigner, alien.
**Civic,** *Syn.* Urbane, municipal. *Ant.* Rural, suburban.
**Civil,** *Syn.* Respectful, polite, affable, courteous. *Ant.* Uncivil, churlish, clownish, boorish.
**Claim,** *Syn.* Title, right, insist, require, ask. *Ant.* Surrender, abjure, disclaim, forgo.—n. *Syn.* Demand, arrogation, right, title, pretension, vindication. *Ant.* Disclaimer, abjuration, waiving.
**Claimant,** *Syn.* Appellant, vindicator, assertor. *Ant.* Abjurer, waiver, conceder, resigner.
**Clamour,** *Syn.* Outcry, noise, hubbub, tumult, squabble, contention. *Ant.* Reticence, silence.
**Classical,** *Syn.* Chaste, elegant, refined, pure. *Ant.* Uncouth, harsh, debased, corrupt.
**Classify,** *Syn.* Assort, dispose, tabulate, class, rank, adjust. *Ant.* Intermix, disorder, confound.
**Clearly,** *Syn.* Explicitly, evidently, distinctly. *Ant.* Imperfectly, indistinctly, opaquely.
**Cleave,** *Syn.* Stick, rend, adhere, split, sunder. *Ant.* Desert, depart, cement, bond, splice, unite.
**Clever,** *Syn.* Gifted, expert. *Ant.* Dull, weak.
**Climate,** *Syn.* Sky, clime, weather, air. *Ant.* Sphere, world, globe, earth.
**Climax,** *Syn.* Head, point, acme, height, summit. *Ant.* Gulf, depth, bathos, floor, base.
**Cloak,** *Syn.* Screen, cover, hide, veil, mask, conceal. *Ant.* Reveal, expose, propound, exhibit.
**Close,** adj. *Syn.* Dense, fast, solid, secret, packed. *Ant.* Frank, public, subtle, airy, ample, open, wide.—v. *Syn.* Complete, stop, conclude, shut. *Ant.* Show, initiate.
**Clownish,** *Syn.* Rude, awkward, boorish, rustic. *Ant.* High-bred, refined, urbane, civil, polite.
**Clumsy,** *Syn.* Ill-shaped, unhandy, uncouth, awkward. *Ant.* Dexterous, expert, clever, skilful.
**Clutch,** v. *Syn.* Grip, catch, seize, grab, grasp. *Ant.* Emancipate, release, liberate.
**Coadjutor,** *Syn.* Co-operator, ally, assistant. *Ant.* Baffler, antagonist, opponent.
**Coagulate,** *Syn.* Condense, fuse, blend, mix. *Ant.* Dissipate, expand, rarefy.
**Coalesce,** *Syn.* Cohere, unite, join, mix, blend. *Ant.* Discomport, disagree.
**Coalition,** *Syn.* Union, compromise, combination. *Ant.* Disagreement, disruption, dissociation.
**Coax,** *Syn.* Allure, overcome, persuade, flatter, wheedle. *Ant.* Drive, impel, coerce.
**Codify,** *Syn.* Condense, embody, digest. *Ant.* Annul, abrogate, expunge.
**Coerce,** *Syn.* Check, drive, compel, impel, inhibit. *Ant.* Tempt, induce, instigate, urge, permit.
**Coexistent,** *Syn.* Compatible, coincident, concurrent. *Ant.* Repugnant, adverse.
**Coextension,** *Syn.* Conterminousness, equality. *Ant.* Inequality, inadequacy.
**Cogent,** *Syn.* Strong, potent, powerful, forcible. *Ant.* Feeble, powerless, ineffectual, weak.
**Cogitate,** *Syn.* Muse, ponder, brood, reflect, ruminate, think. *Ant.* Dream, maunder, idle.
**Cognizant,** *Syn.* Informed, aware. *Ant.* Ignorant, unaware.
**Cohere,** *Syn.* Coalesce, unite, conform, adhere, stick. *Ant.* Disintegrate, separate, sever.
**Coherent,** *Syn.* Close, complete, consistent, consecutive. *Ant.* Silly, loose, discursive.
**Cohibit,** *Syn.* Restrain, curb, hinder, prevent. *Ant.* Urge, encourage, incite, permit, indulge.
**Coincidence,** *Syn.* Consent, harmony, concurrence, fortuity, chance. *Ant.* Difference, variation, discordance, disharmony, purpose, design.
**Collate,** *Syn.* Extract, gather, compare, collect. *Ant.* Distribute, non-verify.
**Collateral,** *Syn.* Connected, related, indirect. *Ant.* Integral, linear, direct.
**Colleague,** *Syn.* Assistant, partner, ally, companion, helper. *Ant.* Counter-agent, co-rival.
**Collect,** *Syn.* Garner, amass, convoke, learn, infer, sum. *Ant.* Deal, divide, arrange.
**Collision,** *Syn.* Clash, crash, conflict, encounter. *Ant.* Shave, interdivergence.
**Collocate,** *Syn.* Allocate, classify, locate, place. *Ant.* Misplace, displace, disturb, dispense, move.
**Colloquy,** *Syn.* Council, consultation, conference. *Ant.* Babel, outcry, clamour.
**Collusion,** *Syn.* Confederacy, accompliceship. *Ant.* Exposure, defeat, frustration, baffling.
**Colourable,** *Syn.* Warped, tinged, ostensible, specious. *Ant.* Open, candid, genuine
**Combination,** *Syn.* League, concert. *Ant.* Resistance, opposition, dispersion, disruption.
**Comfortable,** *Syn.* Cosy, agreeable, pleasant, satisfied, snug. *Ant.* Unhappy, miserable.
**Comity,** *Syn.* Affability, pleasantness, urbanity. *Ant.* Churlishness, roughness, rudeness.
**Command,** v. *Syn.* Charge, order. *Ant.* Suggest, beg, persuade, entreat.—n. (see **Mandate**).
**Commemorate,** *Syn.* Keep, celebrate, perpetuate. *Ant.* Forget, abolish, drop, ignore.
**Commend,** *Syn.* Encourage, approve, extol, laud, praise. *Ant.* Condemn, censure, blame.
**Commensurate,** *Syn* Sufficient, adequate, equal. *Ant.* Inadequate, scant, short, unequal.
**Comment,** v. *Syn.* Explain, dilate, expound, observe. *Ant.* Misapprehend, mystify, confound.
**Commentator,** *Syn.* Expositor, explainer, interpreter. *Ant.* Puzzler, misinterpreter, mystifier.
**Commiserate,** *Syn.* Sympathize, pity, despise. *Ant.* Condemn, ignore, envy, admire.
**Commit,** *Syn.* Assign, relegate, do, execute, perpetrate. *Ant.* Omit, misintrust, miscommit.
**Commodious,** *Syn.* Suitable, easy, ample. *Ant.* Ill-contrived, narrow, incommodious.
**Commodity,** *Syn.* Stock, article, ware, staple. *Ant.* Garbage, refuse, offal, drug.
**Commotion,** *Syn.* Turmoil, tumult, disturbance. *Ant.* Soothing, pacification, subsidence, calm.
**Communicate,** *Syn.* Divulge, reveal, touch, join. *Ant.* Reserve, conceal, withhold, stop, recede.
**Community,** *Syn.* Similarity, unity, class. *Ant.* Dissimilarity, estrangement, animosity.
**Commute,** *Syn.* Modify, compensate, exchange. *Ant.* Perpetuate, disallow, misconvert.
**Compact,** adj. *Syn.* Concrete, firm, dense. *Ant.* Broadcast, sparse, unshapely, friable.
**Companionable,** *Syn.* Agreeable, social, pleasant. *Ant.* Reserved, distant, unsociable, disagreeable.

**Company,** *Syn.* Concourse, audience, troop, gang. *Ant.* Antagonism, opposition, rivalry.
**Comparable,** *Syn.* Similar, approximate, resembling. *Ant.* Inferior, remote, unlike, dissimilar.
**Comparative,** *Syn.* Proportionately, relatively. *Ant.* Superlatively, positively, absolutely.
**Compass,** n. *Syn.* Horizon, circuit, enclosure, area. *Ant.* Limitlessness, boundlessness, expanse, space.—v. *Syn.* Complete, effect, enclose, surround, encompass. *Ant.* Mismanage, fail, discard, dismiss.
**Compassion,** *Syn.* Pardon, condolence, sympathy. *Ant.* Condemnation, denunciation, cruelty.
**Compatible,** *Syn.* Congenial, agreeable, harmonious. *Ant.* Destructive, incongruous, adverse, hostile.
**Compel,** *Syn.* Bind, coerce, make, drive, oblige. *Ant.* Release, cozen, acquit, induce, allure.
**Compensate,** *Syn.* Reward, requite, pay, satisfy. *Ant.* Damage, injure, dissatisfy, defraud.
**Compete,** *Syn.* Emulate, cope, rival, contend. *Ant.* Share, participate.
**Competence,** *Syn.* Ability, wealth, sufficiency, power. *Ant.* Poverty, want, weakness.
**Competitor,** *Syn.* Adversary, opponent, rival. *Ant.* Colleague, auxiliary, partner, participator.
**Compilation,** *Syn.* Patchwork, composition, collation. *Ant.* Creation, effusion.
**Complacent,** *Syn.* Amiable, kind, content, satisfied, pleased. *Ant.* Austere, churlish, irritated.
**Complaint,** *Syn.* Disease, sickness, discontent, murmur. *Ant.* Sanity, health, benefit, boon.
**Complement,** *Syn.* Counterpart, fulfilment, completion. *Ant.* Drawback, abatement, deficit.
**Completely,** *Syn.* Entirely, wholly, totally, fully. *Ant.* Imperfectly, incompletely, partially.
**Complex,** *Syn.* Abstruse, many-sided, deep, intricate, compound. *Ant.* Loose, vague, indirect.
**Complexion,** *Syn.* Hue, character, feature, aspect, look, face. *Ant.* Core, heart, concealment.
**Compliance,** *Syn.* Obedience, submission, yielding. *Ant.* Refusal, repulsion, resistance.
**Complicated,** *Syn.* Involved, intricate, confused. *Ant.* Lucid, simple, clear.
**Complimentary,** *Syn.* Lavish of praise, eulogistic. *Ant.* Defamatory, reproachful, disparaging.
**Component,** *Syn.* Content, factor, element, ingredient. *Ant.* Compound, entirety, sum.
**Comport,** *Syn.* Suit, agree, match, consist, conduct. *Ant.* Vary, forget, misconduct, misdemean.
**Compose,** *Syn.* Write, pacify, form, calm, allay. *Ant.* Excite, irritate, criticise, dissect.
**Composition,** *Syn.* Combination, mixture, structure. *Ant.* Discussion, criticism, examination, analysis.
**Composure,** *Syn.* Self-possession, tranquillity. *Ant.* Disturbance, restlessness, perturbation.
**Compound,** v. *Syn.* Fuse, amalgamate, mix, concert. *Ant.* Analyse, resolve.—n. *Syn.* Junction, combination, mixture. *Ant.* Resolution, dissection, decomposition.
**Comprehension,** *Syn.* Capacity, understanding. *Ant.* Misconception, misunderstanding.
**Comprehensive,** *Syn.* Inclusive, all, broad, general. *Ant.* Exceptive, exclusive, shallow, restricted.
**Compress,** *Syn.* Abridge, contract, crowd, compact, condense. *Ant.* Diffuse, dilate, expand.
**Comprise,** v. *Syn.* Contain, involve, include, embrace. *Ant.* Reject, omit, except, exclude.
**Comprobation,** *Syn.* Co-evidence, induction. *Ant.* Refutation, counter-evidence, disproof.
**Compromise,** *Syn.* Involve, implicate, settle, arbitrate. *Ant.* Exonerate, disengage, exempt.
**Compulsion,** n. *Syn.* Control, restraint, force. *Ant.* con-
**Compute,** *Syn.* Rate, value, number, count, reckon, calculate. *Ant.* Guess, conjecture.
**Concatenation,** *Syn.* Continuity, stringing, connection. *Ant.* Disconnection, severance.
**Concave,** *Syn.* Excavated, pitted, scooped, hollow. *Ant.* Embossed, protuberant, convex.
**Conceal,** *Syn.* Suppress, screen, disguise, hide. *Ant.* Publish, expose, confess, avow, manifest.
**Concede,** *Syn.* Resign, admit, yield, surrender. *Ant.* Claim, contest, deny, withhold, refuse.
**Conceited,** *Syn.* Vain, self-conceited, egotistical. *Ant.* Unaffected, unassuming, simple.
**Conceive,** *Syn.* Understand, think, design. *Ant.* Declare, propound, express, produce.
**Concentrate,** *Syn.* Localize, condense, draw. *Ant.* Decentralize, dismiss, scatter.
**Concern,** *Syn.* Sorrow, regret, affair, matter, regard, interest. *Ant.* Carelessness, disregard.
**Concerning,** *Syn.* Relative to, with regard to, relating, of, about. *Ant.* Disregarding.
**Conciliate,** *Syn.* Propitiate, reconcile, gain, win. *Ant.* Displease, estrange, lose.
**Concise,** *Syn.* Short, neat, expressive, terse, condensed. *Ant.* Verbose, prolix, diffuse.
**Conclave,** *Syn.* Cabinet, synod, assembly, council. *Ant.* Mob, throng, multitude, crowd.
**Conclusive,** *Syn.* Decisive, final, definitive. *Ant.* Vague, questionable, dubious, uncertain.
**Concoct,** *Syn.* Brew, mix, prepare, compound. *Ant.* Disconcert, upset, spoil.
**Concomitant,** *Syn.* Attendant, accompanying. *Ant.* Diverse, subsequent.
**Concord,** *Syn.* Amity, union, peace, accordance. *Ant.* Animosity, variance, disagreement, discord.
**Concourse,** *Syn.* Crowd, assemblage, gathering. *Ant.* Desertion, dispersion, cabinet.
**Concrete,** *Syn.* Consolidated, compact, firm. *Ant.* Boggy, shifting, sloppy, loose.
**Concur,** *Syn.* Agree, meet, assent, approve. *Ant.* Differ, part, dissent, disagree, diverge.
**Condemn,** *Syn.* Sentence, denounce, reprove, blame. *Ant.* Justify, pardon, exonerate, acquit.
**Condescension,** n. *Syn.* Stooping, favour. *Ant.* Scorn, disdain, pride, superciliousness, arrogance.
**Condign,** *Syn.* Just, meet, merited, deserved. *Ant.* Excessive, scant, unmerited, undeserved.
**Condiment,** *Syn.* Seasoning, preserve, pickle, sauce. *Ant.* Aloes, ashes, wormwood, gall.
**Conditionally,** *Syn.* Provided, relatively, provisionally. *Ant.* Positively, absolutely.
**Confide,** *Syn.* Commiserate, console, sympathize. *Ant.* Rally, disregard, exhilarate, congratulate.
**Condonation,** *Syn.* Forgiveness, pardon, excuse. *Ant.* Atonement, satisfaction, expiation.
**Conducive,** *Syn.* Productive, promotive, contributive. *Ant.* Destructive, preventive.
**Confederate,** *Syn.* Combined, united, allied, leagued. *Ant.* Dissolved, disunited.
**Confer,** *Syn.* Bestow, give, consult, discuss, collate, compare. *Ant.* Withdraw, withhold.
**Conference,** *Syn.* Meeting, convention, discourse, discussion. *Ant.* Silence, monologue.
**Confess,** *Syn.* Acknowledge, reveal, own, aver, avow. *Ant.* Deny, suppress, disavow.
**Confidant,** *Syn.* Confederate, adviser, confessor. *Ant.* Rival, betrayer, traitor.
**Confide,** *Syn.* Rely, depend, believe, lean, trust. *Syn.* Disbelieve, distrust, doubt.
**Confidential,** *Syn.* Intimate, secret, private. *Ant.* Treacherous, official, patent, open, public.
**Configuration,** *Syn.* Figure, form, outline. *Ant.* Distortion, contortion, shapelessness.
**Confine,** *Syn.* Bind, narrow, bound, limit, immure, *Ant.* Loosen, widen, extend, expand, dilate.
**Confirm,** *Syn.* Fix, prove, settle, strengthen. *Ant.* Refute, repeal, cancel, upset, shake.
**Confiscate,** *Syn.* Distrain, sequestrate, dispossess, seize. *Ant.* Refund, release, restore.
**Conflagration,** *Syn.* Arson, combustion, ignition, fire. *Ant.* Quenching, extinction.
**Conflicting,** *Syn.* Discordant, opposing, opposed, adverse. *Ant.* Congruous, consistent.
**Confluence,** *Syn.* Concourse, meeting, conflux. *Ant.* Overflow, dispersion, refluence, reflux.
**Conform,** *Syn.* Unite, obey, suit, tally, adapt, consent, agree. *Ant.* Misfit, vary, dissent.
**Confront,** *Syn.* Menace, resist, encounter, oppose, face. *Ant.* Countenance, abet, rally.
**Confused,** *Syn.* Disordered, involved, bewildered. *Ant.* Arranged, organized, systematic, unabashed.
**Congeal,** *Syn.* Congelate, benumb, freeze. *Ant.* Dissolve, chafe, melt, relax, thaw.
**Congenial,** *Syn.* Kindred, sympathetic, natural. *Ant.* Uncongenial, ungrateful, disagreeable.
**Congenital,** *Syn.* Ingenerate, innate, inherent, natural. *Ant.* Assumed, habitual, acquired.
**Congestion,** *Syn.* Redundance, accumulation, congeries. *Ant.* Evacuation, diffusion, dissipation.
**Congratulate,** *Syn.* Felicitate. *Ant.* Sympathize, commiserate.
**Congress,** *Syn.* Synod, assembly, council, parliament, legislature. *Ant.* Mob, conclave, cabal.
**Conjecture,** *Syn.* Surmise, notion, theory, guess, divination. *Ant.* Proof, reckoning, inference, calculation, computation (see **Suppose**).
**Conjuncture,** *Syn.* Emergency, exigency, occasion, crisis. *Ant.* Course, provision.

**Conjure,** *Syn.* Beseech, entreat, crave, implore. *Ant.* Remonstrate, protest, deprecate.
**Connection,** *Syn.* Kindred, affinity, conjunction. *Ant.* Disunion, disjunction, disconnection.
**Connive,** *Syn.* Overlook, pass, pretermit, wink. *Ant.* Investigate, censure, visit, notice.
**Connubial,** *Syn.* Nuptial, matrimonial, conjugal. *Ant.* Adulterous, illicit, celibate, single.
**Conquest,** *Syn.* Overthrow, triumph, victory. *Ant.* Forfeiture, surrender, retreat, defeat.
**Consanguinity,** *Syn.* Lineage, blood, kindred. *Ant.* Dissociation, disconnection.
**Conscientious,** *Syn.* High-principled, upright, strict. *Ant.* Conscienceless, lax, unscrupulous.
**Conscious,** *Syn.* Sensible, cognizant, aware. *Ant.* Insensible, unconscious, unaware.
**Consciousness,** *Syn.* Perception, intelligence, sensation, sense. *Ant.* Unconsciousness, insensibility.
**Conscription,** *Syn.* Drafting, impressment. *Ant.* Volunteering, enlistment.
**Consecrate,** *Syn.* Sanctify, hallow, enshrine, dedicate. *Ant.* Profane, secularize, desecrate.
**Consecutive,** *Syn.* Coherent, arranged, orderly. *Ant.* Discursive, undigested, disordered.
**Consent,** *Syn.* Acquiesce, agree, submit. *Ant.* Refuse, decline, dissent, disagree, resist.
**Consequent,** *Syn.* Attendant, accruing, resultant. *Ant.* Inconsequent, inconducive, assumed.
**Consequential,** *Syn.* Arrogant, pompous, logical. *Ant.* Easy, accessible, affable, illogical, invalid.
**Conservative,** *Syn.* Unrepealed, unsuppressed, undestroyed. *Ant.* Progressive, radical, changed.
**Consider,** *Syn.* Ponder, deduce, infer, judge, reflect, think. *Ant.* Hazard, guess, despise, ignore.
**Considerable,** *Syn.* Extensive, large, important. *Ant.* Inconsiderable, trifling, unimportant.
**Considerate,** *Syn.* Careful, reflective, unselfish, attentive. *Ant.* Careless, rude, inattentive.
**Consignment,** *Syn.* Delegation, commission. *Ant.* Misconsignment, miscommitment.
**Consistency,** *Syn.* Proportion, harmony, solidity. *Ant.* Contradiction, disproportion, subtilty.
**Consistent,** *Syn.* Agreeing, accordant, congruous. *Ant.* Not agreeing with, incongruous.
**Console,** *Syn.* Assuage, encourage, solace, soothe. *Ant.* Annoy, disturb, aggravate, congratulate.
**Consolidate,** *Syn.* Weld, bond, solder, cement, condense. *Ant.* Vaporize, melt, disunite.
**Consort,** *Syn.* Fraternize, company, herd, associate. *Ant.* Banish, black-ball, abandon, avoid.
**Conspicuous,** *Syn.* Salient, noted, easily seen, visible. *Ant.* Inconspicuous, inobservable.
**Conspire,** *Syn.* Band, pull together, unite, agree, conduce. *Ant.* Withstand, counteract, oppose.
**Constant,** *Syn.* True, steady, fixed, firm, perpetual. *Ant.* False, broken, accidental, variable.
**Consternation,** *Syn.* Dismay, horror, astonishment. *Ant.* Greeting, assurance, boldness.
**Constituent,** *Syn.* Element, ingredient, patron, sender. *Ant.* Whole, system, committee.
**Constitute,** *Syn.* Institute, depute, make, form. *Ant.* Annul, decompose, destroy, dissolve.
**Construct,** *Syn.* Frame, erect, form, build, compose. *Ant.* Overthrow, demolish, destroy.
**Construe,** *Syn.* Render, analyze, resolve, parse. *Ant.* Misconceive, falsify, distort, mystify, nullify.
**Consult,** *Syn.* Consider, advise with, interrogate, question. *Ant.* Direct, expound, explain.
**...ie,** *Syn.* Decay, pine, waste, devour, burn, ... *Ant.* Discard, disuse, supersede, reject.
**Consummate,** v. *Syn.* End, finish, execute, perfect. *Ant.* Mar, baffle, undo, neglect, drop.—a. *Syn.* Complete, excellent, perfect. *Ant.* Defective, faulty, common.
**Contact,** *Syn.* Apposition, continuity, touch. *Ant.* Separation, interruption, remoteness.
**Contagious,** *Syn.* Communicated, infectious, catching. *Ant.* Preventive, sporadic.
**Contaminate,** *Syn.* Soil, corrupt, taint, defile, *Ant.* Chasten, sanctify, clarify, lave, cleanse.
**Contemn,** *Syn.* Scorn, vilify, deride, disdain, despite. *Ant.* Regard, venerate, revere, respect.
**Contemplate,** *Syn.* Intend, design, study, behold, ponder. *Ant.* Abandon, overlook, ignore.
**Contemptible,** *Syn.* Paltry, pitiful, vile, despicable. *Ant.* Respectable, weighty, grave, important.
**Contend,** *Syn.* Wrangle, argue, contest, vie, dispute, strive. *Ant.* Forgo, relinquish, resign.
**Contentious (see Contend),** *Syn.* Wayward, perverse. *Ant.* Easy, accommodating, obsequious.
**Context,** *Syn.* Matter, composition, tenor. *Ant.* Extract, passage, citation, quotation, text.
**Continence,** *Syn.* Self-control, abstinence, sobriety, chastity. *Ant.* Dissoluteness, incontinence, self-indulgence, licentiousness.
**Contingent,** a. *Syn.* Conditional, resultant, incidental, dependent. *Ant.* Unaffected, absolute, positive.—n. *Syn.* Subscription, supply, subsidy, contribution. *Ant.* Capital, fund, campaign, host, sum, army.
**Continuation,** *Syn.* Connection, succession, duration, sequence. *Ant.* Cessation, interruption.
**Contortion,** *Syn.* Distortion, writhing, twisting. *Ant.* Contour, shapeliness, uniformity.
**Contraband,** *Syn.* Smuggled, interdicted, illicit. *Ant.* Free, uninterdicted, licit.
**Contract,** v. *Syn.* Agree, form, decrease, abridge, narrow, reduce. *Ant.* Cancel, reverse, dilate, expand.—n. *Syn.* Bargain, bond, agreement, covenant. *Ant.* Parole, assurance, promise.
**Contradiction,** *Syn.* Inconsistency, repugnance. *Ant.* Statement, proof, coincidence, harmony.
**Contrary,** *Syn.* Incompatible, adverse, opposite, opposed. *Ant.* Coincident, kindred, compatible.
**Contrast,** *Syn.* Contrariety, opposition. *Ant.* Similitude, comparison, similarity, harmony.
**Contrive,** *Syn.* Concert, devise, adapt, arrange, plan. *Ant.* Venture, chance, hazard, hit.
**Control,** v. *Syn.* Coerce, guide, repress, curb, check. *Ant.* Mismanage, free, liberate, abandon.
**Controversy,** *Syn.* Question, strife, quarrel, disagreement. *Ant.* Coincidence, unanimity.
**Controvertible,** *Syn.* Dubious, questionable. *Ant.* Certain, unquestionable.
**Contumacy,** *Syn.* Self-will, waywardness, stubbornness. *Ant.* Fawning, servility, docility.
**Contumely,** *Syn.* Obloquy, contemptuousness, arrogance. *Ant.* Adulation, flattery, regard.
**Contusion,** *Syn.* Blow, knock, bruise, *Ant.* Caress, pat, stroking, smoothing, soothing.
**Convene,** *Syn.* Levy, summon, meet, gather, collect. *Ant.* Disband, dismiss, disperse.
**Convenient,** *Syn.* Opportune, timely, useful, handy. *Ant.* Inopportune, untimely, useless, awkward.
**Conventional,** *Syn.* Social, stipulated, customary, legal, ordinary. *Ant.* Unusual.
**Conventual,** *Syn.* Monastic, regular, cœnobitual. *Ant.* Laic, secular, social.
**Converge,** *Syn.* Concentrate, meet, conduce, lead, tend. *Ant.* Foul, mix, radiate, deviate, diverge.
**Conversant,** *Syn.* Proficient, acquainted, familiar. *Ant.* Strange, unversed, ignorant, unfamiliar.
**Conversion,** *Syn.* Transmutation, alteration, change. *Ant.* Retention, permanence.
**Convert,** v. *Syn.* Turn, transform, transmute, alter, change. *Ant.* Divert, perpetuate, conserve.
**Convey,** *Syn.* Transport, transmit, bear, carry, take, transfer. *Ant.* Stow, house, drop, fetch.
**Convict,** *Syn.* Condemn, sentence. *Ant.* Discharge, acquit.
**Conviction,** *Syn.* Belief, persuasion, assurance. *Ant.* Disbelief, misgiving, doubt.
**Convince,** *Syn.* Inoculate, enlighten, persuade. *Ant.* Perplex, puzzle, misadvise, misguide.
**Convivial,** *Syn.* Jolly, jovial, gay, festive, social. *Ant.* Ascetic, churlish, unneighbourly.
**Convoy,** *Syn.* Conduct, protection, guard, escort. *Ant.* Interception, capture, betrayal, loss.
**Convulse,** *Syn.* Disturb, perturb, shake, agitate. *Ant.* Assuage, compose, collocate, soothe.
**Co-operate,** *Syn.* Help, work together, concur, abet. *Ant.* Rival, counteract, oppose, thwart.
**Co-ordinate,** *Syn.* Coequal, coincident. *Ant.* Disparate, unequal, alien, diverse, extraneous.
**Cope,** *Syn.* Strive, compete, struggle, vie. *Ant.* Surrender, compromise, arbitrate, negotiate.
**Cordial,** *Syn.* Hearty, sincere, earnest, warm. *Ant.* Ceremonious, formal, distant, cold.
**Core,** *Syn.* Centre, nucleus, kernel, heart. *Ant.* Appearance, aspect, exterior, face.
**Cornice,** *Syn.* Moulding, beading, projection. *Ant.* Groove, cavity, corrugation, fluting.
**Corollary,** *Syn.* Superaddition, deduction, inference. *Ant.* Proposition, problem.
**Corporal,** *Syn.* Material, physical, fleshly, bodily. *Ant.* Spiritual, moral, mental.
**Corps,** *Syn.* Company, squadron, band, regiment, body. *Ant.* Crowd, mob, multitude.
**Corpulent,** *Syn.* Fleshy, lusty, gross, fat, burly, stout. *Ant.* Slight, attenuated, thin, lean.
**Corpuscle,** *Syn.* Molecule, jot, particle, atom. *Ant.* Organization, aggregate, body, mass.
**Correct,** adj. *Syn.* Right, exact, true. *Ant.* Wrong, incorrect, false.—v. *Syn.* Set right, redress, rectify. *Ant.* Corrupt, falsify, spare.

**Corrective,** *Syn.* Reformative, alternative, regulative. *Ant.* Unimproving.
**Correlation,** *Syn.* Apposition, mutuality, correspondence. *Ant.* Independence, contradiction.
**Corrigible,** *Syn.* Tractable, docile, amenable. *Ant.* Incorrigible, stubborn, intractable.
**Corroborate,** *Syn.* Support, fortify, strengthen, confirm. *Ant.* Enfeeble, rebut, shake, weaken.
**Corrode,** *Syn.* Crumble, wear, gnaw, rust, eat. *Ant.* Consolidate, furbish, renew, repair.
**Corrugate,** *Syn.* Crease, ruffle, wrinkle, crumple, groove, furrow. *Ant.* Roll, flatten, plane.
**Corrupt,** v. *Syn.* Pollute, defile, putrefy, impair, spoil. *Ant.* Cleanse, purify, repair, mend.—a. *Syn.* Infected, putrid, decayed, vitiated, polluted, defiled. *Ant.* Undefiled, uncorrupt, pure.
**Coruscate,** *Syn.* Glisten, flash, flame, blaze. *Ant.* Lower, loom, darken, smoulder.
**Cosmical,** *Syn.* General, universal. *Ant.* Personal, national, topical, local.
**Cost,** v. *Syn.* Absorb, consume. *Ant.* Afford, yield, produce, bring.—n. *Syn.* Charge, worth, price, payment, outlay. *Ant.* Return, income.
**Costume,** *Syn.* Robes, livery, uniform. *Ant.* Incognito, transformation, disguise.
**Council,** n. *Syn.* Assembly, bureau, cabinet. *Ant.* Multitude, crowd, intrigue, mob.
**Counsel,** n. *Syn.* Warning, monition, instruction, advice. *Ant.* Betrayal, misinstruction, misguidance.—v. *Syn.* Guide, warn, instruct, advise. *Ant.* Betray, misinstruct, misguide.
**Countenance,** v. *Syn.* Sanction, favour, abet, aid, help. *Ant.* Browbeat, discourage, confront, oppose.—n. *Syn.* Support, encouragement, abetment, aid. *Ant.* Discountenance.
**Counter,** *Syn.* Against, contrary, opposed. *Ant.* Coincident, according.
**Counteract,** *Syn.* Hinder, rival, oppose, baffle, foil. *Ant.* Subserve, conserve, abet, help, aid.
**Counterpart,** *Syn.* Copy, tally, fellow, match. *Ant.* Contrast, obverse, reverse, correlative.
**Counterpoise,** v. *Syn.* Equalize, balance. *Ant.* Aggravate, overbalance.—n. *Syn.* Equilibrium, make-weight. *Ant.* Preponderance.
**Countless,** a. *Syn.* Unnumbered, numberless, innumerable. *Ant.* Sparse, scant, few.
**Courage,** *Syn.* Fortitude, valour, boldness, bravery. *Ant.* Cowardice, timidity, pusillanimity.
**Course,** *Syn.* Method, plan, manner, round, series, route, road, career, race, mode, way, line, sequence. *Ant.* Caprice, error, hindrance, deviation.
**Court,** v. *Syn.* Pursue, flatter, affect, seek, woo. *Ant.* Shun, avoid, insult, disaffect, abjure, repel.
**Courtesy,** *Syn.* Affability, civility, urbanity, politeness. *Ant.* Incivility, arrogance, rudeness.
**Courtly,** *Syn.* High-bred, aristocratic, refined, dignified. *Ant.* Awkward, unrefined, coarse.
**Covenant,** n. *Syn.* Bargain, contract, bond, agreement. *Ant.* Assurance, intimation, promise.
**Covet,** *Syn.* Yearn for, wish for, long for. *Ant.* Dislike, dislike, despise.
**Covetous,** *Syn.* Grasping, greedy, avaricious, acquisitive. *Ant.* Profuse, self-sacrificing, liberal.
**Cower,** *Syn.* Crouch, stoop, shrink. *Ant.* Confront, face, dare, stand, rise.
**Coy,** *Syn.* Modest, shrinking, bashful, reserved, shy. *Ant.* Hoydenish, rompish, forward, bold.
**Cozen,** *Syn.* Coax, dupe, cheat, swindle, circumvent, wheedle. *Ant.* Disabuse, enlighten.
**Crabbed,** *Syn.* Crusty, irritable, morose, sour. *Ant.* Cordial, warm, genial, easy, open, pleasant.
**Craft,** *Syn.* Intrigue, wiliness, guile, cunning, artifice, art. *Ant.* Sincerity, honesty, candour.
**Cramp,** v. *Syn.* Fetter, hamper, confine, bind. *Ant.* Expand, widen, relieve, loose, free.
**Crassitude,** *Syn.* Burliness, corpulence, thickness. *Ant.* Agility, slightness, spareness, tenuity.
**Crave,** *Syn.* Cry, beseech, ask, beg, implore, entreat. *Ant.* Seize, require, insist, demand.
**Create,** *Syn.* Invent, originate, beget, make, form. *Ant.* Demolish, destroy, annihilate.
**Credence,** *Syn.* Confidence, credit, trust, faith, belief. *Ant.* Denial, distrust, disbelief.
**Credential,** or **Credentials,** *Syn.* Certificates, letter, warrant, missive. *Ant.* Autocracy, self-license.
**Credible,** *Syn.* Trustworthy, likely, probable. *Ant.* Untrustworthy, incredible, improbable.
**Credit,** n. *Syn.* Faith, merit, praise, honour. *Ant.* Censure, disgrace, shame, distrust, disbelief.
**Creditor,** *Syn.* Mortgagee, lender, claimant. *Ant.* Mortgagor, borrower, debtor.
**Creed,** *Syn.* Confession, articles, catechism, belief. *Ant.* Disbelief, recantation, abjuration, protest.
**Crest,** *Syn.* Crown, head, apex, summit, top. *Ant.* Sole, bottom, foot.
**Crestfallen,** *Syn.* Abashed, humiliated, cast down. *Ant.* Confident, elated, inspirited.
**Criminate,** *Syn.* Arraign, accuse, implicate, charge. *Ant.* Absolve, extricate, acquit.
**Cringe,** *Syn.* Grub, truckle, fawn, bow, bend, crouch. *Ant.* Dare, defy, confront, face.
**Cripple,** *Syn,* Disable, cramp, curtail, impair, weaken. *Ant.* Ease, free, augment, renovate.
**Critic,** *Syn.* Savant, arbiter, censor, judge. *Ant.* Artist, performer, writer, author.
**Critical,** *Syn.* Important, exact, delicate, nice. *Ant.* Safe, easy, loose, popular, inexact.
**Criticize,** *Syn.* Discuss, analyze, perpend, examine, scan. *Ant.* Skim, overlook, survey, slur.
**Crone,** *Syn.* Beldame, witch, hag. *Ant.* Maiden, belle, damsel, lass.
**Crony,** *Syn.* Mate, chum, ally. *Ant* Rival, foe.
**Cross,** *Syn.* Peevish, fretful, ill-tempered. *Ant.* Genial, blithesome, good-tempered, amiable.
**Crowd,** *Syn.* Herd, pack, swarm, mob, throng. *Ant.* Cabinet, galaxy, bevy, elite, cream.
**Crown,** n. *Syn.* Apex, brow, head, summit, crest, top. *Ant.* Pedestal, floor, bottom, base.—v. *Syn.* Conclude, seal, consummate, complete. *Ant.* Mar, spoil, frustrate.
**Crucial,** *Syn.* Piercing, sharp, severe, probing, searching. *Ant.* Lax, lenient, indifferent.
**Crude,** *Syn.* Ill-prepared, unshaped, half-studied, harsh, raw. *Ant.* Refined, finished, well-expressed, ripe, well-studied, well-digested.
**Crumble,** *Syn.* Titurate, pulverize, disintegrate. *Ant.* Amalgamate, bond, consolidate.
**Cudgel,** v. *Syn.* Batter, buffer, bruise, pound. *Ant.* Tickle, clap, pat, stroke.
**Culmination,** *Syn.* Success, apex, meridian, zenith. *Ant.* Defeat, failure, decline, descent, fall.
**Culpable,** *Syn.* Guilty, blame-worthy, blamable. *Ant.* Laudable, excusable, innocent.
**Culprit,** *Syn.* Delinquent, criminal, offender. *Ant.* Saint, hero, model, pattern, example.
**Cultivate,** *Syn.* Cherish, refine, improve, promote, till, foster. *Ant.* Blast, blight, prevent, desert.
**Cumber,** *Syn.* Load, oppress, impede, clog. *Ant.* Rid, free, relieve, lighten, liberate.
**Cupidity,** n. *Syn.* Stinginess, covetousness, avarice. *Ant.* Liberality, extravagance, prodigality.
**Curb,** v. *Syn.* Moderate, check, repress, hold, inhibit, restrain. *Ant.* Free, loose, release.
**Curious,** *Syn.* Odd, unique, rare, prying, inquisitive, common. *Ant.* Trite, uninterested.
**Curmudgeon,** *Syn.* Fellow, churl, rascal, wretch, miscreant. *Ant.* Brick, good fellow, trump.
**Current,** *Syn.* Popular, present, ordinary, prevalent. *Ant.* Secret, private, confined, rejected.
**Cursory,** *Syn.* Summary, slight, careless, hasty, rapid. *Ant.* Profound, elaborate, minute.
**Custody,** *Syn.* Care, guardianship, keeping. *Ant.* Liberation, desertion, exposure, neglect.
**Custom,** *Syn.* Fashion, usage, use, habit, manner. *Ant.* Disuse, rule, command, dictate, law.
**Cutting,** *Syn.* Severe, stinging, biting, sharp. *Ant.* Flattering, soothing, complimentary.
**Cynical,** *Syn.* Carping, sneering, snarling, sarcastic. *Ant.* Urbane, complaisant, lenient, genial.

## D

**Dabble,** *Syn.* Skim, trifle, mix, meddle. *Ant.* Gauge, fathom, dig, delve, investigate, study.
**Dainty,** *Syn.* Exquisite, tasty, refined, rare, choice. *Ant.* Greedy, dirty, nasty, coarse, common.
**Daily,** *Syn.* Delay, fondle, sport, wanton, play, trifle. *Ant.* Stir, fag, study, work, toil.
**Damage,** *Syn.* Detriment, mischief, loss, hurt, injury. *Ant.* Blessing, benefit, advantage.
**Dapper,** *Syn.* Smart, natty, neat, spruce. *Ant.* Untidy, unwieldly, awkward, slovenly.
**Daring,** *Syn.* Brave, fearless, dashing, adventurous, bold. *Ant.* Inadventurous, timid.
**Dash,** *Syn.* Strike, dart, speed, rush, throw, cast, hurl. *Ant.* Lag, crawl, creep, erect, raise.
**Dashing,** *Syn.* Brave, showy, adventurous. *Ant.* Timid, dowdy, shrinking.
**Data,** *Syn.* Postulates, axioms, grounds, facts. *Ant.* Inference, problem, conjecture.
**Daunt,** *Syn.* Confront, appal, cow, frighten, terrify, scare. *Ant.* Rally, encourage, countenance.
**Dawdle,** *Syn.* Idle, dally, lag. *Ant.* Work, rush, dash, speed, haste.

**Dawn,** *Syn.* Break, open, rise, appear, begin, gleam. *Ant.* Depart, close, sink, set, wane.
**Dazzle,** *Syn.* Confuse, bewilder, daze. *Ant.* Enlighten, illumine.
**Deaden,** *Syn.* Subdue, damp, blunt, paralyze, benumb. *Ant.* Enliven, quicken, sharpen.
**Deadly,** *Syn.* Noxious, baleful, fatal, mortal. *Ant.* Nutritious, healthful, life-giving, vital.
**Deal,** *Syn.* Traffic, market, trade, chaffer, bargain. *Ant.* Fail, stop, close, hold.
**Dealing,** *Syn.* Practice, traffic, trade, intercourse. *Ant.* Bankruptcy, closing, failure, lack.
**Dear,** *Syn.* Loved, beloved, expensive, costly. *Ant.* Vile, misliked, inexpensive, cheap.
**Deathless,** *Syn.* Everlasting, unfading, undying. *Ant.* Fleeting, fragile, ephemeral, mortal.
**Debar,** *Syn.* Preclude, deprive, deter, prevent, stop, exclude. *Ant.* Entitle, allow, permit, admit, enclose.
**Debase,** *Syn.* Humble, allov, deprave, degrade. *Ant.* Improve, purify, honour, exalt, raise.
**Debate,** *Syn.* Contest, argue, dispute, contend. *Ant.* Admit, surrender, concede, yield.
**Debatable,** *Syn.* Unsettled, uncertain, doubtful. *Ant.* Self-evident, indisputable, sure, certain.
**Debility,** *Syn.* Languor, lassitude, infirmity, weakness. *Ant.* Nerve, tone, vigour, strength.
**Debt,** *Syn.* Score, claim, obligation, default, liability. *Ant.* Gift, grace, trust, credit, assets.
**Decamp,** *Syn.* Abscond, bolt, fly, start. *Ant.* Show, answer, appear.
**Decay,** v. *Syn.* Waste, perish, wither, dwindle, sink, wane. *Ant.* Expand, flourish, increase, grow, rise.—n. *Syn.* Decline, corruption, wasting, sinking. *Ant.* Fertility, birth, rise.
**Deceitful,** *Syn.* Fraudulent, delusive, deceptive. *Ant.* Truthful, honest, fair, open.
**Deceive,** *Syn.* Entrap, betray, dupe, cheat, trick. *Ant.* Deliver, guide, advise, enlighten.
**Decency,** *Syn.* Propriety, modesty. *Ant.* Grossness, immodesty.
**Decide,** *Syn.* Resolve, settle, fix, determine. *Ant.* Waive, doubt, drop, moot, raise, waver.
**Decipher,** *Syn.* Unfold, explain, solve, interpret, read. *Ant.* Mystify, symbolize, cipher.
**Decision,** *Syn.* Firmness, judgment, sentence. *Ant.* Uncertainty, indecision, vagueness.
**Declaim,** *Syn.* Speak, recite, harangue. *Ant.* Study, read.
**Declamation,** *Syn.* Debate, effusion, elocution, oratory. *Ant.* Hesitation, stammering.
**Declaration,** *Syn.* Assertion, ordinance, avowal. *Ant.* Suppression, concealment, denial.
**Declension,** *Syn.* Degeneration, decadence, decay. *Ant.* Advancement, improvement, rise.
**Declivity,** *Syn.* Incline, slope, fall, descent. *Ant.* Verticality, rise, ascent.
**Decoction,** *Syn.* Mess, plate, compound, dish, concoction. *Ant.* Rawness, infusion, crudity.
**Decompose,** *Syn.* Dissolve, resolve, analyze. *Ant.* Compose, mix, concoct, compound.
**Decoy,** *Syn.* Tempt, lure, mislead, entrap, ensnare. *Ant.* Conduct, warn, instruct, guide.
**Decrease,** v. *Syn.* Reduce, lower, subside, diminish. *Ant.* Extend, expand, amplify, grow.
**Decree,** *Syn.* Order, verdict, rule, law, decision. *Ant.* Request, suggestion, hint, cue.
**Decrepit,** *Syn.* Aged, broken down, crippled, weak, infirm. *Ant.* Active, agile, robust, strong.
**Decry,** *Syn.* Abase, detract, vilify, defame, traduce. *Ant.* Panegyrize, praise, laud, extol.
**Dedicate,** *Syn.* Hallow, apply, assign, devote. *Ant.* Misuse, misappropriate, misapply, alienate.
**Deduce,** *Syn.* Gather, conclude, infer, draw. *Ant.* Predict, guess, premise, state.
**Deed,** *Syn.* Feat, exploit, instrument, commission, action. *Ant.* Undoing, recall, failure.
**Deem,** *Syn.* Suppose, think, believe, judge. *Ant.* Misconsider, misestimate, misjudge.
**Deface,** *Syn.* Mutilate, damage, disfigure, injure, spoil, mar. *Ant.* Embellish, adorn, decorate.
**Defalcation,** *Syn.* Deficit, non-payment, failure. *Ant.* Assets, balance, acquittal, payment.
**Default,** *Syn.* Want, absence, defect, omission, forfeit, lapse. *Ant.* Supply, maintenance.
**Defection,** *Syn.* Desertion, dereliction, failure. *Ant.* Adherence, supply, substitution.
**Defective,** *Syn.* Short, wanting, deficient, faulty. *Ant.* Ample, full, sufficient, correct.
**Defence,** *Syn.* Guard, shelter, excuse, resistance, plea. *Ant.* Exposure, betrayal, abandonment.
**Defensible,** *Syn.* Tenable, justifiable, vindicable. *Ant.* Indefensible, unwarrantable, unjustifiable.
**Defer,** *Syn.* Retard, put off, delay, prolong. *Ant.* Hurry, urge, press, quicken, hasten.
**Deference,** *Syn.* Homage, submission, veneration, regard. *Ant.* Inattention, slight, disrespect.
**Deficiency,** *Syn.* Short-coming, lack, want. *Ant.* Abundance, fulness.
**Define,** *Syn.* Bound, fix, specify, limit, mark out. *Ant.* Mystify, obscure, confuse.
**Definite,** *Syn.* Fixed, exact, certain, specific, definitive. *Ant.* Indefinite, unspecified, vague.
**Deflect,** *Syn.* Swerve, diverge, deviate, turn. *Ant.* Straighten, proceed, continue.
**Deformity,** *Syn.* Monstrosity, disfigurement, ugliness. *Ant.* Ornament, beauty, grace.
**Defray,** *Syn.* Quit, discharge, bear, settle, pay. *Ant.* Dissatisfy, repudiate.
**Defy,** *Syn.* Brave, provoke, challenge. *Ant.* Cringe, quail.
**Degenerate,** *Syn.* Grow worse, decline. *Ant.* Advance, mend, improve, recover.
**Degree,** *Syn.* Order, class, mark, extent, step, stage, rank. *Ant.* Numbers, size, mass, space.
**Dejected,** *Syn.* Low-spirited, downcast, dispirited, gloomy. *Ant.* Cheerful, gay, blithe, elated.
**Delectable,** *Syn.* Enjoyable, agreeable, amiable. *Ant.* Unenjoyable, disagreeable, unpleasant.
**Deleterious,** *Syn.* Poisonous, injurious, noxious. *Ant.* Beneficial, esculent, nutritious, wholesome.
**Deliberate,** v. *Syn.* Ponder, reflect. *Ant.* Risk, chance, shelve.—a. *Syn.* Earnest, purposed, grave. *Ant.* Suggested, dubious, irresolute.
**Delicacy,** *Syn.* Modesty, luxury, softness, dainty nicety. *Ant.* Necessaries, coarseness.
**Delight,** *Syn.* Bliss, gladness, joy, pleasure, enjoyment. *Ant.* Misery, sorrow, suffering, pain.
**Delineate,** *Syn.* Paint, depict, sketch, describe. *Ant.* Misportray, exaggerate, caricature.
**Delinquent,** *Syn.* Offender, culprit, criminal. *Ant.* Pattern, paragon, worthy.
**Deliver,** *Syn.* Give, yield, save, free, liberate. *Ant.* Retain, suppress, capture, confine.
**Deluge,** *Syn.* Flood, inundation. *Ant.* Subsidence, drought, dearth.
**Delve,** *Syn.* Search, dive, dig. *Ant.* Skim, dally, rake, scratch.
**Democratic,** *Syn.* Popular, radical, levelling. *Ant.* Autocratic, despotic, imperial.
**Demonstrate,** *Syn.* Illustrate, show, prove. *Ant.* Misexemplify, conceal, disprove.
**Demulcent,** *Syn.* Allaying, softening, soothing. *Ant.* Blistering, chafing, irritating.
**Demur,** *Syn.* Object, halt, hesitate. *Ant.* Consent, agree, approve.
**Demure,** *Syn.* Sober, grave. *Ant.* Noisy, wild.
**Denizen,** *Syn.* Dweller, inhabitant, subject, citizen. *Ant.* Traveller, exile, stranger, foreigner.
**Denominate,** *Syn.* Call, name. *Ant.* Misname.
**Denounce,** *Syn.* Defame, vituperate, brand, decry. *Ant.* Uphold, eulogize, applaud.
**Dense,** *Syn.* Close, solid, stolid, stupid, thick. *Ant.* Sparse, rare, intelligent, clever, quick.
**Denticulated,** *Syn.* Indented, crenelated, notched. *Ant.* Smooth.
**Denude,** *Syn.* Spoil, bare, strip. *Ant.* Decorate, drape, invest.
**Deny,** *Syn.* Disown, disclaim, withhold. *Ant.* Yield, afford, confirm, affirm, admit, accept.
**Department,** *Syn.* Line, branch, division. *Ant.* Community, whole, state, establishment.
**Dependent,** *Syn.* Relying, trusting, resting, hanging. *Ant.* Free, absolute, irrespective.
**Depict,** *Syn.* Delineate, draw, paint, colour, portray. *Ant.* Deform, exaggerate, misrepresent.
**Deplorable,** *Syn.* Sad, pitiable, miserable. *Ant.* Acceptable, glad, welcome.
**Deportment,** *Syn.* Conduct, movement, carriage. *Ant.* Misdeportment, misbehaviour.
**Deprecate,** *Syn.* Expostulate, disclaim, disavow. *Ant.* Invoke, request, entreat, supplicate, beg.
**Depredation,** *Syn.* Invasion, trespass, plunder, havoc. *Ant.* Reparation, refund.
**Depression,** *Syn.* Dip, valley, hollow, degradation. *Ant.* Mound, eminence, rising, rallying.
**Deprive,** *Syn.* Hinder, depose, abridge, divest, rob. *Ant.* Present, supply, endow, invest.
**Deputo,** *Syn.* Delegate, entrust, charge, commission, appoint. *Ant.* Dismiss, discard, recall.
**Dereliction,** *Syn.* Neglect, desertion, short-coming. *Ant.* Attention, observance, performance.
**Derisive,** *Syn.* Disrespectful, contemptuous, scornful. *Ant.* Reverential, deferential, respectful.
**Derivation,** *Syn.* Spring, root, cause, source, origin. *Ant.* Outcome, formation, issue.

**Derogate,** *Syn.* Decry, disparage, detract. *Ant.* Exaggerate, extol, laud, value, esteem.
**Descant,** *Syn.* Dwell, talk, enlarge, dissert. *Ant.* Confine, curtail, abbreviate, abridge, condense.
**Descendant,** *Syn.* Family, issue, offspring, seed. *Ant.* Origin, source, root, parent, founder.
**Describe,** *Syn.* Depict, picture, define, draw, illustrate. *Ant.* Distort, caricature, mystify.
**Descry,** *Syn.* Mark, detect, espy, discover, discern. *Ant.* Misobserve, overlook, miss.
**Desecrate,** *Syn.* Abuse, misuse, secularize, profane. *Ant.* Purify, dedicate, devote, employ.
**Deserve,** *Syn.* Win, justify, earn, merit. *Ant.* Lose, misdeserve, forfeit.
**Desiderate,** *Syn.* Need, want, desire. *Ant.* Supersede, forget, disregard.
**Desideratum,** *Syn.* Want, essential, requisite. *Ant.* Incumbrance, superfluity, surplusage.
**Design,** v. *Syn.* Prepare, plan, intend. *Ant.* Chance, guess, risk, hit.—n. *Syn.* Scheme, sketch, draft, plan, intention. *Ant.* Issue, result.
**Desirable,** *Syn.* Enviable, good, profitable, proper, judicious, valuable, advisable, expedient. *Ant.* Evil, unprofitable, injudicious, improper, objectionable, inexpedient, unadvisable.
**Desist,** *Syn.* Leave off, abstain, drop, stop, cease. *Ant.* Persist, proceed, continue.
**Desolate,** a. *Syn.* Wild, forsaken, forlorn. *Ant.* Gay, lively, cheerful.—v. *Syn.* Ravage, sack, spoil, waste. *Ant.* Enrich, restore.
**Despair,** n. *Syn.* Desperation, despondency, hopelessness. *Ant.* Confidence, elation, hopefulness.—v. *Syn.* Faint, despond. *Ant.* Rally, rely, trust, hope.
**Desperate,** *Syn.* Rash, reckless, daring, wild. *Ant.* Shy, timid, calm, cool.
**Despite,** prep. *Syn.* Resisting, opposing, notwithstanding. *Ant.* Abetting, aiding, concurrently.
**Despoil,** *Syn.* Spoliate, havoc, rob, ravage, strip. *Ant.* Enrich, embellish, adorn, decorate.
**Despotic,** *Syn.* Absolute, arrogant, arbitrary, cruel. *Ant.* Humane, constitutional, limited.
**Destination,** *Syn.* Scope, use, end, object, design, purpose. *Ant.* Alienation, diversion.
**Destine,** *Syn.* Devote, ordain, doom, intend. *Ant.* Divert, misapply, divorce, alienate.
**Destiny,** *Syn.* End, doom, fortune, lot, fate. *Ant.* Freewill, freedom, choice, will.
**Destroy,** *Syn.* Waste, ruin, annihilate, demolish. *Ant.* Make, repair, reinstate, restore.
**Destructive,** *Syn.* Ruinous, baleful, injurious, hurtful. *Ant.* Restorative, preservative.
**Desuetude,** *Syn.* Obsoleteness, disuse. *Ant.* Perpetuation, exercise, practice, custom, use.
**Desultory,** *Syn.* Erratic, superficial, loose, rambling. *Ant.* Exact, continuous, earnest, settled.
**Detail,** v. *Syn.* Specify, sift, enumerate, particularize. *Ant.* Generalize.—n. *Syn.* Point, speciality, particular, component. *Ant.* Mass, totality, statement, account.
**Detain,** *Syn.* Stop, restrain, check, arrest, keep. *Ant.* Loose, dismiss, expedite, liberate.
**Detect,** *Syn.* Expose, unmask, descry, discover. *Ant.* Connive, ignore, lose, miss.
**Detention,** *Syn.* Hindrance, retaining, retention. *Ant.* Letting go, abandonment.
**Deter,** *Syn.* Scare, terrify, hinder, stop, warn. *Ant.* Tempt, prompt, allure, move, incite.
**Detonate,** *Syn.* Pop, explode. *Ant.* Puff, hang, smoulder.
**Detract,** *Syn.* Decry, defame, depreciate, lessen. *Ant.* Increase, raise, enhance, augment.
**Detractor,** *Syn.* Backbiter, cynic, slanderer. *Ant.* Eulogist, sycophant, flatterer.
**Detriment,** *Syn.* Damage, injury, hurt, harm, loss. *Ant.* Repair, remedy, improvement.
**Detrimental,** *Syn.* Pernicious, hurtful, injurious. *Ant.* Augumentative, profitable, beneficial.
**Develop,** *Syn.* Expand, clear, unfold, disclose, lay open. *Ant.* Conceal, obscure, wrap, envelop.
**Deviate,** *Syn.* Diverge, sway, err, swerve, wander, digress. *Ant.* Advance, continue.
**Device,** *Syn.* Show, symbol, plan, design, artifice. *Ant.* Hit, hazard, luck, fortune, abortion.
**Devious,** *Syn.* Circuitous, tortuous. *Ant.* Plain, direct.
**Devise,** *Syn.* Manage, concert, manœuvre, plan, contrive. *Ant.* Mismanage, miscontrive.
**Devoid,** *Syn.* Unprovided, destitute, wanting, void. *Ant.* Gifted, provided, furnished.
**Devolve upon,** *Syn.* Fall, depute, place, impose. *Ant.* Lapse, pass, miss, cancel, deprive.
**Devotion,** *Syn.* Attachment, love, self-sacrifice. *Ant.* Aversion, profanity, impiety.
**Devour,** *Syn.* Absorb, bolt, gobble, gorge, swallow, consume, eat. *Ant.* Vomit, disgorge.
**Diagnostic,** *Syn.* Cue, sign, feature, symptom. *Ant.* Illusion, head, formation, crisis.
**Dialect,** *Syn.* Tongue, idiom, accent, provincialism. *Ant.* Language of the educated.
**Dialectic,** *Syn.* Argumentative, logical, rhetorical. *Ant.* Common-place, colloquial, conversational.
**Dictate,** *Syn.* Command, propose, decree, direct, order. *Ant.* Echo, obey, repeat, follow.
**Didactic,** *Syn.* Moral, directive, instructive. *Ant.* Misleading, pernicious, erroneous, unsound.
**Differ,** *Syn.* Contend, dispute, disagree, dissent, vary. *Ant.* Assent, agree. (See **Assent.**)
**Difficult,** *Syn.* Perplexing, involved, intricate, hard. *Ant.* Lucid, simple, straight, plain, easy.
**Diffuse,** *Syn.* Copious, verbose, prolix, discursive *Ant.* Condensed, terse, epigrammatic.
**Digest,** v. *Syn.* Assimilate, convert, classify, arrange. *Ant.* Reject, refuse, derange, confound.
**Dignified,** *Syn.* Lofty, august, exalted, grand, noble, pompous. *Ant.* Mean, undignified.
**Dilapidation,** *Syn.* Demolition, crumbling, decay. *Ant.* Structure, fabric, soundness, reparation.
**Dilate,** *Syn.* Enlarge, distend, swell, expand, widen. *Ant.* Condense, concentrate, contract.
**Dilatory,** *Syn.* Lagging, loitering, slow, tardy. *Ant.* Rash, hasty, alert, eager, prompt, quick.
**Dilemma,** *Syn.* Scrape, difficulty, doubt, quandary, fix. *Ant.* Escape, advantage, freedom.
**Diminish,** *Syn.* Decrease, dwarf, curtail, contract, reduce. *Ant.* Extend, expand, enlarge.
**Dint,** *Syn.* Efficacy, power, force, agency. *Ant.* Opposition, uselessness, inefficacy, weakness.
**Diplomacy,** *Syn.* Negotiation, ministry, tact. *Ant.* Mismanagement, miscontrivance, recall.
**Diplomatic,** *Syn.* Discreet, politic, clever, prudent. *Ant.* Ill-managed, bungling, injudicious.
**Directly,** *Syn.* Instantly, quickly, at once, straightway, immediately. *Ant.* By-and-by, indirectly.
**Disabuse,** *Syn.* Enlighten, correct, inform, undeceive. *Ant.* Prepossess, prejudice, mislead.
**Disappoint,** *Syn.* Foil, defeat, vex, baffle, deceive, betray. *Ant.* Gratify, satisfy, fulfil, justify.
**Discern,** *Syn.* Perceive, behold, recognise, observe, see. *Ant.* Misdiscern, confound, overlook.
**Discharge,** *Syn.* Send away, perform, free, dismiss, empty. *Ant.* Detain, charge, confine.
**Discipline,** *Syn.* Control, government, training. *Ant.* Rebellion, confusion, disorder.
**Disclose,** *Syn.* Make known, detect, reveal, discover. *Ant.* Suppress, lock, conceal, cover.
**Discomfort,** *Syn.* Trouble, annoyance, vexation. *Ant.* Agreeableness, pleasantness, ease, comfort.
**Disconcert,** *Syn.* Disturb, baffle, upset, confuse, abash. *Ant.* Design, order, arrange, aid, rally.
**Disconsolate,** *Syn.* Woeful, desolate, unhappy, sad. *Ant.* Jovial, gay, happy, merry, joyous.
**Discreet,** *Syn.* Sensible, wary, cautious, prudent, wise. *Ant.* Reckless, imprudent, foolish, blind.
**Discrepancy,** *Syn.* Variation, disagreement. *Ant.* Accordance, harmony, consonance.
**Discrimination,** *Syn.* Insight, judgment, sagacity. *Ant.* Indiscernment, confusedness dulness.
**Discuss,** *Syn.* Examine, canvass, sift, argue, debate. *Ant.* Obscure, confound, mystify.
**Disdain,** *Syn.* Disregard, haughtiness, contempt. *Ant.* Respectfulness, admiration, reverence.
**Disease,** *Syn.* Malady, ailment, illness, complaint, disorder. *Ant.* Salubrity, convalescence, health.
**Dishevel,** *Syn.* Disarrange, entangle, disorder. *Ant.* Braid, weave, bind, plait, dress, tire.
**Dismantle,** *Syn.* Strip, despoil, divest, disrobe. *Ant.* Arrange, adorn, drape, invest, robe.
**Dismay,** *Syn.* Frighten, scare, dishearten, terrify, affright. *Ant.* Assure, inspirit, rally, encourage.
**Dismiss,** *Syn.* Discharge, divest, abandon, banish. *Ant.* Maintain, keep, detain, retain.
**Disparage,** *Syn.* Detract, lower, derogate, decry. *Ant.* Exaggerate, over-estimate, laud, extol.
**Dispatch,** *Syn.* Execute, hasten, send, expedite. *Ant.* Impede, obstruct, detain, retard.
**Dispel,** *Syn.* Dismiss, dissipate, scatter, disperse. *Ant.* Mass, convene, summon, recall, collect.
**Dispensation,** *Syn.* Indulgence, disuse, exemption, visitation. *Ant.* Restriction, retention.
**Disperse,** *Syn.* Spread abroad, break up, scatter, dispel. *Ant.* Meet, gather, recall, collect.
**Display,** *Syn.* Parade, spread out, unfold, exhibit, show. *Ant.* Wrap, dissemble, conceal, hide.

**Dispute,** *Syn.* Quarrel, debate, contend, contest, argue. *Ant.* Forgo, allow, concede, waive.
**Disquisition,** *Syn.* Discussion, treatise, essay. *Ant.* Blarney, diatribe, tirade, effusion.
**Disruption,** *Syn.* Separation, a breaking up, dissension. *Ant.* Reconciliation, amalgamation.
**Dissect,** *Syn.* Scrutinize, anatomize, take to pieces. *Ant.* Confound, organize, unite, grasp.
**Dissemble,** *Syn.* Restrain, smother, repress, conceal. *Ant.* Profess, display, exhibit.
**Disseminate,** *Syn.* Circulate, scatter, publish, proclaim. *Ant.* Eradicate, stifle, suppress, repress.
**Dissolute,** *Syn.* Vicious, wanton, loose, profligate. *Ant.* Correct, self-controlled, strict, upright.
**Distant,** *Syn.* Asunder, apart, aloof, remote, far. *Ant.* Contiguous, adjacent, near, close.
**Distemper,** *Syn.* Ailment, disease, disorder. *Ant.* Convalescence, vigour, sanity, health.
**Distil,** *Syn.* Percolate, drip, emanate, drop. *Ant.* Retain, condense, absorb.
**Distinct,** *Syn.* Plain, clear, obvious, definite, detached, separate. *Ant.* Dim, obscure.
**Distinctness,** *Syn.* Conspicuousness, plainness, clearness. *Ant.* Haziness, indistinctness.
**Distinguished,** *Syn.* Famous, eminent, celebrated. *Ant.* Hidden, inconspicuous, obscure.
**Distract,** *Syn.* Disturb, bewilder, perplex, disconcert, divide. *Ant.* Compose, collect, fix, unite.
**Disturb,** *Syn.* Vex, worry, trouble, rouse, confuse, derange. *Ant.* Leave, quiet, soothe, order.
**Diversify,** *Syn.* Variegate, modify, alter, vary. *Ant.* Stereotype, fix, settle, prosecute, conserve.
**Diversion,** *Syn.* Enjoyment, sport, recreation, deviation. *Ant.* Labour, study, work, task, directness.
**Divest,** *Syn.* Unclothe, strip, denude, dismantle. *Ant.* Envelop, shroud, invest, robe, clothe.
**Divination,** *Syn.* Omens, witchcraft, magic, prediction. *Ant.* Learning, study, instruction.
**Divorce,** v. *Syn.* Alienate, divert, dissever, separate. *Ant.* Reunite, apply, connect, unite.
**Docile,** *Syn.* Tame, quiet, gentle, yielding, compliant. *Ant.* Dogged, self-willed, obstinate.
**Dock,** *Syn.* Prune, abbreviate, lop, curtail. *Ant.* Coax, train, prolong, nourish, elongate, grow.
**Doctrine,** *Syn.* Dogma, creed, belief, article, tenet. *Ant.* Action, conduct, duty, practice.
**Dogged,** *Syn.* Prejudiced, sullen, morose, obstinate. *Ant.* Complaisant, easy, genial, docile.
**Dogmatic,** *Syn.* Positive, arrogant, imperious, theological. *Ant.* Diffident, moderate, active.
**Doleful,** *Syn.* Dismal, woebegone, sorrowful, rueful, dolorous. *Ant.* Beaming, blithe, joyful.
**Domain,** *Syn.* Inclosure, territory, lordship, estate. *Ant.* Wild, wilderness, waste.
**Domestic,** *Syn.* Private, domiciliary. *Ant.* Public, foreign.
**Domicile,** *Syn.* Home, settlement, abode, residence. *Ant.* World, wilderness, houselessness.
**Dominance,** *Syn.* Prevalence, superiority, lordship. *Ant.* Minority, servitude, subjection.
**Domineer,** *Syn.* Usurp, assume, tyrannize, lord. *Ant.* Bow, yield, defer, succumb, submit.
**Dominion,** *Syn.* Sway, empire, control, government. *Ant.* Servitude, inferiority, submission.
**Don,** *Syn.* Wear, assume. *Ant.* Cast, doff.
**Dormant,** *Syn.* Inert, quiescent, latent, sleeping. *Ant.* Wakeful, developed, active, vigilant.
**Dotage,** *Syn.* Imbecility of old age, fatuity. *Ant.* Vigour, judgment, acuteness.
**Doughty,** *Syn.* Redoubtable, redoubted. *Ant.* Puny, craven.
**Draft,** n. *Syn.* Check, order, abstract, sketch, copy. *Ant.* Cash, deed, original.—v. *Syn.* Exhaust, drain, draw. *Ant.* Import, replenish, supply.
**Draught,** *Syn.* Check, breeze, traction, drink. *Ant.* Airlessness, stuffiness.
**Dreadful,** *Syn.* Awful, horrible, fearful. *Ant.* Hopeful, promising, assuring, encouraging.
**Dream,** n. *Syn.* Reverie, fancy, vision, trance. *Ant.* Realisation, verity, reality, fact.
**Dregs,** *Syn.* Trash, dross, offscouring, lees, sediment. *Ant.* Sample, pink, flower, cream.
**Drift,** *Syn.* Result, purpose, purport, tendency. *Ant.* Vagueness, pointlessness, aimlessness.
**Droll,** *Syn.* Comic, funny, amusing, whimsical. *Ant.* Funereal, lugubrious, tragic.
**Drought,** *Syn.* Thirst, parching, aridity, dryness. *Ant.* Watering, quenching, deluge, dew.
**Drudge,** v. *Syn.* Plod, labour, slave. *Ant.* Dally, play, hit off, luxuriate, bask.
**Dry,** v. *Syn.* Parch, drain. *Ant.* Wet, moisten, drench.—adj. *Syn.* Tedious, dull, barren, parched, arid. *Ant.* Entertaining, lively, fresh.
**Ductile,** *Syn.* Irresolute, docile, tractile, malleable. *Ant.* Obstinate, firm, resolute, tough, inelastic.
**Dudgeon,** *Syn.* Umbrage, resentment, spleen. *Ant.* Serenity, contentment, complacency.
**Due,** *Syn.* Obligatory, fit, becoming, fair, just, owing. *Ant.* Improper, unfair, irrelative.
**Dulcet,** *Syn.* Warbling, soft, melodious, soothing, sweet. *Ant.* Clamorous, noisy, grating, harsh.
**Durable,** *Syn.* Constant, abiding, stable, lasting. *Ant.* Unstable, impermanent, transient.
**Durance,** *Syn.* Imprisonment, incarceration, confinement. *Ant.* Largeness, liberty.
**Duration,** *Syn.* Space, continuance, period. *Ant.* Eternity, instantaneousness, momentariness.
**Duty,** *Syn.* Service, trust, office, allegiance, function. *Ant.* Desertion, exemption, freedom.
**Dwarf,** v. *Syn.* Depress, stunt, lower. *Ant.* Raise, elevate, heighten.—n. *Syn.* abortion, pigmy, imp. *Ant.* Hercules, monster, giant.
**Dwindle,** *Syn.* Fall off, decrease, diminish, waste, pine. *Ant.* Grow, increase, enlarge, expand.

## E

**Earn,** *Syn.* Gain, win, achieve, acquire, merit. *Ant.* Spend, lose, waste, forgo, forfeit.
**Earnest,** *Syn.* Ardent, intense, warm, grave, intent, serious, eager. *Ant.* Jesting, sportive, playful, idle.
**Ebb,** *Syn.* Wane, decay, decline, sink, recede, retire. *Ant.* Swell, abound, increase, flow.
**Ebriety,** *Syn.* Temperance, freshness, soberness. *Ant.* Crapulence, intoxication, inebriety.
**Ebullition,** *Syn.* Eruption, outburst, effervescence, boiling. *Ant.* Composure, subsidence, cooling.
**Eccentric,** *Syn.* Erratic, odd, strange, wayward, flighty. *Ant.* Usual, common, customary.
**Echo,** *Syn.* Imitation, repetition, reverberation. *Ant.* Opinion, original, voice, sound.
**Eclectic,** *Syn.* Broad, selective, exceptive. *Ant.* Dogmatic, biassed, partial, petty, narrow.
**Eclipse,** n. *Syn.* Outdoing, overshadowing, failure. *Ant.* Re-effulgence, renown, brightness.
**Economy,** *Syn.* Distribution, arrangement, dispensation, rule. *Ant.* Prodigality, disorder, misrule, waste.
**Ecstasy,** *Syn.* Delight, joy, emotion, transport, frenzy, rapture. *Ant.* Fidget, bore, tedium, coolness.
**Ecumenical,** *Syn.* Catholic, universal. *Ant.* Domestic, local, private, national, partial.
**Edifice,** *Syn.* Fabric, tenement, building, structure. *Ant.* Dismantlement, demolition, ruin.
**Edify,** *Syn.* Improve, instruct, enlighten. *Ant.* Misinform, mislead, misguide.
**Educe,** *Syn.* Elicit, produce, eliminate, draw. *Ant.* Bestow, deposit, insert, apply, adduce.
**Efface,** *Syn.* Cancel, blot out, destroy, erase. *Ant.* Portray, imprint, delineate, revive, restore.
**Effective,** *Syn.* Efficient, potent, able, telling, cogent. *Ant.* Nugatory, futile, ineffective.
**Effeminate,** *Syn.* Weak, soft, feeble, timorous, womanish. *Ant.* Hard, virile, robust, manly.
**Effervesce,** *Syn.* Sparkle, froth, foam, bubble, boil. *Ant.* Flat, brook, bear, subside.
**Effete,** *Syn.* Decrepit, barren, worn. *Ant.* Exuberant, prolific, fertile, vigorous, productive.
**Efficacy,** *Syn.* Energy, agency, virtue, efficiency. *Ant.* Ineffectiveness, inutility, inefficiency.
**Effigy,** *Syn.* Representation, figure, statue. *Ant.* Daub, distortion, misrepresentation, caricature.
**Effluence,** *Syn.* Overflow, discharge, outpouring, emission. *Ant.* Infusion, refluence.
**Effluvium,** *Syn.* Miasma, malaria, exhalation. *Ant.* Balm, zephyr, scent, ventilation
**Effort,** *Syn.* Exertion, trial. *Ant.* Facility, ease, futility, unsuccess, misadventure.
**Effrontery,** *Syn.* Brass, impudence, barefacedness. *Ant.* Coyness, bashfulness, timidity, modesty.
**Effulgence,** *Syn.* Luminosity, brilliancy, splendour, lustre. *Ant.* Tenebrosity, obscuration, darkness.
**Effusion,** *Syn.* Address, speech, oration, emission, pouring. *Ant.* Reading, essay, infusion.
**Egotism,** *Syn.* Self-conceit, self-assertion. *Ant.* Self-abnegation, deference, considerateness.
**Egregious,** *Syn.* Consummate, excellent, peculiar. *Ant.* Mediocre, everyday, ordinary.

**Egress,** *Syn.* Outlet, sally, departure, exit. *Ant.* Entrance, avenue, approach, inlet, adit.
**Ejaculation,** *Syn.* Cry, utterance, exclamation. *Ant.* Drawl, oration, suence.
**Eject,** *Syn.* Expel, cast out, emit, dislodge, throw, cast. *Ant.* Introduce, admit, accommodate, lodge, store, house, retain, receive, accept.
**Elaborate,** *Syn.* Concoct, prepare, forge, execute. *Ant.* Chance, conjecture, hit, simple.
**Elapse,** *Syn.* Glide away, lapse, slip, pass. *Ant.* Endure, halt, continue, abide, wait.
**Elastic,** *Syn.* Springy, buoyant, alterable, ductile. *Ant.* Inert, dull, inelastic, rigid, tough.
**Elated,** *Syn.* Inflated, proud, overjoyed, cheered. *Ant.* Dejected, abashed, dispirited, depressed.
**Elect,** *Syn.* Chosen, accepted, choice, elite. *Ant.* Reprobate, rejected.
**Elegy,** *Syn.* Jeremiad, lament, threnody, dirge. *Ant.* Jubilee, pæan.
**Elementary,** *Syn.* Simple, rudimental, primary. *Ant.* Organized, developed, collective, compound.
**Elicit,** *Syn.* Evolve, worm, express, evoke, draw. *Ant.* Suggest, instil, infuse, implant.
**Eligible,** *Syn.* Choice, desirable, suitable, capable. *Ant.* Ordinary, worthless, undesirable.
**Eliminate,** *Syn.* Explain, reject, eject, exclude, cast out. *Ant.* Import, foist, smuggle, involve.
**Elucidate,** *Syn.* Make plain, illustrate, clear. *Ant.* Confuse, obscure, mystify.
**Elude,** *Syn.* Parry, evade, shun, baffle, avoid, escape. *Ant.* Defy, dare, court, meet, encounter.
**Emaciation,** *Syn.* Wasting, attenuation, leanness. *Ant.* Corpulence, obesity, fatness.
**Emanate,** *Syn.* Issue, proceed, rise, spring, flow. *Ant.* Arrive, end, culminate.
**Emancipate,** *Syn.* Rescue, enfranchise, liberate. *Ant.* Disqualify, bind, enslave, enthral.
**Embargo,** *Syn.* Stoppage, detention, restraint. *Ant.* Congé, dismissal, discharge, permission.
**Embarrass,** *Syn.* Distress, hamper, confuse, perplex, entangle. *Ant.* Assist, facilitate, expedite.
**Embezzle,** *Syn.* Peculate, falsify, confuse, appropriate. *Ant.* Clear, balance, square.
**Embitter,** *Syn.* Molest, aggravate. *Ant.* Sweeten, soothe, alleviate.
**Embody,** *Syn.* Enlist, compact, integrate, codify, express. *Ant.* Disembody, dissipate, analyse.
**Embosomed,** *Syn.* Surrounded, wrapt, enfolded, concealed. *Ant.* Open, unfolded, exposed.
**Embrace,** *Syn.* Close, contain, hug, include, clasp. *Ant.* Except, reject, exclude.
**Embroil,** *Syn.* Trouble, disturb, commingle. *Ant.* Pacify, compose, arrange, remove.
**Embryo,** *Syn.* Origin, nucleus, germ. *Ant.* Maturity, completion, shape, development.
**Emendation,** *Syn.* Reformation, rectification, correction. *Ant.* Corruption, fault, defect, error.
**Emergency,** *Syn.* Difficulty, casualty, trait, necessity. *Ant.* Provision, subsidence, solution.
**Emigration,** *Syn.* Flit, colonization, exodus. *Ant.* Immigration, settlement, sojourn, abode.
**Emollient,** *Syn.* Balsamic, laxative, softening. *Ant.* Galling, irritant, astringent.
**Emotion,** *Syn.* Tremor, agitation, feeling, passion. *Ant.* Stoicism, insensibility, indifference.
**Emphatic,** *Syn.* Special, positive, strong, forcible. *Ant.* Ordinary, unimportant, cool, unemphatic.
**Empire,** *Syn.* Realm, kingdom, sway, rule, dominion. *Ant.* Anarchy, insurrection, independence.
**Empirical,** *Syn.* Quackish, tentative, experimental. *Ant.* Constant, scientific, regular.
**Empower,** *Syn.* Direct, warrant, qualify, enable. *Ant.* Disable, discourage, prevent.
**Emulate,** *Syn.* Aspire, compete, vie, rival. *Ant.* Despise, abandon, forgo, shun, disaffect.
**Enable,** *Syn.* Qualify, strengthen, empower. *Ant.* Disable, hinder, disqualify.
**Enamour,** *Syn.* Enchain, endear, charm, fascinate, captivate. *Ant.* Horrify, disenchant, disgust.
**Enclose,** *Syn.* Wrap, include, environ, encircle, shut. *Ant.* Disencircle, bare, disclose, open.
**Encomium,** *Syn.* Eulogy, compliment, praise, laudation. *Ant.* Invective, taunt, obloquy.
**Encourage,** *Syn.* Animate, reassure, urge, incite, cheer. *Ant.* Dispirit, dissuade, discourage.
**Encroach,** *Syn.* Infringe, transgress, trespass, invade. *Ant.* Observe, recognize, respect.
**Encrust,** *Syn.* Face, plaster, line, coat. *Ant.* Scrape, abrade, expose.
**Encumber,** *Syn.* Impede, clog, obstruct, oppress. *Ant.* Disburden, free, disencumber.
**Endanger,** *Syn.* Hazard, jeopardize, expose, imperil. *Ant.* Screen, shield, protect, defend, cover.
**Endear,** *Syn.* Gain, conciliate, attach. *Ant.* Embitter, alienate, estrange.
**Endless,** *Syn.* Infinite, eternal, boundless, unceasing. *Ant.* Fugitive, brief, temporary, limited.
**Endow,** *Syn.* Endue, clothe, supply, invest, enrich, present. *Ant.* Strip, spoliate, denude.
**Enervate,** *Syn.* Unhinge, unstring, relax, unnerve, weaken. *Ant.* Nerve, harden, brace, strengthen.
**Engage,** *Syn.* Agree, pledge, stipulate, undertake, promise. *Ant.* Extricate, discard, decline.
**Engaging,** *Syn.* Winning, interesting, attractive. *Ant.* Repulsive, uninteresting, unattractive.
**Engender,** *Syn.* Breed, create. *Ant.* Destroy, stifle.
**Enigmatical,** *Syn.* Mystic, obscure. *Ant.* Plain, lucid.
**Enjoin,** *Syn.* Ordain, order, direct. *Ant.* Release, absolve.
**Enlighten,** *Syn.* Teach, instruct, edify. *Ant.* Mystify, obscure.
**Enlist,** *Syn.* Enroll, enter. *Ant.* Disband, dismiss.
**Enliven,** *Syn.* Rouse, quicken, cheer. *Ant.* Tire, weary.
**Enmity,** *Syn.* Hate, discord. *Ant.* Esteem, affection, love.
**Ennoble,** *Syn.* Dignify, exalt. *Ant.* Degrade, debase. {soothe.
**Enrage,** *Syn.* Madden, incite. *Ant.* Pacify,
**Enrapture,** *Syn.* Attract, charm, captivate. *Ant.* Torment, horrify, disgust.
**Enrich,** *Syn.* Store endow. *Ant.* Rob, reduce.
**Enshrine,** *Syn.* Cherish, embalm. *Ant.* Forget, expose.
**Enslave,** *Syn.* Charm. *Ant.* Disgust, repel.
**Ensue,** *Syn.* Befall, follow. *Ant.* Threaten, precede.
**Ensure,** *Syn.* Seal, secure, fix. *Ant.* Hazard.
**Entail,** *Syn.* Devolve, leave. *Ant.* Alienate.
**Enterprising,** *Syn.* Daring, bold, active. *Ant.* Cautious, inadventurous, timid, inactive.
**Entertain,** *Syn.* Amuse, foster. *Ant.* Tire, deny.
**Enthusiasm,** *Syn.* Zeal, fervour, warmth, rapture. *Ant.* Disaffection, indifference, callousness.
**Entice,** *Syn.* Lure, allure. *Ant.* Hinder, warn.
**Entire,** *Syn.* Total, whole. *Ant.* Broken, partial.
**Entitle,** *Syn.* Style, name, enable, empower, qualify. *Ant.* Disable, disentitle, disqualify.
**Entrammel,** *Syn.* Decoy, hamper, obstruct, impede. *Ant.* Disenthrall, extricate, liberate.
**Entreat,** *Syn.* Ask, pray, supplicate, beg. *Ant.* Enjoin, bid, insist, command.
**Entwine,** *Syn.* Weave, lace. *Ant.* Untwist.
**Enumerate,** *Syn.* Name, specify. *Ant.* Miscount.
**Enunciate,** *Syn.* Syllable, pronounce, propound, state. *Ant.* Stammer, babble, mutter.
**Environ,** *Syn.* Inclose, hem. *Ant.* Disinclose.
**Ephemeral,** *Syn.* Fleeting, evanescent, transient. *Ant.* Immortal, eternal, perpetual, abiding.
**Epigrammatic,** *Syn.* Concise, terse, pointed. *Ant.* Pointless, circumlocutory, diffuse.
**Equable,** *Syn.* Easy, even. *Ant.* Uneasy, fitful.
**Equanimity,** *Syn.* Tranquillity, composure, calmness. *Ant.* Impatience, perturbation, disquiet.
**Equip,** *Syn.* Prepare, invest. *Ant.* Denude, divest.
**Equitable,** *Syn.* Just, fair. *Ant.* Unjust, unfair.
**Equivocal,** *Syn.* Doubtful, ambiguous, dubious. *Ant.* Clear, direct, plain, univocal.
**Eradicate,** *Syn.* Destroy, uproot, excise, abolish, extirpate. *Ant.* Foster, instil, import, implant.
**Erect,** *Syn.* Build, raise. *Ant.* Destroy, remove.
**Erratic,** *Syn.* Capricious, changeful, flighty, desultory. *Ant.* Steady, normal, regular.
**Error,** *Syn.* Untruth, fault. *Ant.* Accuracy, truth.
**Erudition,** *Syn.* Scholarship, letters, lore, learning. *Ant.* Sciolism, duncedom, illiteracy.
**Eruption,** *Syn.* Discharge, explosion, outburst. *Ant.* Inburst, irruption, swallowing, engulfing, absorption.
**Esoteric,** *Syn.* Advanced, special, private. *Ant.* Exoteric, rudimentary, popular, public.
**Essential,** *Syn.* Leading, vital, requisite, inherent. *Ant.* Imported, unnecessary.
**Establish,** *Syn.* Fix, plant. *Ant.* Subvert, upset.
**Esteem,** *Syn.* Love, prize, admire, honour, value, price. *Ant.* Dislike, affect, disregard.
**Estimable,** *Syn.* Lovable, worthy, delectable, amiable. *Ant.* Bad, unworthy, unamiable.

**Eternal,** *Syn.* Perpetual, ceaseless, deathless, infinite. *Ant.* Sublunary, fleeting, temporal.
**Euphonious,** *Syn.* Sweet-toned, silvery, musical. *Ant.* Discordant, dissonant, harsh.
**Evacuate,** *Syn.* Desert, void. *Ant.* Hold, seize.
**Evaporate,** *Syn.* Distil, dissolve, liquefy, melt. *Ant.* Indurate, solidify, compact, consolidate.
**Evasion,** *Syn.* Quibble, subterfuge, shift, fencing, shuffle. *Ant.* Grappling, answer.
**Event,** *Syn.* Fact, result, issue. *Ant.* Cause.
**Every,** *Syn.* All. *Ant.* None.
**Evict,** *Syn.* Eject, dispossess. *Ant.* Locate, admit.
**Evidence,** *Syn.* Token, sign, declaration, deposition. *Ant.* Suppression, disproof, surmise.
**Evident,** *Syn.* Palpable, clear, manifest, visible, plain. *Ant.* Dubious, uncertain, obscure.
**Evil,** *Syn.* Bad, wrong, ill. *Ant.* Good, pure, holy.
**Evince,** *Syn.* Prove, show. *Ant.* Conceal.
**Eviscerate,** *Syn.* Draw, disembowel. *Ant.* Pad, cram, stuff.
**Evoke,** *Syn.* Elicit, excite. *Ant.* Stop, allay.
**Exactly,** *Syn.* Accurately, precisely. *Ant.* Otherwise, incorrectly, inadequately, loosely.
**Exaggerate,** *Syn.* Strain, magnify, heighten, enlarge, amplify, overstate. *Ant.* Modify, qualify, soften, mitigate, understate, attenuate.
**Example,** *Syn.* Issue, instance, copy, model, sample. *Ant.* System, rule, law, stock.
**Excavate,** *Syn.* Trench, dig. *Ant.* Level, fill.
**Exception,** *Syn.* Anomaly, omission. *Ant.* Inclusion, normality.
**Exceptionable,** *Syn.* Undesirable, objectionable. *Ant.* Unobjectionable, desirable.
**Excess,** *Syn.* Surplus, increase. *Ant.* Sobriety, failure.
**Excessive,** *Syn.* Extravagant, undue, enormous. *Ant.* Inadequate, scant, insufficient.
**Excommunicate,** *Syn.* Blackball, eject, bar, banish, exclude. *Ant.* Enroll, readmit, admit.
**Excruciate,** *Syn.* Rack, torment, torture, agonize. *Ant.* Tranquillize, please, soothe.
**Exculpate,** *Syn.* Release, acquit, exonerate, defend. *Ant.* Implicate, inculpate, charge.
**Excuse,** *Syn.* Acquit, remit, absolve, exculpate. *Ant.* Exact, inculpate, charge.
**Execrable,** *Syn.* Hateful, accursed, detestable. *Ant.* Laudable, respectable, desirable.
**Exemplary,** *Syn.* Excellent, worthy, honourable. *Ant.* Exceptionable, objectionable.
**Exemplify,** *Syn.* Exhibit, embody. *Ant.* Falsify, betray.
**Exempt,** *Syn.* Clear, free. *Ant.* Liable, subject.
**Exercise,** v. *Syn.* Train, practise. *Ant.* Ease, rest.—*n. Syn.* Drill, use. *Ant.* Ease, rest.
**Exertion,** *Syn.* Toil, labour. *Ant.* Rest, repose.
**Exhalation,** *Syn.* Damp, mist. *Ant.* Absorption.
**Exhaust,** *Syn.* Spend, empty. *Ant.* Refresh, fill.
**Exhibit,** *Syn.* Betray, show. *Ant.* Hide, mask.
**Exhilarate,** *Syn.* Elate, rejoice. *Ant.* Depress.
**Existence,** *Syn.* Entity, being. *Ant.* Non-existence.
**Expanse,** *Syn.* Space, vast. *Ant.* Bound, limit.
**Expatiate,** *Syn.* Dilate, enlarge, amplify. *Ant.* Summarize, epitomize, condense, contract.
**Expect,** *Syn.* Rely on, await. *Ant* Greet, hail.
**Expediency,** *Syn.* Interest, utility. *Ant.* Disadvantage.
**Expedition,** *Syn.* Speed, despatch, haste. *Ant.* Procrastination, tardiness, delay.
**Expend,** *Syn.* Use, spend. *Ant.* Husband, save.
**Experiment,** *Syn.* Exemplification, test, illustration, trial. *Ant.* Hypothesis, assumption.
**Explain,** *Syn.* Elucidate, interpret, clear up, teach. *Ant.* Misinterpret, obscure, mystify.
**Explicit,** *Syn.* Stated, plain. *Ant.* Obscure, hinted.
**Exponent,** *Syn.* Advocate, propounder, interpreter. *Ant.* Confuser, muddler. [import.
**Export,** *Syn.* Produce, ship. *Ant.* Consume,
**Expostulate,** *Syn.* Object. *Ant.* Abet, coincide.
**Express,** *Syn.* Direct, specific. *Ant.* General.
**Expunge,** *Syn.* Cancel, erase. *Ant.* Mark, write.
**Exquisite,** *Syn.* Rare, choice. *Ant.* Coarse, common.
**Extant,** *Syn.* Present, existent. *Ant.* Past, lost.
**Extempore,** *Syn.* Unpremeditated, offhand. *Ant.* Premeditated, prepared, studied.
**Extend,** *Syn.* Avail, spread, reach, enlarge, expand, prolong. *Ant.* Fail, miss, recur, limit.
**Extenuate,** *Syn.* Palliate, qualify, mitigate. *Ant.* Enhance, heighten, aggravate.
**External,** *Syn.* Palpable, visible, manifest, apparent, outer. *Ant.* Inmost, hidden, internal.
**Extinction,** *Syn.* Annihilation, death, destruction. *Ant.* Survival, prosperity, exercise, action.
**Extort,** *Syn.* Extract, wrest. *Ant.* Coax.
**Extortionate,** *Syn.* Exacting, rigorous, severe, hard. *Ant.* Moderate, fair, indulgent, liberal.
**Extract,** *Syn.* Collect, quote, take out, select, draw. *Ant.* Incorporate, restore, insert.
**Extraneous,** *Syn.* Unrelated, unconnected, outside, foreign. *Ant.* Essential, connected, vital.
**Extravagance,** *Syn.* Waste. *Ant.* Carefulness.
**Exudation,** *Syn.* Percolation, drip, ooze. *Ant.* Parching, aridity, absorption.
**Exultation,** *Syn.* Ecstasy, joy, delight, transport. *Ant.* Depression, mourning.

## F

**Fable,** *Syn.* Novel, invention, allegory, parable, fiction. *Ant.* Fact, narrative, history.
**Fabric,** *Syn.* Tissue, work. *Ant.* Shreds, rags.
**Fabricate,** *Syn.* Devise, frame, produce, falsify, invent. *Ant.* Represent, copy, narrate.
**Facetious,** *Syn.* Droll, jocular, humorous, funny, witty. *Ant.* Grave, dull, matter-of-fact, heavy.
**Facile,** *Syn.* Pliable, easy, irresolute, weak, docile. *Ant.* Self-reliant, self-willed, inflexible, resolute.
**Facility,** *Syn.* Pliancy, ease. *Ant.* Effort, labour.
**Fact,** *Syn.* Event, deed, truth. *Ant.* Lie, fiction.
**Factious,** *Syn.* Adversative, malcontent, litigious, crusty. *Ant.* Loyal, complacent, agreeable.
**Faithful,** *Syn.* Firm, true. *Ant.* Untrue, false.
**Fallacy,** *Syn.* Blunder, error. *Ant.* Fact, truth.
**Fallible,** *Syn.* Weak, erring. *Ant.* Unerring, certain.
**Fallow,** *Syn.* Untilled, idle. *Ant.* Tilled, worked.
**Falter,** *Syn.* Waver, halt. *Ant.* Flow, speed, run.
**Familiar,** *Syn.* Frank, free. *Ant.* New, strange, rare.
**Famous,** *Syn.* Celebrated. *Ant.* Obscure, unknown.
**Fanatic,** *Syn.* Zealot, bigot. *Ant.* Cynic, sceptic.
**Farcical,** *Syn.* Droll, funny, comic, ludicrous. *Ant.* Ghastly, dismal, solemn, serious, grave.
**Fashion,** *Syn.* Custom, mould, style, guise, form. *Ant.* Speech, dress, work, person.
**Fasten,** *Syn.* Fix, join, bind. *Ant.* Loose, undo.
**Fastidious,** *Syn.* Dainty, critical. *Ant.* Coarse, easy. [slight.
**Fatal,** *Syn.* Mortal, deadly. *Ant.* Harmless,
**Fate,** *Syn.* End, lot, destiny. *Ant.* Choice, will.
**Fathom,** *Syn.* Probe, sound. *Ant.* Skim, graze.
**Fatuity,** *Syn.* Idiotcy, folly. *Ant.* Sense, wisdom.
**Fault,** *Syn.* Flaw, error, defect. *Ant.* Perfection.
**Favour,** *Syn.* Boon, gift, grace. *Ant.* Denial, refusal, prohibition, disfavour.
**Favouritism,** *Syn.* Invidiousness, partiality. *Ant.* Antipathy, prejudice, odium.
**Fear,** *Syn.* Terror, dread. *Ant.* Trust, courage.
**Fearful,** *Syn.* Awful, timid. *Ant.* Hopeful, bold.
**Feasible,** *Syn.* Practicable, permissible, contrivable, possible. *Ant.* Unallowable, impossible.
**Feature,** *Syn.* Sign, mark. *Ant.* System, whole.
**Feeling,** *Syn.* Pathos, touch. *Ant.* Coldness, insensibility.
**Felicitous,** *Syn.* Joyous, happy. *Ant.* Sad, unhappy.
**Fell,** *Syn.* Fierce, cruel. *Ant.* Humane, generous. —*Syn.* Bare, waste, cut. *Ant.* Rear, erect.
**Fence,** *Syn.* Stave, elude. *Ant.* Suffer, catch, open.
**Ferment,** *Syn.* Effervesce, brew. *Ant.* Still, cool.
**Fertile,** *Syn.* Fraught, rich. *Ant.* Sterile, poor.
**Festive,** *Syn.* Merry, jovial. *Ant.* Gloomy, ascetic.
**Fetid,** *Syn.* Foul, corrupt. *Ant.* Balmy, fresh.
**Fetter,** *Syn.* Clog, restrain, hinder. *Ant.* Liberate, free.
**Feud,** *Syn.* Hostility, strife, fray. *Ant.* Sociality, clanship.
**Fibre,** *Syn.* Sinews, strength. *Ant.* Debility, laxity.
**Fickle,** *Syn.* Mutable, fitful. *Ant.* Steady, sober.
**Fiction,** *Syn.* Fable, invention. *Ant.* Truth, fact.
**Fidelity,** *Syn.* Loyalty, faithfulness, fealty. *Ant.* Infidelity, untruthfulness, treachery.
**Fiery,** *Syn.* Excited, passionate, fierce, ardent, hot. *Ant.* Tame, passionless, icy, cold.
**Figurative,** *Syn.* Typical, rhetorical, tropical, poetical. *Ant.* Unpoetical, prosaic, literal.
**Figure,** *Syn.* Form, type, shape, aspect. *Ant.* Disfigurement, deformity, misrepresentation.

**Filter,** *Syn.* Clarify, leak, distil, percolate, strain. *Ant.* Thicken, disturb, muddle, befoul.
**Filthy,** *Syn.* Foul, nasty, dirty. *Ant.* Clean, pure.
**Final,** *Syn.* Latest, last. *Ant.* Current, open.
**Finish,** *Syn.* Shape, end, conclude, perfect, complete. *Ant.* Mar, botch, fail, start, begin.
**Finished,** *Syn.* High, perfect. *Ant.* Coarse, poor, rude.
**Finite,** *Syn.* Limited. *Ant.* Infinite, unlimited.
**Fit,** *Syn.* Proper, decent. *Ant.* Unseemly, ungainly.
**Flaccid,** *Syn.* Lax, flabby. *Ant.* Plump, firm.
**Flagitious,** *Syn.* Scandalous, monstrous, enormous. *Ant.* Excusable, meritorious, creditable, noble.
**Flaring,** *Syn.* Tawdry, showy, flashy, bright, gaudy. *Ant.* Neutral, dingy, dowdy, dim, dull.
**Flat,** *Syn.* Tame, dull. *Ant.* Interesting, animated.
**Flaunt,** v. *Syn.* Display, flutter, flout, vaunt, boast. *Ant.* Shrivel, hide, retire, conceal.
**Flavour,** *Syn.* Zest, smack, taste. *Ant.* Insipidity.
**Fleece,** *Syn.* Shear, strip. *Ant.* Endow, invest.
**Flexible,** *Syn.* Easy, lithe, pliant. *Ant.* Hard, rigid.
**Flicker,** *Syn.* Waver, quiver. *Ant.* Gleam, blaze.
**Flight,** *Syn.* Evasion, escape. *Ant.* Repose, return.
**Flimsy,** *Syn.* Thin, poor, gauzy. *Ant.* Sound, solid.
**Flinch,** *Syn.* Recoil, swerve. *Ant.* Bear, face, dare.
**Flippant,** *Syn.* Saucy, thoughtless, forward, pert. *Ant.* Considerate, accurate, servile.
**Florid,** *Syn.* Ornate, flowery. *Ant.* Bare, pallid.
**Flounder,** *Syn.* Blunder, roll. *Ant.* Career, flow.
**Flourish,** *Syn.* Thrive, prosper. *Ant.* Decline, fail.
**Flow,** *Syn.* Glide, stream. *Ant.* Recoil, stop.
**Flowing,** *Syn.* Easy, copious. *Ant.* Meagre, dry.
**Fluctuate,** *Syn.* Veer, waver. *Ant.* Stick, abide.
**Flurry,** v. *Syn.* Worry, excite. *Ant.* Calm, soothe.
**Flutter,** *Syn.* Quiver, vibrate. *Ant.* Rest, settle.
**Flux,** *Syn.* Motion, flow. *Ant.* Identity, stillness.
**Focus,** *Syn.* Nucleus, centre. *Ant.* Dissipation, dispersion, circle.
**Foible,** *Syn.* Weakness, fault. *Ant.* Sin, crime.
**Foil,** n. *Syn.* Setting, set-off. *Ant.* Extinction, eclipse.
**Foist,** *Syn.* Pass, palm. *Ant.* Verify, detect, expose.
**Follow,** *Syn.* Obey, chase. *Ant.* Cause, elude.
**Folly,** *Syn.* Weakness, imprudence, madness. *Ant.* Judgment, sanity, wisdom, sense.
**Foment,** *Syn.* Propagate, fan, cherish, excite. *Ant.* Quench, extirpate, extinguish, allay.
**Foppish,** *Syn.* Dressy, finical. *Ant.* Dowdy, modest.
**Foray,** *Syn.* Inroad, sally. *Ant.* Recall, flight.
**Forbear,** *Syn.* Avoid, abstain. *Ant.* Indulge, seek.
**Forbidding,** *Syn.* Offensive, deterrent, repulsive. *Ant.* Permissive, seductive, alluring, attractive.
**Foreign,** *Syn.* Alien, strange. *Ant.* Pertinent, native.
**Forerunner,** *Syn.* Omen, herald. *Ant.* Follower, successor.
**Foresee,** *Syn.* Forecast, predict. *Ant.* Recall, reflect.
**Foretell,** *Syn.* Forewarn, presage, predict. *Ant.* Detail, narrate, recite.
**Forfeit,** *Syn.* Loss, mulct, penalty. *Ant.* Reward, gratuity, compensation, bribe, premium.
**Forge,** *Syn.* Form, work. *Ant.* Misshape, shatter.
**Forgo,** *Syn.* Resign, yield, give up, drop, waive. *Ant.* Retain, grasp, seize, assume, claim.
**Forgotten,** *Syn.* Neglected, obsolete, slighted, bygone. *Ant.* Regarded, guarded, treasured.
**Forlorn,** *Syn.* Wretched, lone, helpless, hapless, solitary. *Ant.* Cheered, cherished, supported.
**Formal,** *Syn.* Exact, correct. *Ant.* Easy, incorrect.
**Formation,** *Syn.* Structure, shape. *Ant.* Distortion, dislocation, deformity.
**Formidable,** *Syn.* Fearful, awful. *Ant.* Trivial, weak.
**Fortitude,** *Syn.* Calmness, courage. *Ant.* Faintness, irritation.
**Fortuitous,** *Syn.* Accidental. *Ant.* Purposed, designed.
**Fortunate,** *Syn.* Happy, lucky. *Ant.* Unlucky.
**Found,** *Syn.* Endow, base, build, fix. *Ant.* Uproot, supplant, subvert.
**Foundation,** *Syn.* Basis, base. *Ant.* Disestablishment.
**Founder,** n. *Syn.* Planter, author. *Ant.* Destroyer.
**Fractious,** *Syn.* Cross, peevish. *Ant.* Agreeable, genial, blithesome.
**Fragile,** *Syn.* Weak, frail. *Ant.* Strong, hardy.
**Fragment,** *Syn.* Chip, bit, piece. *Ant.* Mass, body.
**Franchise,** *Syn.* Right, freedom. *Ant.* Disability, obligation.
**Frank,** *Syn.* Open, candid. *Ant.* Reserved, close.
**Frantic,** *Syn.* Raving, mad. *Ant.* Sober, sane.
**Fraternize,** *Syn.* Consort. *Ant.* Forswear, abjure.
**Fraught,** *Syn.* Full, loaded. *Ant.* Scant, poor.
**Freakish,** *Syn.* Frisky, sportful. *Ant.* Sober, steady.
**Frenzy,** *Syn.* Fury, raving. *Ant.* Coolness, calm.
**Frequent,** *Syn.* Usual, many. *Ant.* Rare, few.
**Fresh,** *Syn.* Recent, cool, young, new. *Ant.* Former, weary, jaded, stale, old.
**Friction,** *Syn.* Abrasion, attrition, contact. *Ant.* Smoothness, isolation, detachment.
**Frightful,** *Syn.* Horrid, awful, dreadful, hideous, ugly. *Ant.* Fair, beautiful, attractive, pleasing.
**Frigid,** *Syn.* Distant, cold. *Ant.* Ardent, warm.
**Fritter,** *Syn.* Idle, waste. *Ant.* Husband, economize.
**Frivolous,** *Syn.* petty, trivial. *Ant.* Grave, serious.
**Frolic,** *Syn.* Sport, game, play. *Ant.* Purpose, study.
**Frolicsome,** *Syn.* Festive, wanton, sportive, gamesome. *Ant.* Studious, grave, serious.
**Frugal,** *Syn.* Thrifty, sparing. *Ant.* Prodigal, profuse.
**Fruitful,** *Syn.* Fertile, prolific. *Ant.* Useless, barren.
**Fulfil,** *Syn.* Effect, execute, achieve, accomplish. *Ant.* Falsify, disappoint, ignore, neglect.
**Fulminate,** *Syn.* Roar, clamour. *Ant.* Eulogize, laud.
**Fulsome,** *Syn.* Offensive, gross. *Ant.* Nice, sober.
**Fume,** *Syn.* Frown, chafe. *Ant.* Smile, acquiesce.
**Fund,** *Syn.* Capital, stock. *Ant.* Outlay, expenditure.
**Fundamental,** *Syn.* Essential, important, primary. *Ant.* Non-essential, unimportant, secondary.
**Funereal,** *Syn.* Solemn, dismal. *Ant.* Festive, joyous.
**Furtive,** *Syn.* Sly, secret. *Ant.* Public, open.
**Fuse,** *Syn.* Smelt, melt. *Ant.* Diffuse, disunite.
**Futile,** *Syn.* Trifling, vain, unavailing, weak. *Ant.* Solid, useful, powerful.

## G

**Gag,** *Syn.* Hush, stifle, silence. *Ant.* Animate, evoke.
**Gage,** *Syn.* Pawn, pledge, bind. *Ant.* Redeem, release, acquit, promise.
**Gain,** v. *Syn.* Earn, win, get. *Ant.* Suffer, forfeit, lose.
**Gallant,** *Syn.* Bold, brave. *Ant.* Churlish, cowardly.
**Gambol,** v. *Syn.* Frisk, sport, frolic. *Ant.* Weary, tire.
**Game,** *Syn.* Frolic, sport. *Ant.* Labour, toil.
**Garb,** *Syn.* Uniform, dress. *Ant.* Rags, undress.
**Garble,** *Syn.* Distort, falsify. *Ant.* State truly.
**Garnish,** *Syn.* Adorn, deck. *Ant.* Strip, denude.
**Garrulity,** *Syn.* Chatter, verbosity. *Ant.* Reticence.
**Gaudy,** *Syn.* Showy, tawdry. *Ant.* Simple, rich.
**Gauge,** *Syn.* Fathom, measure. *Ant.* Guess, scan.
**Gaunt,** *Syn.* Lank, lean, grim. *Ant.* Sleek, tame.
**Gawky,** *Syn.* Clumsy, awkward. *Ant.* Neat, handy.
**Generality,** *Syn.* Bulk, mass. *Ant.* Minority, section.
**Generate,** *Syn.* Breed, produce. *Ant.* Terminate.
**Generation,** *Syn.* Era, period, age. *Ant.* Eternity.
**Generic,** *Syn.* Common, general. *Ant.* Particular.
**Generous,** *Syn.* Liberal, noble. *Ant.* Churlish, ignoble, mean.
**Genial,** *Syn.* Hearty, merry, warm. *Ant.* Noxious, harsh, cold.
**Genius,** *Syn.* Skill, talent. *Ant.* Inanity, stupidity.
**Genuine,** *Syn.* Pure, real. *Ant.* Fictitious, spurious.
**Germ,** *Syn.* Bud, origin, seed. *Ant.* Result, fruit.
**Germane,** *Syn.* Related, allied. *Ant.* Alien, foreign.
**Germinate,** *Syn.* Shoot, sprout. *Ant.* Decay, rot.
**Ghastly,** *Syn.* Pallid, grim, wan. *Ant.* Buxom, fresh.

**Gibe,** *Syn.* Scoff, sneer. *Ant.* Compliment, salute.
**Gigantic,** *Syn.* Huge, colossal. *Ant.* Feeble, puny.
**Gird,** *Syn.* Enclose, belt, hem. *Ant.* Expand, open.
**Gist,** *Syn.* Point, force, pith. *Ant.* Redundancy.
**Glare,** *Syn.* Glow, gleam. *Ant.* Flicker, flash.
**Glib,** *Syn.* Ready, fluent. *Ant.* Hesitating.
**Glimpse,** *Syn.* Glance, sight. *Ant.* Exposure, scrutiny.
**Gloat,** *Syn.* Feast, glut, revel. *Ant.* Shun, avoid.
**Glorify,** *Syn.* Extol, exalt. *Ant.* Abuse, depress.
**Gloss,** n. *Syn.* Lustre, polish. *Ant.* Truth, haze.
**Glowing,** *Syn.* Hot, shining. *Ant.* Cool, dull.
**Glut,** v. *Syn.* Stuff, fill, gorge. *Ant.* Empty, disgorge.—n. *Syn.* Overstock, superfluity, surplus. *Ant.* Scantiness, dearth, scarcity.
**Gluttony,** *Syn.* Voracity, greed. *Ant.* Frugality, abstinence.
**Gorgeous,** *Syn.* Superb, rich, costly. *Ant.* Cheap, bare, poor.
**Govern,** *Syn.* Sway, direct, rule. *Ant.* Misrule.
**Grace,** *Syn.* Charm, beauty. *Ant.* Inelegance.
**Gracious,** *Syn.* Civil, kind, courteous, affable. *Ant.* Ungracious, discourteous, haughty.
**Gradual,** *Syn.* Regular, slow. *Ant.* Broken, sudden.
**Grandiloquence,** *Syn.* Bombast, euphuism, pomposity, verbosity. *Ant.* Unaffectedness, simplicity.
**Grant,** *Syn.* Allow, give. *Ant.* Reserve, withhold.
**Graphic,** *Syn.* Vivid, forcible. *Ant.* Unpicturesque.
**Grasp,** *Syn.* Hold, seize. *Ant.* Lose, loose.
**Grate,** *Syn.* Jar, scrape, rub. *Ant.* Slip, glide.
**Grateful,** *Syn.* Obliged, thankful. *Ant.* Ungrateful, unpleasant.
**Gratification,** *Syn.* Reward, delight. *Ant.* Dislike, pain.
**Gratify,** *Syn.* Satisfy, please. *Ant.* Deny, stint.
**Gratitude,** *Syn.* Thankfulness. *Ant.* Ingratitude.
**Gratuitous,** *Syn.* Wanton, voluntary, free. *Ant.* Obligatory, involuntary, compulsory.
**Grave,** *Syn.* Sober, serious, sad. *Ant.* Merry, joyous.
**Graze,** *Syn.* Shear, shave. *Ant.* Collide, strike.
**Grief,** *Syn.* Regret, woe, trouble. *Ant.* Delight, joy.
**Grievance,** *Syn.* Injustice, burden. *Ant.* Privilege, benefit, boon.
**Grieve,** *Syn.* Sorrow, pain, distress. *Ant.* Rejoice, please, ease.
**Grim,** *Syn.* Stern, fierce. *Ant.* Placid, docile, mild.
**Grope,** *Syn.* Fumble, search, feel. *Ant.* Seize, grasp.
**Gross,** *Syn.* Sensual, coarse. *Ant.* Refined, pure.
**Grotesque,** *Syn.* Archaic, quaint, whimsical. *Ant.* Graceful, chaste, classic.
**Grounded,** *Syn.* Prepared, rooted. *Ant.* Unfounded, baseless, ungrounded.
**Group,** *Syn.* Order, cluster. *Ant.* Medley, crowd.
**Grovel,** *Syn.* Creep, cringe, crawl. *Ant.* Rise, soar.
**Grow,** *Syn.* Expand, increase. *Ant.* Wane, stop, fail.
**Growl,** *Syn.* Murmur, snarl. *Ant.* Grin, chuckle.
**Grudge,** v. *Syn.* Covet, retain, spare. *Ant.* Impart, spend.—n. *Syn.* Discontent, hatred, rancour, spite. *Ant.* Contentment, approval.
**Guardian,** *Syn.* Warder, keeper. *Ant.* Ward, pupil.
**Guide,** *Syn.* Pilot, direct, lead. *Ant.* Betray, mislead.
**Guile,** *Syn.* Deceit, craft. *Ant.* Candour, honesty.
**Guise,** *Syn.* Dress, garb, aspect. *Ant.* Mind, person.

## H

**Habiliment, Habiliments,** *Syn.* Clothes, apparel, robes, dress. *Ant.* Undress, deshabille.
**Habit,** *Syn.* Way, usage, custom. *Ant.* Inexperience.
**Habitual,** *Syn.* Usual, customary, ordinary, regular. *Ant.* Rare, extraordinary, irregular.
**Haggard,** *Syn.* Ghastly, wild. *Ant.* sleek.
**Haggle,** *Syn.* Bargain, higgle. *Ant.* Abate, yield.
**Halcyon,** *Syn.* Serene, calm. *Ant.* Troublous, stormy.
**Hallow,** *Syn.* Venerate, consecrate. *Ant.* Desecrate.
**Halt,** *Syn.* Pause, falter, stop. *Ant.* Decide, advance.
**Handle,** *Syn.* Wield, touch, feel. *Ant.* Bungle, drop.
**Handsome,** *Syn.* Elegant, generous. *Ant.* Ungenerous, uncomely.
**Handy,** *Syn.* Useful, near. *Ant.* Useless, remote.
**Harangue,** *Syn.* Rant, oration, speech. *Ant.* Drawl, mumble.
**Harass,** *Syn.* Pester, annoy. *Ant.* Soothe, comfort.
**Harbinger,** *Syn.* Herald, announcer. *Ant.* Historian.
**Harbour,** n. *Syn.* Port, shelter. *Ant.* Peril, toil.
**Harden,** *Syn.* Compact, train. *Ant.* Soften, relax.
**Hardly,** *Syn.* Just, barely. *Ant.* Amply, fully.
**Hardship,** *Syn.* Annoyance, burden, trouble. *Ant.* Treat, amusement, pleasure.
**Hardy,** *Syn.* Strong, robust. *Ant.* Fragile, weak.
**Harmless,** *Syn.* Gentle, innocent. *Ant.* Deadly, cruel.
**Harmonious,** *Syn.* Uniform, musical. *Ant.* Sharp, harsh.
**Harsh,** *Syn.* Gruff, abusive, sharp, severe, rough. *Ant.* Kindly, genial, gentle, smooth.
**Hasty,** *Syn.* Rapid, speedy. *Ant.* Careful, slow.
**Hateful,** *Syn.* Odious, vile. *Ant.* Desirable, lovely.
**Havoc,** *Syn.* Devastation, wreck, waste, ruin. *Ant.* Prosperity, conservation.
**Hawk,** *Syn.* Peddle, sell. *Ant.* Bond, store.
**Hazard,** *Syn.* Dare, risk, peril. *Ant.* Law, safety.
**Hazy,** *Syn.* Misty, foggy. *Ant.* Transparent, clear.
**Heal,** *Syn.* Repair, cure. *Ant.* Hurt, harm.
**Healthy,** *Syn.* Robust, sound. *Ant.* Weak, unsound.
**Hearsay,** *Syn.* Gossip, report. *Ant.* Knowledge, personal.
**Hearty,** *Syn.* Warm, sound, robust, healthy. *Ant.* Delicate, unhealthy.
**Heat,** *Syn.* Passion, warmth. *Ant.* Calmness, coolness.
**Heathenish,** *Syn.* Pagan. *Ant.* Civilized, Christian.
**Heave,** *Syn.* Hoist, raise, lift. *Ant.* Sink, dash.
**Hector,** v. *Syn.* Bluster, bully. *Ant.* Shrink, cover.
**Heedful,** *Syn.* Wary, careful. *Ant.* Heedless, careless, unmindful.
**Heighten,** *Syn.* Raise, exalt. *Ant.* Depress, lower.
**Heinous,** *Syn.* Atrocious, enormous, odious, hateful. *Ant.* Excusable, laudable, excellent.
**Hereditary,** *Syn.* Lineal, ancestral, inherited. *Ant.* Won, acquired, conferred.
**Heresy,** *Syn.* Unorthodoxy, schism. *Ant.* Orthodoxy.
**Heritage,** *Syn.* Bequest, legacy. *Ant.* Wages, merit.
**Hermetically,** *Syn.* Closely, air-tight. *Ant.* Loosely.
**Heroic,** *Syn.* Daring, brave. *Ant.* Cowardly.
**Hesitate,** *Syn.* Falter, waver. *Ant.* Run, decide.
**Heterodox,** *Syn.* Heretical. *Ant.* Orthodox, sound.
**Hibernal,** *Syn.* Arctic, wintry. *Ant.* Balmy.
**Hideous,** *Syn.* Grim, ugly, horrid. *Ant.* Beautiful.
**Hie,** *Syn.* Speed, haste, fly. *Ant.* Lag, stay, stop.
**Highly,** *Syn.* Very much, greatly. *Ant.* Scarcely.
**Hinder,** *Syn.* Embarrass, debar, retard, obstruct. *Ant.* Promote, enable, expedite, accelerate.
**Hinge,** *Syn.* Hang, turn, move. *Ant.* Jar, halt.
**Hire,** *Syn.* Rent, employ, engage. *Ant.* Purchase.
**Hitch,** *Syn.* Jam, bar, stick. *Ant.* Glide, run.
**Hoard,** *Syn.* Amass, store up. *Ant.* Squander, waste.
**Hoary,** *Syn.* Gray, white. *Ant.* Jet, dark.
**Hoax,** *Syn.* Trick, dupe, befool. *Ant.* Direct, guide.
**Holy,** *Syn.* Divine, pious, pure. *Ant.* Evil, profane.
**Homage,** *Syn.* Worship, fealty. *Ant.* Treason.
**Homely,** *Syn.* Uncomely, coarse, plain. *Ant.* Refined, courtly, beautiful, handsome.
**Honest,** *Syn.* Proper, upright. *Ant.* Wrong, vicious.
**Honesty,** *Syn.* Rectitude, honour, sincerity, integrity. *Ant.* Fraud, deception, trickery.
**Honour,** *Syn.* Esteem, celebrate, respect. *Ant.* Infamy, dishonour, disgrace, slight, disrespect.
**Hoot,** *Syn.* Denounce, hiss. *Ant.* Honour, cheer.
**Horrible,** *Syn.* Hideous, fearful. *Ant.* Fair, lovely.
**Horror,** *Syn.* Dread, fear. *Ant.* Attraction, love.
**Hospitable,** *Syn.* Sociable. *Ant.* Retired, unsociable.
**Hostage,** *Syn.* Surety, bail. *Ant.* Conqueror, dictator.
**Hound,** *Syn.* Hunt, pursue. *Ant.* Spare, discard.
**Hoyden,** *Syn.* Tomboy, romp. *Ant.* Prude.
**Huddle,** *Syn.* Confuse, mix. *Ant.* Arrange, assort.

**Human,** *Syn.* Civilized, rational, anthropological. *Ant.* Irrational, beastly, inhuman.
**Humane,** *Syn.* Tender, kind. *Ant.* Cruel, unkind.
**Humble,** *Syn.* Modest, lowly. *Ant.* Proud, lofty.
**Humid,** *Syn.* Wet, moist. *Ant.* Parched, dry.
**Humorous,** *Syn.* Funny, witty. *Ant.* Serious, grave.
**Hybrid,** *Syn.* Mongrel, mixed. *Ant.* Unmixed, pure.
**Hypocritical,** *Syn.* Sanctimonious, pharisaical. *Ant.* Genuine, sincere, plain-spoken.

## I

**Idea,** *Syn.* Opinion, thought, fancy, notion. *Ant.* Thing, subject, form, object.
**Ideal,** *Syn.* Fanciful, unreal, poetical, mental. *Ant.* Actual, real, visible, physical.
**Identical,** *Syn.* Particular, same. *Ant.* Different.
**Identify,** *Syn.* Verify, unite. *Ant.* Disunite, divide.
**Identity,** *Syn.* Sameness, unity. *Ant.* Difference.
**Idiocy,** *Syn.* fatuity, insanity. *Ant.* Sense, sanity.
**Idiom,** *Syn.* Turn, phrase. *Ant.* Barbarism, solecism.
**Idiot,** *Syn.* Fool, Imbecile. *Ant.* Sage, luminary.
**Idle,** *Syn.* Unoccupied. *Ant.* Occupied, tilled.
**Idolize,** *Syn.* Adore, worship. *Ant.* Execrate, loathe.
**Ignominy,** *Syn.* Shame, Disgrace. *Ant.* Distinction.
**Ignorant,** *Syn.* Uninformed. *Ant.* Learned, wise.
**Ignore,** *Syn.* Overlook, disown. *Ant.* Notice, own.
**Illusion,** *Syn.* Myth, vision. *Ant.* Body, form.
**Illusive,** *Syn.* False, unreal. *Ant.* True, real.
**Illustrate,** *Syn.* Paint, embody, demonstrate. *Ant.* Misrepresent, confuse, obscure.
**Illustrious,** *Syn.* Noble, brilliant. *Ant.* Inglorious.
**Image,** *Syn.* Picture, copy. *Ant.* Truth, person.
**Imagery,** *Syn.* Fancy, poetry. *Ant.* Fact, prose.
**Imagine,** *Syn.* Fancy, conceive. *Ant.* Verity, prove. [shrewd.
**Imbecile,** *Syn.* Idiotic, foolish. *Ant.* Clever,
**Imbibe,** *Syn.* Drink, learn. *Ant.* Reject, discard.
**Imbrue,** *Syn.* Soak, wet. *Ant.* Drain, wipe, dry.
**Imbue,** *Syn.* Stain, dye. *Ant.* Purge, clear.
**Immaculate,** *Syn.* Virgin, pure. *Ant.* Sinful, impure. [tive.
**Immanent,** *Syn.* Internal, innate. *Ant.* Transi-
**Immaterial,** *Syn.* Insignificant, unimportant. *Ant.* Important, essential, material.
**Immature,** *Syn.* Crude, unripe. *Ant.* Mature, ripe.
**Immediate,** *Syn.* Next, direct. *Ant.* Future, remote.
**Immemorial,** *Syn.* Ancient. *Ant.* Fresh, recent.
**Immerse,** *Syn.* Sink, dip. *Ant.* Parch, drain, dry.
**Immigration,** *Syn.* Colonization. *Ant.* Exodus.
**Imminent,** *Syn.* Impending. *Ant.* Escaped, staved off.
**Immodest,** *Syn.* Indecorous. *Ant.* Decorous, modest. [spoil.
**Immolate,** *Syn.* Sacrifice. *Ant.* Pamper, feed.
**Immunity,** *Syn.* Freedom, exemption. *Ant.* Impost. [cherub.
**Imp,** *Syn.* Demon, devil, brat. *Ant.* Angel,
**Impact,** *Syn.* Collision, contact. *Ant.* Shave, removal.
**Impair,** *Syn.* Enfeeble, injure. *Ant.* Improve.
**Impassable,** *Syn.* Immortal, immaterial. *Ant.* Mortal, passable.
**Impassioned,** *Syn.* Glowing. *Ant.* Impassive.
**Impeach,** *Syn.* Indict, accuse. *Ant.* Abet, acquit.
**Impediment,** *Syn.* Stumbling block. *Ant.* Help, aid.
**Impend,** *Syn.* Threaten, hover. *Ant.* Spare, pass.
**Imperative,** *Syn.* Urgent. *Ant.* Mild, lenient.
**Imperial,** *Syn.* Royal, majestic. *Ant.* Mean, slavish.
**Imperious,** *Syn.* Lordly, arrogant. *Ant.* Mild, gentle.
**Impersonate,** *Syn.* Enact, act. *Ant.* Expose, detect. [pious.
**Impious,** *Syn.* Wicked, profane. *Ant.* Godly,
**Implement,** *Syn.* Instrument. *Ant.* Art, work.
**Implicate,** *Syn.* Compromise, connect. *Ant.* Acquit.
**Implicit,** *Syn.* Indicated. *Ant.* Expressed.
**Imply,** *Syn.* Hint, mean. *Ant.* State, declare.
**Import,** *v. Syn.* Bring, introduce. *Ant.* Banish, export.—*n. Syn.* Tenor, drift. *Ant.* Statement.
**Important,** *Syn.* Grave, dignified, great, leading, main. *Ant.* Minor, mean, petty, trivial.
**Importune,** *Syn.* Press, solicit. *Ant.* Surrender.
**Impose,** *Syn.* Set, fix, lay. *Ant.* Disburden, remove.
**Imposing,** *Syn.* Grand, striking. *Ant.* Undignified.
**Impost,** *Syn.* Duty, toll, tax. *Ant.* Exemption.
**Impostor,** *Syn.* Knave, cheat. *Ant.* Undeceiver.
**Impotent,** *Syn.* Feeble, weak. *Ant.* Vigorous, strong.
**Improvident,** *Syn.* Prodigal. *Ant.* Saving, careful.
**Impudence,** *Syn.* Assurance. *Ant.* Abasement.
**Impugn,** *Syn.* Oppose, gainsay. *Ant.* State, declare.
**Impulse,** *Syn.* Force, push. *Ant.* Repulse, rebuff.
**Impute,** *Syn.* Charge, refer. *Ant.* Retract, withdraw.
**Inadvertent,** *Syn.* Heedless, careless, inobservant. *Ant.* Accurate, observant, careful.
**Inalienable,** *Syn.* Entailed. *Ant.* Unentailed.
**Inane,** *Syn.* Feeble, vapid, empty. *Ant.* Powerful.
**Inanition,** *Syn.* Exhaustion. *Ant.* Fulness.
**Inanity,** *Syn.* Vacuity. *Ant.* Significance.
**Inappreciable,** *Syn.* Imperceptible, infinitesimal. *Ant.* Calculable, appreciable, perceptible.
**Inarticulate,** *Syn.* Mute, dumb. *Ant.* Articulated.
**Inaudible,** *Syn.* Muffled, low. *Ant.* Loud, clear.
**Inaugurate,** *Syn.* Install, initiate. *Ant.* Divert.
**Incandescence,** *Syn.* Glow. *Ant.* Iciness.
**Incantation,** *Syn.* Charm, spell. *Ant.* Exorcism.
**Incapable,** *Syn.* Feeble, weak. *Ant.* Qualified.
**Incarcerate,** *Syn.* Imprison. *Ant.* Release, liberate.
**Incarnation,** *Syn.* Impersonation, embodiment. *Ant.* Abstraction, spiritualization. [tion.
**Incendiarism,** *Syn.* Setting on fire. *Ant.* Extinc-
**Incense,** *Syn.* Provoke, inflame. *Ant.* Conciliate.
**Incentive,** *Syn.* Spur, motive. *Ant.* Discouragement.
**Incidence,** *Syn.* Stroke, impact. *Ant.* Rebound.
**Incidental,** *Syn.* Occasional. *Ant.* Systematic.
**Inclement,** *Syn.* Rough, stormy. *Ant.* Genial, mild.
**Incline,** *v. Syn.* Dispose, lean. *Ant.* Indispose, rise.
**Inclusive,** *Syn.* Comprehensive. *Ant.* Exclusive.
**Incoherence,** *Syn.* Disruption. *Ant.* Continuity.
**Incombustible,** *Syn.* Aphlogistic, uninflammable. *Ant.* Combustible, inflammable.
**Incommunicable,** *Syn.* Intransferable, inalienable. *Ant.* Communicable, alienable, transferable.
**Incomparable,** *Syn.* Matchless. *Ant.* Average
**Incompassionate,** *Syn.* Unmerciful, hard-hearted. *Ant.* Merciful, compassionate.
**Incomprehensible,** *Syn.* Mysterious. *Ant.* Plain.
**Inconsolable,** *Syn.* Comfortless. *Ant.* Hopeful.
**Inconstant,** *Syn.* Variable. *Ant.* Changeless.
**Incontestable,** *Syn.* Unquestionable, indisputable. *Ant.* Problematical, questionable.
**Incrust,** *Syn.* Plaster, coat. *Ant.* Abrade, scrape.
**Inculcate,** *Syn.* Instil, urge. *Ant.* Abjure, suggest.
**Incumbent,** *Syn.* Urgent, pressing. *Ant.* Discretional.
**Incur,** *Syn.* Run, meet. *Ant.* Shun, avoid.
**Incurable,** *Syn.* Irremediable. *Ant.* Removable.
**Incursion,** *Syn.* Raid, foray. *Ant.* Settlement.
**Indecorum,** *Syn.* Impropriety. *Ant.* Correctness.
**Indefatigable,** *Syn.* Unwearied. *Ant.* Indifferent.
**Indefeasible,** *Syn.* Unalterable. *Ant.* Reversible.
**Indelible,** *Syn.* Ineffaceable. *Ant.* Transient.
**Indelicate,** *Syn.* Coarse. *Ant.* Modest, nice.
**Indemnify,** *Syn.* Compensate. *Ant.* Mulct, fine.
**Indicate,** *Syn.* Mark, show. *Ant.* Contradict.
**Indifference,** *Syn.* Carelessness. *Ant.* Eagerness.
**Indigent,** *Syn.* Needy, poor. *Ant.* Wealthy.
**Indignation,** *Syn.* Ire, anger. *Ant.* Gratification.
**Indignity,** *Syn.* Slight, insult. *Ant.* Respect.
**Indiscretion,** *Syn.* Slip, lapse. *Ant.* Guiltlessness.
**Indiscriminate,** *Syn.* Confused, mixed. *Ant.* Sorted, arranged.
**Indispensable,** *Syn.* Necessary. *Ant.* Unessential.
**Indite,** *Syn.* Compose, dictate. *Ant.* Transcribe.
**Individual,** *Syn.* Particular. *Ant.* Common, general.
**Indivisible,** *Syn.* Inseparable. *Ant.* Separable.
**Indomitable,** *Syn.* Invincible. *Ant.* Languid.
**Indorse,** *Syn.* Approve, sanction. *Ant.* Repudiate.
**Induce,** *v. Syn.* Move, urge, impel, persuade, cause. *Ant.* Dissuade, disincline, prevent.
**Indulgent,** *Syn.* Forbearing. *Ant.* Rough, harsh.
**Ineffable,** *Syn.* Exquisite. *Ant.* Common.
**Ineffectual,** *Syn.* Idle, vain. *Ant.* Successful.
**Inert,** *Syn.* Sluggish, lazy. *Ant.* Brisk, alert.
**Inevitable,** *Syn.* Unavoidable. *Ant.* Uncertain.

**Inexhaustible,** *Syn.* Unlimited. *Ant.* Limited.
**Inexorable,** *Syn.* Unrelenting. *Ant.* Clement.
**Inexpedient,** *Syn.* Undesirable. *Ant.* Advisable.
**Inexplicable,** *Syn.* Mysterious. *Ant.* Explicable.
**Infamous,** *Syn.* Disgraceful. *Ant.* Honourable.
**Infatuation,** *Syn.* Madness. *Ant.* Sagacity.
**Infection,** *Syn.* Poison, taint. *Ant.* Purification.
**Infer; Syn.** Deduce, gather. *Ant.* Decide, conclude.
**Inference,** *Syn.* Deduction. *Ant.* Proposition.
**Infest,** *Syn.* Disturb, molest, annoy, tease, trouble. *Ant.* Refresh, gratify, comfort.
**Infidel,** *Syn.* Freethinker, heretic. *Ant.* Believer.
**Infinitesimal,** *Syn.* Microscopic, inappreciable. *Ant.* Immeasurable, enormous.
**Inflame,** *Syn.* Enrage, exasperate, rouse, excite, fire. *Ant.* Quiet, cool, quench.
**Inflate,** *Syn.* Expand, distend. *Ant.* Squeeze.
**Inflection,** *Syn.* Flexion, bend. *Ant.* Straightness.
**Inflict,** *Syn.* Put, impose. *Ant.* Spare, remove.
**Influence,** n. *Syn.* Weight, sway, control, effect. *Ant.* Neutrality, Ineffectiveness.
**Influential,** *Syn.* Powerful, potent. *Ant.* Weak.
**Infringe,** *Syn.* Transgress, violate, break. *Ant.* Preserve, conserve, observe.
**Infuse,** *Syn.* Impart, inspire, instil, steep. *Ant.* Divert, drain, dry, strain.
**Ingenious,** *Syn.* Ready, clever. *Ant.* Unskilful.
**Ingenuous,** *Syn.* Open, honourable, sincere, frank. *Ant.* Insincere, sly, reserved, mean.
**Inglorious,** *Syn.* Unrenowned. *Ant.* Illustrious.
**Ingratiate,** *Syn.* Insinuate. *Ant.* Estrange.
**Ingredient,** *Syn.* Element. *Ant.* Residuum, refuse.
**Inhabit,** *Syn.* Occupy, live in. *Ant.* Migrate.
**Inhale,** *Syn.* Absorb, inspire. *Ant.* Exhale.
**Inherent,** *Syn.* Inborn, innate. *Ant.* Extraneous.
**Inherit,** *Syn.* Possess, occupy. *Ant.* Gain, earn.
**Inhibit,** *Syn.* Debar, hinder. *Ant.* Incite, urge.
**Inimitable,** *Syn.* Matchless. *Ant.* Mediocre, ordinary.
**Iniquity,** *Syn.* Crime, sin. *Ant.* Integrity.
**Initiative,** *Syn.* Start. *Ant.* Rear, wake.
**Injunction,** *Syn.* Command, order, mandate. *Ant.* Suggestion, request.
**Injurious,** *Syn.* Prejudicial. *Ant.* Helpful.
**Innovation,** *Syn.* Alteration. *Ant.* Conservation.
**Inoculate,** *Syn.* Instil, imbue, insert, tinge. *Ant.* Divest, prune, disabuse.
**Inordinate,** *Syn.* Extravagant. *Ant.* Just, regular.
**Inorganic,** *Syn.* Inanimate. *Ant.* Organic.
**Insatiable,** *Syn.* Greedy, voracious. *Ant.* Delicate.
**Inscribe,** *Syn.* Mark, label. *Ant.* Cancel, erase.
**Inscrutable,** *Syn.* Insolvable. *Ant.* Self-evident.
**Insensate,** *Syn.* Stolid, brute. *Ant.* Impressible.
**Insidious,** *Syn.* Sly, wily. *Ant.* Undesigning.
**Insinuate,** *Syn.* Ingratiate, introduce. *Ant.* Retract.
**Insipid,** *Syn.* Stupid, flat. *Ant.* Racy, tasty.
**Insist,** *Syn.* Urge, stand. *Ant.* Forgo, yield.
**Insolent,** *Syn.* Rude, scurrilous, offensive, abusive. *Ant.* Courteous, polite.
**Insolvent,** *Syn.* Bankrupt. *Ant.* Thriving, flush.
**Inspiration,** *Syn.* Impulse. *Ant.* Elaboration.
**Inspire,** *Syn.* Cheer, animate. *Ant.* Discourage.
**Instability,** *Syn.* Inconstancy, fickleness, wavering, mutability. *Ant.* Constancy, firmness, stability.
**Install,** *Syn.* Invest, establish. *Ant.* Strip, deprive.
**Instance,** *Syn.* Case, example, prompting, request. *Ant.* Principle, rule, warning. [Time, period.
**Instant,** *Syn.* Second, moment, urgent. *Ant.*
**Instil,** *Syn.* Introduce, infuse, pour. *Ant.* Remove, extract, strain, drain.
**Instinct,** *Syn.* Inclination, intuition, impulse. *Ant.* Judgment, experience, reason.
**Institute,** *Syn.* Begin, erect, found. *Ant.* Subvert, disestablish.
**Insubordinate,** *Syn.* Rebellious. *Ant.* Submissive.
**Insufferable,** *Syn.* Intolerable. *Ant.* Endurable.
**Insult,** v. *Syn.* Outrage, affront. *Ant.* Compliment.
**Insupportable,** *Syn.* Unbearable. *Ant.* Endurable.
**Insure,** *Syn.* Secure, provide. *Ant.* Imperil.
**Insurrection,** *Syn.* Revolt, mutiny, rising, riot. *Ant.* Order, peace, law.
**Intact,** *Syn.* Unhurt, safe, pure. *Ant.* Hurt, corrupt, foul.
**Integrate,** *Syn.* Incorporate. *Ant.* Disintegrate.
**Integrity,** *Syn.* Probity, honesty. *Ant.* Unfairness.
**Integument,** *Syn.* Crust, covering. *Ant.* Exposure, bareness, nudity.
**Intellectual,** *Syn.* Cultured, learned, mental. *Ant.* Unreasoning, unintellectual.
**Intensity,** *Syn.* Strain, force. *Ant.* Coolness.
**Intent,** n. *Syn.* Aim, design. *Ant.* Fate, lot.—adj. *Syn.* Fixed, eager. *Ant.* Indifferent.
**Intentional,** *Syn.* Studied, deliberate, purposed. *Ant.* Unintentional, casual, undesigned.
**Intercede,** *Syn.* Plead, mediate. *Ant.* Abandon.
**Intercept,** *Syn.* Stop, arrest. *Ant.* Forward, send.
**Interdict,** *Syn.* Forbid, debar, prohibit. *Ant.* Grant, concede, yield.
**Interest,** n. *Syn.* Share, profit, business, concern. *Ant.* Indifference, loss, disadvantage, unconcern.
**Interloper,** *Syn.* Intruder. *Ant.* Member. [ing.
**Intermediate,** *Syn.* Intervening. *Ant.* Surround-
**Interminable,** *Syn.* Unending. *Ant.* Momentary.
**Intermission,** *Syn.* Interruption. *Ant.* Continuance.
**Intermit,** *Syn.* Break, relax. *Ant.* Urge, continue.
**Internecine,** *Syn.* Deadly. *Ant.* Desultory.
**Interpolate,** *Syn.* Introduce. *Ant.* Delete.
**Interpose,** *Syn.* Interfere. *Ant.* Remove, retire.
**Interpret,** *Syn.* Solve, explain. *Ant.* Misinterpret.
**Intersperse,** *Syn.* Interlard. *Ant.* Expunge.
**Interstice,** *Syn.* Crack, cleft. *Ant.* Stop-gap, seam.
**Interval,** *Syn.* Season, period. *Ant.* Continuity.
**Intervention,** *Syn.* Interposition, interference. *Ant.* Non-interference, non-intervention.
**Intestate,** *Syn.* Leaving no will. *Ant.* Bequeathed.
**Intestine,** *Syn.* Civil, interior, bowel. *Ant.* Foreign.
**Intimate,** v. *Syn.* Tell, impart. *Ant.* Withhold.—adj. *Syn.* Near, close. *Ant.* Unfamiliar.
**Intimidate,** *Syn.* Scare, deter. *Ant.* Encourage.
**Intoxication,** *Syn.* Inebriety, ecstasy, delirium, venom. *Ant.* Ebriety, sanity, antidote.
**Intrepid,** *Syn.* Doughty, brave, fearless. *Ant.* Timid, fearful, cowardly.
**Intricacy,** *Syn.* Entanglement. *Ant.* Obviousness.
**Intricate,** *Syn.* Complicated. *Ant.* Plain, uninvolved.
**Intrigue,** *Syn.* Plot, cabal. *Ant.* Openness, force.
**Intrinsic,** *Syn.* Real, true. *Ant.* Assumed, pretended.
**Introduction,** *Syn.* Prelude, initiative, preface, leading. *Ant.* End, completion, conclusion.
**Intuition,** *Syn.* Insight, instinct. *Ant.* Experience, learning, information.
**Inundate,** *Syn.* Flood, deluge, overflow. *Ant.* Dry, reclaim, drain.
**Invalid,** *Syn.* Feeble, sick. *Ant.* Well, strong.
**Invective,** *Syn.* Reproach, railing, abuse, obloquy. *Ant.* Eulogy, commendation.
**Inveigh,** *Syn.* Abuse, attack, denounce. *Ant.* Laud, defend, advocate.
**Inversion,** *Syn.* Transposition, alteration, reversal. *Ant.* Fixity, permanence, stability. [covery.
**Investigation,** *Syn.* Study, search. *Ant.* Clue, dis-
**Inveterate,** *Syn.* Habitual, chronic, confirmed. *Ant.* Unformed, incipient.
**Invidious,** *Syn.* Offensive, hateful, unfair. *Ant.* Just, due, fair. [weak.
**Invincible,** *Syn.* Irresistible. *Ant.* Powerless,
**Inviolable,** *Syn.* That cannot be injured. *Ant.* Frail, weak. [rendered.
**Inviolate,** *Syn.* Stainless, unbroken. *Ant.* Sur-
**Inviting,** *Syn.* Attracting. *Ant.* Repelling.
**Invoke,** *Syn.* Call, summon. *Ant.* Defy, deprecate.
**Involved,** *Syn.* Complicated. *Ant.* Unconcerned.
**Iota,** *Syn.* Atom, tittle, jot. *Ant.* Mass, whole.
**Irk,** *Syn.* Jade, bore, tire. *Ant.* Refresh, rivet.
**Irony,** *Syn.* Rally, quiz. *Ant.* Seriousness.
**Irrepressible,** *Syn.* Ungovernable. *Ant.* Bound down, governable.
**Irresponsible,** *Syn.* Unaccountable. *Ant.* Responsible, binding.
**Irrigate,** *Syn.* Wet, water. *Ant.* Drain, dry.
**Irritate,** *Syn.* Provoke, tease. *Ant.* Caress, soothe.
**Irruption,** *Syn.* Incursion. *Ant.* Sally, excursion.
**Isolate,** *Syn.* Separate, insulate. *Ant.* Associate.
**Issue,** *Syn.* End, effect. *Ant.* Law, cause.
**Iteration,** *Syn.* Recurrence. *Ant.* Single statement.
**Itinerant,** *Syn.* Wandering. *Ant.* Local, fixed.

## J

**Jade,** *Syn.* Wear, weary, tire. *Ant.* Bait, recruit.
**Jangle,** n. *Syn.* Quarrel, wrangle, babel, jargon. *Ant.* Discourse, debate, argument.
**Jargon,** *Syn.* Lingo, cant, slang, gibberish. *Ant.* Oration, discourse, literature, speech.
**Jaundiced,** *Syn.* Prejudiced. *Ant.* Unbiassed.
**Jealousy,** *Syn.* Suspicion. *Ant.* Generousness.

**Jeer**, *Syn.* Scoff, taunt, sneer. *Ant.* Cringe, fawn.
**Jeopardy**, *Syn.* Risk, peril. *Ant.* Security.
**Jest**, *Syn.* Sport, fun, joke. *Ant.* Seriousness.
**Jocose**, *Syn.* Merry, funny. *Ant.* Melancholy.
**Jocund**, *Syn.* Joyful, sportive, gay, jovial, merry. *Ant.* Doleful, rueful, woeful, grave, dull.
**Jollification**, *Syn.* Fun, festivity. *Ant.* Soberness.
**Jostle**, *Syn.* Jolt, jog, push. *Ant.* Avoid, keep off.
**Jot**, *Syn.* Whit, fraction, bit, atom, trifle, cipher, tittle. *Ant.* Lot, light, power, deal.
**Jovial**, *Syn.* Genial, jolly. *Ant.* Gloomy, sullen.
**Jubilant**, *Syn.* Triumphant. *Ant.* Penitential.
**Jubilee**, *Syn.* Feast, holiday. *Ant.* Humiliation.
**Judgment**, *Syn.* Award, opinion, sense, sagacity, decision. *Ant.* Evidence, pleading, argument.
**Judicious**, *Syn.* Discreet, prudent, wise. *Ant.* Blind, rash, silly, unwise, foolish.
**Juggle**, *Syn.* Mystify, beguile, trick, conjure. *Ant.* Lead, guide, enlighten.
**Junction**, *Syn.* Alliance, combination, joining. *Ant.* Dispersion, division, separation.
**Jungle**, *Syn.* Brake, thicket. *Ant.* Open area.
**Jurisdiction**, *Syn.* Administration. *Ant.* Independence.
**Just**, *Syn.* Fair, true. *Ant.* Disproportioned, inexact.
**Justice**, *Syn.* Desert, right, fairness, equity. *Ant.* Unfairness, partiality, wrong, injustice.
**Justify**, *Syn.* Absolve, defend, clear. *Ant.* Condemn.

## K

**Keen**, *Syn.* Acute, eager. *Ant.* Dull, indifferent.
**Keeping**, *Syn.* Guardianship, care, custody. *Ant.* Loss, neglect.
**Ken**, *Syn.* Cognizance, survey, view. *Ant.* Oversight.
**Key**, *Syn.* Solution, explanation, guide, clew. *Ant.* Puzzle. [unrelated.
**Kin**, *Syn.* Class, sort, kind, race. *Ant.* Stranger,
**Kind**, n. *Syn.* Breed, class, sort, species, genus, style. *Ant.* (see Dissimilarity, Kin).—a. *Syn.* Gentle.
**Kindle**, *Syn.* Ignite, light. *Ant.* Extinguish.
**Kindred**, a. *Syn.* Related, akin. *Ant.* Uncongenial.
**Kingly**, *Syn.* Regal, royal. *Ant.* Democratic.
**Knave**, *Syn.* Cheat, rogue. *Ant.* Gull, dupe.
**Knot**, *Syn.* Group, band, bond, tie. *Ant.* Cavity, smoothness, crowd, multitude, solution.
**Knotty**, *Syn.* Hard, tough. *Ant.* Easy, simple, plain.
**Knowing**, *Syn.* Proficient, acute, sharp, shrewd. *Ant.* Silly, stolid, gullible, innocent, dull, simple.
**Knowledge**, *Syn.* Understanding, apprehension. *Ant.* Misunderstanding, misapprehension, ignorance.

## L

**Laborious**, *Syn.* Diligent, assiduous. *Ant.* Lazy, idle.
**Labour**, *Syn.* Effort, work. *Ant.* Rest, ease.
**Labyrinth**, *Syn.* Maze. *Ant.* Uninvolved, clue.
**Lack**, n. *Syn.* Need, want. *Ant.* Sufficiency.—v. *Syn.* Need, want. *Ant.* Have abundance of.
**Laconic**, *Syn.* Curt, terse. *Ant.* Wordy, prolix.
**Lament**, *Syn.* Regret, deplore. *Ant.* Welcome.
**Languid**, *Syn.* Weary, faint. *Ant.* Active, strong.
**Languish**, *Syn.* Sink, pine. *Ant.* Thrive, luxuriate.
**Languor**, *Syn.* Lassitude. *Ant.* Vigour, strength.
**Lank**, *Syn.* Loose, lean. *Ant.* Full, tense.
**Lapse**, *Syn.* Progress, error *Ant.* Uprightness.
**Lascivious**, *Syn.* Lewd, lustful. *Ant.* Chaste, pure.
**Last**, v. *Syn.* Live, endure. *Ant.* Fail, cease.—a. *Syn.* Remotest, final. *Ant.* Next, first.
**Lasting**, *Syn.* Durable, perpetual, enduring. *Ant.* Perishable, passing.
**Latent**, *Syn.* Occult, secret, implicit, hidden. *Ant.* Manifest, apparent, visible.
**Lateral**, *Syn.* Incidental, resultant, oblique. *Ant.* Direct, lineal.
**Launch**, *Syn.* Hurl, propel. *Ant.* Repress, retain.
**Lavish**, a. *Syn.* Prodigal, profuse. *Ant.* Niggardly.—v. *Syn.* Waste, heap, pour. *Ant.* Keep, store.
**Lawful**, *Syn.* Rightful, fair, legal. *Ant.* Unfair, wrong, illegal.
**Lawless**, *Syn.* Violent, savage, illegal, wild. *Ant.* Honest, orderly, loyal, peaceful, legal.
**Lawyer**, *Syn.* Advocate, counsellor. *Ant.* Client.
**Lax**, *Syn.* Vague, loose. *Ant.* Rigid, concise.
**League**, *Syn.* Coalition, union, alliance, bond. *Ant.* Divorce, disunion, dissolution.
**Least**, *Syn.* Last, lowest. *Ant.* First, greatest.
**Leave**, n. *Syn.* Concession, liberty. *Ant.* Restriction.
**Legal**, *Syn.* Allowable, lawful. *Ant.* Illegal.
**Legend**, *Syn.* Fable, myth. *Ant.* Fact, history.
**Legible**, *Syn.* Calligraphic, decipherable, plain. *Ant.* Illegible, undecipherable, obscure.
**Legitimate**, *Syn.* Lawful, fair. *Ant.* Illegitimate.
**Leisurely**, *Syn.* Easy. *Ant.* Hurried, eager.
**Lend**, *Syn.* Loan, advance. *Ant.* Retract, resume.
**Lengthy**, *Syn.* Tedious, diffuse. *Ant.* Curt, concise.
**Let**, *Syn.* Suffer, allow. *Ant.* Hinder, prevent.
**Lethal**, *Syn.* Fatal, mortal. *Ant.* Tonic, restorative.
**Lethargy**, *Syn.* Swoon, stupor. *Ant.* Vigilance.
**Level**, *Syn.* Flat. *Ant.* Inequality.—v. *Syn.* Raze, roll, plane. *Ant.* Roughen.—a. *Syn.* Even, flat, plain. *Ant.* Broken, uneven, rough.
**Levy**, *Syn.* Impose, raise. *Ant.* Surrender, forgo.
**Libellous**, *Syn.* Calumnious, defamatory. *Ant.* Laudatory.
**Liberal**, *Syn.* Plentiful, tolerant, profuse, free. *Ant.* Scanty, grasping, mean, low.
**Libertine**, *Syn.* Debauchee. *Ant.* Saint, ascetic.
**Liberty**, *Syn.* Exemption, insult, privilege, freedom. *Ant.* Necessity, constraint, slavery.
**Licentious**, *Syn.* Profligate, lax, rakish, voluptuous. *Ant.* Rigid, ascetic, sober, strict.
**Licit**, *Syn.* Legal, lawful. *Ant.* Unfair, illegal.
**Life**, *Syn.* Activity, spirit, society, vitality. *Ant.* Lifelessness, torpor, death, decease.
**Ligament**, *Syn.* Strap, brace, band, muscle. *Ant.* Breach, splinter, dislocation.
**Like**, a. *Syn.* Similar, equal. *Ant.* Dissimilar.—v. *Syn.* Enjoy, approve. *Ant.* Abhor, detest, dislike, hate.
**Likeness**, *Syn.* Picture, effigy, image, portrait, copy, similarity. *Ant.* Original, dissimilarity.
**Limpid**, *Syn.* Clear, pure. *Ant.* Muddy, opaque.
**Line**, *Syn.* Sequence, course, direction, thread, cord. *Ant.* Solution, divergency, breadth.
**Lineage**, *Syn.* Race, descent. *Ant.* Source, ancestor.
**Lineament**, *Syn.* Feature, line. *Ant.* Visage, face.
**Linear**, *Syn.* Straight, direct. *Ant.* Zigzag, divergent.
**Linger**, *Syn.* Loiter, tarry. *Ant.* Speed, haste.
**Liquid**, *Syn.* Smooth, clear, limpid, soft, fluid. *Ant.* Harsh, dry, hard, congealed, solid.
**Listless**, *Syn.* Supine, vacant. *Ant.* Active, eager.
**Literal**, *Syn.* Real, exact. *Ant.* Unreal, inexact.
**Literary**, *Syn.* Scholarly. *Ant.* Unscholarly.
**Lithe**, *Syn.* Agile, pliant. *Ant.* Inflexible.
**Litigious**, *Syn.* Quarrelsome. *Ant.* Acquiescent.
**Litter**, *Syn.* Mislay, scatter. *Ant.* Clean, tidy.
**Little**, *Syn.* Petty, mean, trivial, weak, slight, brief. *Ant.* Noble, much, full, huge, large.
**Livelihood**, *Syn.* Living, support. *Ant.* Beggary, want, privation.
**Lively**, *Syn.* Quick, vivid, eager, keen, brisk. *Ant.* Listless, dull, torpid, lifeless. [dom.
**Livery**, *Syn.* Badge, garb. *Ant.* Immunity, free-
**Load**, n. *Syn.* Drag, weight. *Ant.* Solace, support.—v. *Syn.* Oppress, cargo, lade, charge, burden. *Ant.* Relieve, lighten, unload, discharge.
**Loan**, *Syn.* Mortgage, advance. *Ant.* Resumption, recall.
**Locate**, *Syn.* Fix, settle, establish, place. *Ant.* Remove, dislodge. [rest.
**Locomotion**, *Syn.* Passage, travel. *Ant.* Abode.
**Lofty**, *Syn.* Tall, majestic, eminent, dignified, high. *Ant.* Affable, mean, stunted, low.
**Logical**, *Syn.* Reasonable. *Ant.* Fallacious.
**Loll**, *Syn.* Recline, lounge. *Ant.* Stir, rise.
**Lonesome**, *Syn.* Solitary. *Ant.* Sociable.
**Longing**, *Syn.* Craving, desire. *Ant.* Indifference.
**Loom**, *Syn.* Gloam, lower. *Ant.* Fade, gale.
**Loose**, v. *Syn.* Let go, untie. *Ant.* Retain, hold, tie.—a. *Syn.* Vague, sparse, detached, unbound. *Ant.* Strict, exact, close, secured, tight, tied.
**Lop**, *Syn.* Curtail, prune. *Ant.* Trail, grow.
**Lordship**, *Syn.* Jurisdiction. *Ant.* Subjection.
**Lose**, *Syn.* Drop, miss. *Ant.* Find, retain, keep.
**Lot**, *Syn.* Doom, fate, chance. *Ant.* Plan, law.
**Loth**, *Syn.* Unwilling. *Ant.* Willing, ready.
**Lovely**, *Syn.* Charming, beautiful. *Ant.* Hateful.
**Lower**, v. *Syn.* Humble, debase. *Ant.* Exalt, raise.—a. *Syn.* Inferior. *Ant.* Superior, higher.
**Lowering**, *Syn.* Overcast, dark. *Ant.* Clear.
**Lowly**, *Syn.* Meek, low, mean. *Ant.* Proud, lofty.
**Loyalty**, *Syn.* Fealty, fidelity. *Ant.* Unfaithfulness, treachery, betrayal.

**Lubricate,** *Syn.* Ease, oil. *Ant.* Clog, rust.
**Lucid,** *Syn.* Rational, distinct, clear, bright. *Ant.* Confused, obscure, opaque, dark.
**Lucre,** *Syn.* Greed, profit, gain. *Ant.* Refuse, loss.
**Ludicrous,** *Syn.* Droll, comic. *Ant.* Sad, grave.
**Lull,** v. *Syn.* Still, hush, quiet, call.—n. *Syn.* Subsidence. *Ant.* Tempest, storm, tumult.
**Lumber,** n. *Syn.* Rubbish, trash. *Ant.* Valuables.
**Luminary,** *Syn.* Light, sage. *Ant.* Dunce, fool.
**Lunacy,** *Syn.* Insanity, madness. *Ant.* Intelligence, sanity.
**Lunatic,** *Syn.* Maniac. *Ant.* Genius, philosopher.
**Lurid,** *Syn.* Wan, murky. *Ant.* Luminous, bright.
**Lurk,** *Syn.* Skulk, lie, hide. *Ant.* Show, rise.
**Luscious,** *Syn.* Delicious, sweet. *Ant.* Sharp, sour.
**Lustre,** *Syn.* Glory, splendour, brightness. *Ant.* Dullness, gloom.
**Lusty,** *Syn.* Strong, robust. *Ant.* Weak, infirm.
**Luxury,** *Syn.* Softness, effeminacy. *Ant.* Hardship, self-denial, asceticism.

## M

**Macerate,** *Syn.* Steep, rot. *Ant.* Swell, repair.
**Machination,** *Syn.* Artful, conspiracy, intrigue. *Ant.* Exposure, defeat, detection.
**Magisterial,** *Syn.* Authoritative, dictatorial. *Ant.* Undignified, docile, submissive.
**Magnanimous,** *Syn.* Lofty, high-minded, noble. *Ant.* Little-souled, mean.
**Magnificent,** *Syn.* Stately, august, superb, splendid, noble, grand. *Ant.* Paltry, little, mean, petty.
**Magnify,** *Syn.* Laud, enlarge. *Ant.* Decry, curtail.
**Maim,** *Syn.* Lame, mar. *Ant.* Mend, restore.
**Main,** *Syn.* Body, bulk. *Ant.* Section, portion.
**Mainly,** *Syn.* Principally. *Ant.* Slightly, partially.
**Maintenance,** *Syn.* Subsistence, defence, livelihood. *Ant.* Indigence, poverty.
**Majesty,** *Syn.* Stateliness, grandeur, dignity. *Ant.* Baseness, pettiness.
**Majority,** *Syn.* Bulk, priority. *Ant.* Inferiority.
**Maker,** *Syn.* Creator. *Ant.* Destroyer.
**Malady,** *Syn.* Disease, disorder. *Ant.* Well-being, health.
**Manacle,** *Syn.* Chain, fetter. *Ant.* Unchain, unbind.
**Manage,** *Syn.* Conduct, handle. *Ant.* Misconduct.
**Manageable,** *Syn.* Docile, easy. *Ant.* Impracticable.
**Management,** *Syn.* Skill, address, conduct, treatment. *Ant.* Misgovernment, misconduct.
**Mandate,** *Syn.* Order, edict. *Ant.* Suggestion.
**Manifest,** a. *Syn.* Open, plain. *Ant.* Indistinct.
**Manifold,** *Syn.* Various, numerous. *Ant* Scant, few.
**Manner,** *Syn.* Sort, style, mode. *Ant.* Project, work.
**Mannerism,** *Syn.* Affectation. *Ant.* Naturalness.
**Manœuvre,** *Syn.* Tactics, operation. *Ant.* Defeat.
**Mar,** *Syn.* Hurt, spoil. *Ant.* Mend, restore, make.
**Marauder,** *Syn.* Rover, invader. *Ant.* Sentry, guard.
**Margin,** *Syn.* Room, lip, edge. *Ant.* Centre, space.
**Marital,** *Syn.* Matrimonial. *Ant.* Celibate, single.
**Marked,** *Syn.* Conspicuous. *Ant.* Unnoticeable.
**Marrow,** *Syn.* Life, gist, pith. *Ant.* Pithlessness.
**Marsh,** *Syn.* Morass, bog, fen. *Ant.* Solid ground
**Martial,** *Syn.* Warlike, brave. *Ant.* Peaceful.
**Martyrdom,** *Syn.* Death for a creed. *Ant.* Renegation.
**Marvel,** *Syn.* Miracle, wonder. *Ant.* Unconcern.
**Mask,** n. *Syn.* Cover, ruse. *Ant.* Unmasking.—v. *Syn.* Disguise, screen. *Ant.* Detect, unmask.
**Mass,** *Syn.* Bulk, body, lump. *Ant.* Fragment.
**Massive,** *Syn.* Huge, solid. *Ant.* Airy, frail, petty.
**Master,** n. *Syn.* Owner, ruler. *Ant.* Pupil, servant.—v. *Syn.* Overpower. *Ant.* Fail, yield.
**Masterly,** *Syn.* Skilful, clear. *Ant.* Unskilful.
**Masticate,** *Syn.* Chew. *Ant.* Gobble, bolt.
**Matchless,** *Syn.* Incomparable. *Ant.* Ordinary.
**Matron,** *Syn.* Wife, woman. *Ant.* Maid, girl.
**Matter,** *Syn.* Body, subject, stuff, substance. *Ant.* Mental, spirit, intellect, mind.
**Matutinal,** *Syn.* Morning, early. *Ant.* Evening.
**Maxim,** *Syn.* Saying, adage. *Ant.* Quibble, sophism.
**Maximum,** *Syn.* Utmost, climax. *Ant.* Minimum.
**Meagre,** *Syn.* Lank, lean, thin. *Ant.* Fat, stout.
**Meanness,** *Syn.* Ungenerousness. *Ant.* Unselfishness.
**Means,** *Syn.* Resources. *Ant.* Object, end.
**Measure,** *Syn.* v. Value, gauge, mete. *Ant.* Misapportion, misdeal, misjudge.
**Mechanic,** *Syn.* Artificer, workman, craftsman. *Ant.* Unskilled worker.
**Mechanical,** *Syn.* Unreflective. *Ant.* Spirited.
**Mediation,** *Syn.* Arbitration, atonement. *Ant.* Neutrality.
**Medicate,** *Syn.* Drug, treat. *Ant.* Purify, analyse.
**Mediocrity,** *Syn.* Average, medium. *Ant.* Excellence.
**Meditate,** *Syn.* Plan, think. *Ant.* Enact, execute.
**Medley,** *Syn.* Mixture, jumble. *Ant.* Arrangement, classification.
**Meek,** *Syn.* Gentle, mild. *Ant.* Proud, bold.
**Meet,** *Syn.* Unite, engage. *Ant.* Avoid, pass.
**Mellow,** *Syn.* Mature, rich, ripe. *Ant.* Harsh, unripe.
**Melt,** *Syn.* Run, dissolve. *Ant.* Consolidate.
**Member,** *Syn.* Portion, part. *Ant.* Whole body.
**Memoir,** *Syn.* Life, record, biographical sketch.
**Memorable,** *Syn.* Prominent, remarkable, great. *Ant.* Ordinary, trifling, petty.
**Memorial,** *Syn.* Relic, record. *Ant.* Oblivion.
**Memory,** *Syn.* Remembrance. *Ant.* Forgetfulness.
**Menace,** n. *Syn.* Threatening, danger. *Ant.* Blessing.
**Mendacity,** *Syn.* Deception, falsehood. *Ant.* Candour.
**Mendicity,** *Syn.* Beggary. *Ant* Labour, industry.
**Menial,** *Syn.* Drudge, servile. *Ant.* Lordly, supreme.
**Mental,** *Syn.* Intellectual. *Ant.* Bodily, corporeal.
**Mephitic,** *Syn.* Miasmatic, malarious. *Ant.* Genial, balmy.
**Mercantile,** *Syn.* Retail, wholesale. *Ant.* Stagnant.
**Mercenary,** *Syn.* Selfish, sordid. *Ant.* Disinterested.
**Merchandise,** *Syn.* Wares, commodities, goods. *Ant.* Rubbish. [unkind.
**Merciful,** *Syn.* Kind, gracious. *Ant.* Harsh.
**Meridian,** *Syn.* Culmination. *Ant.* Base, depth.
**Merit,** *Syn.* Desert, worth. *Ant.* Fault, error.
**Mesh,** *Syn.* Snare, intricacy. *Ant.* Deliverance.
**Metaphor,** *Syn.* Image. *Ant.* Literalness, letter.
**Metaphorical,** *Syn.* Typical, figurative. *Ant.* Literal.
**Metaphysical,** *Syn.* Ideal, mental. *Ant.* Physical.
**Mete,** *Syn.* Measure. *Ant.* Misapportion, misdeal.
**Meteoric,** *Syn.* Flashing. *Ant.* Permanent.
**Method,** *Syn.* Rule, order. *Ant.* Unsystematic.
**Methodical,** *Syn.* Systematic. *Ant.* Unmethodical.
**Miasmatic,** *Syn.* Noxious, polluted. *Ant.* Untainted, fresh. [position.
**Mien,** *Syn.* Air, aspect, look. *Ant.* Being, dis-
**Might,** *Syn.* Power, force. *Ant.* Weakness.
**Migratory,** *Syn.* Wandering. *Ant.* Fixed, settled.
**Mimic,** *Syn.* Mock, ape. *Ant.* Lead, praise.
**Mincing,** *Syn.* Pedantic, affected. *Ant.* Bluff, unaffected.
**Mind,** *Syn.* Spirit, belief, soul. *Ant.* Aversion, object, conduct, body.
**Mingle,** *Syn.* Blend, mix. *Ant.* Sort, sift.
**Minion,** *Syn.* Pet, darling. *Ant.* Antipathy.
**Minister,** *Syn.* Curate, pastor, clergyman, official, servant. *Ant.* Head, master, monarch.
**Minor,** *Syn.* Junior, less. *Ant.* Senior, superior.
**Minstrel,** *Syn.* Bard, musician, singer. *Ant.* Street-player.
**Minute,** *Syn.* Exact, tiny. *Ant.* Broad, huge.
**Miraculous,** *Syn.* Supernatural. *Ant.* Natural.
**Miscellany,** *Syn.* Variety, mixture. *Ant.* Classification.
**Mischief,** *Syn.* Harm, hurt. *Ant.* Compensation.
**Mischievous,** *Syn.* Damaging, spiteful. *Ant.* Advantageous, beneficial.
**Miserable,** *Syn.* Forlorn. *Ant.* Happy.
**Misery,** *Syn.* Woe, heart-ache, wretchedness. *Ant.* Bliss, joy.
**Mission,** *Syn.* Message, errand. *Ant.* Usurpation.
**Mobile,** *Syn.* Variable, sensitive. *Ant.* Immovable.
**Mock,** *Syn.* Imitate, insult, flout, jeer. *Ant.* Admire, respect, welcome, salute.
**Model,** *Syn.* Copy, mould. *Ant.* Work, execution.
**Moderate,** *Syn.* Regulate, control. *Ant.* Immoderate, excessive.
**Modern,** *Syn.* New, present. *Ant.* Bygone, past.
**Modesty,** *Syn.* Humility, diffidence. *Ant.* Conceit.
**Modification,** *Syn.* Variation, revision, alteration. *Ant.* Stabilisation, retention.

**Modish,** *Syn.* Modern, stylish. *Ant.* Dowdy, old-fashioned.
**Molecule,** *Syn.* Monad, atom. *Ant.* Bulk, body.
**Molest,** *Syn.* Worry, disturb. *Ant.* Caress, soothe.
**Moment,** *Syn.* Weight, instant. *Ant.* Period, age.
**Monitor,** *Syn.* Warner, adviser. *Ant.* Deceiver.
**Monopoly,** *Syn.* Exclusiveness, appropriation, privilege. *Ant.* Competition, participation.
**Monotheism,** *Syn.* Deism. *Ant.* Polytheism.
**Monotony,** *Syn.* Tedium, sameness. *Ant.* Variation.
**Monster,** *Syn.* Deformity, prodigy. *Ant.* Gem, beauty.
**Moody,** *Syn.* Gloomy, sullen. *Ant.* Genial, blithe.
**Moot,** *Syn.* Argue, agitate. *Ant.* Hush, burke, stifle.
**Moral,** *Syn.* Ideal, mental. *Ant.* Material, physical.
**Morbid,** *Syn.* Unsound, diseased. *Ant.* Sound, healthy, wholesome.
**Morose,** *Syn.* Moody, sullen. *Ant.* Genial, kindly.
**Mortal,** *Syn.* Fatal, human. *Ant.* Celestial.
**Mortify,** *Syn.* Annoy, deaden. *Ant.* Heal, please.
**Motive,** *Syn.* Reason, purpose. *Ant.* Deed, action.
**Mould,** *Syn.* Form, fashion. *Ant.* Strain, distort.
**Muffle,** *Syn.* Enfold, shroud. *Ant.* Unfold, disclose.
**Muggy,** *Syn.* Misty, foggy. *Ant.* Bright, clear.
**Mulct,** n. *Syn.* Penalty, forfeiture, damages. *Ant.* Premium, reward, bonus.
**Multitude,** *Syn.* Swarm, crowd. *Ant.* Sprinkling.
**Mundane,** *Syn.* Earthly, secular. *Ant.* Supramundane, ethereal, spiritual, unworldly.
**Munificent,** *Syn.* Generous, liberal. *Ant.* Niggardly.
**Muse,** *Syn.* Think, ponder. *Ant.* Move, stir.
**Muster,** v. *Syn.* Rally, marshal. *Ant.* Dismiss.
**Mutable,** *Syn.* Fickle, mobile. *Ant.* Unchanging.
**Mute,** *Syn.* Dumb, silent. *Ant.* Loud, vocal.
**Mutinous,** *Syn.* Refractory, riotous. *Ant.* Submissive.
**Mutter,** *Syn.* Mumble, murmur. *Ant.* Exclaim.
**Mutual,** *Syn.* Common. *Ant.* One-sided.
**Mysterious,** *Syn.* Secret, dim. *Ant.* Plain, clear.
**Mystic,** *Syn.* Mysterious. *Ant.* Matter-of-fact, plain.
**Myth,** *Syn.* Parable, legend. *Ant.* History, fact.

## N

**Naked,** *Syn.* Nude, simple. *Ant.* Draped, robed.
**Narrate,** *Syn.* Report, tell. *Ant.* Blink, conceal.
**Narrow,** *Syn.* Thin, slender. *Ant.* Ample, wide.
**Native,** *Syn.* Proper, home. *Ant* Alien, foreign.
**Natural,** *Syn.* Artless, true. *Ant.* Artful, forced.
**Naughty,** *Syn.* Bad, corrupt. *Ant.* Pure, good.
**Nature,** *Syn.* Kind, truth. *Ant.* Object, thing.
**Nearly,** *Syn.* Closely, almost. *Ant.* Entirely, quite.
**Necessary,** *Syn.* Needful, requisite, certain. *Ant.* Optional, casual, contingent.
**Necessity,** *Syn.* Want, need. *Ant.* Uselessness.
**Needless,** *Syn.* Unnecessary. *Ant.* Useful, needful.
**Negative,** *Syn.* Denying. *Ant.* Direct, assertive.
**Neglect,** v. *Syn.* Omit, slight. *Ant.* Respect, notice. n. *Syn.* Slight, failure. *Ant.* Esteem, regard.
**Negotiate,** *Syn.* Pass, effect. *Ant.* Stop, misconduct.
**Neutral,** *Syn.* Unavowed, negative, indifferent. *Ant.* Positive, active, partial.
**Neutrality,** *Syn.* Indifference, impartiality. *Ant.* Interference, activity.
**Neutralize,** *Syn.* Counteract. *Ant.* Aggravate.
**New,** *Syn.* Recent, novel. *Ant.* Ancient, old.
**Nice,** *Syn.* Fine, dainty, neat. *Ant.* Disagreeable, nauseous, nasty, undiscriminating, coarse.
**Nicety,** *Syn.* Accuracy. *Ant.* Roughness, rude.
**Noble,** *Syn.* Exalted, grand. *Ant.* Humble, mean.
**Nocturnal,** *Syn.* Gloomy, dark. *Ant.* Solar, light.
**Noisome,** *Syn.* Harmful, hurtful. *Ant.* Wholesome.
**Noisy,** *Syn.* Stunning, loud. *Ant.* Soft, still.
**Nomad,** *Syn.* Roving, pastoral. *Ant.* Agricultural.
**Nominal,** *Syn.* Formal, trifling. *Ant.* Deep, real.
**Nominate,** *Syn.* Define, name. *Ant.* Cancel, recall.
**Nonsense,** *Syn.* Folly, trash. *Ant.* Truth, sense.
**Normal,** *Syn.* Natural, usual. *Ant.* Unnatural.
**Notion,** *Syn.* Belief, idea. *Ant.* Misapprehension.
**Notoriety,** *Syn.* Publicity. *Ant.* Rumour, privacy.
**Nourish,** *Syn.* Nurse, cherish, foster, feed. *Ant.* Destroy, blight, starve.
**Nudity,** *Syn.* Exposure, bareness, nakedness. *Ant.* Dress, clothing.
**Nugatory,** *Syn.* Vain, trifling. *Ant.* Serious, grave.
**Nullify,** *Syn.* Annul, abolish. *Ant.* Re-enact, confirm.
**Numberless,** *Syn.* Infinite, countless. *Ant.* Rare, scarce, few.
**Numbness,** *Syn.* Callousness. *Ant.* Sensibility, acuteness.
**Nuptials,** *Syn.* Espousal, marriage, wedding. *Ant.* Separation, divorce.

## O

**Obdurate,** *Syn.* Callous, stubborn. *Ant.* Docile, yielding, tender.
**Obedience,** *Syn.* Compliance, submission. *Ant.* Resistance, disobedience.
**Obesity,** *Syn.* Plumpness, fatness. *Ant.* Leanness.
**Obey,** *Syn.* Yield, submit. *Ant.* Refuse, resist.
**Object,** n. *Syn.* Aim, end, sight. *Ant.* Notion, idea.
**Objective,** *Syn.* External, concrete. *Ant.* Abstract, intrinsic.
**Oblation,** *Syn.* Gift, offering. *Ant.* Refusal, resumption.
**Obligation,** *Syn.* Bond, duty. *Ant.* Word, promise.
**Oblige,** *Syn.* Favour, compel. *Ant.* Disoblige, acquit.
**Oblique,** *Syn.* Angular, divergent. *Ant.* Forward, straight.
**Oblivion,** n. *Syn.* Forgetfulness. *Ant.* Remembrance.
**Obloquy,** *Syn.* Blame, censure. *Ant.* Panegyric, praise.
**Obnoxious,** *Syn.* Offensive, odious. *Ant.* Grateful, pleasant.
**Obscene,** *Syn.* Indecent, impure. *Ant.* Decent, pure.
**Obsequious,** *Syn.* Cringing, servile. *Ant.* Independent, uncringing.
**Observance,** *Syn.* Form, custom. *Ant.* Disuse, breach.
**Observant,** *Syn.* Watchful, mindful. *Ant.* Heedless, disobedient, unmindful.
**Obsolete,** *Syn.* Archaic, past. *Ant.* Extant, modern.
**Obstinate,** *Syn.* Refractory, stubborn, headstrong. *Ant.* Wavering, yielding.
**Obstreperous,** *Syn.* Rattling, noisy. *Ant.* Quiet, subdued.
**Obstruct,** *Syn.* Block, bar. *Ant.* Clear, open.
**Obtrude,** *Syn.* Thrust, force. *Ant.* Retire, suggest.
**Obtuse,** *Syn.* Stupid, dull. *Ant.* Clever, acute.
**Obverse,** *Syn.* facing, opposite. *Ant.* Reverse, hinder.
**Obvious,** *Syn.* Explicit, plain. *Ant.* Obscure, remote.
**Occasionally,** *Syn.* Rarely, casually. *Ant.* Regularly.
**Occult,** *Syn.* Dark, secret. *Ant.* Open, plain.
**Occupancy,** *Syn.* Possession. *Ant.* Eviction.
**Occupant,** *Syn.* Tenant, proprietor, resident, owner. *Ant.* Visitor, stranger, foreigner.
**Occurrence,** *Syn.* Transaction, affair, event. *Ant.* Monotony.
**Ocular,** *Syn.* Palpable, visible. *Ant.* Deductive.
**Odd,** *Syn.* Queer, uneven. *Ant.* Usual, matched.
**Odious,** *Syn.* Offensive, hateful. *Ant.* Pleasant.
**Odium,** *Syn.* Grudge, hatred. *Ant.* Welcome, love.
**Offence,** *Syn.* Injury, crime. *Ant.* Defence.
**Offend,** *Syn.* Pain, shock. *Ant.* Please, gratify.
**Offer,** *Syn.* Tender, propose. *Ant.* Divert, retain.
**Often,** *Syn.* Frequently. *Ant.* Seldom.
**Omen,** *Syn.* Foreboding, sign, augury.
**Ominous,** *Syn.* Suggestive, portentous. *Ant.* Auspicious.
**Omission,** *Syn.* Exclusion, oversight. *Ant.* Notice, insertion.
**Omit,** *Syn.* Leave out, miss, fail, neglect. *Ant.* Insert, restore.
**Omnipotent,** *Syn.* Irresistible. *Ant.* Powerless.
**Omniscient,** *Syn.* Infallible. *Ant.* Ignorant.
**Onerous,** *Syn.* Difficult, heavy. *Ant.* Easy, light.
**Only,** *Syn.* Sole, single. *Ant.* Together, many.
**Onward,** *Syn.* Ahead, forward. *Ant.* Aback, astern.
**Ooze,** *Syn.* Drip, drop. *Ant.* Rush, pour.
**Operate,** *Syn.* Work, act. *Ant.* Cease, rest.

**Operative,** *Syn.* Binding. *Ant.* Inoperative.
**Opinion,** *Syn.* Theory, impression, notion, view.
**Opportunity,** *Syn.* Chance, turn, occasion. *Ant.* Omission, lapse, unseasonableness.
**Oppose,** *Syn.* Obstruct, resist. *Ant.* Back, abet, aid.
**Opposite,** *Syn.* Contrary, adverse. *Ant.* Agreeing.
**Oppress,** *Syn.* Overbear, burden. *Ant.* Support.
**Oppression,** *Syn.* Hardship, cruelty. *Ant.* Leniency.
**Oppressive,** *Syn.* Unjust, heavy. *Ant.* Just, light.
**Option,** *Syn.* Wish, choice. *Ant.* Burden, necessity.
**Opulence,** *Syn.* Fortune, wealth. *Ant.* Indigence.
**Oral,** *Syn.* Verbal, unwritten. *Ant.* Documentary.
**Oratory,** *Syn.* Rhetoric, eloquence. *Ant.* Hesitation.
**Ordain,** *Syn.* Direct, appoint, set. *Ant.* Cancel, revoke.
**Ordeal,** *Syn.* Trial, test. *Ant.* Plea, argument.
**Order,** n. *Syn.* Command, method, sequence. *Ant.* Suggest, disarrange.
**Ordinary,** *Syn.* Inferior, plain, wonted, settled. *Ant.* Superior, unusual, extraordinary.
**Organic,** *Syn.* Constitutional, fundamental. *Ant.* Provisional, contingent.
**Organization,** *Syn.* Construction, form, structure. *Ant.* Disorganization, formlessness.
**Origin,** *Syn.* Rise, cause, source. *Ant.* Conclusion.
**Original,** *Syn.* First, primary. *Ant.* Terminal.
**Orthodox,** *Syn.* Sound, correct. *Ant.* Heretical, unorthodox.
**Ostensible,** *Syn.* Visible, avowed. *Ant.* Actual, real.
**Ostentatious,** *Syn.* Boastful, vain, showy. *Ant.* Retired, quiet, modest.
**Oust,** *Syn.* Remove, eject. *Ant.* Restore, install.
**Outbreak,** *Syn.* Insurrection, commotion, tumult, outburst. *Ant.* Order, quiet, subsidence.
**Outcast,** *Syn.* Exile, vagabond, castaway. *Ant.* Resident.
**Outlandish,** *Syn.* Rude, strange. *Ant.* Native, modish.
**Outlet,** *Syn.* Exit, egress. *Ant.* Entrance, ingress.
**Outline,** *Syn.* Plan, draft, sketch. *Ant.* Figure, form.
**Outlook,** *Syn.* Sight, view, prospect. *Ant.* Introspection.
**Outrage,** *Syn.* Indignity, offence. *Ant.* Moderation.
**Outskirts,** *Syn.* Outpost, order. *Ant.* Heart, body.
**Outspoken,** *Syn.* Frank, plain. *Ant.* Enigmatical.
**Outstrip,** *Syn.* Beat, surpass. *Ant.* Succeed, follow.
**Overcast,** *Syn.* Murky, cloudy. *Ant.* Clear.
**Overflow,** *Syn.* Inundation, deluge, redundancy *Ant.* Subsidence, exhaustion.
**Overjoyed,** *Syn.* Delighted, transported. *Ant.* Saddened.
**Oversight,** *Syn.* Slip, error. *Ant.* Notice, mark.
**Overt,** *Syn.* Open, public. *Ant.* Secret, covert.
**Overthrow,** *Syn.* Defeat. *Ant.* Revive, restore.
**Overture,** *Syn.* Offer, advance. *Ant.* Inaction.
**Overwhelm,** *Syn.* Swamp, crush. *Ant.* Reinstate.
**Own,** *Syn.* Hold, possess. *Ant.* Lose, forfeit.

## P

**Pacific,** *Syn.* Peaceful, calm, mild, conciliatory. *Ant.* Warlike, noisy, quarrelsome, harsh.
**Pacify,** *Syn.* Quiet, still, calm. *Ant.* Provoke, excite.
**Pagan,** n. *Syn.* Idolater, heathen. *Ant.* Christian.
**Pageant,** *Syn.* Display, pomp. *Ant.* Illusion, dream.
**Pain,** n. *Syn.* Anguish, grief. *Ant.* Joy, ease.
**Painstaking,** a. *Syn.* Diligent, attentive, careful. *Ant.* Idle, slack.
**Palatable,** *Syn.* Toothsome, delicious, tasteful. *Ant.* Disagreeable, distasteful.
**Pall,** *Syn.* Dispirit, blunt. *Ant.* Sharpen, quicken.
**Palmy,** *Syn.* Glorious, prosperous. *Ant.* Depressed.
**Palpable,** *Syn.* Gross, obvious. *Ant.* Incorporeal.
**Palpitate,** *Syn.* Beat, throb. *Ant.* Cease, pause.
**Palter,** *Syn.* Dodge, shift, prevaricate, shuffle. *Ant.* Decide, determine, act.
**Paltry,** *Syn.* Trashy, mean. *Ant.* Worthy, noble.
**Pamper,** *Syn.* Glut, feed. *Ant.* Starve, harden.
**Pang,** *Syn.* Twinge, pain, anguish, smart, agony. *Ant.* Delight, gratification, enjoyment, pleasure.
**Parable,** *Syn.* Allegory, fable. *Ant.* Fact, history.
**Paradise,** *Syn.* Bliss, heaven. *Ant.* Misery, hell.
**Paradox,** *Syn.* Mystery, enigma, contradiction. *Ant.* Postulate, truism, axiom, proposition.
**Parallel,** *Syn.* Analogous. *Ant.* Opposed, different.
**Paralyse,** *Syn.* Benumb, deaden. *Ant.* Restore, lift up, nerve, strengthen, liven.
**Paramount,** *Syn.* Supreme, chief. *Ant.* Minor.
**Parasite,** *Syn.* Courtier, toady. *Ant.* Traducer, detractor.
**Pardon,** *Syn.* Acquit, forgive. *Ant.* Visit, punish.
**Pare,** *Syn.* Skin, shave off, peel.
**Parentage,** *Syn.* Pedigree, birth, descent.
**Part,** n. *Syn.* Side, concern, share, portion. *Ant.* Affair, bulk, mass, completeness, whole.
**Partial,** *Syn.* Biassed, local. *Ant.* Just, total.
**Particle,** *Syn.* Mite, jot, grain, bit. *Ant.* Total, mass.
**Particular,** a. *Syn.* Exact, local. *Ant.* Rough, general.—n. *Syn.* Point, detail. *Ant.* Case, whole.
**Partisan,** *Syn.* Disciple, follower, adherent. *Ant.* Opponent.
**Partition,** *Syn.* Division, barrier. *Ant.* Inclusion.
**Passage,** *Syn.* Phrase, journey. *Ant.* Course, book.
**Passive,** *Syn.* Patient, inert. *Ant.* Alert, active.
**Pastime,** *Syn.* Play, recreation. *Ant.* Task, labour.
**Patent,** *Syn.* Plain, obvious. *Ant.* Questionable, dubious.
**Paternal,** *Syn.* Careful, fatherly. *Ant.* Rough, careless.
**Pathetic,** *Syn.* Tender, moving. *Ant.* Unaffecting, farcical, ludicrous.
**Patience,** *Syn.* Endurance. *Ant.* Rebellion, resistance.
**Patrician,** *Syn.* Aristocratic, noble. *Ant.* Plebeian.
**Patronize,** v. *Syn.* Help, befriend. *Ant.* Oppose, depress, oppress.
**Pause,** n. *Syn.* Rest, halt. *Ant.* Continuance.
**Pave,** *Syn.* Fit, smooth, prepare. *Ant.* Obstruct.
**Pawn,** *Syn.* Pledge. *Ant.* Redeem, ransom.
**Peasant,** *Syn.* Rustic, hind. *Ant.* Townsman, citizen.
**Peculiar,** *Syn.* Strange, unusual. *Ant.* Ordinary, universal, general, common.
**Pedantic,** *Syn.* Priggish, pedagogical. *Ant.* Slipshod, unaffected.
**Pedigree,** *Syn.* Lineage, genealogy, descent. *Ant.* Mongrel.
**Peer,** n. *Syn.* Equal, mate. *Ant.* State or condition.—v. *Syn.* Look narrowly, pry, peep.
**Peevish,** *Syn.* Testy, fretful. *Ant.* Easy, genial.
**Pelf,** *Syn.* Mammon, lucre. *Ant.* Wage, reward.
**Penal,** *Syn.* Punitive, coercive. *Ant.* Reparatory
**Penalty,** *Syn.* Price, pain. *Ant.* Bribe, wages.
**Penetrate,** *Syn.* Fathom, reach, enter, pierce. *Ant.* Unentering, blocked.
**Penitence,** *Syn.* Sorrow, remorse. *Ant.* Obduracy.
**Pensive,** *Syn.* Musing, thoughtful. *Ant.* Joyous, vacant.
**Penury,** *Syn.* Poverty, want. *Ant.* Affluence, wealth.
**Perceive,** *Syn.* Feel, discern. *Ant.* Overlook, miss.
**Perception,** *Syn.* Discernment, sight. *Ant.* Imperception, ignorance.
**Percolate,** *Syn.* Filter, strain. *Ant.* Retain, absorb.
**Percussion,** *Syn.* Crash, shock. *Ant.* Touch, graze.
**Perdition,** *Syn.* Loss, ruin. *Ant.* Salvation, rescue.
**Peregrination,** *Syn.* Travel, wandering. *Ant.* Residence, domiciliation.
**Peremptory,** *Syn.* Absolute, express, decisive. *Ant.* Suggestive.
**Perennial,** *Syn.* Constant, ceaseless. *Ant.* Uncertain, deficient, periodical.
**Perfect,** *Syn.* Faultless, full. *Ant.* Scant, faulty.
**Perfidious,** *Syn.* Deceptive, false. *Ant.* Staunch, faithful, true.
**Perforate,** *Syn.* Drilled, bored. *Ant.* Unpierced.
**Perform,** *Syn.* Effect, fulfil. *Ant.* Mar, miss.
**Perfunctory,** *Syn.* Slovenly, careless, mechanical. *Ant.* Careful, animated, spirited, zealous.
**Peril,** *Syn.* Risk, danger. *Ant.* Safety, security.
**Period,** *Syn.* Era, date, time. *Ant.* Infinity.
**Permissible,** *Syn.* Allowable. *Ant.* Insufferable.
**Pernicious,** *Syn.* Baneful, hurtful. *Ant.* Wholesome.
**Perpendicular,** *Syn.* Vertical. *Ant.* Horizontal.
**Perpetrate,** *Syn.* Commit. *Ant.* Perfect, achieve.
**Perpetual,** *Syn.* Endless, constant. *Ant.* Periodic.
**Perplex,** *Syn.* Confuse, puzzle. *Ant.* Enlighten, clear.

**Persecute,** *Syn.* Vex, worry. *Ant.* Abet, encourage.
**Perseverance,** *Syn.* Steadfastness, persistence. *Ant.* Levity, wavering, caprice, inconstancy.
**Persevere,** *Syn.* Keep on, continue, persist. *Ant.* Desist, discontinue.
**Perspicuity,** *Syn.* Transparency, lucidity, clearness. *Ant.* Unintelligibility, turbidity, obscurity.
**Persuade,** *Syn.* Urge, induce. *Ant.* Coerce, deter.
**Pertain to,** *Syn.* Belong to. *Ant.* Be foreign to.
**Pertinacity,** *Syn.* Adherence, obstinacy. *Ant.* Vacillation, hesitancy, indecision, irresolution.
**Pertinent,** *Syn.* Apposite. *Ant.* Impertinent.
**Pervade,** *Syn.* Diffuse, fill. *Ant.* Affect, touch.
**Perversion,** *Syn.* Abuse. *Ant.* Truth, right, use.
**Pervious,** *Syn.* Penetrable. *Ant.* Impenetrable.
**Pest,** *Syn.* Blight, curse, plague. *Ant.* Blessing.
**Pestilential,** *Syn.* Mischievous, deadly, noxious. *Ant.* Sanitary, beneficial.
**Petition,** *Syn.* Request, appeal. *Ant.* Claim, protest.
**Petrify,** *Syn.* Appal, astound. *Ant.* Reassure.
**Petty,** *Syn.* Mean, small. *Ant.* Noble, large.
**Phantasm,** *Syn.* Shadow, dream. *Ant.* Fact, reality.
**Pharisaical,** *Syn.* Formal. *Ant.* Genuine, sincere.
**Philanthropic,** *Syn.* Charitable. *Ant.* Ungenerous.
**Philosophical,** *Syn.* Conclusive, sound, wise. *Ant.* Loose, vague, crude, unsound.
**Physical,** *Syn.* Tangible, visible, material, natural. *Ant.* Spiritual, intellectual, moral, mental.
**Pictorial,** *Syn.* Graphic, artistic. *Ant.* Unadorned.
**Picturesque,** *Syn.* Comely. *Ant.* Tame, flat.
**Pierce,** *Syn.* Stab, bore. *Ant.* Allay, blunt.
**Piety,** *Syn.* Grace, religion. *Ant.* Ungodliness.
**Pile,** *Syn.* Gather, heap. *Ant.* Deal, scatter.
**Pilfer,** *Syn.* Filch. *Ant.* Steal, rob, plunder.
**Pilot,** v. *Syn.* Lead, direct, guide, steer. *Ant.* Mislead, misguide.
**Pine,** v. *Syn.* Sink, decay, fade, droop. *Ant.* Flourish, thrive.
**Pert,** a. *Syn.* Forward, saucy. *Ant.* Retiring, modest.
**Piquant,** *Syn.* Tart, sharp. *Ant.* Insipid, tame.
**Pirate,** *Syn.* Sea rover, buccaneer, sea robber. *Ant.* Merchant sailor.
**Piteous,** *Syn.* Mournful, sad. *Ant.* Pleasant, joyous.
**Pithy,** *Syn.* Laconic, terse. *Ant.* Vapid, weak.
**Pitiless,** *Syn.* Cruel, merciless. *Ant.* Tender, pitiful.
**Pittance,** *Syn.* Drop, dole. *Ant.* Abundance.
**Place,** *Syn.* Fix, locate. *Ant.* Uproot, disturb.
**Placid,** *Syn.* Quiet, calm. *Ant.* Stormy, rough.
**Plain,** *Syn.* Flat, level. *Ant.* Rough, uneven.
**Plaintive,** *Syn.* Doleful, sad. *Ant.* Glad, joyous.
**Plan,** n. *Syn.* Project, draft, sketch, design. *Ant.* Unpremeditated.
**Plastic,** *Syn.* Pliant, ductile. *Ant.* Inert, stubborn.
**Platitude,** *Syn.* Commonplace. *Ant.* Oracle.
**Platonic,** *Syn.* Unsensual. *Ant.* Sexual, ardent.
**Plausible,** *Syn.* Fair-spoken, passable. *Ant.* Genuine.
**Plea,** *Syn.* Apology, excuse. *Ant.* Action, charge.
**Pleasant,** *Syn.* Merry, grateful. *Ant.* Unpleasant.
**Pleasure,** *Syn.* Choice, enjoyment. *Ant.* Denial, pain.
**Plebeian,** *Syn.* Ignoble, coarse, low-bred, vulgar. *Ant.* High-bred, aristocratic, noble.
**Pledge,** n. *Syn.* Surety, hostage, warrant. *Ant.* Parole, assurance, promise, word.
**Pliable,** *Syn.* Facile, ductile. *Ant.* Brittle, stiff.
**Plight,** n. *Syn.* Dilemma, difficulty, situation.
**Plot,** n. *Syn.* Conspiracy, plan, scheme. v. *Syn.* Hatch, frame, concoct, devise.
**Plunge,** *Syn.* Duck, dive, dip. *Ant.* Raise, emerge.
**Poetical,** *Syn.* Lyric, metrical. *Ant.* Commonplace.
**Poignant,** *Syn.* Intense, severe, keen, sharp. *Ant.* Tame, blunt, dull.
**Point,** v. *Syn.* Indicate, show, direct, level, aim.
**Pointless,** a. *Syn.* Feeble, vague. *Ant.* Forcible, telling, sharp.
**Poisonous,** *Syn.* Vicious, venomous. *Ant.* Wholesome.
**Policy,** *Syn.* Cunning, prudence, device, plan. *Ant.* Aimlessness.
**Polish,** *Syn.* Refine, brighten. *Ant.* Scratch, abrade.
**Politic,** *Syn.* Discreet, wise. *Ant.* Unwise, imprudent.
**Pollute,** *Syn.* Deprave, taint. *Ant.* Filter, purify.
**Poltroon,** *Syn.* Skulk, coward. *Ant.* Model, hero.
**Pomp,** *Syn.* Show, parade. *Ant.* Simplicity, quiet.
**Ponder,** *Syn.* Study, reflect, consider. *Ant.* Think vaguely.
**Ponderous,** *Syn.* Heavy, bulky. *Ant.* Airy, light.
**Popular,** *Syn.* General, public. *Ant.* Detested, odious.
**Populous,** *Syn.* Dense, crowded. *Ant.* Deserted, thin.
**Portable,** *Syn.* Light, handy. *Ant.* Ponderous.
**Portend,** *Syn.* Forbode, indicate. *Ant.* Avert, nullify.
**Portentous,** *Syn.* Ominous, threatening. *Ant.* Encouraging, animating, cheering.
**Portly,** *Syn.* Stout, stately. *Ant.* Slim.
**Portray,** *Syn.* Depict, draw. *Ant.* Misrepresent.
**Pose,** *Syn.* Mystify, puzzle. *Ant.* Enlighten.
**Positive,** *Syn.* Actual, real. *Ant.* Uncertain, dubious.
**Possess,** *Syn.* Enjoy, occupy. *Ant.* Resign, lose.
**Possible,** *Syn.* Potential, likely, feasible, practicable. *Ant.* Impossible, impracticable.
**Posterity,** *Syn.* Futurity. *Ant.* Ancestry.
**Postpone,** *Syn.* Procrastinate, prorogue, delay, defer. *Ant.* Accelerate, despatch, expedite.
**Postulate,** *Syn.* Assume. *Ant.* Exemplify, prove.
**Potent,** *Syn.* Strong, active. *Ant.* Inactive, weak.
**Potential,** *Syn.* Undeveloped. *Ant.* Real, actual.
**Pound,** *Syn.* Bruise, beat. *Ant.* Stroke, soothe.
**Poverty,** *Syn.* Destitution, indigence, need, want. *Ant.* Wealth, means, sufficiency.
**Practical,** *Syn.* Skilled, serviceable, useful.
**Practice,** n. *Syn.* Habit, usage. *Ant.* Disuse.
**Practised,** *Syn.* Proficient, experienced, trained.
**Prate,** *Syn.* Gossip, chat, prattle, babble. *Ant.* Terseness, brevity.
**Preamble,** *Syn.* Opening, preface. *Ant.* Finale, close.
**Precarious,** *Syn.* Riskful, uncertain. *Ant.* Assured, safe.
**Precede,** *Syn.* Usher, lead. *Ant.* Follow, succeed.
**Precedence,** *Syn.* Supremacy, preference, priority. *Ant.* Posteriority, subordination, inferiority.
**Precept,** *Syn.* Maxim, rule. *Ant.* Suggestion.
**Precious,** *Syn.* Valuable, dear. *Ant.* Worthless, cheap.
**Precise,** *Syn.* Nice, exact. *Ant.* Vague, inexact.
**Preclude,** *Syn.* Hinder, impede, debar, prevent. *Ant.* Further, promote, admit.
**Precursor,** *Syn.* Pioneer, herald. *Ant.* Follower.
**Predecessor,** *Syn.* Elder, ancestor. *Ant.* Posterity.
**Predestination,** *Syn.* Necessity. *Ant.* Free-will.
**Predicament,** *Syn.* Position, trying, difficulty.
**Predict,** *Syn.* Forecast, foretell, prophesy.
**Predilection,** *Syn.* Preference. *Ant.* Antipathy.
**Predominance,** *Syn.* Prevalence. *Ant.* Subjection.
**Preface,** *Syn.* Premiss, prelude, introduction. *Ant.* Postscript, epilogue, appendix.
**Prefer,** *Syn.* Elect, choose. *Ant.* Defer, reject.
**Prefix,** *Syn.* Preface. *Ant.* Add, supplement.
**Pregnant,** *Syn.* Replete, fruitful. *Ant.* Barren.
**Prejudice,** *Syn.* Damage, unfairness, bias. *Ant.* Judgment.
**Prejudicial,** *Syn.* Injurious, hurtful. *Ant.* Beneficial.
**Preliminary,** *Syn.* Preparatory. *Ant.* Subsequent.
**Prelude,** *Syn.* Prelusion, proem, preface. *Ant.* Conclusion, sequel.
**Premature,** *Syn.* Rash, hasty. *Ant.* Timely, ripe.
**Premeditate,** *Syn.* Plot, plan. *Ant.* Extemporize.
**Premium,** *Syn.* Bonus, prize. *Ant.* Fine, penalty.
**Preponderate,** *Syn.* Predominate. *Ant.* Sink, fail.
**Prepossessing,** *Syn.* Attractive. *Ant.* Repulsive.
**Preposterous,** *Syn.* Monstrous. *Ant.* Fair, just.
**Prerogative,** *Syn.* Privilege. *Ant.* Disqualification.
**Presage,** n. *Syn.* Indication. *Ant.* Fulfilment.
**Prescribe,** *Syn.* Order, enjoin. *Ant.* Prohibit.
**Presentment,** *Syn.* Foreboding. *Ant.* Surprise.
**Preserve,** *Syn.* Protect, uphold, save, guard. *Ant.* Injure, harm.
**Preside,** *Syn.* Govern, control, direct, manage.
**Pressing,** *Syn.* Urgent. *Ant.* Trivial, slight.
**Presumption,** *Syn.* Supposition. *Ant.* Fact, proof.
**Pretence,** *Syn.* Plea, excuse. *Ant.* Fact, truth.
**Pretend,** *Syn.* Affect, feign. *Ant.* Test, detect.
**Prevail,** *Syn.* Succeed, persuade, obtain, overcome. *Ant.* Fail, lose.
**Prevailing,** *Syn.* Rife, ruling. *Ant.* Diminishing.
**Prevalence,** *Syn.* Power, custom. *Ant.* Disuse.
**Prevaricate,** *Syn.* Evade, shuffle. *Ant.* Maintain.
**Prevent,** *Syn.* Thwart, bar. *Ant.* Cause, aid.
**Previous,** *Syn.* Earlier, foregoing. *Ant.* Subsequent.

**Prim,** *Syn.* Stiff, precise. *Ant.* Free, easy.
**Primary,** *Syn.* Chief, first. *Ant.* Subordinate.
**Primeval,** *Syn.* Aboriginal, archaic. *Ant.* Modern.
**Primitive,** *Syn.* Simple, old-fashioned. *Ant.* Modish.
**Principal,** *Syn.* Main, first. *Ant.* Secondary.
**Principle,** *Syn.* Rule, motive. *Ant.* Action, issue.
**Prior,** *Syn.* Earlier, former, previous, preceding. *Ant.* Posterior, later, subsequent.
**Prismatic,** *Syn.* Iridescent. *Ant.* Colourless.
**Privacy,** *Syn.* Retreat, secrecy. *Ant.* Publicity.
**Privation,** *Syn.* Want, loss. *Ant.* Restoration.
**Privilege,** *Syn.* Claim, right. *Ant.* Exclusion.
**Privy,** *Syn.* Clandestine, secret. *Ant.* Open.
**Prize,** n. *Syn.* Spoil, booty. *Ant.* Fine, loss.
**Probable,** *Syn.* Reasonable. *Ant.* Incredible.
**Probation,** *Syn.* Trial, test. *Ant.* License.
**Probe,** *Syn.* Search, test. *Ant.* Miss, skim.
**Probity,** *Syn.* Honesty, virtue. *Ant.* Rascality.
**Problematical,** *Syn.* Uncertain. *Ant.* Obvious.
**Procession,** *Syn.* File, march. *Ant.* Mob, rabble.
**Proclaim,** *Syn.* Utter, report. *Ant.* Conceal.
**Proclivity,** *Syn.* Bias, tendency. *Ant.* Aversion.
**Procrastination,** *Syn.* Delay. *Ant.* Punctuality.
**Procure,** *Syn.* Earn, win, gain. *Ant.* Lose, miss.
**Prodigal,** *Syn.* Reckless, lavish. *Ant.* Frugal.
**Prodigy,** *Syn.* Miracle, marvel, wonder. *Ant.* Ordinary, normal.
**Produce,** v. *Syn.* Create, cause. *Ant.* Reduce.—n. *Syn.* Profit, fruit, yield.
**Profane,** a. *Syn.* Unholy, temporal. *Ant.* Reverent.
**Profess,** *Syn.* Confess, avow. *Ant.* Disavow.
**Proffer,** *Syn.* Tender, offer. *Ant.* Detain, withhold.
**Proficient,** a. *Syn.* Clever, expert. *Ant.* Unskilled.
**Profligate,** *Syn.* Shameless, vicious, depraved. *Ant.* Virtuous, modest.
**Profound,** *Syn.* Strong, deep. *Ant.* Superficial.
**Profuse,** *Syn.* Lavish, copious. *Ant.* Niggardly.
**Progress,** n. *Syn.* Speed, way. *Ant.* Stay, delay.
**Prohibit,** *Syn.* Check, forbid. *Ant.* Allow, grant.
**Project,** v. *Syn.* Cast, throw. *Ant.* Pull, recall.—n. *Syn.* Device, plan. *Ant.* Venture, chance.
**Prolix,** *Syn.* Wordy, diffuse. *Ant.* Brief, curt.
**Prolong,** *Syn.* Delay, extend. *Ant.* Discontinue.
**Prominent,** *Syn.* Important, main, eminent. *Ant.* Unimportant, secondary.
**Promiscuous,** *Syn.* Unselected. *Ant.* Orderly.
**Promote,** *Syn.* Raise, aid. *Ant.* Allay, check.
**Prompt,** *Syn.* Alert, ready. *Ant.* Inactive.
**Promulgate,** *Syn.* Spread, publish. *Ant.* Suppress.
**Pronounce,** *Syn.* Assert, propound, declare, utter. *Ant.* Mumble, gabble, swallow, choke, silence.
**Proof,** *Syn.* Trial, test. *Ant.* Failure, disproof.
**Propagate,** *Syn.* Diffuse, spread, produce, breed. *Ant.* Fail, suppress, contract, reduce, stifle.
**Propel,** *Syn.* Urge, hurl. *Ant.* Detain, retard.
**Prophetic,** *Syn.* Predictive. *Ant.* Narrative, historic.
**Propitiate,** *Syn.* Pacify, appease. *Ant.* Alienate.
**Proportion,** *Syn.* Distribution, rate, relation. *Ant.* Disorder, disparity, incongruity, misadjustment.
**Propose,** *Syn.* Mean, move, intend, purpose, offer.
**Proposition,** *Syn.* Statement. *Ant.* Misstatement.
**Propriety,** *Syn.* Decorum, justness, fitness. *Ant.* Indecorum, impropriety.
**Prorogue,** *Syn.* Adjourn, defer. *Ant.* Continue.
**Prosaic,** *Syn.* Prolix, dull. *Ant.* Fervid, poetic.
**Proscribe,** *Syn.* Forbid, reject. *Ant.* Permit.
**Prospect,** *Syn.* Field, view. *Ant.* Veiling, cloud.
**Prospectus,** *Syn.* Bill, plan. *Ant.* Proceeding.
**Prosperity,** *Syn.* Weal, success. *Ant.* Failure, woe.
**Prosperous,** *Syn.* Lucky, happy, thriving. *Ant.* Unlucky, dwindling.
**Prostrate,** *Syn.* Flat, fallen. *Ant.* Erect, risen.
**Protect,** *Syn.* Save, cover. *Ant.* Expose, betray.
**Protest,** *Syn.* Aver, affirm. *Ant.* Agree, endorse.
**Protract,** *Syn.* Extend, defer. *Ant.* Reduce, curtail.
**Prove,** *Syn.* Confirm, verify, test. *Ant.* Refute, pass.
**Proverbial,** *Syn.* Notorious. *Ant.* Unfounded.
**Provide,** *Syn.* Agree, get, cater, supply, afford, procure. *Ant.* Deny, retain, withhold.
**Provincial,** *Syn.* Rural, outlying. *Ant.* Central.
**Provisional,** *Syn.* Contingent. *Ant.* Unconditional.
**Provoke,** *Syn.* Anger, vex. *Ant.* Pacify, allay.
**Prowess,** *Syn.* Might, valour. *Ant.* Weakness.
**Proximity,** *Syn.* Vicinity, neighbourhood. *Ant.* Remoteness.
**Proxy,** *Syn.* Deputy, agent. *Ant.* Person, principal.
**Prudent,** *Syn.* Wary, wise. *Ant.* Rash, foolish.
**Prudish,** *Syn.* Demure, reserved, over-nice, coy. *Ant.* Bold, immodest.
**Prurient,** *Syn.* Lustful, craving. *Ant.* Disliking.
**Puerile,** *Syn.* Silly, weak. *Ant.* Cogent, manly.
**Punctual,** *Syn.* Prompt, exact. *Ant.* Dilatory.
**Puny,** *Syn.* Tiny, small. *Ant.* Robust, fine, great.
**Purblind,** *Syn.* Short-sighted. *Ant.* Far-sighted.
**Puritanical,** *Syn.* Prudish. *Ant.* Rakish, genial.
**Purlieu,** *Syn.* Suburb, environ. *Ant.* Heart, centre.
**Purloin,** *Syn.* Plunder, steal. *Ant.* Restore.
**Purport,** *Syn.* Tenor, drift. *Ant.* Statement.
**Purpose,** v. *Syn.* Mean, design. *Ant.* Stake.—n. *Syn.* Resolve, object. *Ant.* Fate, chance
**Purulent,** *Syn.* Corrupt, festering. *Ant.* Healthy.
**Pusillanimity,** *Syn.* Timidity. *Ant.* Fortitude.
**Putrefy,** *Syn.* Decay, rot. *Syn.* Purify, preserve.

## Q

**Quack,** *Syn.* Impostor, empiric. *Ant.* Gull, dupe.
**Quaff,** *Syn.* Imbibe, drink. *Ant.* Disgorge.
**Quail,** *Syn.* Cower, shrink. *Ant.* Defy, stand.
**Quaint,** *Syn.* Antique, curious. *Ant.* Commonplace.
**Quake,** *Syn.* Vibrate, shake. *Ant.* Rest, stand.
**Qualified,** *Syn.* Suitable, adapted, fitted. *Ant.* Unsuitable, unfitted.
**Qualify,** *Syn.* Adapt, fit. *Ant.* Free, unfit.
**Quality,** *Syn.* Kind, sort. *Ant.* Nondescript.
**Qualm,** *Syn.* Scruple, remorse. *Ant.* Comfort.
**Quantity,** *Syn.* Part, sum, amount, measure. *Ant.* Scantiness, want.
**Quarrel,** n. *Syn.* Broil, dispute, feud, brawl. *Ant.* Good-will, amity, peace.
**Quarrelsome,** *Syn.* Litigious, petulant, choleric. *Ant.* Mild, genial, peaceable.
**Quash,** *Syn.* Cancel, crush. *Ant.* Undermine, sap.
**Quell,** *Syn.* Stifle, allay. *Ant.* Fan, excite.
**Question,** v. *Syn.* Inquire, ask. *Ant.* Assert, state.
**Quibble,** v. *Syn.* Trifle, evade. *Ant.* Argue, reason.
**Quickness,** *Syn.* Liveliness. *Ant.* Slowness.
**Quiescence,** *Syn.* Silence, quiet, rest, repose. *Ant.* Turbulence.
**Quiet,** n. *Syn.* Peace. *Ant.* Noise, unrest.
**Quit,** *Syn.* Resign, leave. *Ant.* Occupy, seek.
**Quite,** *Syn.* Truly, wholly. *Ant.* Hardly, barely.
**Quiver,** *Syn.* Quake, vibrate, shiver, shake. *Ant.* Still, motionless.
**Quote,** *Syn.* Note, name, cite. *Ant.* Retort, refute.

## R

**Rabble,** *Syn.* Mob, crowd. *Ant.* Galaxy, élite.
**Rabid,** *Syn.* Mad, raging. *Ant.* Sober, sane.
**Radiant,** *Syn.* Shining, splendid. *Ant.* Dull.
**Radiate,** *Syn.* Emanate, gleam, sparkle, shine. *Ant.* Absorb.
**Radical,** *Syn.* Entire, extreme. *Ant.* Partial, derived.
**Rage,** n. *Syn.* Ire, anger. *Ant.* Softness, reason.—v. *Syn.* Storm. *Ant.* Be composed, be calm.
**Raging,** *Syn.* Furious, impetuous, violent. *Ant.* Calm, peaceful, gentle.
**Rail,** v. *Syn.* Chide, bluster, scold, censure. *Ant.* Praise.
**Rally,** v. t. and i. *Syn.* Recover, inspirit, recall. *Ant.* Disperse.—v. *Syn.* Mock, taunt. *Ant.* Flatter.
**Ramble,** v. *Syn.* Roam, rove. *Ant.* Drive, speed.
**Ramification,** *Syn.* Division. *Ant.* Stem, line.
**Rampant,** *Syn.* Rank, furious. *Ant.* Restrained.
**Rancid,** *Syn.* Rank, sour. *Ant.* Pure, sweet.
**Rancour,** *Syn.* Malice, spite. *Ant.* Good-feeling.
**Random,** *Syn.* Wild, stray. *Ant.* Aimed, steady.
**Rank,** n. *Syn.* Order, line, row. *Ant.* Disorder.
**Rankle,** *Syn.* Gall, fester. *Ant.* Close, heal.
**Ransom,** *Syn.* Redeem, free. *Ant.* Fine, indict.
**Rant,** *Syn.* Boasting declamation. *Ant.* Rhetoric.
**Rapacious,** *Syn.* Ravenous. *Ant.* Frugal, liberal.
**Rapidity,** *Syn.* Dispatch, speed. *Ant.* Delay, slowness.
**Rapture,** *Syn.* Delight, bliss. *Ant.* Pain, agony.
**Rare,** *Syn.* Thin, precious, excellent, choice, scarce. *Ant.* Dense, usual, mean, common.
**Rarefy,** *Syn.* Lighten, expand. *Ant.* Solidify.
**Rascal,** *Syn.* Knave, rogue. *Ant.* Gentleman.
**Rash,** *Syn.* Unwary, reckless. *Ant.* Cautious, wary.

**Rate,** n. *Syn.* Value, price, worth, duty, tax.
**Ratification,** *Syn.* Substantiation. *Ant.* Abrogation, disaffirmation, negation.
**Ratify,** *Syn.* Secure, seal. *Ant.* Annul, reject.
**Rational,** *Syn.* Sound, sane. *Ant.* Silly, weak.
**Ravage,** n. *Syn.* Ruin, waste. *Ant.* Preserve.
**Ravel,** *Syn.* Twist, entangle. *Ant.* Untwist, disentangle.
**Raving,** *Syn.* Mad, furious. *Ant.* Sensible, calm.
**Ravish,** *Syn.* Outrage, violate, charm, enchant. *Ant.* Irritate, annoy.
**Raw,** *Syn.* Chill, fresh, unfinished, uncooked. *Ant.* Genial, mature, ripe, prepared, dressed.
**Raze,** *Syn.* Ruin, level. *Ant.* Restore, rear, build.
**Reach,** *Syn.* Gain, stretch. *Ant.* Miss, stop, fall.
**React,** *Syn.* Result, recoil. *Ant.* Impress, strike.
**Read,** *Syn.* Learn, peruse. *Ant.* Misinterpret.
**Ready,** *Syn.* Quick, free, apt, speedy, alert. *Ant.* Unfitted, clumsy, awkward, slow.
**Real,** *Syn.* True, actual. *Ant.* False, untrue.
**Reality,** *Syn.* Truth, verity. *Ant.* Fancy, fiction.
**Realize,** *Syn.* Reap, gain. *Ant.* Miss, lose.
**Realm,** *Syn.* Country, empire, state, kingdom.
**Reap,** *Syn.* Gain, gather. *Ant.* Waste, lose.
**Reason,** n. *syn.* Proof, motive. *Ant.* Disproof.
**Reassure,** *Syn.* Restore, rally. *Ant.* Discourage.
**Rebuke,** v. *Syn.* Rebuff, chide. *Ant.* Incite, applaud.
**Rebut,** *Syn.* Retort, meet. *Ant.* Sanction, accept.
**Recant,** *Syn.* Recall, unsay. *Ant.* Retain, hold.
**Recapitulate,** *Syn.* Summarize. *Ant.* Propound.
**Recede,** *Syn.* Ebb, retire. *Ant.* Proceed, flow.
**Receive,** *Syn.* Hold, take. *Ant.* Reject, give.
**Recent,** *Syn.* Fresh, new, late. *Ant.* Ancient.
**Recess,** *Syn.* Nook, cavity. *Ant.* Promontory.
**Reciprocal,** *Syn.* Mutual. *Ant.* One-sided.
**Reckless,** *Syn.* Heedless, careless. *Ant.* Careful.
**Reclaim,** *Syn.* Recall, reform. *Ant.* Corrupt.
**Recline,** *Syn.* Lie, lean. *Ant.* Stand, rise.
**Recluse,** *Syn.* Apart, retired. *Ant.* Social, public.
**Recognize,** *Syn.* Own, identify. *Ant.* Disown, ignore.
**Recollect,** *Syn.* Remember. *Ant.* Lose, forget.
**Recommend,** *Syn* Advise, praise. *Ant.* Dissuade.
**Recompense,** v. *Syn.* Reward. *Ant.* Injure.
**Reconcile,** *Syn.* Adjust, unite. *Ant.* Separate.
**Recondite,** *Syn.* Profound, deep. *Ant.* Obvious.
**Record,** v. *Syn.* Note, enter. *Ant.* Suppress.—n. *Syn.* Inventory, roll, list, entry. *Ant.* Non-registration, oblivion.
**Recount,** *Syn.* Detail, recite. *Ant.* Falsify.
**Recourse,** *Syn.* Refuge, aid. *Ant.* Avoidance.
**Recover,** *Syn.* Save, cure, regain. *Ant.* Miss, lose.
**Recreant,** *Syn.* Base, false. *Ant.* True, staunch.
**Recreation,** *Syn.* Sport, holiday. *Ant.* Work, toil.
**Recruit,** *Syn.* Revive, restore. *Ant.* Lose, waste.
**Rectify,** *Syn.* Better, correct. *Ant.* Distort, pervert.
**Recur,** *Syn.* Resort, revert, come back, return. *Ant.* Happen once.
**Redeem,** *Syn.* Fulfil, ransom. *Ant.* Lose, pledge.
**Redouble,** *Syn.* Intensify. *Ant.* Abate, diminish.
**Redress,** *Syn.* Order, right. *Ant.* Wrong, impair.
**Reduce,** *Syn.* Impair, curtail. *Ant.* Extend, enlarge
**Redundant,** *Syn.* Superfluous. *Ant.* Deficient, lacking.
**Refer,** *Syn.* Allude, advert. *Ant.* Disconnect.
**Referee,** *Syn.* Umpire, arbitrator. *Ant.* Opponent.
**Refinement,** *Syn.* Elegance, polish. *Ant.* Bluntness.
**Reflect,** *Syn.* Think, consider, mirror, image. *Ant.* Disregard, rove, wander, dream, idle, dissipate.
**Reform,** *Syn.* Better, amend. *Ant.* Impair, worsen.
**Refractory,** *Syn.* Unruly, perverse. *Ant.* Obedient.
**Refrain,** *Syn.* Keep, hold. *Ant.* Venture, indulge.
**Refuge,** *Syn.* Retreat, shelter. *Ant.* Exposure.
**Refund,** *Syn.* Return, repay. *Ant.* Expend, divert.
**Refuse,** v. *Syn.* Reject, deny. *Ant.* Afford, grant.—n. *Syn.* Dross, dregs.—*Ant.* Prime, cream.
**Refute,** *Syn.* Disprove. *Ant.* Confirm, prove.
**Regal,** a. *Syn.* Royal, kingly. *Ant.* Shabby, mean.
**Regards,** *Syn.* Respects, compliments. *Ant.* Dislike, disdain.
**Regenerate,** *Syn.* Revive, renovate. *Ant.* Waste.
**Region,** *Syn.* District, clime, country.
**Regret,** v. *Syn.* Lament, grieve. *Ant.* Forget, hail.
**Regulate,** *Syn.* Rule, organize, methodize. *Ant.* Muddle, disarrange.
**Regulation,** *Syn.* Law, rule. *Ant.* Disorder.
**Rehearsal,** n. *Syn.* Narrative, recital, repetition.
**Rehearse,** *Syn.* Tell, relate. *Ant.* State once.
**Reimburse,** *Syn.* Repay, refund. *Ant.* Embezzle.
**Rein,** *Syn.* Check, curb. *Ant.* Vent, loose.
**Reinstate,** *Syn.* Reinvest, replace. *Ant.* Degrade.
**Reiterate,** *Syn.* Renew, repeat. *Ant.* Cancel.
**Reject,** *Syn.* Decline, repel. *Ant.* Choose, hail.
**Rejoinder,** *Syn.* Reply, retort. *Ant.* Banter.
**Rekindle,** *Syn.* Reinforce. *Ant.* Extinguish.
**Relapse,** v. *Syn.* Retrogress. *Ant.* Recover.
**Related,** *Syn.* Connected. *Ant.* Unrelated.
**Relax,** *Syn.* Rest, slacken. *Ant.* Brace, bend.
**Release,** v. *Syn.* Loose, free. *Ant.* Confine.
**Relegate,** *Syn.* Transfer, remove. *Ant.* Locate, recall.
**Relent,** *Syn.* Soften, yield. *Ant.* Persist.
**Relevant,** *Syn.* Appropriate. *Ant.* Inappropriate.
**Reliance,** *Syn.* Trust, confidence. *Ant.* Suspicion.
**Relief,** *Syn.* Help, aid. *Ant.* Oppression.
**Religion,** *Syn.* Creed, faith. *Ant.* Unbelief.
**Relinquish,** *Syn.* Quit, resign. *Ant.* Seize.
**Relish,** v. *Syn.* Enjoy, like. *Ant.* Loathe, reject.—n. *Syn.* Flavour, zest. *Ant.* Distaste.
**Reluctance,** *Syn.* Regret, dislike. *Ant.* Desire.
**Remainder,** *Syn.* Surplus, rest. *Ant.* Waste, loss.
**Remarkable,** *Syn.* Unusual. *Ant.* Commonplace.
**Remediable,** *Syn.* Removable. *Ant.* Incurable.
**Remedy,** *Syn.* Redress, cure. *Ant.* Hurt, evil.
**Reminiscence,** *Syn.* Trace, relic. *Ant.* Warning.
**Remiss,** *Syn.* Careless, slack. *Ant.* Careful.
**Remit,** *Syn.* Pardon, relax. *Ant.* Enforce.
**Remonstrate,** *Syn.* Object, protest. *Ant.* Submit.
**Remorse,** *Syn.* Penitence. *Ant.* Self-approval.
**Remote,** *Syn.* Indirect, distant. *Ant.* Close, near.
**Remove,** *Syn.* Carry away, displace. *Ant.* Replace.
**Remunerate,** *Syn.* Repay, reward. *Ant.* Defraud.
**Render,** *Syn.* Restore, give. *Ant.* Retain, keep.
**Renegade,** *Syn.* Traitor, apostate. *Ant.* Adherent.
**Renew,** *Syn.* Refresh, restore. *Ant.* Wear, impair.
**Renounce,** *Syn.* Forgo, reject. *Ant.* Assert, claim.
**Renown,** *Syn.* Glory, fame. *Ant.* Disgrace.
**Renunciation,** *Syn.* Repudiation, rejection. *Ant.* Insistence, claim.
**Reorganize,** *Syn.* Rearrange. *Ant.* Dissolve.
**Repair,** *Syn.* Recover, restore. *Ant.* Wear, waste.
**Repay,** *Syn.* Refund, reward. *Ant.* Extort, waste.
**Repeal,** n. *Syn.* Abrogation. *Ant.* Continuance.
**Repel,** *Syn.* Check, reject. *Ant.* Welcome, urge.
**Repent,** *Syn.* Regret, grieve. *Ant.* Persist, rejoice.
**Repentance,** *Syn.* Penitence. *Ant.* Impenitence.
**Repine,** *Syn.* Grumble, murmur. *Ant.* Submit.
**Replace,** *Syn.* Supply, restore. *Ant.* Displace.
**Replenish,** *Syn.* Stock, fill. *Ant.* Exhaust, waste.
**Repletion,** *Syn.* Abundance. *Ant.* Exhaustion.
**Repose,** n. *Syn.* Peace, tranquillity, quiet, rest. *Ant.* Uneasiness, tumult, disturbance, agitation.
**Reprehend,** *Syn.* Chide, blame. *Ant.* Laud, praise.
**Repress,** *Syn.* Quell, crush. *ant.* Rouse, raise.
**Reprieve,** n. *Syn.* Pardon, delay. *Ant.* Conviction.
**Reprisal,** *Syn.* Retaliation. *Ant.* Condonation.
**Reproach,** v. *Syn.* Censure, blame. *Ant.* Approve.
**Reproduce,** *Syn.* Copy, imitate. *Ant.* Extinguish.
**Repudiate,** *Syn.* Disown, disavow. *Ant.* Assert.
**Repugnant,** *Syn.* Averse, odious to. *Ant.* Attractive.
**Repulsive,** *Syn.* Forbidding. *Ant.* Attractive.
**Reputable,** *Syn.* Respectable. *Ant.* Discreditable.
**Request,** v. *Syn.* Desire, ask. *Ant.* Insist, order.
**Requite,** *Syn.* Reward, repay. *Ant.* Defraud.
**Rescind,** *Syn.* Reverse, cancel. *Ant.* Maintain.
**Research,** *Syn.* Investigation. *Ant.* Ignorance.
**Resemblance,** *Syn.* Likeness. *Ant.* Dissimilarity.
**Resent,** *Syn.* Resist, repel. *Ant.* Pardon, submit.
**Resentment,** *Syn.* Ire, anger. *Ant.* Calmness.
**Reserve,** *Syn.* Constraint, shyness, retention. *Ant.* Frankness, openness, surrender.
**Reserved,** *Syn.* Unsociable, silent, cold. *Ant.* Frank, outspoken, sociable.
**Residence,** *Syn.* Abode, stay. *Ant.* Travel.
**Resign,** *Syn.* Forgo, submit. *Ant.* Claim.
**Resist,** *Syn.* Thwart, hinder. *Ant.* Succour, help.
**Resolute,** *Syn.* Steady, fixed, decided. *Ant.* Weak, dubious, irresolute, fitful.
**Resort,** v. *Syn.* Retire, fly. *Ant.* Avoid, shun.—n. *Syn.* Haunt, assembly. *Ant.* Avoidance.
**Respect,** v. *Syn.* Esteem, regard. *Ant.* Contemn.
**Respectable,** a. *Syn.* Good, worthy. *Ant.* Bad, mean.
**Respective,** *Syn.* Relative. *Ant.* Absolute.

**Respond,** *Syn.* Reply, answer. *Ant.* Disagree.
**Restitution,** *Syn.* Reparation. *Ant.* Deprivation.
**Restive,** *Syn.* Uneasy, stubborn. *Ant.* Docile.
**Restless,** *Syn.* Roving, uneasy. *Ant.* Quiet, calm.
**Restore,** *Syn.* Repay, return. *Ant.* Remove.
**Restrain,** *Syn.* Limit, check. *Ant.* Loose, urge.
**Result,** v. *Syn.* End, terminate. *Ant.* Begin, arise.—n. *Syn.* Upshot, effect. *Ant.* Operation, origin.
**Resume,** *Syn.* Return, renew. *Ant.* Discontinue.
**Resuscitate,** *Syn.* Reanimate. *Ant.* Prostrate.
**Retaliate,** *Syn.* Retort, avenge. *Ant.* Forgive.
**Retard,** *Syn.* Hinder, clog. *Ant.* Accelerate.
**Retentive,** *Syn.* Tenacious, close. *Ant.* Oblivious.
**Reticence,** *Syn.* Reserve. *Ant.* Openness.
**Retort,** n. *Syn.* Reply, repartee.
**Retract,** *Syn.* Recall, unsay. *Ant.* Reiterate
**Retrench,** *Syn.* Curtail, limit. *Ant.* Increase.
**Retribution,** *Syn.* Visitation, compensation, penalty, *Ant.* Remission, condonation.
**Retrieve,** *Syn.* Restore, repair. *Ant.* Forfeit, lose.
**Retrospect,** *Syn.* Survey. *Ant.* Anticipation.
**Reveal,** *Syn.* Disclose, unveil. *Ant.* Cover, hide.
**Revel,** *Syn.* Feast, carouse. *Ant.* Abstain, fast.
**Revelation,** *Syn.* Discovery. *Ant.* Concealing.
**Revenue,** *Syn.* Return, Income. *Ant.* Expense.
**Reverberate,** *Syn.* Resound, echo. *Ant.* Silent.
**Reverie,** *Syn.* Vision, dream. *Ant.* Diligence.
**Reverse,** v. *Syn.* Upset, invert. *Ant.* Place, order.—n. *Syn.* Back, change. *Ant.* Front, order.
**Revert,** *Syn.* Recur, return. *Ant.* Drop, ignore.
**Review,** v. *Syn.* Inspect, survey. *Ant.* Disregard.
**Revile,** *Syn.* Abuse, slander. *Ant.* Compliment.
**Revive,** *Syn.* Live, refresh. *Ant.* Depress, kill.
**Revoke,** *Syn.* Repeal, recall. *Ant.* Renew, enact.
**Revolt,** v. int. *Syn.* Resist, rebel. *Ant.* Acquiesce.
**Revulsion,** n. *Syn.* Abhorrence. *Ant.* Liking.
**Reward,** v. *Syn.* Pay, honour. *Ant.* Misrequite.
**Rhetorical,** *Syn.* Lively. *Ant.* Cool, Calm.
**Ridicule,** n. *Syn.* Jeer, satire. *Ant.* Respect.
**Righteous,** *Syn.* Just, upright. *Ant.* Vicious, evil.
**Rigid,** *Syn.* Exact, stiff. *Ant.* Mild, docile.
**Riot,** *Syn.* Fray, tumult. *Ant.* Sobriety, peace.
**Risk,** n. *Syn.* Peril, danger. *Ant.* Security, safety.
**Rival,** n. *Syn.* Competitor. *Ant.* Supporter.
**Roam,** *Syn.* Stroll, rove. *Ant.* Fly, hurry.
**Rob,** *Syn.* Cheat, plunder. *Ant.* Enrich, endow.
**Robe,** *Syn.* Drape, deck. *Ant.* Strip, divest.
**Robust,** *Syn.* Sound, strong. *Ant.* Frail, weak.
**Rogue,** *Syn.* Cheat, scamp. *Ant.* Honest man.
**Romance,** *Syn.* Fiction, fable. *Ant.* Fact, truth.
**Root,** *Syn.* Source, origin. *Ant.* Issue, branch.
**Rooted,** *Syn.* Based, fixed. *Ant.* Insecure.
**Rotation,** *Syn.* Order, turn. *Ant.* Constancy.
**Rotundity,** *Syn.* Roundness. *Ant.* Concavity.
**Rough,** *Syn.* Severe, stormy, rugged, harsh, uneven. *Ant.* Calm, glossy, smooth, even.
**Rouse,** *Syn.* Excite, wake. *Ant.* Calm, allay.
**Routine,** *Syn.* Rule, order, succession, round. *Ant.* Merit, impulse, chance, casualty.
**Row,** n. *Syn.* Order, series. *Ant.* Gap, hiatus.
**Rude,** *Syn.* Vulgar, coarse. *Ant.* Calm, refined.
**Rudiment,** *Syn.* Seed, germ. *Ant.* Perfection.
**Ruffian,** *Syn.* Bully, cut-throat, villain. *Ant.* Hero, decent fellow.
**Ruffle,** *Syn.* Excite, disturb. *Ant.* Compose.
**Rugged,** *Syn.* Harsh, rough. *Ant.* Mild, even.
**Rule,** n. *Syn.* Order, maxim, law. *Ant.* Exception.
**Rumour,** *Syn.* Repute, report. *Ant.* Evidence
**Rupture,** *Syn.* Fracture, breach. *Ant.* Union.
**Rural,** *Syn.* Sylvan, rustic. *Ant.* Civic, urban.
**Rustic,** a. *Syn.* Simple, rural. *Ant.* Elegant.
**Rustle,** *Syn.* Whisper, quiver. *Ant.* Din, blast.
**Ruthless,** *Syn.* Unpitying. *Ant.* Lenient, tender.

## S

**Sable,** *Syn.* Black, dark. *Ant.* White, bright.
**Sacerdotal,** *Syn.* Priestly, clerical. *Ant.* Laic.
**Sack,** *Syn.* Spoil, plunder. *Ant.* Protect, spare.
**Sacred,** *Syn.* Divine, holy. *Ant.* Profane, unholy.
**Sacrifice,** v. *Syn.* Forgo, offer. *Ant.* Withhold.
**Sad,** *Syn.* Dull, grave. *Ant.* Glad, gay, joyous.
**Saddle,** *Syn.* Charge, load. *Ant.* Relieve, rid.
**Sage,** *Syn.* Savant, philosopher. *Ant.* Dolt, fool.
**Saintly,** *Syn.* Holy, pure. *Ant.* Worldly, impure.
**Salute,** *Syn.* Greet, hail. *Ant.* Pass, ignore.
**Salvation,** *Syn.* Redemption. *Ant.* Destruction.
**Salve,** *Syn.* Cure, heal. *Ant.* Hurt, wound.
**Sanctify,** *Syn.* Justify, purify. *Ant.* Pollute.
**Sanctuary,** *Syn.* Asylum, shrine. *Ant.* Pitfall.
**Sanguinary,** *Syn.* Bloody. *Ant.* Sparing, lenient.
**Sanguine,** *Syn.* Ardent, warm. *Ant.* Frigid, cold.
**Sanity,** *Syn.* Rationality. *Ant.* Lunacy, insanity.
**Sarcasm,** *Syn.* Taunt, satire. *Ant.* Eulogy.
**Satire,** *Syn.* Irony, sarcasm. *Ant.* Laudation.
**Satisfaction,** *Syn.* Contentment. *Ant.* Grievance.
**Satisfy,** *Syn.* Please, content. *Ant.* Starve, stint.
**Saturate,** *Syn.* Steep, soak. *Ant.* Dry, drain.
**Saunter,** *Syn.* Stroll, loiter. *Ant.* Push, drive.
**Savage,** *Syn.* Fierce, brutal. *Ant.* Docile, mild.
**Saying,** *Syn.* Saw, maxim. *Ant.* Dissertation.
**Scandal,** *Syn.* Libel, offence. *Ant.* Respect, honour.
**Scant,** *Syn.* Sparing, short. *Ant.* Ample, full.
**Scarce,** *Syn.* Unique, rare. *Ant.* Plentiful.
**Scare,** *Syn.* Deter, terrify. *Ant.* Encourage.
**Scatter,** *Syn.* Spread, strew. *Ant.* Save, heap.
**Scepticism,** *Syn.* Unbelief, doubt. *Ant.* Faith.
**Scheme,** *Syn.* Device, plan. *Ant.* Blunder.
**Schism,** *Syn.* Dissent, division. *Ant.* Unity
**Science,** *Syn.* Skill, knowledge. *Ant.* Ignorance.
**Scoff,** *Syn.* Mock, sneer. *Ant.* Honour, respect.
**Scold,** *Syn.* Abuse, rail. *Ant.* Laud, praise.
**Scope,** *Syn.* Purpose, aim. *Ant.* Limitation.
**Scorn,** v. *Syn.* Spurn, slight. *Ant.* Regard, honour
**Scour,** *Syn.* Scrub, purge. *Ant.* Foul, soil.
**Scourge,** *Syn.* Curse, bane. *Ant.* Blessing.
**Scourings,** *Syn.* Scum, dross. *Ant.* Flower.
**Scraggy,** *Syn.* Bony, lean. *Ant.* Fat, plump.
**Scramble,** v. *Syn.* Hurry, struggle. *Ant.* Dawdle.
**Scrape,** v. *Syn.* Mark, grate. *Ant.* Lubricate.
**Screen,** v. *Syn.* Defend, hide. *Ant.* Expose, open.
**Scriptural,** *Syn.* Inspired, revealed, biblical. *Ant.* Unscriptural, unrevealed.
**Scrupulous,** *Syn.* Nice, exact. *Ant.* Reckless.
**Scrutinize,** *Syn.* Sift, probe, examine. *Ant.* Disregard.
**Scurrility,** *Syn.* Mockery, derision. *Ant.* Flattery.
**Seal,** *Syn.* Fasten, close. *Ant.* Cancel, open.
**Search,** v. *Syn.* Seek, inspect. *Ant.* Disregard.
**Season,** *Syn.* Occasion, time. *Ant.* Untimeliness.
**Secede,** *Syn.* Dissent, retire. *Ant.* Unite, adhere.
**Secluded,** *Syn.* Shaded, secret. *Ant.* Exposed.
**Secondary,** *Syn.* Minor, inferior. *Ant.* Important.
**Secret,** *Syn* Obscure, hidden. *Ant.* Public, open.
**Secrete,** *Syn.* Conceal, hide. *Ant.* Disclose, expose.
**Sectarian,** *Syn.* Narrow, party. *Ant.* Tolerant.
**Secular,** *Syn.* Civil, worldly. *Ant.* Religious.
**Secure,** a. *Syn.* Certain, fixed. *Ant.* Distrustful.—v. *Syn.* Close, guard. *Ant.* Free, open.
**Sedate,** *Syn.* Calm, sober. *Ant.* Indiscreet, flighty.
**Sedative,** *Syn.* Soothing. *Ant.* Disturbing.
**Sedentary,** *Syn.* Studious. *Ant.* Free, active.
**Sediment,** *Syn.* Dross, refuse. *Ant.* Filtration.
**Sedition,** *Syn.* Mutiny, riot. *Ant.* Allegiance.
**Seduce,** *Syn.* Deprave, allure. *Ant.* Compel, force.
**Sedulous,** *Syn.* Painstaking. *Ant.* Inattentive.
**Seemly,** *Syn.* Proper, fit. *Ant.* Improper, unsuitable.
**Segment,** *Syn.* Part, section. *Ant.* Totality, whole.
**Seize,** *Syn.* Grasp, catch. *Ant.* Dismiss, loose.
**Seldom,** *Syn.* Rarely. *Ant.* Frequently, often.
**Select,** v. *Syn.* Choose, pick. *Ant.* Sweep, lump.—a. *Syn.* Prime, fine. *Ant.* Ordinary, average.
**Selfish,** *Syn.* Greedy, illiberal. *Ant.* Generous.
**Semblance,** *Syn.* Show, form. *Ant.* Unlikeness.
**Seminary,** *Syn.* School, college. *Ant.* Wilderness.
**Senile,** *Syn.* Doting, aged. *Ant.* Virile, vigorous.
**Seniority,** *Syn.* Priority. *Ant.* Inferiority.
**Sense,** *Syn.* Reason, feeling. *Ant.* Nonsense, folly.
**Senseless,** *Syn.* Silly, stupid. *Ant.* Wise, sensible.
**Sensitive,** *Syn.* Impressible. *Ant.* Unimpressible.
**Sensual,** *Syn.* Lewd, carnal. *Ant.* Ascetic.
**Sensuous,** *Syn.* Esthetic, material. *Ant.* Abstract.
**Sentence,** *Syn.* Phrase, judgment, decision. *Ant.* Acquittal.
**Sententious,** *Syn.* Thoughtful. *Ant.* Dry, dull.
**Sentient,** *Syn.* Conscious, feeling. *Ant.* Mindless.
**Sentiment,** *Syn.* Opinion, notion, feeling.
**Sentimental,** *Syn.* Romantic. *Ant.* Matter-of-fact.
**Sentinel,** *Syn.* Sentry, watch. *Ant.* Traitor.
**Separable,** *Syn.* Divisible. *Ant.* Indivisible.
**Separate,** v. *Syn.* Detach, part. *Ant.* Collect, unite.
**Sepulchral,** *Syn.* Gloomy, hollow. *Ant.* Genial.
**Sequel,** *Syn.* Conclusion, result, event. *Ant.* Preface, first part.
**Sequence,** *Syn.* Series, succession. *Ant.* Precedence.
**Sequestered,** *Syn.* Secluded. *Ant.* Frequented.
**Seraphic,** *Syn.* Pure, angelic. *Ant.* Fiendish.
**Serene,** *Syn.* Calm, clear. *Ant.* Ruffled, stormy.
**Series,** *Syn.* Rotation, train, course, order. *Ant.* Disorder.

**Serious,** *Syn.* Earnest, grave. *Ant.* Light, gay.
**Serpentine,** *Syn.* Sinuous, winding. *Ant.* Straight.
**Serve,** *Syn.* Tend, assist, attend. *Ant.* Command.
**Serviceable,** *Syn.* Sound, useful. *Ant.* Profitless.
**Servile,** *Syn.* Abject, menial. *Ant.* Independent.
**Servility,** *Syn.* Baseness, bondage slavery.
**Set,** v. t. *Syn.* Fix, settle. *Ant.* Lift, remove.—v. i. *Syn.* Harden, decline. *Ant.* Soften, rise.
**Settle,** *Syn.* Quiet, decide, adjust, establish, fix. *Ant.* Confuse, disturb, derange, remove.
**Settlement,** *Syn.* Subsidence. *Ant.* Excitement.
**Sever,** *Syn.* Part, divide. *Ant.* Conjoin, unite.
**Severe,** *Syn.* Harsh, stern. *Ant.* Kind, gay.
**Shackle,** n. *Syn.* Chain, fetter. *Ant.* Help, aid.
**Shallow,** *Syn.* Superficial. *Ant.* Profound, deep.
**Shape,** v. *Syn.* Adapt, form. *Ant.* Distort, pervert.
**Shapeless,** *Syn.* Rude, chaotic, formless. *Ant.* Neat, trim, compact, comely.
**Share,** n. *Syn.* Lot, portion. *Ant.* Mass, whole.
**Shatter,** *Syn.* Shiver, split. *Ant.* Organize.
**Shed,** *Syn.* Diffuse, emit. *Ant.* Collect, absorb.
**Sheer,** *Syn.* Mere, pure. *Ant.* Partial, mixed.
**Shelter,** v. *Syn.* Protect, shield. *Ant.* Endanger.
**Shelve,** *Syn.* Shift, dismiss. *Ant.* Pursue, start.
**Shift,** v. *Syn.* Alter, change. *Ant.* Fasten, fix.—n. *Syn.* Evasion, pretext. *Ant.* Steadiness.
**Shiftless,** *Syn.* Wasteful. *Ant.* Careful, provident.
**Shine,** *Syn.* Excel, beam. *Ant.* Fail, fade.
**Shock,** *Syn.* Horrify, disgust. *Ant.* Edify, please.
**Shocking,** *Syn.* Foul, sad. *Ant.* Charming.
**Shore,** *Syn.* Beach, coast. *Ant.* Sea, ocean.
**Show,** v. *Syn.* Explain, prove, teach, exhibit. *Ant.* Deny, refute, obscure, hide, suppress.
**Shred,** *Syn.* Scrap, rag, strip. *Ant.* Piece, mass.
**Shrew,** *Syn.* Virago, scold. *Ant.* Dove, angel.
**Shrewd,** *Syn.* Discriminating. *Ant.* Undiscerning.
**Shrill,** *Syn.* Acute, sharp. *Ant.* Deep, low.
**Shrink,** *Syn.* Retire, shrivel. *Ant.* Dare, expand.
**Shrivel,** *Syn.* Wither, contract. *Ant.* Spread, unfold.
**Shuffle,** *Syn.* Evade, confuse. *Ant.* Order, range.
**Shun,** *Syn.* Escape, avoid. *Ant.* Seek, court.
**Shy,** *Syn.* Chary, timid. *Ant.* Reckless, bold.
**Side,** *Syn.* Party, border, verge, edge, margin. *Ant.* Opposition, disconnection, core, body.
**Sidereal,** *Syn.* Celestial, heavenly. *Ant.* Terrestrial.
**Sift,** *Syn.* Sort, probe. *Ant.* Amalgamate, confuse.
**Sign,** *Syn.* Proof, token. *Ant.* Misindication.
**Signal,** *Syn.* Remarkable. *Ant.* Unimportant.
**Significant,** *Syn.* Speaking, telling, symbolical, weighty, forcible, indicative, suggestive, momentous, expressive. *Ant.* Mute, unindicative, expressionless, meaningless, inexpressive.
**Signify,** *Syn.* Indicate. *Ant.* Misindicate, conceal.
**Silent,** *Syn.* Quiet, still. *Ant.* Loquacious, noisy.
**Similar,** *Syn.* Common, alike. *Ant.* Alien, unlike.
**Simplicity,** *Syn.* Artlessness. *Ant.* Insincerity.
**Simplify,** *Syn.* Facilitate. *Ant.* Complicate.
**Simulate,** *Syn.* Pretend, feign. *Ant.* Real.
**Simultaneous,** *Syn.* Concurrent. *Ant.* Separate.
**Sincere,** *Syn.* True, frank. *Ant.* Insincere.
**Singular,** *Syn.* Queer, odd, unusual, unique. *Ant.* Customary, usual, ordinary, common.
**Sinister,** *Syn.* Dishonest, unfair. *Ant.* Auspicious.
**Sinuous,** *Syn.* Undulating. *Ant.* Smooth.
**Situation,** *Syn.* Place, post. *Ant.* Unfixedness.
**Size,** *Syn.* Bulk, extent. *Ant.* Tenuity, smallness.
**Skim,** *Syn.* Glide, brush. *Ant.* Penetrate, enter.
**Skirt,** *Syn.* Confine, border. *Ant.* Penetrate.
**Skulk,** *Syn.* Slink, sneak. *Ant.* Show, appear.
**Slander,** *Syn.* Abuse, vilify. *Ant.* Laud, praise.
**Slavish,** *Syn.* Abject, base. *Ant.* Independent.
**Sleek,** *Syn.* Smooth, glossy. *Ant.* Hairy, rough.
**Slender,** *Syn.* Slim, slight, thin. *Ant.* Thick, stout.
**Slight,** v. *Syn.* Scorn, disdain. *Ant.* Notice, regard.
**Slippery,** *Syn.* Evasive, smooth. *Ant.* Solid, firm.
**Slovenly,** *Syn.* Untidy, loose. *Ant.* Neat, trim.
**Sluggish,** *Syn.* Lazy, slow. *Ant.* Quick, active.
**Smear,** *Syn.* Plaster, daub. *Ant.* Scour, polish.
**Smite,** *Syn.* Beat, strike. *Ant.* Caress, soothe.
**Smother,** *Syn.* Choke, stifle. *Ant.* Spread, fan.
**Smoulder,** *Syn.* Simmer, reek. *Ant.* Blaze, burst.
**Snare,** n. *Syn.* Device, noose, gin, trap, net.
**Snug,** *Syn.* Comfortable. *Ant.* Bare, exposed.
**Soar,** *Syn.* Mount, rise. *Ant.* Descend, drop, sink.
**Sober,** *Syn.* Temperate, cool. *Ant.* Furious, excited.
**Sobriety,** *Syn.* Abstemiousness. *Ant.* Intemperance.
**Sociable,** *Syn.* Companionable. *Ant.* Unfriendly.
**Soil,** *Syn.* Tarnish, stain. *Ant.* Cleanse, purify.
**Sojourn,** *Syn.* Tarry, rest. *Ant.* Depart, move.
**Solace,** *Syn.* Consolation. *Ant.* Affliction.
**Sole,** *Syn.* Only, single. *Ant.* Collective, plural.
**Solemn,** *Syn.* Grave, sacred. *Ant.* Gay, light.
**Solicit,** *Syn.* Crave, ask. *Ant.* Claim, exact.
**Solid,** *Syn.* Firm, hard. *Ant.* Light, flimsy, soft.
**Solitude,** *Syn.* Retirement. *Ant.* Society.
**Solution,** *Syn.* Key, explanation. *Ant.* Confusion.
**Sombre,** *Syn.* Dark, grave. *Ant.* Gay, bright.
**Somnolent,** *Syn.* Drowsy, sleepy. *Ant.* Vigilant.
**Sonorous,** *Syn.* Clear, loud. *Ant.* Inaudible.
**Sophism,** *Syn.* Quibble, fallacy. *Ant.* Logic, reason.
**Soporific,** *Syn.* Opiate, narcotic. *Ant.* Antinarcotic.
**Sorcery,** *Syn.* Witchcraft. *Ant.* Disenchantment.
**Sordid,** *Syn.* Mean, base, vile. *Ant.* Lavish, pure.
**Sorrow,** *Syn.* Trouble, grief. *Ant.* Gladness, joy.
**Soul,** *Syn.* Life, spirit. *Ant.* Unfeelingness.
**Sound,** n. *Syn.* Report, noise. *Ant.* Stillness.—a. *Syn.* Whole, entire. *Ant.* Broken, partial.—v. t. *Syn.* Gauge, probe. *Ant.* Disregard.
**Source,** *Syn.* Origin, rise. *Ant.* Effect, issue, end.
**Sour,** *Syn.* Acid, tart. *Ant.* Mellow, sweet.
**Spacious,** *Syn.* Wide, large, vast. *Ant.* Restricted.
**Spare,** v. *Syn.* Grant, save. *Ant.* Waste, spend.—n. *Syn.* Lean, meagre. *Ant.* Liberal, ample.
**Sparse,** *Syn.* Meagre, few. *Ant.* Thick, dense.
**Special,** *Syn.* Proper, particular. *Ant.* General.
**Specify,** *Syn.* State, indicate. *Ant.* Generalize.
**Specimen,** *Syn.* Type, sample. *Ant.* Exception.
**Spectral,** *Syn.* Illusionary, ghostly. *Ant.* Bodily
**Spectre,** *Syn.* Spirit, ghost. *Ant.* Flesh, body.
**Speculation,** *Syn.* Scheme, theory. *Ant.* Fact.
**Speedy,** *Syn.* Quick, early. *Ant.* Slow, late.
**Spirited,** *Syn.* Ardent lively. *Ant.* Dispirited.
**Spiritual,** *Syn.* Holy, divine. *Ant.* Gross, carnal.
**Spite,** *Syn.* Hatred, malice. *Ant.* Benevolence.
**Spleen,** *Syn.* Chagrin, anger. *Ant.* Benevolence.
**Splendid,** *Syn.* Grand, superb. *Ant.* Tame, dull.
**Split,** *Syn.* Rend, crack. *Ant.* Agree, conform.
**Spoil,** *Syn.* Rob, strip. *Ant.* Better, endow.
**Spontaneous,** *Syn.* Voluntary. *Ant.* Compulsory.
**Spread,** *Syn.* Stretch, extend. *Ant.* Shut, fold.
**Sprightly,** *Syn.* Alert, gay. *Ant.* Heavy, dull.
**Sprite,** *Syn* Fairy, shade, ghost, spectre, spirit. *Ant.* Reality.
**Sprout,** n. *Syn.* Scion, stem, shoot, germ, bud.
**Spur,** *Syn.* Goad, incite. *Ant.* Hold, rein.
**Spurious,** *Syn.* Forged, false. *Ant.* Genuine, true.
**Squalid,** *Syn.* Nasty, foul. *Ant.* Wholesome.
**Squander,** *Syn.* Dissipate, waste. *Ant.* Conserve, save.
**Stable,** *Syn.* Steady, firm. *Ant.* Weak, infirm.
**Stagnant,** *Syn.* Dull, still. *Ant.* Rapid, brisk.
**Staid,** *Syn.* Sober, grave. *Ant.* Indiscreet, flighty.
**Stain,** v. *Syn.* Soil, slur, dye. *Ant.* Wash, purify.
**Stale,** *Syn.* Tasteless, vapid. *Ant.* Fresh.
**Stalwart,** *Syn.* Powerful. *Ant.* Timorous, weak.
**Stammer,** *Syn.* Falter. *Ant.* Speak clearly.
**Stamp,** n. *Syn.* Kind, genus. *Ant.* Formlessness.
**Standard,** *Syn.* Rule, test. *Ant.* Misrule.
**Standing,** n. *Syn.* Position. *Ant.* Insecurity.
**State,**—v. *Syn.* Declare, say. *Ant.* Deny, imply, suppose, repress.
**Stately,** *Syn.* Dignified. *Ant.* Unimposing.
**Stationary,** *Syn.* Motionless. *Ant.* Changeable.
**Statute,** *Syn.* Act, law. *Ant.* Use, custom.
**Staunch,** *Syn.* Steady, firm. *Ant.* Unsteady.
**Stave,** v. *Syn.* Fend, parry. *Ant.* Draw, court.
**Stay,** n. *Syn.* Prop, support, sojourn, abode. —v. *Syn.* Dwell, rest, stop. *Ant.* Move, send.
**Steadfast,** *Syn.* Constant. *Ant.* Unstable.
**Steady,** *Syn.* Fixed, firm. *Ant.* Inconstant.
**Steep,** v. *Syn.* Soak, dip. *Ant.* Dry, air.—a. *Syn.* Hilly, abrupt. *Ant.* Level, easy.
**Stem,** v. *Syn.* Obstruct, withstand, oppose. *Ant.* Yield.
**Sterile,** *Syn.* Desert, barren. *Ant.* Productive.
**Sterling,** *Syn.* Genuine, pure. *Ant.* Fictitious.
**Stern,** *Syn.* Harsh, rigid. *Ant.* Easy, genial.
**Stiff,** *Syn.* Unyielding, rigid. *Ant.* Affable, easy.
**Stifle,** *Syn.* Quench, choke. *Ant.* Ventilate.
**Stigma,** *Syn.* Stain, blot. *Ant.* Credit, decoration.
**Stint,** *Syn.* Limit, stop. *Ant.* Heap, pour, lavish.
**Stipendiary,** *Syn.* Hired, paid. *Ant.* Honorary.
**Stipulate,** *Syn.* Contract, agree. *Ant.* Revoke.
**Stir,** *Syn.* Raise, agitate. *Ant.* Still, quiet, soothe.
**Stock,** n. *Syn.* Accumulation, supply, hoard, store.
**Stoical,** *Syn.* Patient, apathetic. *Ant.* Excitable.
**Stolid,** *Syn.* Heavy, dull. *Ant.* Bright, acute.

**Store,** n. *Syn.* Fund, supply. *Ant.* Want, lack.
**Stout,** *Syn.* Brave, sturdy. *Ant.* Timid, weak.
**Straight,** *Syn.* Right. *Ant.* Waving, indirect.
**Strain,** *Syn.* Purify, force. *Ant.* Befoul, remit.
**Stranger,** *Syn.* Foreigner. *Ant.* Acquaintance.
**Stratagem,** *Syn.* Contrivance, artifice. *Ant.* Mismanagement, defeat, blunder.
**Stream,** *Syn.* Exit, flow. *Ant.* Stand-still, station.
**Strengthen,** *Syn.* Corroborate. *Ant.* Undermine.
**Stress,** *Syn.* Pressure, force. *Ant.* Triviality.
**Stricture,** *Syn.* Blame, censure. *Ant.* Compliment.
**Strife,** *Syn.* Contention. *Ant.* Amity, peace.
**Strike,** *Syn.* Stamp, impel, smite. *Ant.* Pat, caress.
**Strive,** *Syn.* Try, contest, aim. *Ant.* Yield, relax.
**Structure,** *Syn.* Construction. *Ant* Demolition.
**Struggle,** n. *Syn.* Agony, pains, labour, contest. *Ant.* Rest, yield, ease.
**Stubborn,** *Syn.* Hard, tough. *Ant.* Pliable, docile.
**Studied,** *Syn.* Premeditated. *Ant.* Extempore.
**Stun,** *Syn.* Astonish, bewilder. *Ant.* Animate.
**Stupendous,** *Syn.* Marvellous. *Ant.* Unimposing.
**Style,** *Syn.* Title, name, mode, fashion, diction.
**Suavity,** *Syn.* Affability. *Ant.* Haughtiness.
**Subdue,** *Syn.* Tame, conquer. *Ant.* Liberate.
**Subject,** a. *Syn.* Prone, liable. *Ant.* Independent. —n. *Syn.* Topic, theme, material, matter.
**Subjective,** *Syn.* Intellectual. *Ant.* External.
**Sublime,** *Syn.* Grand, lofty. *Ant.* Ordinary, low.
**Submerge,** *Syn.* Sink, plunge. *Ant.* Educe, raise.
**Submission,** *Syn.* Resignation. *Ant.* Independence.
**Subsequent,** *Syn.* After, later. *Ant.* Precedent.
**Subsidence,** *Syn.* Settlement. *Ant.* Rising, emergence.
**Subsidiary,** *Syn.* Assistant. *Ant.* Counteractive.
**Subsist,** *Syn.* Continue, live. *Ant.* Starve, fail.
**Substantial,** *Syn.* Solid, real. *Ant.* Imaginary.
**Subterfuge,** *Syn.* Artifice. *Ant.* Frankness
**Subtile,** *Syn.* Acute, fine. *Ant.* Dense, gross.
**Subtle,** *Syn.* Crafty, sly. *Ant.* Frank, open.
**Suburbs,** *Syn.* Environs, outskirts. *Ant.* Centre.
**Subvert,** *Syn.* Overthrow. *Ant.* Converse.
**Success,** *Syn.* Good-fortune. *Ant.* Ruin, defeat.
**Succinct,** *Syn.* Concise, brief. *Ant.* Discursive.
**Succour,** *Syn.* Help, aid. *Ant.* Hurt, thwart.
**Succumb,** *Syn.* Yield. *Ant.* Rise, resist.
**Sufferance,** *Syn.* Toleration. *Ant.* Intolerance.
**Sufficient,** *Syn.* Satisfactory. *Ant.* Inadequate.
**Suggest,** *Syn.* Propose, hint. *Ant.* Propound.
**Suitable,** a. *Syn.* Seemly, proper. *Ant.* Unfitting.
**Sullen,** *Syn.* Dismal, gloomy. *Ant.* Cheerful.
**Sully,** *Syn.* Taint, soil. *Ant.* Honour, purify.
**Sultry,** *Syn.* Oppressive. *Ant.* Fresh, open.
**Summary,** a. *Syn.* Sharp, quick. *Ant.* Protracted. —n. *Syn.* Abridgemnt. *Ant.* Expansion.
**Summit,** *Syn.* Height, top. *Ant.* Foot, depth.
**Summon,** *Syn.* Cite, call. *Ant.* Send, remit.
**Sumptuous,** *Syn.* Expensive. *Ant.* Parsimonious.
**Superb,** *Syn.* Showy, grand. *Ant.* Commonplace.
**Supercilious,** *Syn.* Haughty. *Ant.* Courteous.
**Superficial,** *Syn.* Imperfect. *Ant.* Accurate.
**Superhuman,** *Syn.* Supernatural. *Ant.* Physical.
**Superior,** *Syn.* Loftier, better. *Ant.* Worse, lower.
**Superlative,** *Syn.* Supreme. *Ant.* Ordinary.
**Supersede,** *Syn.* Recall, oust. *Ant.* Perpetuate.
**Superstition,** *Syn.* Fanaticism. *Ant.* Disbelief.
**Supervise,** *Syn.* Control. *Ant.* Mismanage.
**Supine,** *Syn.* Careless, lazy. *Ant.* Diligent, active.
**Supplicate,** *Syn.* Crave, pray. *Ant.* Insist, order.
**Suppose,** *Syn.* Fancy, assume, imagine. *Ant.* Deny, prove, disbelieve.
**Suppress,** *Syn.* Hush, crush, check, stifle, repress. *Ant.* Publish, strengthen, excite, raise.
**Supremacy,** *Syn.* Sovereignty. *Ant.* Inferiority.
**Supreme,** *Syn.* First, highest, greatest. *Ant.* Last, lowest.
**Surety,** *Syn.* Hostage, bail, pledge, certainty. *Ant.* Uncertainty.
**Surfeit,** *Syn.* Glut, excess. *Ant.* Defect, stint.
**Surmise,** v. *Syn.* Presume, guess, imagine, suspect. *Ant.* Ascertain.
**Surpass,** *Syn.* Outdo, excel. *Ant.* Equal, fail.
**Surprise,** *Syn.* Amaze, alarm. *Ant.* Forewarn.
**Surrender,** *Syn.* Relinquish. *Ant.* Contend.
**Surreptitious,** *Syn.* Stealthy. *Ant.* Frank, open.
**Survey,** *Syn.* View, scan. *Ant.* Miss, ignore.
**Susceptible,** *Syn.* Impressible. *Ant.* Impassible.
**Suspect,** *Syn.* Guess, surmise. *Ant.* Credit, trust.
**Suspicion,** *Syn.* Jealousy, misgiving, distrust. *Ant.* Reliance, trust.
**Sustenance,** *Syn.* Nourishment. *Ant.* Starvation.
**Swarm,** *Syn.* Mass, crowd. *Ant.* Rarity, sprinkling.
**Sway,** n. *Syn.* Authority, rule. *Ant.* Inferiority.
**Sweep,** v. *Syn.* Destroy, carry off, brush, clean, remove.—n. *Syn.* Stroke, range, compass.
**Swell,** *Syn.* Extend, dilate. *Ant.* Narrow, contract.
**Symmetrical,** *Syn.* Well-proportioned, shapely. *Ant.* Disproportioned, deformed.
**Sympathy,** *Syn.* Compassion. *Ant.* Antagonism.
**Symptom,** *Syn.* Token, mark. *Ant.* Misindication.
**Synod,** *Syn.* Ecclesiastical council, conference.
**Synonymous,** *Syn.* Equivalent. *Ant.* Not identical.
**Synopsis,** *Syn.* Summary, epitome, abstract.
**System,** *Syn.* Plan, method. *Ant.* Confusion.

## T

**Tabernacle,** *Syn.* Church, temple, pavilion, tent.
**Tacit,** *Syn.* Implied, silent. *Ant.* formal, open.
**Taciturn,** *Syn.* Close, reserved. *Ant.* Chatty, open.
**Tact,** *Syn.* Skill, address. *Ant.* Indiscretion.
**Tactics,** *Syn.* Strategy, policy. *Ant.* Blunder.
**Taint,** *Syn.* Tarnish, defile. *Ant.* Credit, purify.
**Talent,** *Syn.* Gift, ability. *Ant.* Incompetence.
**Tally,** *Syn.* Suit, match. *Ant.* Disagree, differ.
**Tamper,** *Syn.* Intrigue, dabble, meddle. *Ant.* Leave alone.
**Tangible,** *Syn.* Perceptible. *Ant.* Impalpable.
**Tangle,** *Syn.* Mat, snarl. *Ant.* Disentangle, unravel.
**Tantalize,** *Syn.* Provoke. *Ant.* Satisfy, gratify.
**Tardy,** *Syn.* Late, slow. *Ant.* Early, alert, quick.
**Tarnish,** *Syn.* Stain, dull, bedarken, bedim. *Ant.* Polish, brighten.
**Tart,** *Syn.* Biting, acid. *Ant.* Suave, genial, sweet.
**Taunt,** *Syn.* Sneer, scoff. *Ant.* Compliment.
**Tautology,** *Syn.* Reiteration. *Ant.* Brevity.
**Tawdry,** *Syn.* Flashy, showy. *Ant.* Rich, chaste.
**Tax,** *Syn.* Tribute, assessment, impost, rate, duty.
**Teach,** *Syn.* Advise, instruct. *Ant.* Mislead.
**Tease,** *Syn.* Annoy, harass. *Ant.* Soothe, fascinate.
**Tedious,** *Syn.* Wearisome. *Ant.* Interesting.
**Teeming,** *Syn.* Abundant. *Ant.* Scanty.
**Telling,** *Syn.* Powerful. *Ant.* Ineffective, weak.
**Temerity,** *Syn.* Audacity. *Ant.* Wariness.
**Temperate,** *Syn.* Calm, sober. *Ant.* Immoderate.
**Tempest,** *Syn.* Tumult, squall, gale, storm, blast. *Ant.* Calm.
**Temporal,** *Syn.* Worldly. *Ant.* Ecclesiastical.
**Temporary,** *Syn.* Partial, present. *Ant.* Perpetual.
**Tempt,** *Syn.* Attract, entice. *Ant.* Dissuade.
**Tenable,** *Syn.* Justifiable. *Ant.* Indefensible.
**Tenacious,** *Syn.* Adhesive, retentive. *Ant.* Yielding.
**Tenacity,** *Syn.* Pertinacity, fixity, stubbornness, cohesiveness, retentiveness. *Ant.* Laxity.
**Tend,** *Syn.* Serve, manage, watch, guard, nurture. *Ant.* Neglect, unheed.
**Tendency,** *Syn.* Drift, bias. *Ant.* Disinclination.
**Tender,** v. *Syn.* Bid, offer. *Ant.* Retain, withdraw.—a. *Syn.* Soft, frail. *Ant.* Rough, hardy.
**Tenet,** *Syn.* Doctrine, article. *Ant.* Disbelief.
**Tenor,** *Syn.* Sense, drift. *Ant.* Variance.
**Term,** n. *Syn.* Period, season, time limit. *Ant.* Eternity, endlessness.
**Terrestrial,** *Syn.* Sublunary. *Ant.* Celestial.
**Terrible,** *Syn.* Fearful, awful. *Ant.* Unstartling.
**Territory,** *Syn.* Country, region, province, state.
**Terror,** *Syn.* Horror, fear. *Ant.* Confidence.
**Testify,** *Syn.* Verify, swear. *Ant.* Falsify.
**Testimony,** *Syn.* Proof, witness. *Ant.* Refutation.
**Thankful,** *Syn.* Grateful. *Ant.* Ungrateful.
**Theft,** *Syn.* Larceny, stealing, thieving, robbery. *Ant.* Gift, restoration.
**Theory,** *Syn.* System, scheme. *Ant.* Truth, fact.
**Thicket,** *Syn.* Wood, copse. *Ant.* Open place.
**Thorough,** *Syn.* Perfect, complete, entire. *Ant.* Incomplete, parted.
**Thought,** *Syn.* Care, purpose, idea, reflection. *Ant.* Unreflectiveness, dream, vacuity.
**Thraldom,** *Syn.* Bondage, slavery. *Ant.* Freedom.
**Thread,** *Syn.* Course, line. *Ant.* Solution.
**Threatening,** *Syn.* Foreboding. *Ant.* Assuring.
**Thrift,** *Syn.* Profit, saving. *Ant.* Loss, waste.
**Thrive,** *Syn.* Grow, prosper. *Ant.* Fade, decay.
**Thrust,** *Syn.* Drive, push. *Ant.* Retract.
**Tide,** *Syn.* Course, flow. *Ant.* Stagnation.
**Tidings,** *Syn.* Rumour, news. *Ant.* Suppression.
**Tie,** n. *Syn.* Bond, fastening, band.—v. *Syn.* Secure, unite, fasten, restrict, bind.
**Till,** *Syn.* Cultivate. *Ant.* Waste, neglect.

**Tint,** *Syn.* Dye, hue, colour. *Ant.* Colourlessness.
**Tiny,** *Syn.* Little, small. *Ant.* Gigantic, bulky.
**Tipsy,** *Syn.* Fuddled, intoxicated. *Ant.* Sober.
**Tire,** *Syn.* Jade, weary. *Ant.* Excite, enliven.
**Tolerable,** *Syn.* Endurable. *Ant.* Unbearable.
**Toll,** *Syn.* Assessment, duty, rate, tax, impost.
**Tomb,** *Syn.* Crypt, catacomb, vault, grave.
**Tongue,** *Syn.* Dialect, language, speech, discourse.
**Torment,** *Syn.* Pain, worry. *Ant.* Amuse, soothe.
**Torrid,** *Syn.* Sultry, hot. *Ant.* Cool, fresh.
**Torture,** *Syn.* Anguish, agony. *Ant.* Bliss, rapture.
**Total,** a. *Syn.* Gross, complete, entire, whole.
**Toy,** v. *Syn.* Frolic, sport, caress, fondle, play.—n. *Syn.* Gewgaw, trifle. *Ant.* Implement.
**Trace,** *Syn.* Pursue, track. *Ant.* Lose, miss.
**Tract,** *Syn.* Patch, region, quarter, district. *Ant.* Enclosure, park.
**Traditional,** *Syn.* Unwritten. *Ant.* Documentary.
**Train,** v. *Syn.* Rear, lead. *Ant.* Break, force.
**Traitorous,** *Syn.* Faithless, false, treacherous. *Ant.* Loyal, faithful.
**Trammel,** *Syn.* Clog, fetters. *Ant.* Unrestraint.
**Tranquil,** *Syn.* Still, quiet. *Ant.* Disturbed.
**Transact,** *Syn.* Treat, conduct. *Ant.* Mismanage.
**Transcend,** *Syn.* Excel, outstrip. *Ant.* Foil, fall.
**Transcribe,** *Syn.* Transfer, copy, translate. *Ant.* Misinterpret.
**Transfer,** *Syn.* Give, sell. *Ant.* Keep, fix, retain.
**Transgress,** *Syn.* Sin, break. *Ant.* Obey, keep.
**Translate,** *Syn.* Transfer, render, construe. *Ant.* Misconstrue.
**Transparent,** *Syn.* Limpid. *Ant.* Opaque, turbid.
**Transpire,** *Syn.* Exude, escape. *Ant.* Lie, lurk.
**Transport,** n. *Syn.* Bliss, ecstasy. *Ant.* Distress, agony.
**Travail,** *Syn.* Toil, labour. *Ant.* Joy, rest, ease.
**Travel,** *Syn.* Tour, trip. *Ant.* Settlement, rest.
**Traverse,** *Syn.* Thwart, cross. *Ant.* Omit, pass.
**Treachery,** *Syn.* Treason, perjury. *Ant.* Fidelity.
**Treaty,** *Syn.* Alliance, contract. *Ant.* Neutrality.
**Treble,** *Syn.* Acute, sharp. *Ant.* Low, bass.
**Tremble,** *Syn.* Shiver, shake. *Ant.* Still, stand.
**Tremendous,** *Syn.* Fearful. *Ant.* Unimposing.
**Trepidation,** *Syn.* Alarm. *Ant.* Courage, firmness.
**Trial,** *Syn.* Proof, test. *Ant.* Trifle, relief.
**Tribute,** *Syn.* Customs, charge, duty, impost, tax, acknowledgment, gift, offering. *Ant.* Denunciation.
**Trickle,** *Syn.* Drop, drip. *Ant.* Rush, flow.
**Trifle,** n. *Syn.* Toy, bauble, *Ant.* Weight, crisis.
**Triumph,** *Syn.* Success, victory. *Ant.* Defeat.
**Trivial,** *Syn.* Useless, common. *Ant.* Novel, critical.
**Truant,** *Syn.* Loose, vagrant. *Ant.* Industrious.
**Truckle,** *Syn.* Yield, crouch, stoop, cringe. *Ant.* Resist, obstruct.
**Truism,** *Syn.* Commonplace. *Ant.* Paradox, discovery.
**Trunk,** *Syn.* Shaft, body, stock, stem. *Ant.* Branch, twig.
**Trust,** v. *Syn.* Credit, rely. *Ant.* Doubt, suspect. —n. *Syn.* Credit, hope, belief, faith.
**Truth,** *Syn.* Fidelity, fact, verity, veracity. *Ant.* Untruth, falsity.
**Tumult,** *Syn.* Mutiny, uproar. *Ant.* Order, peace.
**Tumultuous,** *Syn.* Confused, disturbed, disorderly. *Ant.* Quiet, calm, soothe.
**Turbid,** *Syn.* Thick, foul. *Ant.* Limpid, clear.
**Turn,** v. *Syn.* Alter, spin. *Ant.* Arrest, fix.—n. *Syn.* Shape, bend. *Ant.* Uniformity, fixity.
**Tutor,** *Syn.* Master, teacher. *Ant.* Pupil, ward.
**Twine,** *Syn.* Wind, twist. *Ant.* Detach, disunite.
**Twist,** *Syn.* Wrest, distort. *Ant.* Straighten.
**Type,** *Syn.* Fashion, idea, character, kind, *Ant.* Caricature, deviation, abnormity, inexpression.
**Tyranny,** *Syn.* Despotism. *Ant.* Independence.
**Tyro,** *Syn.* Novice, beginner. *Ant.* Professor.

## U

**Ubiquity,** *Syn.* Omnipresence. *Ant.* Limitation.
**Ulterior,** *Syn.* Remote, further. *Ant.* Hither, prior.
**Ultimate,** *Syn.* Final, last. *Ant.* Intermediate.
**Umbrage,** *Syn.* Offence, dissatisfaction. *Ant.* Complacency.
**Unanimous,** *Syn.* Agreeing. *Ant.* Discordant.
**Unblemished,** *Syn.* Unsullied, unspotted, spotless, pure. *Ant.* Soiled, spoilt, impure.
**Unctuous,** *Syn.* Smooth, oily. *Ant.* Abrupt.
**Undertaking,** *Syn.* Effort, attempt, adventure. *Ant.* To lapse, to forgo, abandon.

R

**Undulation,** *Syn.* Vibration, wave. *Ant.* Plain, rest.
**Uneasy,** *Syn.* Awkward, stiff, unquiet, restless. *Ant.* Restful, undisturbed.
**Uniform,** *Syn.* Even, equal. *Ant.* Inconsistent, diverse, varying.
**Union,** *Syn.* Concert, harmony, junction. *Ant.* Discord, divorce, severance.
**Unique,** *Syn.* Rare, matchless. *Ant.* Common.
**Unison,** *Syn.* Union, concord. *Ant.* Disagreement.
**Unit,** *Syn.* Part, item. *Ant.* Mass, total.
**Unity,** *Syn.* Conjunction, concord, individuality. *Ant.* Variety, discord, plurality.
**Universal,** *Syn.* Whole, all. *Ant.* Local, partial.
**Upbraid,** *Syn.* Chide, taunt. *Ant.* Laud, praise.
**Uphold,** *Syn.* Raise, elevate. *Ant.* Betray, drop.
**Upset,** *Syn.* Capsize, overturn. *Ant.* Confirm, plant.
**Upshot,** *Syn.* Finale, issue, result. *Ant.* Unproductive.
**Urbane,** *Syn.* Polite, refined, affable. *Ant.* Discourteous.
**Urge,** *Syn.* Drive, push, press. *Ant.* Retain, hold.
**Urgent,** *Syn.* Grave, immediate. *Ant.* Unimportant.
**Usage,** *Syn.* Treatment, fashion, use, custom.
**Useful,** *Syn.* Profitable. *Ant.* Fruitless, hostile.
**Usher,** *Syn.* Announce, precede, introduce, herald. *Ant.* Succeed, attend, follow.
**Usurp,** *Syn.* Assume, seize. *Ant.* Accept, inherit.
**Utilize,** *Syn.* Employ. *Ant.* Lose, waste.
**Utmost,** *Syn.* Remotest, farthest. *Ant.* Least.
**Utter,** v. *Syn.* Speak, pronounce, express, issue. *Ant.* Check, hush, repress, recall.—a. *Syn.* Pure, entire, thorough, extreme. *Ant.* Impure, incomplete.

## V

**Vacant,** *Syn.* Mindless, void, unemployed, empty. *Ant.* Thoughtful, filled, engaged, employed, full.
**Vacillate,** *Syn.* Be unsteady, waver, fluctuate. *Ant.* Adhere, abide, determine.
**Vacuity,** *Syn.* Void, space. *Ant.* Occupation.
**Vagary,** *Syn.* Fancy, whim. *Ant.* Judgment, purpose.
**Vagrant,** *Syn.* Roving, roaming, wandering. *Ant.* Resident, local, established, domestic.
**Vague,** *Syn.* Indefinite, general. *Ant.* Definite, strict.
**Vain,** *Syn.* Idle, empty. *Ant.* Sound, solid.
**Valediction,** *Syn.* Leave-taking. *Ant.* Greeting.
**Valid,** *Syn.* Weighty, strong. *Ant.* Invalid, weak.
**Vanish,** *Syn.* Melt, disappear. *Ant.* Loom, appear.
**Vanity,** *Syn.* Pride, conceit. *Ant.* Truth, reality.
**Vanquish,** *Syn.* Overcome. *Ant.* Fail, yield.
**Vapid,** *Syn.* Tame, flat. *Ant.* Animated, spirited.
**Vapour,** *Syn.* Gas, fume, mist, fog, steam. *Ant.* Condensation, solid.
**Variable,** *Syn.* Unsteady, fickle. *Ant.* True, firm.
**Variance,** *Syn.* Disagreement. *Ant.* Reconciliation.
**Variety,** *Syn.* Diversity. *Ant.* Type, uniformity.
**Various,** *Syn.* Uncertain, sundry. *Ant.* Same, one.
**Vary,** *Syn.* Differ, alter. *Ant.* Conform, harmonize.
**Vaunt,** *Syn.* Brag, boast. *Ant.* Decry, repress.
**Vegetate,** *Syn.* Idle, grow. *Ant.* Work, pine.
**Vehement,** *Syn.* Eager, passionate. *Ant.* Feeble, mild.
**Veil,** *Syn.* Cover, hide. *Ant.* Strip, expose.
**Velocity,** *Syn.* Speed, quickness. *Ant.* Slowness.
**Veneration,** *Syn.* Adoration. *Ant.* Loathing.
**Vengeance,** *Syn.* Retaliation. *Ant.* Grace, pardon.
**Venom,** *Syn.* Virus, poison. *Ant.* Antidote.
**Venturous,** *Syn.* Rash, daring. *Ant.* Cautious.
**Veracious,** *Syn.* Honest, true. *Ant.* Mendacious.
**Verbal,** *Syn.* Vocal, oral. *Ant.* Recorded, written.
**Verbose,** *Syn.* Tedious, prosy. *Ant.* Terse, curt.
**Verge,** n. *Syn.* Edge, brim. *Ant.* Midst, heart.—v. *Syn.* Slope, tend. *Ant.* Back, revert.
**Verify,** *Syn.* Test, confirm. *Ant.* Mistake, fail.
**Vernal,** *Syn.* Genial, spring. *Ant.* Aged, wintry.
**Versed,** *Syn.* Clever, skilled. *Ant.* Unpractised.
**Vertical,** *Syn.* Perpendicular. *Ant.* Horizontal.
**Veteran,** *Syn.* Adept, expert. *Ant.* Novice, recruit.
**Vibrate,** *Syn.* Shake, quiver. *Ant.* Be at rest.
**Vice,** *Syn.* Crime, evil, fault. *Ant.* Virtue, purity.
**Vicious,** *Syn.* Bad, corrupt. *Ant.* Sound, pure.
**Vie,** *Syn.* Rival, contest. *Ant.* Retire, yield.

**Vigorous,** *Syn.* Lusty, strong. *Ant.* Effete, inactive.
**Vindicate,** *Syn.* Clear, assert. *Ant.* Destroy, waive.
**Violence,** *Syn.* Fury, rage. *Ant.* Gentleness, lenity.
**Virago,** *Syn.* A shrew, a scold, vixen, termagant. *Ant.* Gentle, feminine.
**Virile,** *Syn.* Robust, manly. *Ant.* Puerile, feeble.
**Virtue,** *Syn.* Goodness, force. *Ant.* Corruption.
**Virulence,** *Syn.* Malignancy. *Ant.* Benevolence.
**Visible,** *Syn.* Obvious, plain. *Ant.* Imperceptible.
**Visionary,** *Syn.* Dreamy, fanciful. *Ant.* Palpable.
**Vital,** *Syn.* Essential, living. *Ant.* Secondary.
**Vocation,** *Syn.* Mission, office. *Ant.* Leisure.
**Vogue,** *Syn.* Fashion, custom. *Ant.* Disrepute.
**Void,** *Syn.* Null, empty. *Ant.* Good, solid, full.
**Volume,** *Syn.* Quantity, size. *Ant.* Smallness.
**Volunteer,** *Syn.* Offer. *Ant.* Refuse, withhold.
**Voluptuous,** *Syn.* Self-indulgent, sensual. *Ant.* Sober, self-denying.
**Voracious,** *Syn.* Ravenous, hungry. *Ant.* Nice, dainty, delicate.
**Vouch,** *Syn.* Vow, attest. *Ant.* Abjure, demur.
**Vouchsafe,** *Syn.* Deign, grant. *Ant.* Deny, refuse.
**Vulnerable,** *Syn.* Weak. *Ant.* Impregnable.

## W

**Waft,** *Syn.* Bear, float. *Ant.* Bear down, sink.
**Wag,** *Syn.* Jester, joker. *Ant.* Serious fellow.
**Waive,** *Syn.* Cancel, remit. *Ant.* Urge, press.
**Wake,** *Syn.* Excite, rouse. *Ant.* Hush, soothe.
**Wan,** *Syn.* Haggard, bloodless, livid, pale. *Ant.* Bright, lively, fresh-coloured.
**Wander,** *Syn.* Rove, range. *Ant.* Settle, rest.
**Wane,** *Syn.* Recede, fade. *Ant.* Expand, rally.
**Want,** *Syn.* Failure, lack. *Ant.* Allowance.
**Wanton,** *Syn.* Licentious, loose, sportive, roving. *Ant.* Austere, discreet, sedate, demure.
**Ward,** *Syn.* Avert, watch. *Ant.* Admit, betray.
**Warlike,** *Syn.* Hostile, martial. *Ant.* Pacific, civil.
**Warn,** *Syn.* Deter, notify. *Ant.* Induce, incite.
**Warp,** *Syn.* Pervert, corrupt, shrink, twist, turn. *Ant.* Correct, guide, direct, stand.
**Warrant,** *Syn.* Confirm, secure. *Ant.* Nullify, imperil.
**Wary,** *Syn.* Vigilant, prudent. *Ant.* Unsuspecting.
**Washy,** *Syn.* Vapid, weak. *Ant.* Pungent, forcible.
**Waste,** *Syn.* Wither, decay, destroy, ruin. *Ant.* Enrich, protect, repair, restore.
**Watchful,** *Syn.* Wary, careful. *Ant.* Unwary.
**Waver,** *Syn.* Scruple, halt. *Ant.* Rest, decide.
**Wayward,** *Syn.* Froward, wilful. *Ant.* Manageable.
**Weaken,** *Syn.* Impair, dilute. *Ant.* Corroborate.
**Wean,** *Syn.* Withdraw, detach. *Ant.* Attach.
**Weary,** a. *Syn.* Worn, tired. *Ant.* Hearty, fresh.
**Weave,** *Syn.* Plait, twine. *Ant.* Untwist, unravel.
**Weazen,** *Syn.* Dried up, wizened. *Ant.* Plump, fresh.
**Wed,** *Syn.* Marry, link. *Ant.* Divorce, separate.
**Wedlock,** *Syn.* Match, marriage. *Ant.* Celibacy.
**Welfare,** *Syn.* Good fortune. *Ant.* Unsuccess, failure.
**Well,** adv. *Syn.* Properly, thoroughly, rightly. *Ant.* Improperly, imperfectly, wrongly, ill.
**Wheedle,** *Syn.* Cajole, coax. *Ant.* Scare, chide.
**Whet,** *Syn.* Provoke, stimulate, incite, sharpen. *Ant.* Nauseate, satiate, deaden, pall, blunt.
**Whimsical,** *Syn.* Quaint, fanciful. *Ant.* Sober, staid.
**White,** *Syn.* Clear, snowy, pure. *Ant.* Impure, black.
**Wholesome,** *Syn.* Healing, salutary, healthful. *Ant.* Deleterious, unwholesome, unhealthful.
**Wholly,** *Syn.* Utterly, quite, totally, entirely. *Ant.* Partially.
**Wield,** *Syn.* Handle, manage. *Ant.* Depose, resign.
**Wile,** *Syn.* Art, craft, guile. *Ant.* Friendliness.
**Wilful,** *Syn.* Stubborn, intentional, deliberate. *Ant.* Thoughtful, obedient, docile, accidental.
**Will,** v. *Syn.* Direct, devise. *Ant.* Intestate.
**Willingly,** *Syn.* Freely, voluntarily. *Ant.* Unwillingly, grudgingly.
**Wind,** *Syn.* Turn, wreath, twine, coil. *Ant.* Untwist, to straighten.
**Winning,** *Syn.* Seductive, alluring. *Ant.* Unpleasing.
**Winnow,** *Syn.* Sort, sift. *Ant.* Intermix, confuse.
**Witchcraft,** *Syn.* Sorcery, necromancy, magic. *Ant.* Truth, honesty.
**Withdraw,** *Syn.* Retire, recall. *Ant.* Confirm, offer.
**Wither,** *Syn.* Blight, blast. *Ant.* Grow, swell.
**Withhold,** *Syn.* Keep, retain. *Ant.* Afford, grant.
**Withstand,** *Syn.* Thwart, resist. *Ant.* Submit.
**Witness,** *Syn.* Evidence. *Ant.* Miss.
**Witty,** *Syn.* Facetious, humorous. *Ant.* Dull, stolid.
**Wizard,** *Syn.* Sorcerer, conjurer, magician, juggler.
**Woe,** *Syn.* Sorrow, grief. *Ant.* Comfort, joy.
**Wonder,** *Syn.* Surprise, amazement. *Ant.* Indifference.
**Wonderful,** *Syn.* Awful, strange, amazing. *Ant.* Usual, normal, regular, everyday, common.
**Wont,** *Syn.* Habit, rule. *Ant.* Disuse, exception.
**Workman,** *Syn.* Operative, craftsman, artisan. *Ant.* Untrained, unskilled.
**Workmanship,** *Syn.* Manipulation, handiwork.
**Worldly,** *Syn.* Secular, temporal. *Ant.* Spiritual, heavenly.
**Worry,** *Syn.* Molest, harass. *Ant.* Please, calm.
**Worship,** v. *Syn.* Exalt, adore. *Ant.* Contemn, loathe.
**Worth,** *Syn.* Rate, value. *Ant.* Cheapness.
**Wound,** *Syn.* Pain, cut, rend. *Ant.* Soothe, heal.
**Wrangle,** *Syn.* Contend, brawl. *Ant.* Harmonize.
**Wrathful,** *Syn.* Exasperated, raging, angry. *Ant.* Calm, gentle.
**Wreathe,** v. *Syn.* Enfold, interweave, twist, turn. *Ant.* Open out, straighten.
**Wrench,** *Syn.* Extort, strain, distort, twist, wrest. *Ant.* Unite, consolidate.
**Wretched,** *Syn.* Vile, ruined, debased, miserable. *Ant.* Noble, admirable, unfallen, happy.
**Wrong,** *Syn.* Illegal, unjust, mistaken, unfit. *Ant.* Just, right, correct, proper, fit.
**Wrongful,** *Syn.* Wrong, dishonest, unjust, unfair.
**Wrought,** *Syn.* Produced, done. *Ant.* Undone.
**Wry,** *Syn.* Deranged, askew. *Ant.* Just, right.

## Y

**Yearly,** *Syn.* Per annum, annually.
**Yearn,** *Syn.* Desire, covet, crave, long. *Ant.* Recoil, loathe.
**Yield,** *Syn.* Render, bear, afford, produce. *Ant.* Claim, refuse, deny, retain.
**Yielding,** *Syn.* Pliant, supple. *Ant.* Hard, firm.
**Yoke,** *Syn.* Link, couple. *Ant.* Release, divorce.

## Z

**Zeal,** *Syn.* Energy, ardour. *Ant.* Torpor, apathy.
**Zealot,** *Syn.* Devotee, fanatic, bigot, partisan. *Ant.* Deserter, traitor, renegade.
**Zealous,** *Syn.* Eager, fervid, anxious, ardent. *Ant.* Careless, placid.
**Zenith,** *Syn.* Summit, pinnacle, highest point, height. *Ant.* Minimum, lowest point, nadir.
**Zephyr,** *Syn.* Gentle wind, mild breeze. *Ant.* Furious wind, gale.
**Zero,** *Syn.* Nothing, cipher, naught. *Ant.* Creature, something.
**Zest,** *Syn.* Relish, pleasure, gust, gusto, flavour. *Ant.* Disrelish, distaste.

# BUSINESS COMPENDIUM

PEARS—THE PURE SOAP

*For particulars of Pears Famous Toilet Preparations turn to end of Book*

# Pears' Dictionary of Business

## Being a Dictionary of Subjects, Words, and Phrases relating to Trade, Commerce, Shipping, Finance, and Law.

**Abandonment** in marine insurance is the act of cession by which in the case of the constructive total loss of a vessel or goods in the progress of a voyage, the owners give up to the underwriters what remains of the vessel or goods on condition of receiving the whole sum for which insured.

**Above Par**, a price above nominal value.

**Acceptance** is the signification by the person on whom a bill of exchange is drawn of his assent to the order of the drawer. It is effected by the drawee writing "accepted" across the face of the bill and appending his signature.

**Acceptance for Honour supra protest**, where a bill has been protested for dishonour either for non-acceptance by the drawee or for better security any person not already liable may with the consent of the holder accept the bill for the honour of any party to the bill.

**Acceptance General**, the acceptance of a bill of exchange without any qualification of the terms upon which it is drawn.

**Acceptance Qualified or Special**, varies in express terms the effect of the bill as drawn. The qualification may relate to the time or place of acceptance, the fulfilment of some condition, or the acceptance of responsibility for only part of the sum mentioned.

**Accommodation Bill** is a bill of exchange accepted by one person or firm for the accommodation of another person or firm, as a matter of convenience or friendship, without the acceptor having received any consideration.

**Accountants** are men whose special business it is to prepare, investigate, and audit accounts. The chief bodies of professional accountants are the Institute of Chartered Accountants in England and Wales (estbd. 1880), the Society of Incorporated Accountants and Auditors (estbd. 1885), the Institute of Chartered Accountants in Ireland (estbd. 1888) and the Chartered Accountants of Scotland (estbd. in Edinburgh 1854). Admission to these bodies is by way of serving a term of articleship and passing examinations.

**Active Bonds** are bonds bearing a fixed rate of interest payable in full from the date of issue, and include most bonds negotiable on the Stock Exchange.

**Act of Bankruptcy**, an act or default on the part of a debtor deemed to be evidence of his insolvency, and one which enables a creditor to present a petition against him in a Court of Bankruptcy. A debtor commits an act of bankruptcy (*a*) if he makes an assignment of his property for the benefit of his creditors generally, (*b*) if he makes a fraudulent gift or transfer of his property, (*c*) if he fraudulently prefers one creditor to another in the transfer of his property, (*d*) if he leaves the country or remains out of it, or absents himself from his house with a view to delaying or defeating the creditors, (*e*) if, as a result of an action in court, the sheriff seizes his goods and holds them for twenty-one days, (*f*) if he files a declaration of inability to meet his obligations, (*g*) if he fails within seven days to comply with a bankruptcy notice, (*h*) if he gives notice to any creditor that he intends suspending payment of his debts.

**Act of God**, any event beyond human prevention or foreseeing, such as shipwreck, earthquake, lightning, etc., loss in respect of which cannot be enforced unless expressly provided for.

**Actuary**, a statistician whose duties are chiefly concerned with applying the doctrine of mathematical probability to such matters as life insurance, annuities, reversionary interests and the like.

**Adjudication Order**, the order of Court declaring the bankruptcy of an insolvent debtor and investing his property in a trustee.

**Advance Freight**, an advance payment for freight of sea-carried goods, payable on shipment, and not recoverable in case of loss of goods in transit.

**Advance Note**, a note given by the master of a ship to a seaman on his signing an engagement agreement. If the agreement be made in any port within the United Kingdom the amount advanced must not exceed a month's wages; but if the engagement be made at a foreign port this restriction does not apply.

**Advice**, any notification of a business transaction, apprising an agent, correspondent, or customer that a certain thing has been done. In the neglect of the advice of a bill of exchange, the bill may be dishonoured "for want of advice."

**After Sight**, a phrase indicating that the period for which a bill is drawn does not begin to run until presented for acceptance by the drawee, or from the date of noting or protest.

**Agenda**, a list of matters to be transacted or discussed at a meeting.

**Alien** is a person who is not a British subject. A British subject is a person who is a natural-born British subject or a person to whom a certificate of naturalisation has been granted (British Nationality and Status of Aliens Act, 1914–1918). A natural-born British subject is one born within His Majesty's Dominions. An alien is prohibited from owning or having shares in any British ship and from holding any parliamentary, municipal, or other public office. After a five years' residence an alien may take out letters of nationalisation through the Home Office, the fees in connection with the matter amounting to about £6.

**Allotment**, the allotting of shares, stock, or bonds in a company. No allotment of shares can be made unless the minimum subscription mentioned in the memorandum or articles of association and in the prospectus, as that upon which the directors would proceed to allotment, has been subscribed, and the sum payable on application has been received by the company, or the entire share capital has been subscribed and paid for, conditions which must be carried out within forty days of the first issue of the prospectus, otherwise all moneys received on share account must be returned.

**Allotment Note** is a document signed by a seaman, authorising payment by his employers of a portion of his wages (not exceeding one half) for a certain voyage, to a near relative or savings bank specified.

**All Rights Reserved**, a printed intimation in any book or literary work, notifying that the owner of the copyright has legally protected his rights against infringement.

**All-Round Price**, a price that covers all charges usually treated as trade extras. (Same as Overhead Price.)

**Amalgamation, or Combination**, the association of companies with a view to taking advantage of the economies of large-scale production, eliminating competition, and, in general, controlling production and, therefore, prices. Amalgamations may be *horizontal* or *vertical*, the former taking place between firms engaged in the same industry and working for the same markets, and the latter between firms carrying on distinct processes, the finished products of one process being the raw materials of another.

**Amortisation**, the redemption, reimbursement, liquidation or repayment of a debt, the term usually being applied to the drawing and repayment of Government and debenture bonds. Amortisation may be effected by redemption at par at some predetermined future date, by means of a sinking fund, or by means of drawings.

**Ancient Lights** are [illegible]hts of light enjoyed by a property owner over [illegible] land. Such a right is obtained either by uninterrupted enjoyment for twenty years, or by written authority, and once legally established cannot be upset, no building being permissible that would seriously interfere with the privilege.

**Annuity,** a fixed sum of money paid yearly or in certain portions at fixed periods of the year, and which may be certain (or terminable) or life (or perpetual) annuities. The former is a fixed periodical payment for a specific time only, and the latter is an annuity calculated upon the probable duration of the life of the person to whom it is payable.

**Ante-date,** to give a date prior to that on which it is written, to any cheque, bill, or other document.

**Appraiser,** a valuer of property, who pays £2 a year for his licence, and is liable to a penalty of £50 for acting without one. No examination is necessary for an appraiser. There is a valuation duty payable on all appraisements. (*See* **Stamp Duties** in *Office Compendium* Section.)

**Apprentice,** one who contracts to serve another in a trade or calling for a specified term, in return for being taught the "art and mystery" of such trade or calling. As an apprentice is usually a minor, the contract is signed on his behalf by his parent or guardian, a stamp duty of 2*s.* 6*d.* being chargeable on an apprenticeship indenture, whether a premium be paid or not. An apprenticeship expires (1) by effluxion of time, (2) by the coming of age of the apprentice, (3) by the death of master or apprentice, (4) by mutual consent of the parties, (5) by the bankruptcy of the master.

**Arbitrage,** the process by which operators on markets or exchanges make a profit out of the difference in prices existing at the same time for the same thing upon different markets.

**Arbitration,** a method of settling a dispute by a reference to disinterested parties, frequently resorted to in order to avoid law suits, and sometimes, where technical or other special difficulties present themselves, recommended by a court of law. Disputes between employers and employed are often settled by arbitration.

**Arbitration of Exchange** is the calculation entailed when a merchant having money to remit to one country finds it a saving to remit through another country because of the rate of exchange being more favourable in the latter. It is called simple arbitration when only one intermediate place is dealt with, and compound arbitration if more than one be concerned.

**Articles of Association** are the rules and regulations detailing the scope and method of conducting the internal business of a limited company. They must be printed in consecutively numbered paragraphs, and are supplementary to the Memorandum of Association, the terms of which they must not exceed.

**Assessment,** the official valuation of property or income for the purposes of taxation; the term is also used to represent the amount of tax which has been determined as payable by a certain person.

**Assets** are property of any kind available towards the discharge of the liabilities of a testator, intestate debtor, or company.

**Assign,** a legal term applied to the making over the right or interest in goods, money, or property of any kind to another. [assigned

**Assignee,** the person to whom anything is

**Assignment,** a document of transfer of land, personal property, or rights. *Choses in action,* such as debts, can be assigned and sued for by the assignee on certain conditions.

**At Sight,** a form of notification written on bills or notes denoting that they are payable on demand, without allowance of days of grace.

**Attachment,** a legal term applying to the seizure of a person or goods before a court under process of law, and has special reference to the writ of attachment authorising such seizure.

**Attestation** is the formal witnessing of the signing of any deed or document and the subscribing of the witness's name in proof thereof. Two witnesses, who are not interested, are required to a will, and they must append their signatures at the request and in the presence of the testator.

**Attorney, Power of,** a document authorising the person to whom it is given to act in all respects as the grantor of the power, in relation to matters specified in the document. When the power is general it applies to everything in which the grantor is interested, when special it applies to specific matters, such as the power to sign cheques, bills, transfers, deeds, to receive moneys, to effect sales, etc.

**Auction** is a public sale at which goods or properties are offered for sale by an auctioneer, and sold to the highest bidders when the sale is without reserve.

**Auctioneer,** a person licensed to sell goods or property by public auction. He is usually paid by commission, and his licence costs him £10 a year. In respect of goods seized under distraint, or for sales under the authority of the County Court, the person selling need not be a qualified auctioneer if the goods be under £20 in value.

**Auditor,** the person who carries out an audit of accounts. He is liable to be proceeded against for damages if by his omissions or neglect any loss arises. It is no part of his duty, however, to criticise the actions of principals, or to concern himself with the prudence or imprudence of transactions disclosed by the books. His chief duty is to ascertain the true financial position of the business and get out a balance sheet in which this is accurately set forth. The employment of auditors is compulsory in regard to the accounts of most public bodies and companies, but no director or officer of a company may hold the position of auditor.

**Average,** a marine insurance term applying to loss or damage at sea. It may refer to *particular average,* a contribution by underwriters for part loss or damage; or *general average,* a combined contribution on ship, freight, and cargo for damage and expenses incurred for the common good. Average in the ordinary commercial sense indicates "a mean proportional between two or more figures."

**Average Clause,** the clause in a marine insurance policy excluding certain articles from average unless general, and declaring others free from average if under a specified percentage.

**Award,** the decision of an arbitrator or arbitrators, or their umpire, on matters in dispute that may have been referred to them. Unless otherwise stated, or by consent for extension of time, an award must be delivered within three months of the arbitration.

**Back Bond,** a term in Scots Law equivalent to a trust deed in England. It is a deed which qualifies or attaches a condition to an absolute disposition.

**Backed Note,** a receiving note, endorsed by a shipbroker, authorising goods to be transferred from barges to shipboard.

**Back Freight** occurs when from causes beyond a captain's control goods cannot be landed at the port of destination, and have to be conveyed back to the place of shipment, freightage thus becoming chargeable against the owner for the return voyage.

**Backwardation,** the sum charged by a buyer to the seller of stock which is not delivered on settling day. The stock is said to be "carried over" to the next account.

**Bail,** the security given to effect the release of one arrested or imprisoned, on the understanding that he shall appear for trial at a fixed time and place.

**Bailment** is the delivery of goods by one person to another for a specific use or purpose, a condition which arises when goods are lent, or pawned, let on hire, entrusted for conveyance, or in temporary custody for repair or alteration, on the understanding that the goods shall be returned on fulfilment of the conditions on which the goods were deposited.

**Balance Sheet,** a statement prepared from the accounts of a concern, setting forth on the debit side the capital, its debts and other liabilities, and on the credit side all the assets, including cash, stock-in-trade, property, plant, goodwill, and so on.

**Bank Holidays,** days which are kept as close holidays in banks and which are observed as general holidays. By the Act of 1871, introduced by Sir J. Lubbock (afterwards Lord Avebury), they are in England and Ireland—Easter Monday, Whit Monday, the first Monday in August, and the day after Christmas Day; and in Scotland—New Year's Day, Christmas Day, Good Friday, the first Monday in May and the first Monday in August. If the payment of a debt or the fulfilment of an obligation falls due on a bank holiday it may be executed on the following day.

**Banking**, in its modern significance, dates from the foundation of the Bank of England in 1694. During the 18th century banking developed to a great extent and many private banks were started. General conditions of banking were greatly improved by the Bank Charter Act of 1844, which divided the functions of the Bank of England into the business of banking and the business of note issue, limited the fiduciary issue, and provided for the centralisation of note issue in the hands of the Bank of England. Between 1844 and 1914 the note issue of the Bank expanded from 28·3 millions to 55·1 millions. With the outbreak of the Great War the Government issued £1 and 10*s.* currency notes, which became legal tender for any amount, and these continued in circulation until 1928, when an Act was passed to amalgamate the note issues of the Treasury and the Bank of England under the control of the Bank. The fiduciary issue was limited to £260,000,000, but the Treasury may grant permission for this figure to be exceeded for six-monthly periods. In general terms the business of a bank consists of issuing notes, receiving deposits at interest, keeping current accounts for customers, discounting bills of exchange, advancing money to customers upon security and acting as business and financial agents for customers, as, for example, in the purchase of stocks and shares, as trustee or executor.

**Bank of Deposit**, a bank receiving money at a specified rate of interest, deposits being only withdrawable after a prescribed previous notice has been given. The bank, being thus guarded against emergency calls, is able to invest its moneys more favourably than ordinary banks, and to pay higher interest.

**Banks, Joint Stock**, banks whose capital is subscribed by shareholders, and now, with very few exceptions, limited liability companies, the liability however, not extending to note issues.

**Bank Notes**, are promissory notes of a bank payable to bearer on demand. Bank of England notes are legal tender for any amount and since 1928 have been issued for 10*s.* and £1 as well as for larger sums. The Bank may extend its fiduciary issue of notes to £260,000,000, and notes issued in excess of this figure must have a backing of gold.

**Bank Post Bills** came into use in 1738 as a protection against *mail robberies*. The Bank of England issues them for sums of not less than £10 or more than £1,000, payable seven days after sight, on the amount being deposited, and without charge, the seven days' interest being the bank's remuneration. These bills are not subject to days of grace.

**Bank, Private**, a bank carried on by one or more persons, not exceeding ten, in partnership. These banks, however, are now few, none having been established in recent years, and such as were private are for the most part amalgamated with banks of limited liability.

**Bank Rate**, the rate at which the Bank of England discounts first-class bills of exchange.

**Bank Return**, a weekly statement, issued every Thursday, showing the liabilities and assets of the two departments of the Bank of England.

**Bank Stock**, strictly the Bank of England's banking capital, the rate of interest being regulated according to the Bank's profits. The capital of other banks is also called bank stock.

**Bankers' Cheques**, a cheque drawn by one bank on another. (Bankers'.)

**Bankers' Clearing House.** (*See* Clearing House.

**Bankrupt**, a debtor who has committed an act of bankruptcy, and has been adjudicated a bankrupt by a court of justice.

**Bargain and Sale**, as distinct from assignment, is a legal term referring to the conveyance of real property in return for a consideration.

**Barratry is an** offence committed by the master of a ship or the mariners, and may consist of either deserting or sinking a ship, embezzling cargo, or doing any other act whereby the charterer, insurer, or shipowner is injured.

**Bear**, a Stock Exchange operator who sells for future delivery shares which he does not possess in the hope that he will be able to purchase them before the date of delivery at a lower price. If the bear is unable to meet his obligations on the day of delivery he is said to be "cornered."

**Bear Account**, an account of "bearing" transactions, the selling entries representing a greater amount of stock than the "bear" can deliver and often entailing "backwardation" payments to effect a "carrying over" to the next account.

**Bearer.** The term "or bearer," or "to bearer," on bills or cheques, denotes that the person holding the same has the same right in respect of it as the person specifically mentioned.

**Bearer Bond**, a bond for money loaned made payable to the bearer or holder of it.

**Bid**, a price offered at an auction or other sale, withdrawable at any time before it has been acknowledged by the auctioneer or seller.

**Bill Broker**, one who buys and sells bills of exchange or promissory notes, selling bills drawn on foreign countries, and buying bills for remitters to those countries.

**Bill of Credit**, a letter authorising the advance of money to a specified person, and undertaking, or implying the obligation, on the part of the writer, to reimburse the person acting on the letter.

**Bill of Entry**, a written description of goods entered at the Custom House, either for intended exportation or importation. In the case of an importer being unable (from insufficient advice) to make out a complete Bill of Entry, he may apply for a Bill of Sight, which contains a general description of the goods, and on that the goods are landed for further examination. Perfect entry must be made within three days by indorsing the Bill of Sight with the necessary particulars.

**Bill of Exchange** is an unconditional order in writing addressed by one person to another signed by the person giving it, requiring the person to whom it is addressed to pay on demand or at a fixed or determinable future time a certain sum in money to or to the order of a specified person or to bearer.—Bills of Exchange Act, 1882.

**Bill of Health**, a certificate signed by a consul or other official delivered to masters of ships when they leave places, showing (in the case of a *clean* bill of health) that when the ship sailed, no infectious disorder was known to exist at the port of sailing. A *suspected* or *touched* bill implies that there were rumours of infection; and a *foul* bill, or the absence of a clean bill, indicates that the ship sailed from an infected place.

**Bill of Lading**, a receipt from a ship's captain to the shipper undertaking to deliver goods—on payment of freight—to some person whose name is expressed or endorsed thereon by the shipper.

**Bill of Sale**, a document giving evidence of sale or mortgage of personal chattels when such transaction has not been followed by the immediate transference of such chattels to the custody of the purchaser or mortgagee. A bill of sale must be presented to the Registrar within seven days.

**Bill of Sight.** (*See* Bill of Entry.)

**Bill of Store.** Goods of British origin which have been exported to a foreign country can be re-imported within five years without being liable to importation duties, and when that takes place the particulars are entered in what is termed a bill of store.

**Bill of Sufferance** is an official permit to a ship to proceed from one British port to another, with dutiable articles on board, and trade, without paying Customs dues until the goods are landed or placed in a bonded warehouse.

**Bills, Victualling**, a licence issued by the Customs authorities to carry stores, for use on a voyage, free of duty.

**Bimetallism**, an economic theory which seeks to establish that currency should be maintained on a double standard—generally gold and silver.

**Blank Acceptance**, a term used when the acceptor of a bill of exchange signs the acceptance without naming the amount for which it is drawn, in which it is open to the drawer to insert afterwards any amount up to the limit covered by the stamp.

**Blank Bill** or **Note** is one that is drawn without giving the name of a payee.

**Blank Credit** is a Letter of Credit in which no specific sum is mentioned.

**Blank Indorsement**, an indorsement of a bill of exchange or other document, from which the name of the person to whom it is given is omitted, the bill then becoming payable to bearer.

**Blank Transfer**, a transfer of shares or stock in which the name of the transferee and the date of execution are omitted, the transfer usually being deposited with a bank as security for money lent, or with the real owner of the shares by a nominee in whose name they are registered. The

company concerned will not recognise a blank transfer.

**Board of Trade**, a department of the British Government, forming a permanent committee of the Privy Council, and presided over by a member of the Cabinet. It deals with commercial policy generally, commercial treaties and negotiations and international questions affecting British trade, the provision of sea transport for fighting services and other Government departments, the administration of statutes regarding gas, water and electricity, key industries, weights and measures, patents, designs, trade-marks and other matters relating to trade, the registration of joint stock companies and matters relating to bankruptcies.

**Bond**, an obligation by deed, whereby the person giving the bond binds himself in a penalty to the obligee, either to pay a sum of money or to do or refrain from doing some act. The penalty is usually double the sum secured. The bond becomes void on its obligation being discharged.

**Bonded Goods** are goods stored in a bonded warehouse, and not chargeable with duty until required to be removed. The owner is required to enter into a bond to pay the duty on removal of the goods.

**Bonded Vaults**, the name given to the underground cellars used for storing wines and spirits under the same conditions as already mentioned in respect of Bonded Goods.

**Bonded Warehouse**, a building set apart for the storage of dutiable goods, the duty on which is not payable until they are removed. The warehouse is in the entire charge of revenue officers.

**Bond Note**, a note authorising the removal of bonded goods for exportation or to another warehouse, and requiring the signature of a Customs House official.

**Book Debts**, the debts standing in a trader's books in the ordinary course of business.

**Bottom**, a marine term now applied to a ship generally, though originally only signifying the keel or hull.

**Bottomry**, the act of mortgaging a ship.

**Bottomry Bond**, a contract or mortgage by which a ship becomes a pledge for the repayment of money advanced to enable it to proceed to its destination, and only recoverable if the ship succeeds in terminating its prescribed voyage satisfactorily. This kind of contract is not in much use in these days, when ordinary Marine Insurance policies practically cover all requirements.

**Bought Notes and Sold Notes**, otherwise Contract Notes, are notes which traders exchange with each other, giving particulars of sale and purchase transactions as entered into between them. The copy of the entry of the transaction delivered to the purchaser is called a "Bought Note" and that to vendor is a "Sold Note."

**Bounties** are premiums paid by a Government to persons engaged in producing or exporting certain goods to encourage industry or favour competition.

**Brand**, a distinguishing name, design, or trade-mark used for putting on goods, or on cases in which they are enclosed, to define ownership, class, or quality.

**British Ship**, a vessel owned exclusively by British subjects, or by a corporation or company established in British dominions according to British laws, and registered as a British ship, except in cases of vessels of small tonnage.

**Broker**, an intermediary agent in the purchase and sale of any goods, his remuneration being derived from commission or brokerage charged on a percentage basis for such transactions.

**Brokerage**, the commission, percentage, or fees paid to the broker for his work in connection with any business carried through by him.

**Brokers' Contract Notes.** (*See* **Bought Notes** and **Sold Notes.**)

**Brokers' Returns**, particulars sent to shipbrokers, setting forth all the items of the cargo of a ship.

**Bubbles**, the name given to fanciful and sensational financial schemes without substantial foundation, engineered for speculative purposes, and ending in disaster. The most notable example in this country was the South Sea Bubble of 1720.

**Bucket Shops** are the offices of outside brokers who are not members of the Stock Exchange, and are unable themselves to carry out Stock Exchange transactions, but get members to act for them.

**Building Society**, a society formed for the purpose of raising, by the subscription of its members, a stock or fund to be used for making advances to members upon security of freehold, copyhold or leasehold estate by way of mortgage.

"**Bull**," one who buys, or contracts to buy, shares in the expectation of a rise in price, with a consequent realisation of profit on them by settling day.

**Bull Account**, refers to the account of a "bull" who, finding himself with more stock than he can settle for, pays what is called "contango" for the privilege of having the account "carried over" to the next settlement.

**Burden**, a ship's carrying capacity reckoned by tonnage. [excess of sellers.

**Buyers Over**, a term indicating buyers are in

**Bye-Laws** are special rules and regulations made by any company or corporation for the carrying on of its affairs, but they must neither contravene the powers conferred by Parliament nor the laws of the land.

**Call**, an instalment due on shares not fully paid, payable according to the terms of the prospectus or Articles of Association of the company. The term is also used in respect of the option of exercising a call to buy or sell specified securities during a certain period and at a certain price.

**Called Bond**, a bond concerning which a notice or "call" has been sent out that it will be redeemed on a date named.

**Call Money**, money lent to bill-brokers and repayable on demand or "call."

**Call of More**, or "option to double," is the privilege to double the amount of one's present buying at a future-named date on the same terms.

**Cancelling** is the act of rendering inoperative any bill, note, cheque, deed, or other document. This is usually done by writing or stamping across the face of the document the word "cancelled," or by perforation or obliteration of the signatures.

**Capital** is that portion of wealth which is set aside for future production and is either fixed or circulating. The former is represented by land, houses, factories, workshops, machinery, lease, goodwill or other things necessary for the carrying on of business, and not of a nature to be sold or exchanged. Circulating or floating capital is money provided for the purchase of raw material, the remuneration of employees, and other working expenses in the ordinary course of business. In a general way, the term capital signifies the money and money-value invested in a business undertaking. The actual capital of a limited liability company is the amount that its shareholders may have subscribed for the carrying on of the undertaking. The term, however, has a varied application. Thus the full sum named as capital in the Memorandum of Association is called the "nominal," "authorised," or "registered" capital, while the sum represented by the shares actually taken up is called the "subscribed capital," the portion remaining unpaid or uncalled up being styled "unpaid" or "uncalled" capital. The principal sum of a loan is also called "capital."

**Capitalisation** is the act of providing money to be used as capital in a commercial or other undertaking.

**Carat**, a term used in assessing the value of gold and precious stones. In connection with gold, it represents the proportion of pure gold contained in any gold alloy, and for this purpose the metal is divided into 24 parts. Thus 24 carats indicates pure gold, and any lesser number of carats shows the proportion of gold contained in the alloy. As used by jewellers in weighing precious stones, a carat represents 3·17 Troy grains.

**Carrier**, any person or company engaging to convey goods or passengers for hire in the regular way of business. Thus railway companies are common carriers so far as concerns their carriage of goods. So long as goods are in the custody of a carrier, he is responsible for their safety, being exempted, however, when damage results by the "act of God," from the act of the King's enemies, or from "inherent vice," that is, natural deterioration, bad packing, etc. A carrier of passengers differs from a common carrier of goods in that he does not warrant the safety of his passengers, or that his carriage is absolutely free from defect at all events. His duty is to take care.

**Carrying Over.** (*See* **Backwardation and Contango.**)

**Cartel**, a close industrial association, in which

the combined firms confine their attention to production, and entrust the selling of the product to a central office.

**Cart Note,** the Customs note authorising the transfer of dutiable goods from one bonded warehouse to another, or from import ship to bonded warehouse.

**Cash,** a term applied to coin and bank-notes as distinct from bills, drafts, or securities. Generally speaking, however, "cash" includes negotiable instruments that can readily be converted into coin or bank-notes.

**Caution Money** is money deposited as security for the fulfilment of a contract or obligation.

**Certificate,** an authorised or official document certifying title, right, or verification, respecting its subject-matter.

**Certificate of Damage,** a dock certificate testifying that certain goods on being landed from shipboard are in a damaged condition. Without this the importer cannot recover compensation.

**Certificate of Incorporation,** a certificate issued by the Registrar of Joint Stock Companies, after the registration of a limited liability company.

**Certificate of Origin,** a document authoritatively indicating the place of origin of the goods, materials or manufactures mentioned therein.

**Certification of Shares Transfer** is when shares represented by one certificate are sold in batches, and the company takes the certificate, and certifies on the transfer that the shares therein enumerated are in their custody. If only a part of the holding be sold, a "Balance Certificate" is given to the owner for what remains unsold.

**Chamber of Commerce,** an association of merchants, manufacturers, traders, and others, organised for promoting the interests of trade; and exercising a very beneficial influence in obtaining and spreading statistical information, aiding commercial legislation, and otherwise.

**Charter,** a government or Crown grant of concessions, powers, or privileges to individuals, companies, or institutions.

**Charterer,** one who charters a ship under an agreement of charter-party.

**Charter-Party,** a hiring contract whereby the owner of a ship grants to another person or persons the right of using the ship for a specified voyage or period for the carriage of goods.

**Chattels,** things deemed to be personal property, and divided into chattels *real* and chattels *personal*, the former being interests in land less than freehold, and the latter such things as belong immediately to the person of the owner.

**Cheque** is a written order addressed by a person called the "drawer" to a banker to pay a sum of money generally to some third party known as the "payee" but may be to "bearer." In the former case it requires endorsement by the payee before payment, but in the latter case it is payable by delivery. A cheque now requires a stamp value 2d. A banker is liable to his customer for cheques paid with a forged signature of the drawer.

**Cheques Crossed.** A cheque is crossed for protection. The crossing is usually done by the drawer, who writes "  & Co." between two parallel transverse lines across the face of the cheque, after which the cheque can only be realised by being passed through a bank. The simple "  & Co." crossing is called "general"; when the name of a particular bank is added it is called "special." (*See also* **Not Negotiable.**)

**Cheque to Bearer,** a cheque payable to the person holding it without requiring endorsement. The wording "or Bearer" after the name of the payee is sufficient, but if the cheque be crossed it must be paid into a bank.

**Cheque to Order** is one having the words "or Order" printed or written upon its face, to follow the name of the person in whose favour it is drawn, who must endorse the cheque before payment can be obtained. If crossed it must be paid into a bank.

**Chose in Action,** a commercial-law term denoting a thing in respect of which one has a right of action as distinct from a thing in actual possession. For example, mortgages, bonds, warrants, policies of insurance, and debts. Such rights are now assignable; prior to 1873 they were not.

**Chose in Possession,** a thing in actual ownership, such as goods and chattels.

**Circular Notes,** not less in amount than £10, are issued by banks to persons about to travel abroad, to obviate carrying large sums on the person. According to requirements, the bank forwards what is called "a letter of indication" to correspondents at stated places at which the traveller will stop, directing the payment to him of any sum up to a specified limit. Each letter is signed both by the bank and the payee, to prevent personation or forgery.

**Clearance** may mean (1) a Custom House permit for a vessel to sail out of a port and signifying that all dues have been satisfied; or (2) the same privilege in regard to goods, showing that all local obligations have been disposed of.

**Clearance Inwards,** refers to ships that have arrived in port and discharged their cargo.

**Clearance Outwards** refers to vessels ready for leaving port.

**Clearing a Bill,** procuring cash to satisfy a bill of [exchange.

**Clearing Bank** is a bank affiliated with the London Bankers' Clearing House.

**Clearing House, Bankers',** the house in Post Office Court, Lombard Street, through which bankers pass the bills and cheques they hold on other banks by a mutual arrangement, which enables daily settlements to be made on the balance of total sums, thus obviating delays, and greatly facilitating banking transactions. There are three clearings each day, at 10.30 a.m., at noon, and at 2.30 p.m. By this system transactions to the value of many millions are effected each day without the passing of a single note or coin, the difference due to each bank being settled between them by cheques on the Bank of England.

**Clearing House, Railways,** an association of which nearly all the railways of England and Scotland are members, and utilised for settling the accounts of the various companies having running powers over each other's lines. It also deals with various matters connected with the general relations and working of the different railways. The House is in Seymour Street, Euston.

**Clearing House, Stock Exchange,** or **Settlement Department,** deals with Bonds and Shares on much the same principle as that of the Bankers' Clearing House in respect of cheques and bills.

**Collated Telegram,** a telegram that the sender has repeated to secure accuracy and for which he pays an extra charge.

**Collateral Security** is additional security given by a debtor to secure the fulfilment of an obligation.

**Combination.** (*See* **Amalgamation.**)

**Commission,** allowance made to agents and others for effecting sales or carrying out business transactions.

**Commission Agent,** one who sells or buys goods for another, and receives by way of remuneration a commission or percentage upon the amount involved in each transaction.

**Committee of Inspection,** a committee of creditors appointed by the whole body of creditors to supervise the winding-up of the affairs of a bankrupt or of a company. It should consist of not more than five or less than three persons.

**Company.** (*See* **Joint Stock Company.**)

**Compounding with Creditors,** an agreement whereby creditors agree to accept, and a debtor undertakes to pay, or secure payment of, a certain sum in each £ in full settlement of indebtedness.

**Compulsory Winding-up** is the winding-up of a company's affairs by the order and under the supervision of the Chancery or County Court.

**Concession,** a special privilege granted by a government, corporation, or other authority to concessionaires, and may include land grants, mining or building rights, powers to construct railways, and the like.

**Conditions of Sale,** stipulations in a contract for sale, which are of the essence of contract. Failure by one party to fulfil these conditions justifies the other party repudiating the contract.

**Consideration,** in the legal sense, value of some kind given by the promisee and accepted by the promisor in return for his undertaking. The consideration may take the form of a money payment, a delivery of goods or a promise of either.

**Consignment Note,** a form requiring to be filled up for the despatching of goods by rail or other common carrier.

**Consol Certificates** are issued by the Bank of England and certify that the holder is entitled to a sum in the Consolidated two and a half per cent. Annuities.

**Consolidated Fund** consists of several separate government funds, pledged for the payment of the interest of the National Debt, cost of Army and Navy maintenance, government salaries, etc.

**Consols** (Consolidated Annuities) form a large portion of the Funded National Debt of Great Britain, and represent stock at a fixed rate of interest. In 1930 the amount outstanding was £276 million in 2½ per cent. Consols and £353 million in 4 per cent. Consols.

**Constructive Total Loss** is a marine insurance loss entitling the insurer to payment of the full amount for which he is insured on abandonment of his ship and its contents. (*See* **Abandonment.**)

**Consular Invoices** are invoices of goods requiring to be declared before and certified by the consul of a country to which they are being exported. Such invoices are only required in respect of goods for the chief South American States, Portugal, and the United States, and as regards the last named country only when the goods exceed £20 in value.

**Contango,** a term of the Stock Exchange denoting the charge made for carrying over a transaction from one settling day to the next.

**Contango Day,** otherwise "continuation day," or "making-up day," is the second day before settling day, when arrangements are made as to carrying over transactions.

**Contingent Liability,** a liability which may be discharged without any liability accruing. Thus, the liability of a banker who accepts bills for a customer of substantial position is not likely to accrue.

**Contract,** an agreement enforceable at law between two or more parties, and implying both an agreement and an obligation. There must be offer and acceptance, legal capacity to contract, consideration, and genuineness, otherwise the contract is voidable.

**Contracting Out,** the right of individuals to agree that certain parliamentary enactments shall not apply as between them.

**Contract Note.** (*See* **Bought and Sold Notes.**)

**Contributories,** persons liable to contribute to the amount unpaid on their shares in a limited company in case of that company being wound up. Those who have been shareholders within a year of the winding up are liable to be called upon as contributories to the extent to which the present member of the company has failed to pay for his

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**Convertible Paper Currency** is one that can be converted into cash on demand, as a Bank of England Note.

**Convertible Securities** are such as are always marketable and convertible into money—Consols, railway stock, and exchequer bills, for example.

**Co-operation,** the association of individuals for joint benefit in trading. Co-operative Stores, or Distributive Societies (which, in 1929, numbered 1341 and had a membership of 6,133,000) are registered under the Industrial and Provident Societies Act. Interest on shareholders' capital is limited to a fixed rate, and after meeting this, the surplus on trading is distributed as dividends to members in proportion to the value of their purchases.

**Copyright,** by the Copyright Act 1911, is the sole right to produce or reproduce the work or any substantial part thereof, to perform, or in the case of a lecture to deliver, the work or any substantial part thereof in public; if the work is unpublished to publish the work or any substantial part. The sole right includes production of a translation, or in the case of a dramatic work to convert it into a novel or other non-dramatic work, or, vice versa, to convert a novel into a dramatic work; or to make any record, perforated roll or cinematograph film of any literary, dramatic or musical work. It extends over the period of the life of the author, and for 50 years after his death.

**Corner.** (*See* **Bear.**)

**Cost Accounts,** a system of recording in accounts the materials used and labour employed in the manufacture of a certain commodity or execution of a particular job.

**Cost and Freight,** a term used in respect of goods sold at a price covering cost and carriage.

**Country Clearing,** the clearing of cheques and bills paid into country banks, through the London Clearing House by the London agents of the banks.

**Country Notes,** the bank-notes of any bank of issue other than the Bank of England.

**Course of Exchange,** the price given in one country for a specified sum in the currency of another country.

**Cover,** a deposit of cash or securities ensuring the depositee against loss in stock exchange or other operations carried out on the depositor's behalf.

**Credit, Letter of,** a letter from a bank, firm, or one person to another, authorising payment to a third person named of a specified sum, for which the sender assumes responsibility.

**Credit Note** is an acknowledgment, by a seller, of a sum due to the purchaser on accounts of packages, short weight, etc.

**Cumulative Preference Shares** are shares the dividend on which is at a fixed rate and in default of payment in one year, or in any number of years, the amount accumulates until payment can be made. Such dividends take priority over other dividends, though not over debenture interest. (*See* **Preference Shares.**)

**Currency Bonds** are bonds guaranteeing the repayment of principal and interest in the currency of the country of their issue. They are issued by American Railway Companies.

**Current Account,** the amount of money a person has deposited at a bank, and on which he can draw from or add to as may be desired, no interest as a rule being chargeable on either side.

**Customs Bills of Entry,** a daily list issued by the Customs authorities to subscribers, including a full list of ships' reports inwards, with their cargoes, also of ships sailing, with other particulars.

**Customs Declaration,** a form that has to be filled up and signed by one who sends goods abroad, stating the nature, weight, and value of the goods.

**Customs Duties,** the name given to taxes on the imports and exports of commodities. These duties rank among the most common modes of raising revenue for public purposes, and have been charged since Anglo-Saxon times. They are imposed under the following heads:—spirits, beer, wines, tobacco, tea, sugar, silk and artificial silk, cocoa, matches and dried fruit.

**Customs Entry,** a statement of particulars of the nature, value, and weight, of imported or exported goods furnished to the customs officials.

**Damages,** the compensation which a person who has suffered a legal wrong is by law entitled to recover from the person responsible for the wrong. They may be *liquidated*, in which case they are definitely ascertainable, or *unliquidated*, when a sum has not been agreed, and has to be fixed by another party, such as a jury.

**Day to Day Loans,** money borrowed for a day at a specified rate of interest, and renewable from day to day by mutual agreement.

**Days of Grace,** a period of three days allowed by custom of law beyond the fixed day of payment for a bill of exchange or note. Should the last day of grace fall on a Sunday, or other non-business day, the bill or note is due on the preceding day. These days are not allowed on bills payable on sight or on demand.

**Dead Freight,** the amount charged for empty space to one who having chartered to load a full cargo falls short of requirement.

**Dead Reckoning,** a nautical term used in calculating a ship's position at sea from the distance shown by the log only, with allowances for leeway, etc., without astronomical observations.

**Dead Rent,** the minimum rent which the lessee of a mine or quarry must pay the landlord, whether operations are carried on or not.

**Dead Weight,** cargo that pays freightage according to weight, irrespective of measurements, such as iron, coal, etc.

**Debenture,** a document, or certificate, signed by a public officer, corporation, or company, acknowledging indebtedness for money lent and guaranteeing repayment with interest.

**Debenture Bonds** are the bonds of a government, company, or corporation, engaging to repay a specified borrowed sum, with interest, at a time named, the interest being payable periodically by coupon until the bond matures and is paid off.

**Debenture Stock** differs from debenture bonds in that it is usually irredeemable. The principal sum is registered in the owner's name, and the interest, which takes priority of dividends, is paid by warrant to the owner's order.

**Debit Note** is a note giving particulars of an allowance claimed in respect of defective or damaged goods.

**Debt**, a term generally applied to an amount due or payable from one person to another in return for money, services, goods, or other obligation.

**Decimal System** is based on a unit of 10, and for purposes of calculation is much simpler than the English system. It is in operation in France and other European countries, also in the United States.

**Deck Cargo**, any cargo carried either in any uncovered space on deck or in any covered space not included in the cubical contents forming the ship's registered tonnage (Merchant Shipping Act, 1906).

**Deed** is a written or printed document under hand and seal. It must be signed in the presence of a witness or witnesses, must bear a seal, and must have formal "delivery"—that is, the signer must either give constructive delivery by placing his finger on the seal and saying, "I deliver this as my act and deed," or actual delivery by handing over the deed. Without "delivery" the deed is inoperative.

**Deed of Arrangement**, a deed of assignment or composition, whereby a debtor conveys property, effects, goods, or debts to a trustee or trustees for the benefit of his creditors generally. Such a deed requires registration as a bill of sale within seven days of execution. (See Deeds of Arrangements Act, 1914) which provides:—It must be either (*a*) an assignment of property; (*b*) a deed of composition; (*c*) a deed of inspectorship; (*d*) a letter of licence authorising debtor to manage or dispose of a business with a view to payment of debts; (*e*) any agreement authorising debtors to carry on or wind up business in order to pay debts.

**Deferred Annuities** are such as do not come into effect until such a specified later period as agreed upon. Such annuities are purchasable at any post office. In case of death before a deferred annuity begins, the purchase-money is not returnable.

**Deferred Bonds** are bonds issued by a government corporation, or company, entitling the holder to a gradually increasing rate of dividend or interest, until a fixed maximum rate is reached, when they become converted into ordinary bonds.

**Deferred Stock or Shares** are such as do not rank for dividend until after the ordinary, preference, and guarantee dividends have been provided for.

**Deficiency Bills** represent temporary loans made by the Bank of England to the Government.

**Delivery Order**, an order signed by the owner of specified goods, addressed to any person or official having charge of them, and requesting delivery of them to the person named in the order. It is negotiable to the extent that it can be placed with a banker to secure any advances he may make on the goods. [demand.

**Demand Draft**, a bill of exchange payable on

**Demurrage**, a charge to which the charterer of a ship is liable by neglecting to load or unload within the time named in the charter-party. The term is also used in connection with delays in removing goods after being conveyed to the station of destination.

**Deposits**, in the commercial sense, comprise deposits of money for employment in business, deposits of negotiable securities with a banker for safety, deposits of similar documents as security for loans, deposits of money or bills in a bank in the ordinary course of business on current account, and deposits of sums at interest.

**Deposit Account** represents money which has been placed with a banker at interest, and which cannot be withdrawn without previous notice.

**Deposit Receipt**, bankers' receipt for moneys deposited, specifying the terms of the deposit.

**Derelict**, a vesel abandoned by its crew, and in respect of which salvage accrues to those who save it, or what it contains.

**Despatch Money** is the opposite of demurrage, being money allowed by a shipowner when a charterer loads or unloads in less time than originally specified.

**Deviation**, a marine insurance term indicating an alteration of course from that set down in the policy, a departure which, unless made for avoiding perils, annuls the risk of the underwriters.

**Discount**, a sum of money deducted from a debt in consideration of its payment before the stipulated time, or upon certain conditions.

**Discounting a Bill**, the act of purchasing at a certain deduction or discount, a bill of exchange not yet due.

**Dishonour**, the refusal to accept a bill of exchange on presentation for acceptance, or to pay it at maturity.

**Dissolution of Partnership**, the discontinuance of a partnership from any legal cause, a notice of which must be inserted in the *London Gazette*, and also specially intimated by letter or notice to all with whom the firm have had dealings.

**Distress**, or **Distraint**, a taking without legal process of a personal chattel from the possession of the occupant. Thus a landlord may recover rent in arrear; or a rate-collector or tax-gatherer for recovery of rates and taxes; or by Justices of Peace for the recovery of fines due on summary conviction.

**Dividend**, a periodical payment of interest on an investment; and when declared upon the capital of a company undertaking it must be out of profits alone. A dividend may also be a composition or part payment in respect of a claim on the estate of a bankrupt, or a company in liquidation.

**Dividend Warrants** are written orders to a banker authorising the payment of dividends, and are negotiable.

**Docket**, a summary copy of any decree; a brief list or label; derived from dock; to curtail.

**Dock Warrant**, which must bear a 3*d*. stamp, is an instrument issued by a dock owner or company in favour of a person specified by the owner of goods warehoused in dock, and entitles such person to take possession of the goods. Advances on dock warrants are readily made by bankers.

**Document Bills** are bills of exchange attached to the bills of lading, policies and invoices, in respect of which they have been given. Should a bill of this class be dishonoured, the holder can claim on the document.

**Domiciled** is a term applied to a bill of exchange made payable at a particular place.

**Donatio Mortis Causa**, a gift of personal property in prospect of death.

**Draft**, a bill drawn by one person on another; an order in writing to pay money; a bill of exchange.

**Drawee**, the person on whom a bill is drawn, his liability on which does not come into force until he signs and accepts it, after which he is the acceptor.

**Drawer**, the person who draws a bill, who in case of dishonour is liable to the holder or any indorser who is compelled to pay it.

**Dutch Auction**, the "cheap-jack" method of starting the sale of an article at a price, and gradually lowering it to an amount at which a sale is effected, or the article withdrawn.

**Duties** are taxes levied upon goods, commodities, or manufactures. In the case of imported or exported goods these duties are called customs, while duties on home products are termed "excise."

**Easement**, a legal term applied to a privilege enjoyed by anyone over another's property, such as right of way, ancient lights, etc.

**Ejectment**. When a tenant after the termination of his tenancy, either as the result of a notice to quit or otherwise, continues in possession of premises, an action at law can be commenced, and what is now termed writ for recovery of land issued. If the rent be over £100 a year the action must be in the High Court, otherwise the County Court must be appealed to.

**Embargo**, a Government order issued in wartime, prohibiting vessels from entering or leaving port for a time specified.

**Endorsee**, the person to whom a bill of exchange passes when made over to him by endorsement.

**Endorsement**, the signing of one's name on the back of a bill, an act which transfers the right in it to the endorsee.

**Endowment Policy** is one on which premiums are payable only for a prescribed period, after which the insurer has no other liability, and may either receive the amount for which he is insured, let it remain to accumulate with interest, the whole to be paid at his death, or take an annuity based on the policy value, as may be stipulated in the policy.

**Enfaced Paper** is the "rupee paper" of the Indian Government, bearing an intimation on it that the interest may be collected at the Bank of England.

**Entry for Warehousing**, an entry made at the Customs House giving particulars of dutiable goods to be stored on import in a bonded warehouse, and not liable to duty until taken out for consumption.

**Errors and Omissions Excepted** (*E.E.* or *E. and*

*O.E.*), when written at the foot of invoices or accounts indicate that they are open to after-correction if any mistakes should be discovered.

**Estate Duty** is the duty payable upon the value of all property which passes on the death of any person.

**Estoppel**, a legal term indicating that a person is barred by a legal remedy because of some former act which precludes him of the right. Estoppel may be by record, *e.g.* a judgment, by deed, or by conduct.

**Estimate**, a written statement specifying the amount of money for which a contracting party will perform certain work, or supply certain goods.

**Ex All**, a Stock Exchange term signifying that the stock or shares specified as being sold are sold apart from any dividend, bonus, or profit then due.

**Ex-Drawing**, a term used in regard to bonds sold, and indicating that the buyer is not to have any benefit that may accrue from a drawing about to take place.

**Ex Mero Motu**, of one's own action.

**Ex-New**, not including the right to new stock or shares about to be issued.

**Ex-Ship**, or **Free Overside**, a sale of goods on shipboard, all the cost and responsibility of the removal of which fall on the purchaser.

**Ex-Warehouse**, a sale of goods, the cost of removing which from the warehouse must be borne by the buyer.

**Exchange** is the giving or receiving of one thing for another; also the name given to buildings in which merchants, bankers, and brokers meet for the transaction of business in commodities, stocks, bills, etc.

**Exchequer**, which derives its name from the checkered table on which accounts were calculated in early Norman times, is a term connected with the revenues of the Crown. The Court of Exchequer Division existed up to 1881, when it was abolished. In former times it had jurisdiction in all revenue matters. The term Exchequer is now mainly applied to the Governmental department which deals with the public revenues, and is presided over by a Chancellor, who is a Cabinet Minister.

**Exchequer Bills**, Bills issued by the Treasury for sums varying from £100 to £1,000, and bearing interest at the rate current on the day of issue. They form part of the unfunded debt. They are made repayable, at par, in a year from date, but can be renewed annually.

**Exchequer Bonds**, which are made payable to bearer, are issued by the Treasury for sums borrowed. They are for a specified period (which must not exceed six years), at the expiration of which they are redeemable at par.

**Excise Duties** are inland taxes imposed on articles of home product for home consumption, or on their manufacture or sale, and were first established in England in 1643, and made on vendors of ale, beer, cider, and perry.

**Execution**, a process of court whereby, default having been made in satisfying a judgment, a writ or order of execution is issued authorising the sheriff or bailiff to seize and sell the goods of the debtor, or such portion of them as may be necessary, to discharge debt and costs.

**Face Value**, the nominal value marked on the face of a security—the par value.

**Factory and Workshops Act, 1901**, is the Act under which all factories and workshops in the United Kingdom are at present regulated. Factories are divided into two classes, textile and non-textile. The Act provides improved regulations as to the sanitary condition of factories and workshops, guards against overcrowding, requires certain things to be done for safety, prescribes who may be employed, and for what number of hours per day or week, etc., and provides an elaborate organisation of inspectors to see the Act enforced.

**Fee-Simple**, land in absolute ownership, and at the owner's complete disposal.

**Fiduciary Loan**, a loan granted without any security being given.

**Fiduciary Note Issue**, an issue of bank-notes without the provision of a money reserve.

**Fine**, a sum of money which a legal tribunal, or other properly constituted authority, imposes on a defaulter, transgressor, or trespasser, the payment ordinarily being held to discharge the grievance.

**First Class Paper**, bills, notes, and other securities given by firms, companies, corporations, or Governments of high position and undoubted solvency.

**First of Exchange**, the first of a set of foreign bills of exchange, usually drawn in triplicate. If the first be paid or satisfied, the others become valueless.

**First Open Water**, a marine term introduced in charter-parties relating to vessels proceeding to the Baltic ports, and denoting the time when a ship first touches the open sea after the breaking up of the winter ice.

**Fixed Capital.** (*See* **Capital.**)

**Fixtures** are legally such movable additions to a building or land as when actually secured become part of the freehold. There are three exceptions to the rule that tenant's fixtures secured to the freehold pass to the landlord, viz.:—(*a*) in favour of trade; (*b*) for agricultural purposes. See Agricultural Holdings Act, 1923; (*c*) for ornament and convenience, such as tapestry, chimney-pieces. (*See also* **Tenant's Fixtures** and **Trade Fixtures.**)

**Floaters**, a Stock Exchange term referring to what are called Bearer Securities, on which loans are readily raised, and as the loans on them are called in by one bank they are passed to another, and so on, hence the name "floaters."

**Floating Capital.** (*See* **Capital.**)

**Floating Policy**, an insurance policy which covers certain specified goods which are distributed over a certain area.

**Floating Security**, a term used in regard to the security of a limited company, and forming a charge on its assets, but not enforceable unless there is default in payment of principal or interest.

**Flotsam**, a legal term applied to goods lost at sea and found floating on the water. Flotsam does not belong to the finder, but must be delivered up to the rightful owners, or, if no owner appears within a year and a day, becomes forfeit to the Crown. The finder, however, is entitled to a reward proportionate to the value of the goods.

**F.O.B.**—Free on Board—signifies that the seller of goods has borne the expenses of putting them on board ship.

**Folio**, a term of four different meanings: (1) in bookkeeping it means two pages facing each other; (2) in ordinary legal documents 72 words constitute a folio; (3) in Parliamentary documents there are 90 words to the folio; and (4) in printing the folio is the number of any single page.

**For Money**, meaning a sale "for money" on the Stock Exchange involving immediate delivery of the securities purchased and payment on receipt, a class of transactions applying especially to Consols.

**For the Account**, Stock Exchange transactions included in current account for settlement on the next settling day.

**Foul Bill.** (*See* **Bill of Health.**)

**Founders' Shares** are such as are granted to persons concerned in the founding and originating of a company, as compensation for their promotion or other services.

**Free of all Average**, a marine insurance term denoting that no claim for partial loss or average, general or particular, but only in respect of total loss, can be entertained. (*See* **Average.**)

**Free of General Average**, a clause in a marine policy absolving the underwriter from general average contributions. (*See* **General Average.**)

**Free of Particular Average**, a clause defining the insurer's non-liability for partial loss due, generally, to the highly perishable nature (through climatic conditions) of the goods concerned.

**Free Overside**, a term indicating that the risk of goods sold is with the buyer after being unshipped.

**Freehold**, real estate held either in fee simple, fee tail or at the least for the term of life. (*See* **Fee Simple.**)

**Freight**, charges paid for carriage of goods or merchandise by ship: a term still used in the older sense to denote the goods themselves.

**Freight Note**, statement giving particulars of freight charges.

**Freight Release.** When goods have been shipped "freight forward," a note of "freight release" showing that all freight charges have been paid, must be produced to the master of the ship before they can be taken away.

**Funded Debt.** (*See* National Debt.)

**Funding,** the operation whereby a floating debt is converted into stock.

**Futures,** purchases or sales of commodities in produce markets whereby the transaction is to be completed at some future date, as distinct from spot transactions.

**Garnishee Order,** an order of court attaching money or goods belonging to a judgment debtor, the object being to prevent such money or goods being handled by the debtor instead of applied for the benefit of his creditors.

**Gazette** was the name given to the first news sheet published in Venice about 1536, and named after the coin gazetta, which was its price. The term is now in general use, but applied more particularly to publications of an official character, such as the *London Gazette*, which contains Court and Government notifications, lists of public appointments and honours, legal notices and lists of bankrupts. The *London Gazette* was first published at Oxford in 1665.

**General Average.** (*See* Average.)

**Gilt-Edged Securities.** (*See* Trustee Securities.)

**Give On,** the paying of contango.

**Godown,** a storage warehouse in India.

**Gold.** (See article on Gold in *General Information* Section.)

**Gold Bonds,** bonds payable in gold coin.

**Good Delivery,** a Stock Exchange term indicating that a security is in proper form and condition.

**Goods and Chattels,** include all kinds of movable property, as well as rights of action, bills, debts, banknotes, bonds, etc.

**Goodwill,** is the benefit acquired by a business by the patronage from constant customers.

**Graving,** the cleansing of the bottom of a ship.

**Graving Dock,** a dock where ships are graved.

**Groundage,** the charge for space occupied by a ship while in port.

**Ground Rent,** a rent charged in respect of land only, and not in respect of the buildings to be placed thereon.

**Guarantee Fund,** a reserve fund set apart to meet possible losses.

**Guarantee Society,** one which guarantees employers from losses in respect of the defaults, omissions, or malpractices of employees. The guarantee takes the form of an insurance policy, on which an agreed annual premium is paid.

**Habeas Corpus,** the name given to a writ ordering the body of a person under restraint or imprisonment to be brought into court for full inquiry into the legality of the restraint to be made. The first Habeas Corpus Act was passed in 1679, though nominally such a right had existed from Magna Carta, but some of the more despotic kings had disregarded it. In times of public peril the privilege of habeas corpus is sometimes temporarily suspended, many instances occurring in the recent history of Ireland.

**Half-Notes.** In remitting money, business men sometimes forward half-notes, forwarding the other halves on the first being acknowledged. In regard to this practice it is important to know that the property in entire note belongs to the sender until he parts with the second half.

**Hall Marks** are official marks impressed upon gold and silver articles, testifying to their genuineness and value. The stamping is entrusted to the Goldsmiths' Company of the City of London, at Goldsmiths' Hall, and the marks are the standard of quality, the assay-town's mark, notification of duty paid, date, maker and (sometimes) workman's mark.

**Hammered,** a stock-exchange form of proclaiming a defaulter. When a member is unable to meet his engagements, the fact is notified from the rostrum, first of all, by striking three blows upon it with a wooden hammer, which calls the members up. The name of the defaulting member is then given out, and he is expelled or temporarily suspended. On paying not less than 10*s.* in the £, so far as his debt to the Stock Exchange is concerned, the defaulter's claim for re-admission will be considered by the committee, and if there are no other charges against him, he may again become a member, but even then he is not discharged from after liability in respect of the balance of his indebtedness.

**Haulage,** charges for the use of trucks, wagons, or carriages, from one point to another, exclusive of loading and unloading them.

**Hereditaments** may be defined as any kind of property that can be inherited and may be *corporeal*—as land, or any substantial and permanent property thereto attached, and *incorporeal*—as real charges upon property, the right of user in articles, or offices and privileges issuing out of *corporeal* holdings. *Incorporeal* hereditaments comprehend franchises, annuities, ways, rents, commons, advowsons, tithes, and the like.

**Heritable Bond** is a term in Scots Law meaning a bond joined with a conveyance of land to be held by a creditor as security for his debt. A form of mortgage.

**High Seas** are the seas that are open to all, and represent the entire sea-space beyond three miles of the shore.

**Hire Purchase,** a system whereby goods are obtained on hire, it being understood that the payments made shall be regarded as part payment for the goods. Ownership of the goods does not pass until the last instalment is paid, and if any default be made in payment of the instalments, the owner has power to recover the goods.

**Holder** is the payee or indorsee of a bill of exchange or Note who is in possession of it, or the bearer thereof. Bills of Exchange Act, 1882, s. 2.

**Holding Company,** one that, although not itself trading, owns shares in a company that is. Often used as a means of amalgamating two or more companies without either of them losing its identity.

**Holding Over,** the act of refusing to quit possession of premises after the expiration of the term of a tenancy, or of legal notice to quit. A liability for double rent attaches to such action.

**Home Consumption,** a term relating to (1) goods consumed in the country of their production, or (2) imported goods stored in a bonded warehouse until duty is paid and they are brought into consumption.

**Horse Power,** the draught power of a horse, the unit of measurement introduced by Watt for estimating the power of the steam-engine. It is the work done in raising 33,000 lbs. a height of one foot in one minute.

**Hotchpot,** a legal term signifying the bringing into common sharing of a specified property; as in the case of a child, who during his father's lifetime has had a portion of estate given to him, being compelled, on the father dying without will, to bring his share into hotchpot to be included in the statutory division ordained for intestates' estates.

**In Advance of Calls,** a phrase referring to payments made by shareholders prior to call being made on their shares.

**In Ballast.** A ship is in ballast when, not having any cargo, she carries some weighty substances for stability.

**Income Tax,** a tax of so much in the pound sterling of income from whatever source, all persons resident in Great Britain and Northern Ireland, and all persons not resident in, but deriving income from property, trade or employment in Great Britain and Northern Ireland being liable to assessment. Income is classed under five schedules: (*a*) from the ownership of land, buildings etc.; (*b*) from the occupation or use of land; (*c*) from Government or public stocks; (*d*) from trade, profession or vocation, remittances from abroad, bank interest, etc.; (*e*) from salaries, pensions and emoluments of offices of the Army, Navy, Civil Service, Ecclesiastical bodies, Corporations, Public Companies, annuities or dividends from Public Companies, etc.

**Inconvertible Paper Currency** is paper money which cannot be exchanged on demand by the holder for cash to its full nominal value, and, owing to the uncertainty in regard to its realisation, is at a discount in the market.

**Indemnity,** a formal legal acceptance of responsibility against damage or loss in such circumstances as may be expressed.

**Indents** are orders from distant countries for goods, specifying particulars and prices, and owing their name to the fact that they were formerly written on forms bearing an indented line, part of which remained with the sender, while the other part was on the order. With the increased facilities now existing, however, there is no special force in an indent beyond that of an ordinary order.

**In Forma Pauperis,** a special privilege accorded by the English law to a suitor who, not being worth

[illegible], tools of his trade, and the subject matter of the proceedings), is unable to pay the costs of legal proceedings, and is permitted to have such costs remitted.

**Injunction**, an order or judgment of Court restraining some person or persons from doing certain things, not amounting to a crime, which are detrimental to the interests of another or others.

**Inscribed Stock** is stock in respect of which holders are simply registered, no certificates being issued to them. No one can deal with such stock except actual holders or persons appointed by the power of attorney of holders.

**Insolvency**, the state of one who has not property sufficient for the full payment of his debts.

**Inspecting Order**, a written order authorising goods in dock, bonded warehouse, or other place to be shown to the holder.

**Insurance**, a provision or contract securing against loss by fire, tempest, or other contingency; insuring compensation for accident; allowance during ill-health; or payment of a stipulated sum at death to beneficiaries indicated. Insurances are usually effected with insurance companies, who take the hazard in consideration of annual premiums paid to them by the person insuring. The rates are based on a system of averages.

**Interbourse Securities** are such as are negotiated simultaneously in different countries, and are dealt in at fixed rates of exchange.

**Interest**, in its commercial sense, is payment made for the loan or use of money, and is calculated according to a specified rate. Interest is either *simple* or *compound*. When simple interest is paid, the principal sum remains the same; in case of compound interest, each year's interest is added to the principal, and succeeding interest calculations are on the increased amounts.

**Interim Dividends** are such as are paid on shares before the time of declaring the full dividend.

**Interpleader**, a form of lawsuit the purpose of which is to decide between rival claimants to property or money. The suit is usually resorted to by the officers of the law when in possession of property of disputed ownership.

**Intestacy** is the condition supervening on a person possessed of property dying without having made a will. By the administration of Estates Act 1925, which applies to all persons dying after 1st January 1926, all his real and personal estate is held by his personal representatives upon trust for sale (except as to money) with power to postpone sale. After payment of funeral expenses, debts and death duties, the residue is distributed as provided in sections 45–47.

**Inventory**, a list of all goods, effects, fixtures, etc., in possession.

**I O U**, an informal written and signed acknowledgment of indebtedness, requiring no stamp, and, though not a promissory note, can be sued upon. The letters stand for "I owe you."

**Issue of Shares and Loans.** Shares are issued by the sending out of certificates in return for subscription payments, and declare the holders entitled to so many shares. A loan issue consists of bonds with a similar declaration.

**Jerquer**, the principal of the Customs department where all documents relating to import ships are finally checked, or jerqued.

**Jetsam**, a term in navigation law, signifying goods thrown into the sea in order to lighten the ship in danger of wreck. Such goods belong to the Crown in default of other claimants.

**Jettison**, the act of throwing goods overboard in time of sea-peril to save the ship. The liability to make good property so lost is apportioned according to average.

**Jobber**, a dealer on the Stock Exchange who is forbidden by its rules to deal with anyone outside the Exchange; he deals only with brokers and fellow-jobbers.

**Joint Stock Company**, an association of individuals for the purposes of profit, possessing a common capital subscribed by the members and divided into transferable shares. A company may be formed by *seven or more* (or in the case of a private company, *two or more*) persons subscribing to a Memorandum of Association, and otherwise complying with the requirements of the Companies Act regarding registration. Companies so constituted may be of three kinds: (1) limited by shares. This is the common form of Joint Stock Company and is divided into public and private companies (which see); (2) limited by guarantee; (3) unlimited. The affairs of Joint Stock Companies are controlled by the Companies Act, 1929.

**Joint Tenancy**, the occupation or possession of land by persons jointly and equally entitled.

**Jointure**, the property settled on a woman at her marriage, forming her separate estate to be enjoyed after the death of her husband.

**Judgment Creditor**, one who has obtained a Court judgment against a debtor.

**Judgment Debtor**, one against whom a Court judgment for payment of debt has been obtained.

**Keep House**, a term applied to a debtor who denies himself to creditors calling at his house. This constitutes an act of bankruptcy.

**Kentledge**, permanent ship-ballast, and generally consisting of pigs of iron.

**Laches**, in commercial law, are acts of negligence or carelessness.

**Lagan**, or **Ligan**, goods thrown from a ship and sunk in the sea, but secured to a buoy so as to be found again.

**Landing Order**, a Customs document authorising the chief officer of a ship, after dues paid, to hand over goods for landing, during which process the waiter or searcher examines the goods and finally signs the order as correct.

**Larceny**, the unlawful taking and carrying away of things personal with intent to deprive the rightful owner of the same. See Larceny Act, 1916. [ship.

**Lastage**, sand or gravel used for ballasting a

**Law Merchant**, the mercantile law, which embodies the customs and usages ordinarily sanctioned between merchants and traders, and is recognised as part of the common law of the country.

**Lay Days** are days allowed for loading or unloading ships according to agreement, and date from the time that official permission to load or discharge has been given. [by leaking.

**Leakage**, an allowance made for losses on liquids

**Lease**, a letting, or the document setting forth the letting of lands, tenements, machinery, or other property for a specified consideration and time. A lease for a longer period than three years must be by deed.

**Leaseholds**, which are personal property, however long the term, are lands or houses held on lease, subject to the payment of ground rent to the freeholder.

**Legacy**, a gift by will of personal property. There are three classes of legacies: (1) *general*, being payable out of a testator's general assets; (2) *specific*, when comprising a specified part of the testator's property; (3) *demonstrative*, when a certain fund is made liable for the discharge of the legacy; but if the fund has ceased to exist or is inadequate the general estate must supply it.

**Legal Day** is the whole of the twenty-four hours of a day, from one midnight to the next.

**Legal Tender.** Gold and Bank of England notes are legal tender in Great Britain for any amount; silver is legal tender for any amount up to £2, and bronze for any amount up to one shilling.

**Letter of Allotment**, a letter informing an applicant for shares that certain shares have been allotted to him. A stamp duty of 1*d*. is chargeable on such letters for less than £5, and of 6*d*. for higher amounts.

**Letter of Credit** is a letter written by one correspondent to another requesting him to credit the bearer with a certain sum of money. It may be "general" to all persons or "special" to particular persons by name. It is not negotiable,

**Letter of Indemnity**, a letter undertaking to be responsible for any loss or damage sustained in circumstances specified.

**Letters of Administration** are the authority granted by the Probate Division to a person to act as administrator to the estate of a deceased person, either with or without a will.

**Letters Patent.** (*See* Patent.)

**Liabilities by Indorsement** are contingent liabilities incurred by the indorsement of bills or other negotiable instruments whereby the indorser becomes responsible for payment should the other parties to the document make default.

**Libel** is a defamatory publication upon a person by writings, pictures, images. Contumelious matter that tends to degrade a man in his neighbour's opinion on publication constitutes a libel. Libel differs from slander as the latter is *oral*

**defamation** whilst libel must be matter published. Libel may also in certain cases be punished criminally.

**Licence** is a permission given to do some act, which, without such permission, it would be unlawful to do. It usually refers to permits issued on payment of excise duty. (See *Office Compendium.*) Licences are required for keeping carriages, dogs, for operating a wireless set, for driving a motor vehicle, for shooting game, for hawking and peddling, for selling beer, ale, wines and spirits, tobacco, patent medicines, etc.

**Lien**, the right by which a person holding personal property of another can retain possession of it until some claim that he has against the original owner is satisfied.

**Light Dues** are charges levied on ships for the maintenance of lighthouses, beacons, etc., around the coasts.

**Liquid Assets** consist of readily realisable property, such as coins, notes, Consols, and other high-class securities.

**Liquidated Damages**, an agreed amount of damage in case of breach of contract; or, in an action, the definitely ascertainable amount that may be indisputably due.

**Lloyd's**, started as a meeting-place for merchants and shipowners at a coffee-house in Abchurch Lane, London, kept by Edward Lloyd, gradually developed into a very powerful association, and since 1774 has had its offices in the Royal Exchange. The members of Lloyd's mostly engage in the business of insuring or "underwriting" ships, but almost any risk can be covered there.

**Lloyd's Register** forms a full record and classification of all British ships, and of foreign ships classed in the register, and is published yearly. The surveyors of Lloyd's make periodical surveys of vessels, and keep a systematised inspection over ships intended for classification. The first class mark for ships is A1.

**Lock-Out**, the act of an employer, who, by reason of trade disputes, or other cause, closes his factories or workshops against his employees.

**Log-Book**, *the book in which the chief incidents* of a voyage are entered by the master of a ship.

**Long-Dated Bill**, a money-market term denoting a bill of exchange for a longer than ordinary period.

**Made Bill** is a bill of exchange having the name of one or more indorsers on it. It is usually a foreign bill sent from a provincial town to London for negotiation.

**Making a Market** is a method sometimes adopted by company promoters prior to share allotment in order to force a demand. Brokers are commissioned to buy shares in the market at a price slightly beyond the nominal value, a jobber is arranged with to sell them, and an artificially manipulated demand is started. Thus a favourable impression of value and demand is created and the public may be induced to apply for shares in considerable numbers.

**Making-up Price**, the price at which stocks or shares are closed for the current settlement.

**Mandamus**, *n.* writ commanding the performance of certain acts or duties. It is issued from the King's Bench Division of the High Court and may be addressed to any person, corporation or inferior court requiring them to do something specified.

**Manifest**, a document giving particulars of the various packages comprising the cargo of a ship.

**Margin**, a covering deposit with a broker, accompanied by instructions as to prices that are not to be exceeded.

**Maritime Lien**, a claim for salvage, damages, wages or payments for necessaries made in respect of any maritime adventure and constituting a direct charge upon the ship, freight or cargo enforceable by arrest and sale.

**Market Overt**, in open market, *i.e.* a place sanctioned by law or custom for selling and buying and open to the public. Contracts of sale made in market overt are binding against the real owner.

**Mate's Receipt**, the receipt given by the mate of a ship when goods are brought alongside for loading.

**——— of Association**, the document to which at least seven members subscribe in the formation of a public company, or two in the case of a private company, and which states (in the case of a limited company), (i) the name of the company, (ii) the situation of its registered office, (iii) the objects of the company, (iv) that the liability of its members is limited, (v) the amount of its share capital. Clause (iii) limits the activities of the company, as any act done in excess of these powers is null and void (*ultra vires*).

**Metalling Clause**, a clause in a marine insurance policy, specifying the non-liability of the underwriters for loss caused by ordinary wear and tear of a steamship on a voyage.

**Metric System.** (See *Office Compendium.*)

**Mint Par of Exchange**, the rate which expresses the relation between the quantities of gold obtainable by the units of currency of two countries.

**Mint Price of Bullion** indicates the number of coins into which a given weight of bullion is divided.

**Mixed Currency**, a currency partly of coins of the precious metals and partly of convertible paper, but both must be of legal tender quality.

**Mixed Policy** is a marine insurance policy combining time and distance conditions—a voyage and a period.

**Monometallism**, the system of a single metal standard of value in a national currency, such as the gold standard obtaining in England.

**Month.** The term month in commercial matters means a calendar month, unless otherwise specified.

**Mortgage**, a legal document whereby one who borrows money conveys his right to certain property to the lender as security for the repayment of the sum advanced together with interest at a rate specified in the deed. The borrower is called the mortgagor, the lender the mortgagee. A mortgage may be on freehold, leasehold, copyhold, or personal property. The mortgage of personal property is usually effected by a bill of sale. By the Law of Property Act, 1925, after 1st January, 1926, a legal mortgage of freehold land can be created only (1) by a lease of the land for a term of years subject to redemption; (2) by a charge by deed expressed to be by way of legal mortgage. If no interest be paid or debt acknowledged for 12 years, the debt is deemed to have been extinguished. The mortgage of leasehold property is by assignment or by an under-lease. A British ship can only be mortgaged as laid down in Merchant Shipping Act, 1894.

**Mutual Life Insurance**, a system of life insurance carried on by members of a company having no shareholders and no subscribed capital and dividing the whole of its profits amongst its policyholders.

**Name Day**, the second day of the Stock Exchange settlement. Also called the "Ticket Day."

**National Debt** constitutes the financial obligations of a state, and amounted in Great Britain in 1929 to £7,587 million, which represents a total annual charge of £355 million. The National Debt is divided into *funded* and *unfunded* debt, the former representing debt in respect of which the date of repayment is remote, and taking the form of Consols and debts due to the Bank of England, while unfunded debt consists of Government short loans, repayable at a fixed date.

**Navy Bills** are of two kinds: (1) those issued by the Admiralty in order to pay for stores, and (2) bills of exchange drawn by naval officers against pay falling due.

**Negotiable Instruments and Negotiable Paper**, such as bills, notes, cheques, warrants, bonds, and other documents as are by common usage on transfer by delivery from one person to another, convey a legal right to the property therein, free from all claims. A bill of lading is not a negotiable instrument.

**Net** or **Nett Weight**, actual weight of goods after every allowance has been made for package, waste, etc.

**Nominal Exchange**, the state of the exchanges which depends upon the par value of moneys of the countries, and not on the current demand for them at any given time.

**Nominal Partner**, one who permits his name to be used in the title of a business, although having no actual interest in the concern, as in the case of one who has retired from it. He may be liable for the debts of the business if he holds himself out as a partner.

**Nominal Price**, an approximate or designated price of issue of shares, or price quoted in respect of goods and securities in which dealings are in-

**——— Public is an officer who may certify deeds** and other documents, usually a solicitor appointed

to certify signatures to documents intended for use abroad, and to put marks of protest on bills of exchange and promissory notes, foreign and inland, which have not been met.

**Notice of Dishonour**, the notice which the holder of a bill of exchange must give to drawer and negotiators when the bill is refused payment.

**Noting a Bill**, the memorandum of a notary public written upon the face of or attached to a returned bill, after being presented by him a second time and not accepted or not paid.

**Not Negotiable.** When a cheque or bill has these words written across its face they do not limit the transfer of it from one to another, but, in the case of a transferor not having a good title to the document, the transferee is merely in the same positon as the transferor, and cannot go back upon the original drawer for satisfaction.

**Novation** is the act of replacing a debtor by another who assumes the responsibility, to which there must be the assent of the original debtor and creditor as well as of the substitute.

**Nudum Pactum**, an agreement without consideration. Not capable of being sued upon except under seal.

**Official Receiver**, a person appointed by the Board of Trade to carry out prescribed duties under the Bankruptcy Act 1914 in connection with the winding up of bankrupts' estates, and having the powers of a trustee in bankruptcy.

**Official Referee**, a High Court official appointed to deal with actions concerning disputed accounts.

**Omnium Stock**, a term of the Stock Exchange for the total value of the various stocks on which a loan is founded. [or at short notice.

**On Call**, money lent, either repayable on demand

**On Demand**, a term in general use to denote bills of exchange in which these words have been written. They need no acceptance and are payable on presentation.

**One Man Company**, a company in which almost all the shares (excepting the few which are allotted to nominees to make up the statutory number of shareholders) are held by one man.

**Open Cheque**, an uncrossed cheque payable on presentation to "bearer" or "order," as the case may be.

**Open Credit**, credit given by a banker to a customer without guarantee or security. A letter of credit authorising payment of money to another person without condition also comes within the term "open credit."

**Open Policy**, a marine insurance policy, the full amount of which is not declared until the value of the property has been ascertained.

**Open Slip**, a slip of paper initialled by the underwriter, having reference to the terms of an open policy, and requiring no stamp.

**Option**, a right granted to a person to buy or sell certain stock or shares at a specified price within a stated period or on an indicated day. (*See* **Put and Call.**)

**Ordinary Stock or Shares**, such as have no special privilege or right attaching to them, but which receive dividends representing the profits after paying interest on preference shares and debentures and providing for reserve, etc.

**Original Bill**, the first of a duplicate or triplicate set of foreign bills. The term also applies to a bill which has been discounted before endorsement.

**Over-Capitalisation**, the circumstance of a company having more capital to pay interest upon than it has power to earn, a result usually caused by too large a price having been paid for the taking over of the business, or in promotion.

**Overhead Price**, a price including extras.

**Over-Tonnage** denotes the providing of a greater tonnage of ships than is required for the freight to be shipped.

**Par**, a price that is equivalent to nominal value.

**Partners** are persons associated in the carrying on of a trade, industry, or business jointly with a view to profit; and may be active, as when employing themselves in the conduct of the enterprise; sleeping, when providing capital but taking no active part; or nominal, when only lending their name.

**Partnership**, an association of not more than twenty and not fewer than two persons for trading purposes, whose interests, relationship, and responsibilities are usually defined in a deed of partnership. All partners are liable jointly and severally for all the debts of the firm to the outside public, and the firm is bound by the action of any one partner. By the Registration of Business Names Act 1916, when the partnership is carried on in a name which does not consist of the true surnames of all the partners it must be registered and the names of all partners be exhibited on all business letters, catalogues, showcards, etc.

**Passive Bonds and Shares**, bonds on which no interest is paid but which confer some future accruing advantage on the holder.

**Patent Laws.** It was usual in England, up to January 1st, 1905, for the Patent Office indiscriminately to accept fees for registering and granting "protection" to "inventions." Now the Patent Office examines its records before issuing its papers. Each complete specification is subjected to a rigorous examination to discover whether the idea infringes any British patent granted within the preceding fifty years. If the result of the examination is unsatisfactory the applicant is asked to amend his specification. If he refuses, the Comptroller, after a hearing, may compel him to put in a reference to prior specifications, by way of notice to the public, the applicant having the right, however, of appeal to the law officer—the Solicitor-General. The issue of a patent does not prove its validity. As before, any person who thinks his patent anticipates that of the applicant may oppose the grant of the latter by filing a certain form and paying the requisite fee of 10s. Evidence will then be taken by the Comptroller, the final decision as to validity remaining, as before, with the Law Courts. The law as to British patents and designs was consolidated by the Patent and Designs Act 1907, and amended by an Act of 1919, which placed a check on the indiscriminate taking out of patents in this country by foreigners, and provided better safeguards and facilities than had previously existed. Over 30,000 applications for British patents are made annually, but less than half the number are granted as a rule. For Fees see *Office Compendium*.

**Pawnbroking**, the business of lending money on security of goods taken in pledge. In the 18th century pawnbroking grew to be a regular business and was regulated by Acts of Parliament. A licence is required by every pawnbroker, for which he pays £7 10*s.* per annum, with an additional duty of £5 15*s.* if he deals in plate. The three balls which hang over the pawnbrokers' shops are the ancient arms of Lombardy, the Lombards being the first money-lenders in Europe. (*See* **Monts-de-Piété**, *General Information* Section.)

**Pay Day**, the day on which Stock Exchange settlements are concluded. Used also to denote the particular day of each month on which a firm pays its accounts.

**Payee**, the person or firm to whom a bill of exchange, promissory note, or sum of money is made payable. [sory note, or account.

**Payer**, one who pays a bill of exchange, promis-

**Paying-in Slip**, a printed form on which particulars and details of a total amount are written when a customer pays a sum into the bank, indicating how it is made up.

**Payment under Protest**, a payment made after protest has been made denying all or part liability.

**Per Capita**, per head.

**Permit**, a Customs or Excise document of authorisation to remove dutiable goods.

**Personal Property** or **Personalty**, everything that is possessed apart from that which is freehold land.

**Petitioning Creditor**, one who files a petition in bankruptcy against a debtor.

**Placing Shares**, the act of a broker or brokers in getting people to take up shares, usually referring to such as are placed in order to make up a sufficient number to secure quotation on the Stock Exchange.

**Policy Holder**, the possessor of a policy, whether the insured, or one to whom the policy has been assigned.

**Pool**, an association of firms manufacturing the same product, and formed with a view to controlling prices by regulating output. Each member of the pool has a definite quota of production allotted to him. In general terms, a pool is a combination of several persons in one large operation, the profit or loss of which is shared among them according to the amounts of their respective subscriptions.

**Post Obit Bond** is a bond given for a loan, undertaking to repay the lender the sum borrowed,

with interest, after the decease of another person from whom he expects to receive money; often may be set aside by a Court of Justice.

**Pratique**, a licence for a ship to trade in specified ports, provided the port she sails from is free from infectious disease.

**Preference Bonds** are such as are issued at a fixed rate of interest, and payable before dividends are declared on ordinary shares.

**Preference Shares and Preference Stock** are shares or stock entitled to their fixed dividend before any division of profits can be made amongst the holders of ordinary shares or stock. Preferential rights may be cumulative or non-cumulative.

**Preferential Payments in Bankruptcy** are such as have to be made before the claims of ordinary creditors are considered, and include rates and taxes which may have become payable within twelve months preceding the date of the receiving order; salaries or wages of clerks or servants for services during the preceding four months, and not exceeding in any one case £50; wages of labourers or work for services during the preceding two months, and not exceeding in any one case £25.

**Premium** has several meanings: (1) a prescribed periodical (usually annual) payment on a policy of insurance; (2) the advance in price of stock or shares above par value; (3) a bounty; (4) a payment in respect of a loan in addition to or in place of interest.

**Present Value**, a term used in discounting, and referring to a simple deduction of interest from the face value of a bill; the determination of the present value of a deferred payment with compound interest; or the calculation of the present value of a series of payments due at regular intervals.

**Price Associations**, associations of members of the same trade or industry with a view to the regulation of prices.

**Price Current**, a list of articles of merchandise with their prices, the duties payable (where necessary), etc., with prices and statements, duties, drawbacks, etc., if any.

**Primage**, a percentage added to the freight and paid by the shipper or consignor to the master of a ship for the loading of goods.

**Prime Cost**, in cost accounting, is the cost of labour and raw materials with all the charges thereon, such as carriage inwards, freight, etc.

**Private Arrangement**, a deed whereby a debtor and his creditors enter into an agreement for the payment and acceptance of a composition in satisfaction of all claims. This deed must be registered.

**Private Company**, a small limited company privately formed by members who subscribe the whole of the capital among themselves. By Companies Act 1929 the number of members is limited to 50. No invitation can be issued to the public to subscribe.

**Production**, a term used to denote a thing produced—that is, made, written, composed, or manufactured; or, in its ordinary commercial significance, the bringing forward and offering of an article for sale.

**Profit**, the surplus that remains after all expenses of production and sale have been paid. *Gross profit* is the excess of selling price over cost price; *net profit* is the excess of gross profit over the selling and management expenses.

**Profit Sharing**, a method of remunerating labour, under which the employee receives, in addition to his ordinary wages, a share of the profit of the concern.

**Prohibitions and Restrictions**, a term applying to articles which are either prohibited altogether from being exported or imported, or are placed under special conditions.

**Promissory Note**, an unconditional promise in writing made by one person to another, signed by the maker, engaging to pay on demand, or at a fixed or determinable future time, a certain sum in money to or to the order of a specified person or to bearer.

**Proof of Debt in Bankruptcy**, a creditor's affidavit or declaration, setting forth particulars of debt owing to him by a bankrupt.

**Property** is of two classes, corporeal, as land, buildings, etc., and incorporeal, as the rights in things not represented by material objects.

**Proprietary Company**, a parent company holding lands or mining rights, parts of which it sells or leases to others.

**Prospectus**, a document issued by public companies inviting the public to subscribe for shares of the company. A copy of every prospectus, before publication, must be filed with the Registrar of Joint Stock Companies. The prospectus must state various facts relating to the affairs of the company, and these are enumerated in the Fourth Schedule of the Companies Act, 1929.

**Protest**, a notification by a notary public of an unaccepted or unpaid foreign bill of exchange which protest must be effected at the place of dishonour, and contain a copy of the bill, a statement of the parties to it, and other particulars.

**Proxy**, one who acts for another, or the written authorisation for such action. A proxy requires 1*d.* stamp, but for proxies in bankruptcy or winding-up proceedings there is stamp exemption.

**Public Company**, a limited company whose capital consists of shares publicly subscribed, such shares being saleable by any shareholder without the consent of the other shareholders.

**Put**, or **Put Option**, is the right to sell certain stock at a price named on a specified day, in consideration of a premium paid.

**Put and Call**, equivalent to double option.

**Put of More**, a "put option," with the additional privilege of selling double the quantity specified.

**Quarantine** is a term used to denote the period for which a vessel, on which there is infectious disease, is detained in isolation until medically certified free from taint. Originally this period was forty days; hence the term; but now the detention and prohibition of intercourse with the shore only lasts until a clean bill of health can be given.

**Quarter Days**, the last days of each quarter of the year on which payment of rent or interest falls due. In England they are Lady Day (March 25), Midsummer Day (June 24), Michaelmas Day (Sept. 29), and Christmas Day (Dec. 25). In Scotland the quarter days are Candlemas (Feb. 2), Whitsun (May 15), Lammas (Aug. 1), Martinmas (Nov. 11).

**Quintal**, a weight that varies in different countries. In Liverpool, England, and the United States it is 100 lbs.; in France, 100 kilos, equal to about 220½ lbs. avoirdupois.

**Quit-Rent**, rent paid by a freeholder or copyholder to a lord of manor in lieu of services.

**Quorum**, a term indicating the number of members of any body or company necessary to be present at any meeting or commission before business can be transacted.

**Racking**, a term used in the wine and spirit trade when liquors or wine are transferred from certain casks to other casks, or when drawn off from the lees.

**Rack Rent**, rent of the full yearly value of the property held. A term generally used to denote the rent of a house and land as distinguished from rent of land only.

**Railway Advice**, a document sent by a railway company to a consignee of goods intimating that goods are awaiting his orders at a specified station, and that demurrage will be chargeable after a date named.

**Rateable Value**, the value of property as the same is assessed in the rate books of the local authorities, representing the ordinary rent value less the outgoings in connection with the property.

**Real Estate**, or **Realty**, is immovable property, *i.e.* land held on freehold. Leaseholds, however long the term, are personal estate.

**Real Securities**, deeds of mortgage of real estate.

**Realisation** is a conversion into actual cash of what was previously contingent or doubtful, a process that may result in gain or loss on original cost according to the state of the market.

**Receipt** is a written acknowledgment of money paid, on which a stamp duty of twopence must be paid if for a sum of £2 or over. The following are exempt: sums of money placed on deposit with a banker, bankers' acknowledgments of bills of exchange, taxes, wages, salary or pension.

**Receiver**, one appointed to control an estate or property pending dispute or litigation.

**Receiving Notes**, documents signed by shippers requesting the chief officer of a ship to receive on board specified goods.

**Receiving Order**, the order of a Court of Bankruptcy, on petition presented by a debtor or one of his creditors, placing the debtor's estate in the hands of the Official Receiver, and barring further legal proceedings against the debtor by creditors.

The effect of the order is thus to protect the estate of the debtor until it is definitely declared after the public examination whether the debtor be bankrupt or not.

**Recognizance,** an acknowledgment of indebtedness to the Crown, should a certain specified act not be duly performed; for example, a recognizance in respect of a prisoner liberated on bail, whose failure to appear on the day appointed for trial would render the recognizance realisable.

**Re-draft,** a new bill of exchange which the holder of a protested bill draws on the drawer or endorsers for the amount of the original bill with the costs added.

**Reducing into Possession,** the conversion of a thing in which one has the *right* of action into actual possession, as when the holder of a bill of sale enforces his security.

**Re-exchange,** loss and expenses incurred on a dishonoured foreign bill. [goods.

**Re-exportation,** the exportation of imported

**Registered Bonds** are such as for security against robbery or loss are registered in the holders' names in the books of the company or State issuing the bonds.

**Re-insurance,** when an underwriter considers he has incurred too great a hazard he may effect a sub-insurance with others, so that in the event of loss the liability will be more widely distributed.

**Remedy,** the technical term for the extreme limit of allowance the Mint will allow from the fixed coinage standard.

**Renewal of a Bill** is frequently resorted to when an acceptor finds himself unable to meet it when it falls due. The original bill is cancelled and a new one drawn up, so that the consent of all parties to the original bill is required.

**Replevin,** the name of an action brought by a tenant for recovery of goods unlawfully distrained upon.

**Reputed Ownership** is a term in use regarding goods and property in the possession of a bankrupt, and applies to everything under his control at the time of his bankruptcy. All such property is presumed to belong to the bankrupt and to be available for realisation and distribution, unless the contrary is proved.

**Request Note,** a Customs note filled up and signed by an importer when requiring the removal of dutiable goods from one warehouse to another, or (in the case of perishable goods) from shipboard before clearance.

**Reserve,** a charge made against profits before arriving at the actual net profit, in order to make provision for contingencies. The fund resulting from these reservations is the Reserve Fund. If reservation is made for some specific object—*e.g.* the replacement of a wasting asset, or repayment of a debt—the fund is known as a Sinking Fund, and must be invested.

**Reserve Liability,** such portion of a limited company's unpaid capital as can only, by special resolution of the company, be called up for winding-up purposes.

**Respondentia,** a legal term applying to maritime contracts, mortgaging the cargo for money advanced for the prosecution of the voyage. It is only repayable on the safe arrival of the ship.

**Rest,** a Bank of England term applied to its weekly return, and signifying the surplus of assets over liabilities (including capital).

**Restraint of Trade** is a legal term. Any contract which places excessive restraint on the freedom of trade may be declared void by a Court, unless limited by time and space.

**Restrictive Endorsement** is one which destroys the negotiability of a bill of exchange, such as "Pay A only."

**Retainer,** the engagement, by request and payment of the retaining fee, of the services of a counsel to represent one of the parties to an action, inquiry, trial, hearing, or arbitration.

**Retiring a Bill** is to withdraw it from circulation either by buying it up and retaining it until maturity or at once cancelling it, or by the acceptor meeting it in the usual way when due. In the latter case it is discharged.

**Revenue,** in its ordinary application, refers to income of any kind; more strictly, however, it denotes (i) the income yielded to a State from taxes and duties, (ii) in accounting, the income earned by a company, as distinct from capital receipts.

**Revenue Account,** another name for a profit and loss account, the term being applied usually to large industrial concerns such as Railway and Shipping Companies, Gas Companies, etc.

**Reversion** is a right to property or benefit, the enjoyment of which does not come into operation until the happening of a certain event or the expiration of a certain period.

**Reversionary Interest,** a term generally applied to a deferred interest in money or personal property.

**Rider,** any separate addition to a document, or addition to a resolution or verdict, appended to the original.

**Right of Action** is the right, obtained by agreement or purchase, of claiming or suing for a debt or obligation due to another.

**Ring,** a combination formed by a group of speculators to obtain the control of the operations in a certain commodity or security, and by creating scarcity to run up prices for their own profitable realisation.

**Royalty** has several meanings: (1) percentages or dues payable to landowners for mining rights; (2) sums paid for the use of a patent; (3) percentages paid to an author by a publisher on the sales of a book.

**Rummaging a Ship** is the search made by Customs officers for concealed dutiable or prohibited goods.

**Runner,** one who touts for sharebroking business and is remunerated by a share of the profits on what he introduces, while also liable to bear a share of any losses made.

**Running Days,** a term in a ship's charter meaning consecutive days, including Sundays and holidays, as distinct from working days.

**Sagging Market** is one in which prices show a marked and continuous falling tendency.

**Sale for the Coming Out** is an early sale of shares in a company prior to the issue of share certificates.

**Sale or Return,** a selling of goods to a retailer on condition that if he fail to re-sell them within a given time the seller will take them back and refund the money paid for them or make an equivalent allowance.

**Sale Warrant,** a document given with a weight note, in the case of goods sold on payment of deposit, conditionally on an early discharge of the balance.

**Salvage,** the reward payable by the owners of goods carried in a ship, or by the shipowner for exceptional services performed at sea by which goods or the ship are saved from loss. It is also applied to the goods saved from the dangers of the sea or to property saved from fire either on sea or land. The crew are not entitled to any reward for assistance rendered, even for extraordinary services. A passenger may be awarded a reward in exceptional cases.

**Salvage Loss,** a term used in respect of a partial marine insurance loss, being the nett value of the goods recovered deducted from the full amount of insurance.

**Sampling Orders** are orders addressed to the superintendent of a dock or other warehouse, authorising the giving of specified samples to the person named.

**Sans Recours,** "without recourse," a term which when written on a bill of exchange by an endorser frees him from liability on the document.

**Schedule,** a list, summary, index, or inventory. It may be either supplementary or explanatory.

**Scrip,** a certificate of shares in a Government loan, company, or corporation, a contraction of "subscription."

**Searchers** are Customs officers entrusted with the duty of searching and examining vessels on arrival or departure for goods liable to duties.

**Search Warrant,** a document issued by a magistrate authorising a search in any place for stolen or concealed property.

**Seaworthy,** the condition of a ship when it is in every respect fitted for undertaking a voyage. There is an implied warrant of seaworthiness in a marine insurance voyage policy but not in a time policy, and should the vessel prove to have been inefficient at starting, the shipowners will be liable for any loss by the cargo owners and any insurance of the ship will be void.

**Second Class Paper,** bills, notes, and other securities for the satisfaction of which persons or firms of only moderate standing are responsible.

**Secured Creditor**, one who holds some property of a debtor towards the satisfaction of his claim. If a secured creditor desires to present a petition in bankruptcy against the debtor, he must either surrender his security or establish its value and prove an unsecured balance of at least £50.

**Securities** are documents entitling the holder to specified realisable rights in land, money, stocks, shares, bonds, mortgages, etc., in the event of loans, payments or advances for which they were given remaining undischarged.

**Seisin**, actual possession of real estate.

**Seizure Notes** are notes made out by a Customs officer on discovering and taking possession of goods fraudulently obtained or bearing fraudulent trade-marks, and left with the goods after they have been placed in a Customs warehouse.

**Sellers Over**, a market condition when sellers are in excess of buyers, or when there are no buyers at all.

**Selling Out**, a market or Stock Exchange term. If a buyer fails to take up the securities he has contracted to buy, the seller may sell out against him, the buyer being liable for any expenses to which the seller may be put on that account.

**Sequestration** is a legal process putting a sheriff or other officer of Court in possession of property or goods until a dispute or claim in respect thereof has been disposed of. It also may mean the taking possession of the property of a bankrupt for the purpose of distributing it amongst his creditors.

**Sequestrator**, the person appointed to take possession under a sequestration order.

**Set-off**, the placing of a debt due against a debt owing, wholly or partially. The two debts must be due in the same right and between the same parties.

**Settlement** may mean: (1) the discharge of a debt or claim; (2) the settling of a sum of money on a woman on her marriage as a provision for herself and children; and (3) the Stock Exchange fortnightly settling period, viz., the last three days of the account, as to general stocks and shares, and in the mining market four days.

**Settling Day**, the last day of the Stock Exchange account.

**Sharebrokers** are persons engaged in the business of buying and selling shares and stocks for clients.

**Share Certificate**, a document issued by a public company to a shareholder, certifying the number of the shares held and the sum paid up on them.

**Share Warrant**, a document certifying that the bearer owns the shares specified and that they are fully paid up. It is a negotiable instrument, with coupons attached payable at the dates named to whomsoever may present them. When shares take this form the shareholder's name does not appear on the list of shareholders.

**Ship Brokers** are persons engaged in promoting business between shipowners and traders.

**Shipping Articles**, the contract between a shipmaster and his seamen setting forth the terms and conditions of service.

**Shipping Bills**, Customs or traders' documents containing particulars of goods placed on shipboard.

**Shipping Cards**, cards issued by shipbrokers giving dates of sailings, approximate dates of arrivals, and other information of use to shippers.

**Shipping Note**, delivery or receipt note concerning goods sent for loading.

**Shipping Weight**, the declared weight of goods put on shipboard.

**Ship's Certificate of Registry.** This is issued by the registrar after the completion of the building of a ship, and sets forth the name, build, tonnage, and other particulars.

**Ship's Clearance Inwards.** (*See under* Clearance.)

**Ship's Clearance Outwards.** (*See under* Clearance.)

**Ship's Manifest** is a ship's paper that contains full details of the vessel's cargo and the ports for which she is bound.

**Ship's Papers**, such as must go with the ship, comprise the Certificate of Registry, the contract with the seamen, Charter Party or Bills of Lading, Manifest, Official Log, and Bill of Health.

**Ship's Protest**, a declaration, made before a notary, setting forth particulars of loss or damage to ship or cargo, a document necessary for production to underwriters before adjustment of claim.

**Ship's Store Bond**, a document given by a shipowner or captain in respect of dutiable articles to be used as stores during a voyage.

**Ship's Stores**, articles necessary for the provisioning of a ship; as a Customs term, however, it refers to articles which would be chargeable with duty if consumed on land.

**Short Bills or Short-dated Bills**, are bills of exchange having less than ten days to run. They include bills payable on demand or at sight.

**Short Exchange**, rates quoted for bills payable on sight or within a few days after.

**Short Loans**, advances for short specified periods at a fixed rate of interest.

**Short Shipment**, a term applied to goods that, through accident or want of space, are unable to be taken on board.

**Shut for Dividend** refers to the period when the transfer books of the public companies are closed for the making out of dividend warrants. No transfer can be registered during this period.

**Sight Bills** are such as are payable at sight, without allowance of days of grace.

**Sighting a Bill.** A bill is sighted when presented to the person on whom it is drawn.

**Sinking Fund** is a fund created by setting apart a proportion of the profits of a company or the revenue of a Government with the object of extinguishing the debt or loan.

**Skipping**, a Customs term used in taring, and referring to the temporary transfer of articles from one package to another.

**Slander of Title**, a false, malicious statement injurious to a person's title to property and causing special damage.

**Slander of Goods** is an offence of a similar nature, but where goods are disparaged whereby a man suffers loss of sales or custom.

**Sliding Scale**, a scale of wages regulated by appreciation or depreciation in the market value of the products of labour.

**Slinging**, the act of putting chains round goods lying alongside a ship for convenience of hoisting. The shipper bears the charge for this.

**Slip**, a marine insurance term referring to a slip-note of particulars required by an underwriter before undertaking to insure, and which he initials if accepted.

**Sola**, signifying "this only," is a term applied to a document of which only the original exists.

**Solvency**, the ability to discharge all debts and obligations in full.

**Special Commerce**, a term including imports for home consumption and exports which mainly represent the products of the countries from which they are exported.

**Special Damage** is damage sustained by wrongful act and for which damages beyond general damages may be claimed.

**Special Indorsement** on a bill of exchange is an indorsement specifying the name of the person to whom the indorser transfers the document.

**Specie**, metallic money or coin, in contradistinction to instruments of credit, such as bills and notes.

**Specie Point**, the point above or below the Mint par of exchange at which it is found more profitable to pay in specie than bills.

**Specific Performance**, the express carrying out of the terms specified in a contract. Where damages supply an adequate remedy, however, the Courts seldom enforce specific performance.

**Specification**, a detailed list of work to be done or goods to be supplied in the carrying out of an order or contract.

**Spits**, instruments of wood, iron or steel, used by Customs officers in examining goods for dutiable articles.

**Spot Goods** are such as are ready for immediate delivery.

**Squeezing the Bears**, a phrase denoting the condition to which "bears" are reduced when buyers to whom they have contracted for delivery are themselves the holders of the available stock, and by this means compel the "bears" to purchase from them at an advanced price.

**Stag**, a speculator on the Stock Exchange, who applies for new securities in the hope that in a short time their price will rise above the price of issue, whereupon he sells at a profit.

**Stale Cheque**, a cheque that is not presented for payment within a reasonable period. Bankers make a rule of not cashing cheques six months or more old.

**Standard Gold** is composed of twenty-two parts of pure gold and two parts of copper alloy.

**Standard Money** is coin whose value in exchange depends upon the intrinsic value of the metal it contains.

**Standard Silver** consists of one half pure silver and one half alloy by the Coinage Act 1920. The remedy allowance was made 5 instead of 4 in force previously.

**Standarding** is an arithmetical calculation for ascertaining the value of bullion, that is converting the gross weight of gold or silver that is not of the standard into its equivalent in weight of standard metal.

**State Notes** are the notes of a State or Government, undertaking to pay bearer on demand the amount specified in specie.

**Statute Barred**, a commercial term denoting a debt has passed beyond the limit within which it can be legally recovered.

**Statute of Limitations**, passed in 1623, still remains in force, whereby it is laid down that actions for trespass or debt, or simple contract, cannot be instituted after the lapse of six years from the date of the cause of action; that actions for assault, menace, or imprisonment must be brought within four years; and actions for slander within two years. Actions for the recovery of land must be commenced within twelve years.

**Statutory Meeting**, a meeting of the members of a limited company which it is compulsory to hold within not less than a month and not more than three months from the time of starting business.

**Stay of Execution**, an order of Court suspending execution on a judgment obtained, until an appeal which has been moved for has been heard.

**Sterling Bonds** are such as are payable in British currency only.

**Stiffening Order**, a Customs House permit for a ship before completely unloading to take ballast or heavy cargo on board for steadying purposes.

**Stock** represents the consolidation of shares and other securities into a money basis of value, and includes the national debt of a country, and fully paid-up shares in a company, and, unlike shares, is divisible into fractional parts.

**Stock Exchange**, a building in which the operations of buying and selling stocks and shares are carried on. The London Stock Exchange is controlled by a committee of thirty members. There are two classes of members—jobbers and brokers; jobbers dealing in particular groups of stocks, and brokers operating generally between the public and the jobbers. The annual subscription is forty guineas; and to become a member a man must have served as clerk to a member for two or four years. If admitted to membership after two years he pays 500 guineas, if after four years 250 guineas.

**Stock Receipt**, a receipt given to the purchaser of registered stock by the seller on payment of the consideration. On production of this receipt the purchaser's name is registered as owner.

**Stopping a Cheque or Note**, an act resorted to when a cheque or note has been lost or stolen, or for some other reason the drawer of the cheque or owner of the note does not wish the amount paid. In the case of a cheque, the drawer notifies the bank on which it is drawn that it is not to be paid and the bank will withhold payment. Regarding notes, the issuing bank cannot refuse payment, but if it has been "stopped" will trace back as far as possible the source from whence the presenter procured it.

**Stop Order.** If the holder of shares observes that prices are falling he may give his broker a stop order to sell out should the price fall to a certain figure. If that figure is reached, the broker will sell immediately at the best price he can obtain.

**Stoppage in Transitu**, a seller has a right to stop goods in transit which are not paid for, and prevent their delivery on discovering after despatch that the purchaser is not solvent.

**Stowage**, payments for stowing a vessel.

**Strike** is a combined withdrawal from work of a body of workers, for the purpose of obtaining or resisting a change in conditions of employment.

**Subpœna**, "under a penalty," a writ of Court commanding the attendance of a witness at a specified time and place. It is called a *subpœna ad testificandum* when requiring verbal testimony only, and a *subpœna duces tecum* when requiring the production of documents.

**Subsidy**, money contributed by a State, Government institution, or person, in behalf of any special object.

**Sufferance Wharf**, a licensed wharf upon which dutiable goods may be landed and stored until the duty is paid.

**Sum Payable**, the amount payable on a cheque, bill, promissory note, or draft, and written out in full in the body of the document. If by error the sum written in figures in another part does not tally with the amount as written out in full, the latter will be deemed correct.

**Surrender Value**, the value of a life insurance policy at any given time when the person insured, because of inability to continue paying premiums, or for other cause, desires a lump sum to be paid to him in consideration of what he has already paid and of surrendering the policy.

**Suspension of Payment** is when persons, firms or companies, unable to cope with their liabilities, decide to cease paying further debts, and announce the fact to their creditors. This constitutes an act of Bankruptcy.

**Take In**, to obtain backwardation.

**Taking In Shares** is when a person having bought more shares than he can take up on the settling day gets some one to relieve him of a portion of them.

**Taking Up a Bill** is discharging it when it falls due. The acceptor has the first responsibility, and if failing him, it is taken up by an indorser, the latter can sue the other parties previously liable on the bill.

**Tale Quale**, a grain trade term, denoting that goods sold are equal to sample as they lie, but that any loss by damage during transportation must be the concern of the buyer.

**Talon** is the last portion of a bearer bond coupon sheet, containing the intimation that on presentation a fresh sheet of coupons will be exchanged for it.

**Tape Prices** are the latest prices as recorded on the "tapes" or the telegraph instruments at various places, as supplied by the authority of the Stock Exchange.

**Tare** is the deduction made in respect of boxes, cases, or other things used in packing goods, leaving only the actual weight of the goods to be paid for.

**Tariff**, a list of duties charged on specified articles. The term is also applied to any list of charges.

**Telegraph Restante**, a direction on a telegram intimating that it has to remain at the office where received until called for.

**Telegraphic Transfers** are messages authorising the transfer of amounts specified from one person to another by process of debit and credit entries by bankers, and much resorted to in transactions between different countries. A trader can in this way pay a sum into a bank in London and have its equivalent paid by the bank's agent in almost any city of the world the same day.

**Telegraphing Money Orders**, a method of securing payment of sums of money to a person named on the order, at any postal telegraph office other than the issuing one. No telegraph money order can be issued for a greater amount than £40.

**Tenant's Fixtures** are such as the tenant has himself put up, and are removable by him at the end of his tenancy, unless they are of such a nature that they cannot be detached without injury to the landlord's property. By the Larceny Act 1916, the larceny of fixtures is punishable.

**Tender** is an offer to supply certain things, perform certain acts, or pay a specified sum, but it is not binding until accepted.

**Tenement**, a house or other building occupied or capable of being occupied by a tenant.

**Terminal Charges**, railway charges for loading, unloading, and otherwise handling goods entrusted to them for transportation.

**Third Class Paper** bills and other negotiable securities, the responsibility for payment of which belongs to persons or firms of inferior standing.

**Ticket**, a document giving particulars of shares sold and given to a purchaser by his broker.

**Time Bargain**, an agreement to buy or sell at a future date at a price fixed on entering into the agreement.

**Time Policy**, a marine insurance in respect of goods in transit, and limited to a specified period not exceeding one year and thirty days.

**Tolls** are dock and canal charges for conveyance of goods, and are charged against the owners of the goods, not the ships.

**Tonnage as registered is based, not on the carrying capacity of a ship, but upon its cubical capacity, one ton being reckoned for every 100 cubic feet.**

**Tonnage Dues,** port charges, estimated on a ship's registered tonnage, payable on entering or leaving port.

**Trade Bill,** a bill of exchange in respect of which value in goods has been actually received by the drawee or acceptor.

**Trade Fixtures,** like tenant's fixtures, are removable by a tenant at the expiration of his tenancy provided no damage be done to the land lord's property.

**Trade Mark,** a distinguishing mark on goods to indicate that they are the goods of the proprietor of such trade mark by reason of manufacture, selection, dealing with, or offering for sale. Trade marks can be registered, the registration holding good for 14 years and being renewable indefinitely. Infringement of a registered trade mark renders the infringer liable to fine or imprisonment.

**Trade Union,** a combination of workmen formed to protect the trade interests of its members, by the substitution of collective for individual bargaining between workmen and employers. Trade Unions can be regarded as successors of the old craft guilds, and their growth was a feature of the late 18th and early 19th centuries. After years of repression a Royal Commission on Trade Unions was appointed in 1867, and its report was followed by the passing of the Trade Union Act of 1871, which was amended in 1876, and which with the Trade Disputes Act 1926–7 determines the present position. Since 1866 a congress of delegates from Trade Unions has met annually for the purpose of discussing labour questions. There are over 1,100 Trade Unions in Great Britain and Northern Ireland, with a membership of nearly 5,000,000, over three-quarters of whom belong to the building, mining and quarrying, metal, engineering, shipbuilding and textile trades. Usually a weekly contribution is fixed by the rules, but the income of a Trade Union varies according to the needs of the organisation, weekly levies being made for special purposes.

**Transfer,** any document whereby one person transfers property, securities, or rights to another. On the Stock Exchange a transfer of shares or stock is prepared by the seller's broker, signed by the seller, and handed over to the buyer on payment of the consideration.

**Transfer Days** are those on which the Bank of England and some other banks enter transfers of registered stock.

**Transire,** a Customs document permitting a specified vessel or goods to pass or proceed, and serving for outward clearance. It is made out in duplicate, and is used by ships engaged in a coasting trade.

**Treasure Trove,** a legal term applying to money, plate, or bullion found hidden in the earth, or elsewhere, and for which the owner cannot be found. The treasure legally belongs to the Crown. An inquest is held by the Coroner to enquire into the ownership.

**Treasury Bills** are negotiable Government acknowledgments of loans, and may be for three, six, or twelve months.

**Tret,** an allowance, once common, for waste, wear, of damage, etc., but no longer a custom of trade.

**Trust,** a term now generally applied to industrial amalgamations. In its restricted sense it refers to those particular combinations in which shareholders deposit their shares in the hands of trustees, receiving in return a trust certificate, the trustees henceforth managing the association and distributing the profits to the shareholders of the various companies concerned.

**Trust Deed,** a deed assigning or conveying property, debts, or securities to a trustee or trustees for the purposes set forth in such deed.

**Trustee Securities,** those, specially listed under the Trustees Acts, in which trustee money can be invested. They include all Government stock, shares in the Bank of England, Dominion and Indian loans, and certain industrial securities.

**Turn of the Market,** an expression referring to the difference between selling and buying prices of stocks or shares. For example, if a jobber names two prices, one is the price he will buy at, the other his selling price, and the difference between the two is termed the "turn of the market."

**Turnover,** the amount representing the total sales of a trader during a given period.

**Uberrimæ Fidei,** an expression of mutual good faith by contracting parties. This term is specially applied to guardian and ward, solicitor and client, insurer and insured.

**Ullage,** waste or leakage, in liquid contents of bottles, casks, etc.

**Ultra Vires.** The memorandum of association of a company defines its objects. If a company exceeds these powers it is acting *ultra vires* (beyond its powers).

**Unclaimed Dividends** are dividends which have not been claimed. In the case of Government Stock, after ten years they are transferred, along with the Stock itself, to the National Debt Commissioners.

**Under Protest,** a commercial term signifying a payment of money accompanied by a declaration that the demand is illegal or in excess of what is justly due, and implying the need of a future rectification.

**Underwriter,** one who insures ships against loss. Also one who, on a limited company's prospectus being issued, undertakes, if the public do not subscribe to the amount required, himself to take up shares sufficient to cover the deficiency, on a specified commission basis.

**Unfunded Debt.** (*See* **National Debt.**)

**Unified Stock** is stock which from being of different interest-bearing rates is amalgamated into one of a uniform rate. The Consolidated Annuities are an example.

**Unilateral Contract** is a contract that is binding only on one party to it, such as a loan of money or a loan for use.

**Unseaworthy,** the condition of a ship when from any cause, including inadequacy of crew or captain, it is unsafe to load it or send it on a voyage.

**Upset Price,** the price that must be reached at auction to effect a sale. If there is no bid up to that amount the property is withdrawn.

**Usury,** a term originally used to denote any interest or premium paid for the loan of money, but afterwards only employed to express an excessive rate of interest. Many statutes have been passed in order to restrain the practice, and although some of the old evils are continued by private arrangement, the law, as a rule, can afford protection against extortion. The Money-Lenders' Acts 1900–1911 compel money-lenders to be registered, and gives a judge the power of reducing any rate of interest he may deem exorbitant.

**Vendors' Shares** are shares allotted to the vendor or vendors of a business on the same being converted into a limited company.

**Venture,** a term used when goods are sent out to consignee on a general hazard of sale, for what can be got for them.

**Waiver Clause,** a clause inserted in marine insurance policies, empowering either the insurer or insured to do what he thinks best to minimise loss in the event of an accident, without prejudicing the terms of the policy.

**Warrant,** (1) a magistrate's order for the arrest of a person or seizure of goods; (2) a receipt for goods deposited in a warehouse, and a negotiable document; (3) a document entitling the holder to certain money or property.

**Warrant of Attorney,** a document given by a client to his attorney authorising him to appear for him in specified legal proceedings and act as directed, suffering judgment if necessary.

**Warranty,** a guarantee that goods sold are of the quality stated, and giving the buyer the right of action for damages should the goods turn out inferior.

**Watering Stock,** a term denoting the issue of extra shares of nominal capital, without providing for interest being paid thereon, the object being to keep down the apparent rate of interest.

**Way Bill,** a list of passengers or goods carried by public conveyance.

**Weight Note,** a dock company's certificate of weight and other particulars of goods imported.

**Winding Up** is the closing up of a company's concerns, which may be by reason of insolvency, or otherwise. (*See* **Liquidation.**)

**Without Prejudice.** When statements are made or letters written with the words "without prejudice" affixed, they cannot be used as evidence in subsequent litigation without consent of the person responsible.

# GENERAL INFORMATION

PEARS—THE PURE SOAP

*For particulars of Pears Famous Toilet Preparations turn to end of Book*

# Pears' Dictionary of General Information

TREATING UPON SOME **6000** DIFFERENT SUBJECTS
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NOTE.—*Biographical subjects of all periods are dealt with in the "Dictionary of Prominent People" section; information concerning domestic birds of the home and farm will be found in "Pears' Dictionary of Poultry and Cage Birds" and "Pears' Dictionary of Domestic Pets"; the "Indoor and Outdoor Sports and Pastimes" section comprises all that need be said in a comprehensive work of this description concerning such matters; while much other "General Information" is properly classified in "Pears' Dictionary of Health," "Pears' Dictionary of Gardening," "Pears' Dictionary of Cookery," "Pears' Office Compendium," and the various other specialised sections of this Cyclopaedia.*

**Abacus,** the upper portion of the capital of a column; also a contrivance for adding figures, still used in Russia and other countries.

**Abaddon,** the angel of the bottomless pit—Apollyon, Satan.

**Abattis,** a military term signifying an entrenchment of trees placed side by side with the branches outwards.

**Abbeys**—monastic or conventual establishments governed by an abbot or an abbess—were among the earliest of Christian institutions, and were adopted in Western Europe under the Benedictines in the 6th and 7th centuries; by 1415 no fewer than fifteen thousand and seventy abbeys had been established by this order alone. At Canterbury, Westminster, York and other places in Britain the remains of Benedictine abbeys are still to be seen. The Cistercian abbeys are of later date, and well preserved examples are to be found at Fountain's, Rievaulx, Kirkstall, Tintern, etc. From the dissolution of the Monasteries by Henry VIII. monasticism practically ceased in this country, and no further abbeys were built.

**Abdication.** The term refers usually to the act of a sovereign who relinquishes the supreme power in a State. There is only one instance since the Conquest of the abdication of an English monarch: that of James II., in 1688. Among Continental nations there have been many. In France we have those of Napoleon I., Charles X., and Louis Philippe. The Emperor William of Germany and the Emperor Carl of Austria both abdicated on the defeat of the Central Empires in the Great War in 1918, together with several minor rulers.

**Abduction** is the taking away of any person. It is either a civil or criminal offence. It is used chiefly for the taking away of a wife from a husband, a child from a parent, a ward from her guardian or a female servant from her master, and is an offence that is severely punished as felony, and the abduction of an unmarried girl under sixteen is punishable as a misdemeanour.

**Abecedarians,** a small sect of Anabaptists of the 16th century, who got their name from their opposition to learning, even down to the A B C.

**Aberdeen University,** formed in 1860—as at present constituted—by the union of two ancient colleges dating back to the 16th century. It has a library of over two hundred and sixty thousand volumes. Along with Glasgow, Edinburgh and St. Andrews Universities, it returns three members of Parliament. Held its quatercentenary celebration in Sept., 1906.

**Abiogenesis,** a term invented by Professor Huxley to indicate the origination of living by not living matter. The abiogenesis theory supports that of evolution by tracing the organic into the inorganic.

**Aborigines** is a term first applied to an ancient Latin race, but now signifies the original inhabitants of any country. The Maories of New Zealand and the Red Indians of North America represent two prominent existent examples. As regards the older nations, aboriginal evidences are difficult to trace.

**Abraham-men,** a term applied to such vagrants as simulate sickness, or "sham Abraham," as the sailors say, and originally borne by a lunatic beggar from Bethlehem Hospital in London, marked by a special badge indicative of the Abraham ward of the hospital in which he had been confined.

**Absinthe,** an aromatic spirit formerly much consumed in France, and made from a distillation of wormwood and other roots macerated in alcohol. The manufacture is prohibited in France and Switzerland. Absinthe drinking is a great evil, destroying the power of the brain and ultimately inducing paralysis. Its use is prohibited in the French Army and Navy. Zola's novel "L'Assommoir" was a scathing indictment of the absinthe habit.

**Absolution,** an ecclesiastical term denoting the liberation of a person guilty of sin from its consequences by the act or intercession of religious authority. Now confined in its strict form chiefly to the Roman Catholic and Greek Churches, although a modified form is occasionally used in certain churches of the Anglican Communion.

**Academy** is a Greek term, originally applied to the groves where Plato taught, but subsequently adopted to indicate higher educational institutions of a special kind. Academies of science are numerous in all parts of the world, and in addition there are what may be called Literary Academies, of which the French Academy, established in 1635, is a notable example. There are also Academies of History, of Medicine, of Music, and of Art. The London Royal Academy of Arts was founded in 1768, Sir Joshua Reynolds being its first president. The British Academy, for the promotion of historical, philosophical, and philological studies, was founded in 1902, and is incorporated by royal charter.

**Acclimatisation** expresses the process by which animals or plants are gradually inured to a climate other than that of their origin.

**Acetic Acid,** an organic acid usually obtained by the oxidation of tainted wines, the distillation of wood, or from the leaves of certain plants. Is used in medicine, as a condiment, as a mordant, and in the preparation of varnishes, artificial silk, etc.

**Acetylene,** a powerful illuminating gas compounded of hydrogen and carbon, readily soluble in acetone, will inflame spontaneously when brought in contact with chlorine, and under modern conditions of utilisation forms a beautiful illuminant.

**Acids** are compound substances which combine chemically with an alkaline or base and result in a new body that has neither acid nor alkaline properties. These resultant bodies are termed salts, and as many salts can be produced as there are basic substances to be neutralised. The range of acids is very great. The chief mineral acids are sulphuric, hydrochloric, and nitric, and are capable of being utilised for an immense variety of commercial purposes.

**Acolyte,** one who assists the priest in the Roman Catholic service by lighting the candles and performing other minor duties.

**Acoustics,** the science of sound, whereby the various phenomena of sound waves are investigated. The experiments of Lord Rayleigh in recent years have added considerably to our knowledge of this subject.

**Acrobats** were originally rope dancers, and among the ancient Greeks and Romans this kind of performance was very popular. In modern days the term has had a much extended meaning, and includes performers in a variety of feats of strength and dexterity which were not practised by the ancients; thus, in the general term acrobats are included men and women who perform on the trapeze, the horizontal bar, etc.

**Acrostic,** a kind of verse which has afforded amusement to ingenious triflers from very ancient times, and consists of a composition so arranged that the initial letters of the lines, read consecutively, form certain names or words.

**Actinozoa,** a marine group of animals of the Sea-Anemone class.

**Act of Uniformity.** (*See* **Uniformity Act.**)

**Actor Knights.** In recent times actors have received more recognition by the State than in former days, and the old stigma of vagabondism no longer applies to the stage as a profession. From the Restoration downwards prominent actors and actresses have been honoured, and within recent years knighthoods have been conferred upon Sir Henry Irving, Sir Charles Wyndham, Sir John Hare, Sir H. Beerbohm Tree, Sir George Alexander, Sir Charles Hawtrey, Sir Squire Bancroft, Sir Alfred Butt, Sir F. R. Benson, Sir J. Forbes-Robertson, Sir Philip Ben Greet, Sir J. Martin Harvey, Sir G. du Maurier, Sir Harry Lauder, and Sir Nigel Playfair. Sir Augustus Harris, the Drury Lane manager of a former decade, and the celebrated writer Sir A. W. Pinero were also knighted.

**Actresses** who have married men of title. One of the most notable examples was that of Miss Mellon, who early in the last century first married Coutts the banker, and afterwards the Duke of St. Albans, and bequeathed her portion of the Coutts wealth to the late Baroness Burdett-Coutts. Then there was Miss Farren, who became Countess of Derby; Miss Connie Gilchrist's marriage with the Earl of Orkney; Belle Bilton with the Earl of Clancarty; José Collins with Lord Robert Innes-Ker; Gladys Cooper with Sir N. A. Pearson, and others. Prior to the Restoration of Charles II., female parts in plays presented on the English stage were performed usually by boys, as was the rule in Shakespeare's day.

**Acts of Parliament** comprise public Acts which are binding on all citizens, and private Acts which refer to particular persons or places. Although the Magna Charta may be said to have initiated the English Statute Book, it was not until the time of Edward I. that Acts of Parliament came to be in any sense general. Acts of Parliament were not printed until the reign of Richard III., and they were not printed in English until the fourth year of Henry VII. The first authorised edition of English Acts of Parliament was published between 1810 and 1824. Scotch Acts date back to 1292, and Irish Acts to 1310.

**Adamites,** a sect of religionists who claimed to restore Adam's original condition of innocence, and rejected marriage. It originated in North Africa in the 2nd century; in mediæval times there were Adamites in Germany, but they were soon exterminated.

**"Addled Parliament."** James I.'s second Parliament, called together in 1614, and dissolved without legislating.

**Adulteration** is the act of mixing an inferior substance with a superior one for the sake of greater profit. During the last half century, many stringent laws have been passed for the prevention of adulteration of food, drink, and drugs; and the appointment of public analysts in all the leading cities and towns, with power to collect samples for analysis has had a very salutary effect, though there still remains much to be done.

**Advent,** a period devoted to religious preparation for the coming celebration of the Nativity (Christmas). It comprises four Sundays, and commences on the one preceding or following St. Andrew's Day (Nov. 30), or on St. Andrew's Day itself. Advent was not observed before the fourth century.

**Advertisement** is the spreading of information for commercial purposes. The earliest form was the public crier, who is still employed in various parts of the country. There was a tax on advertisements up till the middle of the 19th century and at the time of its abolition was 1*s.* 6*d.* Mr. Gladstone's Budget of 1853 proposed its reduction to 6*d.*, and a resolution for its abolition was lost. In Committee, however, an amendment was carried that the figure 0 was substituted for the figure 6. This was passed by 9 votes and the tax became inoperative. The great extension of modern advertising is due to the enormous expansion of printing in recent years. Advertisements in newspapers and periodicals account for the greatest proportion of expenditure in modern advertising, and the revenue derived from this source is directly responsible for the success of the modern newspaper and periodical. Other important forms are posters and outdoor publicity generally—advertising by circulars, showcards, signs, pamphlets, handbills, window display material and catalogues. There have been striking improvements in recent years, particularly since the war, in the standard of all forms of advertising; advertisers employing artists of great national reputation for posters and illustrations generally. Great ingenuity has been shown in the construction of electric signs for advertisement purposes, such as those in Piccadilly Circus. Aeroplane sign-writing is another instance of novelty in presentation which advertisers are always seeking, although climatic conditions in this country have prevented the development of this to the same extent as in the United States. An indication of the importance of advertising to firms of the present day is shown in the fact that several individual corporations in this country spend over £200,000 annually on publicity, while many spend over £100,000. Advertising in its higher form has a considerable educational influence upon the people. Messrs. Pears, and other great advertisers, have recognised this and have put many superb art productions before the public, both in the newspapers and on the hoardings. Messrs. Pears paid £2,200 for the famous "Bubbles" picture by the late Sir J. E. Millais, P.R.A., and the same firm has similarly popularised works by Stacey Marks, R.A., and other eminent artists. The latest Pears' poster, "The Bloom of Youth," was painted by Mr. W. Russel Flint, A.R.A., R.W.S., whose delightful water-colour studies are world famous. Various Acts of Parliament have established a restrictive control over advertisements. The most important of these was the Advertisement Regulation Act (1907) to control hoardings over 12 feet in height, and to regulate the display of advertisements which might affect the beauties of a public Park or landscape. In 1925 this act was extended to include view of scenery from the highway or a railway. The statutory powers given under

these Acts have been exercised by over one hundred local authorities in Great Britain.

**Advocatus Diaboli** ("the devil's advocate"), a Roman Catholic functionary who presents opposing evidence in regard to the life of any deceased person it may be proposed to canonise.

**Advowson** is the right of presentation to a vacant church benefice, and is capable of being sold or mortgaged. The greater majority of advowsons are in the hands of private persons; the rest are under the patronage of the bishops, deans, and chapters, universities, and the Crown.

**Æolian Harp** is a musical instrument formerly in considerable favour. It consists of catgut stretched over a wooden sound-box which, when placed so as to receive a controllable current of air, can be made to emit many pleasing harmonies.

**Aerated Bread** is made by special process in which carbonic acid gas is used instead of yeast. In London there are numerous restaurants promoted by the exploiters of this principle, which has achieved considerable popularity.

**Aerated Waters** all have their origin in the introduction of carbonic acid or other gaseous ingredient into the water by pressure; and, by special subsequent treatment, assume the form in which they are sold, including lemonade, ginger beer, potash water, soda water, seltzer, lithia, etc.

**Aerial Navigation** developed at an amazing pace after the outbreak of the Great War. At the outbreak of hostilities Germany had 470 aeroplanes and 24 airships, France 500 aeroplanes and 14 airships, Russia 400 aeroplanes and 7 airships, Austria 120 aeroplanes and 4 airships, while Great Britain had only 130 aeroplanes and 5 airships. Immediately after the declaration of war there was a tremendous speeding up. Our Air Ministry, established now as a permanent and necessary branch of Governmental operations, and, though at present working as a Peace organisation, exercises a controlling influence in the aviation work of the time. The Air Force consists of 71 squadrons of 10 to 12 machines each. It is difficult to keep pace with the advances made in Civil Aviation which has made great strides of late; the total expenditure on it for 1929-30 was £1,650,896. Machines carrying up to 40 passengers leave Croydon daily for various towns on the Continent, and keep to a regular time-table. The Air Mail Service to India leaves every Saturday, taking 5 days on the journey, calling at Basle, Naples, Alexandria, Gaza, Bagdad, Bushire, and Karachi. The Atlantic has been flown frequently. The "Graf Zeppelin," carrying 60 passengers and crew, flew round the world during August 1929, taking but 21 days, with halts at Friedrichshaven, Tokio, and Los Angeles to New York. The speeds obtained, too, are extraordinary. During the Schneider Trophy race, in the Solent in September 1929, an English machine won at the enormous speed of 328 miles per hour, including many sharp turns, and on September 12 Squadron Leader Orlebar obtained a speed on the straight of 365·1 miles per hour. In 1928 an all-metal monoplane was made with a wing span of 150 feet, weighing 15 tons. It contained 3 engines, each of 650 horse-power. The R 100, a rigid airship, has a gas capacity of 5 million cubic feet, with a gross lift of 152 tons, and flies at 80 miles per hour with 100 passengers. It can travel for 4,500 miles without re-fueling. Length 800 feet; diameter, 130 feet. Built of duralumin with 6 engines, each of 700 horse-power. The airship weighs 83 tons, and contains a restaurant for 50 persons. The largest airship to be built was the R 101, with a gas capacity of 5,500,000 feet; length 800 feet; lift gross tons 152; number of engines and h.p. 5 · 2925. On Oct. 5, 1930, it crashed near Beauvais, France, on its way to India; 48 lives were lost, including that of the Air Minister Lord Thomson, and Sir Sefton Brancker. The victims were accorded a public funeral and buried in one grave at Cardington.

**Aerial Warfare.** During the Great War (1914-18) there were 37 aeroplanes and 54 Zeppelin raids upon our unfortified towns in England and Scotland. The first aeroplane raid occurred on Dec. 24, 1914, and the first Zeppelin raid on Jan. 9, 1915. The total number of people killed in air raids on England and Scotland during the war was 1,282, and 2,730 were injured, but the total result of enemy air raids was small from a military point of view. Several enemy aeroplanes and Zeppelins were brought down. British and French reprisal air raids on German towns were effective, and the British Flying Corps rendered immense service on the battle fronts.

**Aerolite**, the name given to meteoric stones which sometimes fall from the sky to the earth. These substances usually contain a large proportion of iron, and many have been of great weight and dimensions.

**Æsthetics** concerns itself with the science of the beautiful, and is applied not only in the field of art, but in connection with metaphysics and science. From the days of ancient Greece there have been ardent followers of æsthetics, and many systems have been evolved.

**Affidavit** is a written or printed statement of facts to which a deponent makes formal oath before a judicially qualified person. Some solicitors are qualified as commissioners for administrating oaths.

**Affirmation** is a declaration made in lieu of an oath by persons objecting to be sworn because of religious or other scruples. Perjury applies to affirmations the same as to oaths.

**Afridis**, a warlike race of hill-men on the north-west frontier of India.

**Afrikander**, a name usually given to the South African Dutch, but rightly applied to all African-born whites.

**After-damp**, is a mixture of carbonic acid and nitrogen that occurs in a mine after an explosion and causes suffocation to human beings. It it also called "choke-damp."

**Agape**, a "love-feast" held by the early Christians, in commemoration of the Lord's Supper. Condemned by the Council of Cathage, 397, but revived in recent times in a modified form by Moravians and some Methodists.

**Agapemone**, the title given to a so-called religious society founded in 1845 by H. J. Prince, at Charlinch, near Bridgwater, which attained some notoriety. It is a sort of "free love" commune, unattached to any recognised sect.

**Agar-agar**, a vegetable gum obtained from seaweeds, and largely employed in the Orient in the composition of soups and jellies.

**Agate**, a variegated stone composed of nearly pure silica. Germany, Brazil, and India furnish the main supplies, and Scotland has a species of agate called Scotch pebble.

**Agave**, the American aloe, which sometimes does not attain to flowering maturity under sixty or seventy years, and then dies.

**Age** is a term of wide application, variously used at different periods. In classical mythology five successive ages or races were defined—the *golden* or primitive, when people enjoyed unalloyed happiness without labour and lived on the fruits of the earth; the *silver*, when the worship of the gods was neglected; the *brazen*, which was warlike and violent; the *heroic*, when the gods and semi-gods held sway; and the *iron*, representing the lowest point of human degradation. Hesiod and Ovid both retain this classification. It is common to call the ages after some pre-eminent, dominating personality or characteristic; thus, we have the age of Pericles, the Augustan age, the Elizabethan age, the dark ages, the middle ages, the steam age, and so forth. Then there are the geological ages—classifying the ages according to the evidences of the various strata. Archæologists divide the pre-historic periods into the Stone, Bronze, and Iron Ages. As regards individual life, age has its four main divisions of infancy, youth, manhood, and old age. Shakespeare gave us his "Seven Ages"; Keats adopted the four seasons classification. According to British law, a man or woman is of age at 21.

**Agionites**, an obscure sect of seventh-century ascetics who made pretence of special sanctity and suffered condemnation by the Council of Gangra.

**Aglaia**, an asteroid found by the astronomer Luther, in 1857, and so called because of its brilliancy.

**Agnel**, an old French gold coin, worth 12 sols 6 deniers, and first struck *temp.* St. Louis. So called because of the figure of the *Agnus Dei* on the obverse.

**Agnosticism**, a term first used by Huxley in 1869 to denote the theory that beyond our personal knowledge of phenomena all is uncertainty. This was his own attitude towards spiritual things. Agnosticism neither denies nor affirms the existence of God.

**Agnus Dei** (Lamb of God), the name of a Roman Catholic prayer; also forms part of the Gloria in the Anglican communion service.

**Agony Column**, the portion of a newspaper devoted to advertisements of a secret or personal nature.

**Ahriman**, the Zoroastrian spirit of destruction.

**Air** is a mixture of gases forming the atmosphere we breathe. The normal constituents of air are, nitrogen 78·1 per cent., oxygen 21·0 per cent., and argon 0·9 per cent., together with varying amounts of water vapour and carbon dioxide, and traces of neon, helium, hydrogen, krypton and xenon. Beyond these are found varying traces of nitric acid, ammonia, and particles of solid matter. The height of the atmosphere is supposed to be about 40 miles. It is the oxygen of the air that maintains animal life.

**Air-gun**, an instrument for firing projectiles by means of compressed air, but hitherto of little practical use. In recent years the United States Navy has experimented with an air-gun of large calibre, called the "dynamite gun," but it has not yet been adopted to any particular extent.

**Air-pump.** Invented in 1650, consists of a receiver, from which the air is to be exhausted, and a pump, which is a metal cylinder with a piston in it, for drawing off the air. The air-pump has been of great utility in scientific experiments, and its governing idea is applied to the condensing steam-engine for drawing away the commingled air and aqueous vapour from the condenser and casting them into the hot well.

**Air-ship.** (*See* **Aerial Navigation.**)

**Akka**, a race of pigmies inhabiting the territory between the rivers Aruwimi and Nepoko, in Central Africa.

**Alabama Claims** were claims for compensation made by the United States against Great Britain for damage done to American shipping during the Civil War by the *Alabama* privateer, which was finally sunk by the *Kearsage*, of the U.S. Navy. The claim was decided by arbitration at Geneva in 1872, the Court giving a verdict for the claimants for over £3,160,000.

**Alabaster**, a soft, crystalline form of sulphate of lime, or granulated gypsum, easily worked for statuary and other ornamental articles, and capable of being highly polished. Solterra, in Tuscany, yields the finest; that in highest ancient repute came from Alabastron, in Egypt, near to the modern Antinoë.

**Al Araf**, the mid-heaven of the Koran, where those whose deeds have been neither decidedly good nor very bad spend their after-life.

**Albatross**, a large white ocean bird whose wings measure from ten to twelve feet when outstretched.

**Albert Medal** (1), a medal of the Society of Arts, given to scientific men, inventors, etc.; and (2) a medal awarded for gallant deeds in saving life on sea or land.

**Albert Memorial**, a large Gothic monument designed by Sir Gilbert Scott, and embellished with sculptures by eminent artists. Erected in memory of Prince Albert in Kensington Gardens at a cost of £120,000.

**Albigenses**, a small religious sect who in the 12th century, at Albi, in France, opposed the papal rule, but were ultimately put down by Innocent III.

**Albino**, a term first applied to designate certain white negroes which the Portuguese navigators met with in Africa. It is now used in regard to all persons of white skin and hair and pink eyes. Albinos cannot see well in the sunlight; it is only in semi-darkness that they discern objects clearly. The albino peculiarity is also found in other living creatures besides man.

**Al Borak**, a winged being on which Mahomet was credited with having travelled through the heavens.

**Album**, a term now used for a book of photographs, autographs, or other collections, but originally applied to the tablets on which public decrees, edicts, etc., were inscribed in ancient Rome. In mediæval times the word was used to designate lists of various kinds.

**Albumen**, a substance essential to the building up of the animal organism. The white of an egg shows it in its purest form. It coagulates under heat, or by the action of acid or alcohol, and is further capable of soluble or insoluble modifications. It provides an anti-toxin in corrosive sublimate poisoning.

**Alcalde**, a Spanish mayor, judge or magistrate, or in Portugal a justice of the peace; not to be confounded with the similar word "alcalde" which signifies the keeper of a castle or prison along both shores of the Mediterranean. The latter is a military term, the former signifies always a civil functionary, but both are from the same Arabic root.

**Alcazar**, the famous palace at Seville, in ancient days the residence of the Moorish kings.

**Alchemy** was from the 12th to the 17th century regarded by many philosophers and enthusiasts as a science capable of demonstration in the production of one or other of three supposed chemical combinations—the philosopher's stone, which was to transmute the baser metals into gold; the elixir of life, that was to prolong existence indefinitely; and the alkahest, or universal solvent. Men of great attainments, monarchs, ecclesiastics, and all classes of people dabbled in alchemy; lives were given up entirely to it, fortunes were wasted upon it. Geber, Roger Bacon, Albertus Magnus, Paracelsus, and many other men of note were devoted alchemists. The experiments of the alchemists, however, in spite of their being directed towards an impossible end, resulted in many discoveries that were of value to the real science of chemistry.

**Alco**, a dog, native of tropical America. It is long-haired and has pendulous ears; sometimes domesticated. The colours most prominent are yellow and white, and the animal is tractable and held in considerable esteem.

**Alcohol** is a chemical combination of carbon, hydrogen, and oxygen, and is produced by the distillation of fermented liquors. It is used in the manufacture of a variety of products, such as chloroform, ether, perfumes, etc.; its most general use, however, is in imparting a stimulative action to liquors, rendering them of intoxicating effect upon consumption in sufficient quantity. When diluted with wood spirit, alcohol becomes "methylated spirit," and in that condition can be used for numerous industrial and chemical purposes, and is largely exempted from duty.

**Aldebaran**, a star of the first magnitude, commonly known as the Bull's Eye, being in the constellation of Taurus.

**Aldehyde**, the generic term for a class of chemical bodies, of which the best known is acetalydehyde. They are produced by oxidation of primary alcohols and many are used in the manufacture of synthetic resins.

**Alderman**, a title first instituted by the Saxons and given to governors, magistrates, etc. Afterwards adopted to designate the higher section of a municipal corporation.

**Aldine Editions** are the beautiful books printed in Venice by Aldus Manutius and his family between 1490 and 1597. Italics were first introduced in these books.

**Ale.** (*See* **Beer.**)

**Alembic**, a vessel formerly much used in distillation, but now generally superseded by retorts.

**Alexandrines** are stanzas each line of which contains twelve syllables—six measures.

**Algæ**, a variety of aquatic flowerless plants of which seaweed is a leading example. There are two main divisions—marine and fresh-water algæ

**Algazel**, an antelope found in Nigeria and the Gambia country; it is of good size, with horns a yard long, annulated in the lower half.

**Algebra**, a branch of mathematics in which symbols are used in place of numbers. Sir Isaac Newton styled it the "universal arithmetic."

**Algol**, a double star of the Perseus constellation, situate in the head of Medusa.

**Alhambra**, the ancient palace of the Moorish kings near Granada, built in the 14th century, and remarkable for its architectural grace and beauty.

**Alias**, a Latin term signifying "otherwise," and used in legal proceedings to indicate the assumption of a false name or names.

**Alibi**, signifying "elsewhere," is the plea of a person who desires to prove that he was at some place away from that he is charged with having been at when a particular offence was committed.

**Alien** is a child of a foreign father, born in a foreign country or in the U.K. before the naturalisation of his father. The British Nationality and Status of Aliens Act, 1914 amended by the Acts of 1918 and 1922 defines natural-born British subjects and how naturalisation may be effected. Residence in U.K. of one year previous to the application is necessary. Instructions for the guidance of persons desiring to apply for a certificate of naturalisation may be obtained free on application to the Home Office, Whitehall, S.W.

**Alimony** is an allowance made to a wife out of her husband's estate for her maintenance either during a matrimonial suit or at its termination. If she elopes with an adulterer or wilfully leaves her husband without just cause she is entitled to no allowance.

**Alizarin**, the chief colouring matter of madder; and now produced synthetically from coal tar.

**Alkali**, the general name given to a number of substances which are the opposite to acids in their chemical action. The term is commonly applied to soluble alkaline bodies, the principal of which are potash, soda, lithia, aqueous ammonia, lime, baryta, and strontia. The action of the solutions of these bodies is caustic on animal and vegetable substances, and they are extensively used in industrial processes.

**Allegiance** is the tie which binds the subject to his sovereign for the protection that the sovereign affords to the subject. It may be natural when one is a subject born or has been naturalised, or it may be temporary and local when one is temporarily resident in the U.K.

**Allegory**, a narrative or discourse couched in figurative language and intended to point a moral. A leading example is Bunyan's *Pilgrim's Progress*.

**Alligator**, the crocodile of America, common in the lower Mississippi and adjacent lakes and marshes, varying in length from two to twenty feet.

**Alloys** are combinations of metals. Our coinage metals are alloys. In a sovereign there are twenty-two parts of gold alloyed with 2 of copper; silver coins contained pre-war about 7 per cent. of copper. The alloys best known are brass, composed of copper and zinc; German silver, of copper, zinc, and nickel; pewter, of tin and lead; bell-metal, of copper and tin. When mercury forms part of an alloy, it is termed an amalgam.

**All Saints' Day** (Nov. 1) is common to both the English and Roman Catholic Churches, and is in commemoration of the saints generally, or such as have no special day set apart for them. Instituted by Pope Boniface IV. early in the 7th century, this ecclesiastical festival was formerly called "All Hallows."

**All Souls' Day** (Nov. 2) is a festival of the Roman Church, intended for the mitigation by prayer of the sufferings of souls in purgatory. The commemoration was enjoined by Abbot Odilo of Cluny during the 11th century upon the monastic order over which he presided, and was afterwards adopted generally throughout the Roman Communion.

**Allspice**, a flavouring obtained from a West Indian tree of the myrtle order, *Pimenta officinalis*. The essential oil of its unripe fruit is a powerful irritant, and the bruised berries are carminative.

**All the Talents Administration** was a coalition of the best men of the two political parties, formed on the death of Pitt, in 1806, by Lord Grenville.

**Alluvium**, accumulations of sand, mud, gravel, etc., washed down by rivers and forming distinct deposits.

**Allylene**, a colourless, foul-smelling gas, obtained by the action upon bromopropene of sodium ethylate. It burns with a smoky flame, and yields a yellow precipitate with cuprous chloride.

**Almack's**, a fashionable room of assembly in St. James's, built in 1765, and for many years the scene of balls and society functions.

**Almanac**, a calendar of the year, with particulars of days, weeks, and months, the position of the sun and moon, tidal information, records of festivals, fairs, etc. Almanacs date from the latter part of the 15th century. The first English almanac was issued in 1431. Almanacs are of numerous special varieties. Up to 1834 they were subjected in this country to a stamp duty of 15*d*. per copy. "Old Moore's Almanac," a popular penny issue, with horoscopes, predictions, etc., has for a lengthy period circulated largely.

**Almond**, the fruit of the *Amygdalus communis*, indigenous originally to Persia, Asia Minor, and parts of North Africa. There are sweet and bitter almonds, the former being a favourite edible, the latter containing prussic acid.

**Almoner** was a monastery official charged with the distribution of alms. There was also the King's Almoner, and the title of Hereditary Grand Almoner still survives, though not involving any duties.

**Almuce**, a covering worn in former days by ecclesiastics while celebrating the Liturgy, and the originator of the "mortar-boards" still in vogue at certain schools, colleges, and cathedrals.

**Aloe**, a large plant of the lily-wort genus, growing naturally only in warm climates, and yielding by evaporation a purgative substance of great bitterness. It flowers every eight years.

**Alopecias**, a genus of fishes of the shark family, one of the most notable varieties of which is the thresher, or fox-shark.

**Alpaca**, a South American ruminant whose wool is woven into a soft dress fabric known by the same name. Sir Titus Salt first manufactured alpaca cloth. Saltaire, near Bradford, remains to evidence the success which for many years attended the enterprise. Attempts have been made to acclimatise the alpaca in England, but with little success.

**Alpenglow**, the peculiar evening atmospheric condition observable at times in Alpine regions.

**Alpha and Omega**, an expression incorporating the first and last letters of the ancient Greek alphabet, and used to convey the idea of the beginning and end of anything—the whole of it.

**Alphabet** (so called from the first two letters of the Greek alphabet—alpha, beta) is the term applied to the collection of letters from which the words of a language are made up. The Phœnicians are credited with the first adoption of an alphabet. The Chinese have no alphabet, but signs which convey ideas. The Sanskrit alphabet has 40 letters.

**Alpine Climbing** has a perennial fascination for the adventurous of both sexes, and the "Alpine Club," founded in the interests of British travellers in this famous mountain region in 1858, has done much to encourage and facilitate the ascent of difficult and forbidding peaks. Mr. Edward Whymper and others reached the summit of the Matterhorn (14,836 ft.) in July, 1865; but four of the party were killed in the descent. Since then this dangerous climb has been negotiated without accident by several men and women, both with and without guides, though against this there are several fatalities to set. Alpine climbing will never lose its charm to certain minds.

**Alsatia**, a district of Whitefriars, London, which was for a long period a recognised sanctuary for debtors and criminals, where they could not be captured. It was abolished in 1697.

**Altar**, originally a table or elevated place upon which sacrifices were offered up, and still symbolically the place of sacrifice in Roman Catholic churches. In English churches the communion table is the altar.

**Altimeter**, an instrument designed for the compilation or measurement of altitudes trigonometrically.

**Altitude**, an astronomical term, signifying the angular elevation of a heavenly body above the horizon, true or apparent—that is, as it appears to the eye, or as the result of calculation. The

observation may be made with quadrant or sextant.

**Alto-Relievo,** a term applied to sculptured designs which are depicted in prominent relief on a flat surface, technically signifying that the projection exceeds one-half the true proportions of the objects represented. Basso-relievo is carving kept lower than one-half such proportionate projection.

**Altruism,** a term invented by Comte to denote devotion to the welfare of others, the opposite of Egoism.

**Alum,** is a compound salt used in various industrial processes, especially dyeing, its constituents being sulphuric acid, alumina, an alkali, and water. The nature of the alkali introduced gives it its distinctive character, so that there are potash alum, soda alum, and ammonia alum.

**Alumina,** is the oxide of aluminium, and is used as a basis for fine pottery.

**Aluminium** is a constituent of alum and forms a white metal of a very pliant nature, admitting of its being utilised for a variety of purposes. It resists the action of the air, is impervious to nitric acid, and its conductivity is about one-third that of silver. It alloys with most metals.

**Amadavat,** a small bird occurring in the Indian Archipelago, brightly coloured and active, kept sometimes by the Bengali baboos for fights.

**Amalgam** is the term applied to any alloy of which mercury forms a part.

**Amazons,** the women of an Indian tribe on the banks of the Maranon, in South America, who assisted their husbands in resisting Spanish invasion; also the female warriors of any land, such as the Amazons attached to the army of the King of Dahomey. The Amazons were a mythological race supposed by the ancients to inhabit some region of Asia and who were ruled by warlike women. According to Pliny they were in the habit of cutting off the right breast to be able to use the right arm freely in war.

**Amber,** a brittle resinous substance of vegetable origin, obtained mostly from the Baltic coasts, and used for ornaments, pipe mouth-pieces, etc.

**Ambergris,** is a variegated inflammable substance produced in the intestines of the cachelot or spermaceti whale, and generally found floating on the sea. Is a valuable perfumery material, and is used in the East for flavouring purposes.

**Amblycephalus,** a genus of homoptera including the froth-fly, which is destructive in many hop gardens in July and August, sucking the sap from the vine.

**Amblyopsis,** a species of fish, practically sightless, and with inoperative organs of hearing and feeling, that inhabit the Mammoth Cave of Kentucky. A remarkable illustration of the failure of senses not brought into use.

**Ambulance,** an ambulating hospital, for affording surgical aid to persons wounded in battle. The term is also applied to vehicles for conveying injured or sick persons to hospitals in populous places, a service of this kind being now provided in most cities and towns. An Ambulance Corps is part of a regular army equipment. The French were the first to adopt ambulances.

**Ambuscade** is a military manœuvre by which troops are ambushed for a surprise attack upon an enemy.

**Ameer,** an Indian title of high nobility signifying "noble of nobles," "lord of lords." Hyderabad and other oriental States now included in our Indian Empire had their Ameers, and the native head of Afghanistan still holds the distinction.

**America Cup,** a prize trophy first offered in 1851 by the Royal Yacht Squadron and open to yachts of all nations. It was won in the first year by the "America," a New York yacht, and has remained on that side of the ocean ever since, despite attempts to recapture it by Lord Dunraven, Sir Thomas Lipton, and others.

**Amethyst,** a variety of precious stone of violet-blue or purple colour, occurring in crystals and greenstone rocks, and fairly abundant in Brazil, Russia and India.

**Amianthium,** a plant of the Melanth genus, called in America "Fall Poison," because of the notion that cattle feeding on its foliage in autumn would suffer ill effects.

**Amice,** a linen vestment worn about the neck by Roman priests under the alb when officiating at Mass; also assumed by some Anglican ritualistic clergymen. Formerly worn on the head by priests and pilgrims.

**Amiens, Treaty of,** signed by England, France, Spain, and Holland in 1802, brought the War of the French Revolution to an end. Fresh cause of quarrel was soon found, however, and Napoleon resumed the warfare, which only ended with Waterloo.

**Ammiolite,** an earthy powder, scarlet of hue, found in the mines of Chili, and considered to be an admixture of cinnabar, antimonate of copper, and certain other ingredients.

**Ammonia,** a colourless gaseous compound comprising three atoms of hydrogen to one of nitrogen. It is obtained from various sources, but formerly was made by heating the horns and hoofs of deer, acquiring the name of spirits of hartshorn. The ammonia of commerce is now procured by coal decomposition in the course of gas-making and by direct synthesis.

**Ammonites** are extinct snail-like animals which inhabited coiled shells of beautiful design. Their fossils are found in the secondary system of rocks.

**Ammonium,** the basic radical of ammonium salts, a compound of hydrogen and nitrogen.

**Amnesty,** an act of grace by which a ruler or governing power pardons any body of political offenders. It is usually absolute; but it may be partial, as when it excepts certain specified persons from its operation.

**Amœba,** a minute form of life, gelatinous, without rudiments, of the lowest organisation, and only discernible through the microscope. Abounding in fresh and stagnant waters.

**Amorphism,** a term used to indicate the absence of crystalline form in any body or substance.

**Ampère,** the recognised unit of measures for electric currents.

**Amphibia,** a class of vertebrate animals possessing structural peculiarities common to both reptiles and fish, enabling them to live either in water or on land. The most familiar examples of the class are frogs, newts and toads.

**Amphitheatre,** a term first used by the Romans to denote the buildings set apart for gladiatorial and wild beast exhibitions. The Colosseum, which held nearly 90,000 persons, covered an area of about five acres. The ruins of this gigantic structure form one of the finest relics of ancient Rome. There were numerous other amphitheatres in different parts of the Roman Empire, including two or three in Britain, and the term is still frequently applied to buildings where exhibitions are given.

**Amphitherium,** a genus of fossil mammalia found in the lower oolite in Oxfordshire, and so called because of the difficulty it presented to scientists in attempting its classification.

**Amphora** was a large clay vessel used by the Romans for preserving wine, fruit, oil, etc.

**Amulet,** a necklet or other ornament worn as a charm against evil and much used in former times in England. Still common in the East.

**Ana,** a word used to describe any collection of criticisms, observations and opinions regarding a particular person. Modern examples: *Walpoliana, Baconiana.*

**Anabaptists,** a sect that came into prominence during the Reformation period. John of Leyden was one of their leaders, but Munzer was their chief prophet. They committed many acts of violence under the cloak of religious zeal, but their operations were mainly confined to Germany. They are not to be identified in any form with the English Baptists.

**Anabasis,** Xenophon's narrative of the exploits of Cyrus the Younger against his brother Artaxerxes of Persia, 401 B.C. The title also of Arrian's history of Alexander the Great's expedition to Asia.

**Anachronism,** a confusion of dates and events, as when an allusion is applied to illustrate a period to which it does not properly belong. To represent persons of the 18th century riding in railway trains would be an obvious anachronism.

**Anacoluthon** is lack of grammatical sequence in speaking or writing.

**Anaconda,** a large South American snake, powerful, finely marked, and much feared by man and animals of its habitat.

**Anagram** is a literary exercise which consists in

using the letters in a given word or phrase to form a different word or phrase.

**Analogy**, a method of argument whereby an inference is drawn from one set of facts and applied to another to which it has some resemblance.

**Analysis** is the process by which a complex thing is reduced or broken up into its original elements. Qualitative analysis reveals the presence of certain substances, quantitative analysis shows those substances in their respective proportions. Analysis as applied to Grammar, Mathematics and Logic resolves phrases, propositions, and arguments into their separate parts.

**Analysts, Public**, are chemists officially appointed to analyse all such food and drugs as are submitted to them by inspectors within their own area. Every town of importance has its public analyst, whose official work in protecting the body politic against adulteration and impurity is highly important.

**Anarchism** is a communistic propaganda, in which revolutions and violence have a prominent part. Britain has harboured many foreign anarchists from time to time, but anarchist organisations do not find much to work upon here. In Russia, Germany, Italy, and the United States there is a strong undercurrent of anarchism, as we are occasionally reminded by assassinations of prominent personages. Among the murders committed by anarchists since Alexander II. was assassinated in 1881, those of President Carnot in 1894, the Empress of Austria in 1898, King Humbert in 1900, President McKinley in 1901, the Grand Duke Sergius in 1905, and the King and Crown Prince of Portugal in 1908 are the most conspicuous. There are many anarchists, however, who do not countenance violence except in an organised revolutionary form. Herr Most, Prince Kropotkin, Karl Marx, Rechus, and other propagandists differ greatly in their anarchistic theories, though all aim at the destruction of class rule and the establishment of a free society.

**Anathema** was the Greek term for things dedicated to the gods, and in its modern religious use indicates unreserved offerings to God and sacrifice. Anathematisation in the Roman Church is the extreme form of excommunication.

**Anchor**, an instrument used for keeping ships stationary. Great improvements have been introduced in recent years, stockless anchors being now chiefly used, consisting of a shank and a loose fluke. Many anchors are now made of cast steel.

**Anchorite** is a religious person who retires into solitude to employ himself with holy thoughts. Among the early Christians, anchorites were numerous, but in the Western Church they have been few. Their reputation for wisdom and prescience was high, and kings and rulers in old days would visit their cells for counsel. An Anchorite or "ankret" was in mediæval times a source of fame and profit to the monastic house within which he was voluntarily immured.

**Anchovy**, a fish of the sprat order, plentiful in the Mediterranean and along the Atlantic coast, and caught off the Devon and Cornish coasts in winter. Much esteemed when cured, but sprats are often put on the market as anchovies.

**Andrographis**, a genus of plants of the acanthus order, yielding a bitter tonic, a good deal employed in India in dysentery treatment.

**Anemometer**, a wind-measuring instrument, now in general use at all meteorological stations, and in its more recent developments by Mr. Beckley, of the Kew Observatory, and others, is capable of recording the force and variations of the wind with accuracy.

**Aneroid** is the name given to the modern barometer, which is on a different principle from the mercurial barometer, and consists of a metallic box, exhausted of air, having a fluted lid on which the atmosphere presses, acting upon levers which indicate on a dial every atmospheric movement.

**Angel, or angel-noble**, a gold coin, formerly current first in France and then in England, of value variant from 6*s*. 8*d*. to 10*s*. The coin bore a representation of the Archangel Michael in conflict with a dragon. The last English noble was coined in the reign of Charles I.

**Angelica**, an aromatic plant of the *Umbelliferæ* order, *Angelica officinalis*, valuable as a flavouring and possessing medicinal properties. In olden times supposed to ward off evil fortune.

**Angels**, divine messengers or agents communicating with or guarding human beings, a conception which is included in the Christian and other doctrines; and in former times, particularly in the Roman Church, special functions were accorded to certain angels and archangels, and their intercession was constantly appealed to.

**Angelus**, a church bell rung in Roman Catholic countries at morn, noon, and sunset, to remind the faithful to say their Angelic Salutation.

**Angevin Dynasty** includes the Plantagenet kings from Henry II. to Richard II. The name was derived from Henry II.'s father, Geoffrey, Count of Anjou.

**Anglosperms** are plants whose seeds are contained in capsules, as distinct from Gymnosperms, or naked seeds.

**Angiotomy**, a surgical term signifying the cutting open of an artery, a vein, or some other vessel.

**Angle**, a term used to denote the inclination to each other of two straight or curvilinear lines. Angles are measured by the degrees of the circumference of a circle, which is divided into 360 equal parts, the angles formed by the lines radiating from the centre being proportioned to the area of the circumference which the lines intercept. A right angle is one of 90°.

**Angles**, a northern tribe originally settled in Schleswig, who joined the Saxons in invading Britain and formed the Kingdom of Anglo-Saxons.

**Anglican Communion** comprises all the churches affiliated to the English Episcopal Church, including also the Protestant Episcopal Church of the United States. British Colonial Churches are now freed from State control, except that the appointment of Colonial bishops still remains with the heads of the Mother Church. The Anglican Communion comprises the Church of England, the Church of Ireland, the Scottish Episcopal Church, the Protestant Episcopal Church of the United States, the Canadian Church, the Church in India and Ceylon, the Church in the West Indies, the Australian Church, the Church of New Zealand, the South African Church and some 30 Missionary Dioceses. The whole Anglican community comprises upwards of 20,000,000 adherents. The Church of Wales was disestablished in 1920.

**Angling** is not the simple sport it was in the days of Izaak Walton, when the capture of fish with a hook was a fairly complete description of the sport. Now rod, line, and hook come into play in a variety of ways, and scientific methods are adopted. Salmon-fishing is the angling pastime of the rich, and English and Scottish waters afford plenty of good sport of this kind. Salmon are usually caught with the fly, but many artificial lures are also adopted. Trout are angled for much in the same way. Pike, grayling, chub, roach, perch, and other fresh-water denizens also provide good sport for all and Waltonians are to-day more numerous than ever. Some of the best known books on angling are Walton's *Compleat Angler*, Francis's *Book on Angling*, Foster's *The Scientific Angler*, by W. E. Hodgson, *Trout Fishing and Salmon Fishing*, by the same author.

**Anglo-Japanese Treaty**, signed in 1902 and renewed in 1905 and 1911, aims at maintaining the rights of the possessions of the two countries in Asia, the integrity of India, and equal trading rights with China and Korea, each country undertaking to assist the other in case of its rights being attacked. The treaty was denounced in 1922, at the Washington Conference, the four-power Pacific Agreement making it unnecessary.

**Angora goats** are famous for their fine, long silky hair, from which mohair fabrics are made.

**Anguis**, a genus of limbless lizards of the Scincidæ family, including the slow worm.

**Aniline**, a well-known product obtained from coal tar. In some of its reactions it yields brilliant colours. In 1858 Sir W. H. Perkin succeeded in producing from aniline a dyestuff to which the name of mauve was given. From that time aniline dyes came into wide adoption, and at the present time aniline can be utilised for every shade of colour desired. For the dyeing of

fabrics aniline colours are universally employed, also for coloured inks, tinting pulps, coloured soaps, cosmetics, and a host of other industrial purposes. Most aniline products were obtained from Germany before the war, and being difficult to procure from other sources, the Government to a large extent guaranteed a new British company specially formed for dealing with the difficulty, and the experiment has yielded highly satisfactory results.

**Animalcule** is a term used to designate the myriad of minute animal creatures which are too small to be seen except by the aid of the microscope. These organisms exist in such vast multitudes that a single drop of water will reveal enormous numbers.

**Animal Heat** arises from the oxidation, within the physical tissues, of food consumed. It has been estimated that an adult man produces in twenty-four hours enough heat to boil five or six pints of water. The temperature of the blood is much affected by motion as well as food. Mental work reduces the heat slightly. The temperature of the atmosphere has little appreciable effect upon the body's heat when the condition is healthy. It is possible to keep life together when the internal heat falls so low as 75·2° F., and even to be saved from death with the temperature at 113° F. Cold-blooded animals —reptiles, fishes, amphibians, and invertebrate creatures—have the temperature of their surroundings, and may be frozen and still live if thawed.

**Animal Kingdom,** comprises all living beings, but in some of the lowest organisms it is difficult to discriminate between what is vegetable and what is animal. The two main divisions of the animal world are the *Vertebrates*, those possessing a backbone, and the *Invertebrates*, which are without. There are five classes of Vertebrates—*Mammalia*, such as suckle their young; *Aves*, birds; *Reptilia*, reptiles; *Amphibia*, animals living on land or water at will; and *Pisces*, fishes. The Invertebrates include; *Protozoa*, the lowest forms of animal life; *Cœlenterata*, of which the hydra and the sea-anemone are examples; *Annuloida*, star-fishes, etc.; *Annulosa*, comprising insects, the lobster, spider, etc.; and the *Mollusca*, including snails, the oyster, etc.

**Animal Magnetism.** (*See* **Hypnotism.**)

**Animals at Sea.** Most animals are difficult to deal with at sea, and give violent vent to their feelings until sea-sickness brings silence. The tiger suffers most of all. Elephants do not like the sea, but are amenable to treatment, a bucketful of hot water containing three and a half pints of whisky and seven ounces of quinine being occasionally administered. Oxen are heroic in their attempts to overcome sickness. Horses often perish on a sea voyage. The only animal that seems to be comfortable at sea is the polar bear. Dogs and cats make good enough sailors when once they have overcome their first sickness.

**Anime** is a transparent resinous substance exuded from the courbaril tree, and receives its name because of its being alive with insects in its natural state. Used in perfumery and varnish making. It has also medicinal properties.

**Animism,** as defined by biologists, is "the general doctrine of souls and other spiritual beings."

**Anise,** an umbelliferous plant growing mostly in warm climates, and valued for its fruit, aniseed, possessing certain medicinal properties and yielding a volatile oil. Highly aromatic and used as a condiment for pickles and soups.

**Anna,** an Indian coin, one-sixteenth of a rupee.

**Annals,** or historical records, were kept by the Romans from an early period. In modern times the term is used to designate any general record of events arranged according to years.

**Annates** were acknowledgments formerly paid by way of fee or tax in respect of ecclesiastical preferment, and consisted usually of a proportion of the income (first-fruits) of the office.

**Annealing** is the process of slow cooling of glass and metal substances by which their brittleness is removed, and they become capable of resisting breakage. Some large castings are gradually cooled over a period of two or three months.

**"Annual Register,"** a yearly record of events, started by Dodsley in 1759, and for a time compiled by Edmund Burke.

**Annunciation, Feast of the** (March 25), is a church festival commemorating the message of the incarnation of Christ brought by the angel Gabriel to the Virgin Mary, hence the title **Lady Day.**

**Anodyne** is a term covering any application for the relief of pain, and includes the various opiates, quinine, salicylate of soda, and such familiar applications as poultices, fomentations, besides counter irritants like mustard plasters, aconite, chloroform, etc.

**Anointing** is the pouring of consecrated oil upon the body as a mark of supreme honour. In England it is a ceremony restricted chiefly to the ceremony of the monarch's coronation, and the spoon with which the oil is applied forms part of the English regalia. In the Roman Catholic Church anointing represents the sacrament of extreme unction.

**Anomaly** is a term used in Astronomy for the angle measured at the sun between a planet in any point of its orbit and the last perihelion.

**Anonymous,** without name, indicates that a book or article is published without the author's name being divulged.

**Anser,** a genus of swimming birds, the most familiar example of which is the goose.

**Ant,** an insect of the same order as bees and wasps (*Hymenoptera*). Ants live in communities under a well-defined system, and comprise males, females, and neuter. When the male and female, which are winged, leave their nest and pair, the male dies and the female sheds her wings and is made queen of a new community. The neuters comprise a working and a defending body, as well as a band of slave ants captured from another species. As in the case of the bees, the work of the ants consists in the storing up of provision for the future, and their ant-hills contain a regular series of passages and storehouses. They feed on both animal and vegetable matter, and upon a kind of milk exuded by plant-lice.

**Antacids,** agents designed in medicine to diminish acidity in the system by increasing its alkalinity.

**Antarctic Zone,** comprises the Antarctic Circle, parallel to the Equator, about 23½° from the South Pole. Captain Scott, who returned from his *Discovery* voyage in 1904, penetrated 300 miles further than any previous explorer. Shackleton, in his *Nimrod* expedition in 1909, reached a point only 97 geographical and 111 statute miles from the South Pole. The Pole was first actually reached on December 14th, 1911, by Captain Amundsen, the Norwegian explorer, Captain Scott and his party arriving there on January 18th, 1912, and dying from exposure on the return journey. (*See* **Scott, Captain, Shackleton, Sir E.,** and **Mawson, Douglas,** *Prominent People* section.)

**Anteater,** a mammal found in South America and South Africa with a long cylindrical tongue, coated with a viscid secretion. This tongue it thrusts into ant-hills and draws it forth covered with ants, which it devours. The American species is toothless; the African has molar teeth.

**Antediluvian,** applies to fossil evidences belonging to a period prior to human record, and is commonly regarded as indicating a time prior to the Deluge.

**Antelope,** a large zoological genus of mammalia, mainly deer-like and elegant animals, with lustrous eyes; fleet of foot, and widely distributed.

**Antennæ,** feelers of insects and crustaceans, usually two in number, though in the case of certain wingless insects four or six. Their precise functions are unknown, but it is probable they serve some purpose additional to that of tactility.

**Anthem,** a choral composition, with or without instrumental accompaniment, usually sung after the third collect in the Church of England service. The words are from the Scriptures, and the composition may be either for solo voices only, full choir, or both. Among the chief English composers of anthems are Tallis, Purcell, Croft, Boyce, Goss, and Stainer.

**Anthology** is the figurative term used to describe a selection or collection of literary compositions, usually poems or hymns. The first Greek Anthology, comprising the choicest pieces by Greek classical poets, was compiled by Meleager

about 90 B.C. The Latin Anthology of verse from the age of Ennius to about 1000 A.D. was made by Peter Burmann the Younger.

**Anthracite** is a hard kind of coal which burns without flame, and contains upwards of 90 per cent. of carbon. Pennsylvania is the largest known anthracite coal region. The next largest field is in South Wales.

**Anthropoid**, meaning "resembling man," is the term employed to designate the order of apes whose structure has similarity to that of man. The gorilla, orang-outang, and chimpanzee are of this order, and, in number and general form of limbs, and physical organism generally, bear a nearer resemblance to human beings than any other creatures. On this fact much of the Darwinian theory has been built.

**Anthropology** is the science which reveals man's place in nature, and describes the mental and physical peculiarities of mankind—a science which owes much to the researches and expositions of Darwin, Wallace, Spencer, Huxley, Lyall, and Haeckel in modern times. It is a branch of study that assumes greater importance every year, and at the annual meeting of the Anthropological Section of the British Association the most eminent scientists of the day set forth their views. There is also a Royal Anthropological Institute at 52 Upper Bedford Place, London.

**Anthropometry** is the system of human measurement invented by M. Bertillon, of the French Criminal Department, for purposes of establishing identity. The evidence of finger prints has been applied successfully in many criminal cases.

**Anthropomorphism** is the application to the Deity of the attributes of man, a form of belief which belongs more or less to all religions, for the reason that man is incapable of imagining beings of a higher form than his own.

**Antiburghers**, a Scottish sect which arose in 1747, many members of the Associate Synod declining to take the oath of burghership in Edinburgh, Glasgow, and Perth. Mostly merged in the United Presbyterian Church, now the United Free Church of Scotland.

**Antichlor** is a substance used in paper-making to free the pulp from the injurious after-effects of chlorine.

**Antichrist**, the name given to the enemy of Christ, as mentioned by St. John, and long anticipated by the early Christians.

**Anticlimax** is the reverse of climax, introducing the strong point of a story or argument before the close instead of reserving it for the end.

**Antilegomena**, the books of the New Testament which were not accepted as canonical by the early Christian churches, though afterwards admitted to equal authority with the rest. These were: the Epistle to the Hebrews, the Epistle of St. James, the Second Epistle of St. Peter, the Second and Third Epistles of John, the Epistle of St. Jude, and the Apocalypse or Revelation of St. John.

**Antimony**, a crystalline metal of great brittleness. On being burned, it gives off dense fumes of oxide of antimony. By itself it is not of special utility; but as an alloy for hardening other metals, it is much used. As an alloy with lead for type-metal, and with tin and copper or zinc for Britannia-metal, it is of great value. All antimoniacal compounds are poisonous.

**Antinephritic**, a medicine combative of kidney diseases.

**Antinomians** were members of the early Christian communities who claimed immunity from obedience to the "law," on the pretext that faith alone was sufficient to secure salvation.

**Antipathy**, when it arises in connection with things that do not commonly excite unfavourable feelings, is often caused by shock or fright, and may be either in regard to things seen, heard, or smelt.

**Antiphony** occurs in connection with psalmody, and consists in the alternation of parts by two different sets of voices of a choir or congregation.

**Antipodes**, the parts of the earth exactly opposite to our feet, having seasons, etc., at exactly opposite times to ours. Thus the North Pole is the antipodes of the South, and New Zealand the antipodes of England.

**Anti-Semitism**, a modern revival of the old-time hatred of the Jewish race, confined mostly to Germany, Austria, and Russia. In Russia especially the Anti-Semitic feeling was attended by great cruelty, and thousands of Jews took refuge in foreign countries, many of them coming to Britain. Beginning as a political movement intended to keep the rich Jews from obtaining ascendency, it spread far beyond political boundaries. For the protection of persecuted Jews the late Baron Hirsch started a scheme for transferring large numbers to new countries and endowed it with a sum of £9,000,000. (*See* Zionists.)

**Antiseptics**, the term applied to substances which destroy or weaken microbes, bacteria, or germs, and often arrest the spread of diseases caused by those minute putrefying agents. Among the chief antiseptic substances are carbolic acid, corrosive sublimate, or perchloride of mercury, iodine, peroxide of hydrogen. In the case of water, milk, or other liquids, boiling is the simplest antiseptic.

**Antithesis** is a form of expression which deals in opposites—as contrasting the light with the dark, good with evil, and so on—and is often resorted to by eminent writers with effect.

**Antitrinitarian**, one who denies the Trinity.

**Antitype**, that which agrees with or fulfils the type: as Christ was the realisation of the Paschal lamb.

**Antlers** are the horns of deer, and, except in reindeer, are restricted to the males.

**Aorta**, the main trunk of the arterial system, in direct communication with the heart, and from which all the other arteries spring.

**Apaches**, a tribe of Red Indians, formerly ferocious, and spread over the Mid-West of America. A name also given to a set of lawless and violent people in Paris.

**Apatite**, a widely distributed mineral, consisting mainly of phosphate of lime, and useful in promoting vegetation.

**Ape**, a term applied to monkeys generally, and covering the whole group of primates between man and the lemurs.

**Aphelion**, the point in the orbit of a planet farthest from the sun, where the motion is slowest.

**Aphengescope**, a modified magic lantern for the exhibition of opaque objects.

**Aphides**, plant lice, a numerous species of destructive parasites living on roots, leaves, and plants.

**Apis**, the sacred bull worshipped by the ancient Egyptians; also the scientific name for the bee.

**Apjohnite**, a mineral containing much sulphuric acid, occurring in white asbestiform or fibrous masses at Lagoa Bay, in South Africa.

**Aplysia**, a genus of molluscs, with an oblong translucent and flexible shell, popularly called sea-hares, and inhabiting the laminarian zone. They have four tentacles, and discharge a violet fluid on molestation. Some species are found in British waters.

**Apocalyptic Number**, the mystical number 666, mentioned in the Apocalypse.

**Apocalyptic writings** are those which deal with revelation and prophecy, more especially the Revelation of St. John.

**Apochromatic** object glasses are prepared so as to destroy the second residuary spectrum.

**Apocrypha**, the title given to the Hebrew writings, not regarded as canonical by the Jews, but received by the Roman Catholic Church. Regarded as only historical records by the Protestant Churches. The term applies mainly to the additional Old Testament books, but there are also some Christian writings of the same character. The Apocryphal books include 1 and 2 Esdras, Tobit, Judith, Esther x.–xvi, Wisdom, Ecclesiasticus, Baruch, Song of the Three Holy Children, Bel and the Dragon, the Prayer of Manasses, and 1 and 2 Maccabees.

**Apogee**, the point in the moon's orbit at the greatest distance from the earth.

**Apollinarians**, followers of Appollinarius, Bishop of Laodicea, who lived in the 4th century, and denied the humanity of Christ. Condemned as heretics.

**Apostasy** is a revolt, by an individual or party, from one form of opinions or doctrine to another.

**Apostolic Council,** held at Jerusalem, A.D. 52, presided over by James, to decide what the obligations of Christians were to the Mosaic law.

**Apostolic Fathers** were the immediate disciples or followers of the Apostles, especially such as have left writings behind them, including Barnabas, Clement, Hermas, Ignatius, Polycarp, etc.

**Apostolic Succession** is the derivation of holy orders by an unbroken chain from the Apostles, and the succession of the ministry to the powers and privileges of the Apostles.

**Apothecary,** one who prepares and distributes drugs. In 1815 the Apothecaries' Company of the City of London obtained the privilege of examining and licensing all the apothecaries and sellers of drugs throughout England and Wales. This was amended, by an Act of 1874 an apothecary may sell drugs prescribed by himself or another. A chemist may not prescribe but only sell drugs.

**Apotheosis** was the Greek term for the inclusion of a mortal among the Gods. Divine honours were accorded to Julius Cæsar and Augustus.

**Apparitions** indicate supposed supernatural appearances, once much believed in. Even now there are many who have faith in spiritual manifestations. Science, however, looks askance at these claims.

**Appian Way,** the oldest of the Roman Roads, originally laid by Appius Claudius from Rome to Capua, and afterwards extended to Brundisium.

**April,** the fourth month of the year, so called from Aprilis, to open—the period when vegetation opens.

**Apse** is a semicircular recess at the east end of the choir or chancel of early churches, and vaulted over.

**Apteryx,** a large wingless New Zealand bird of the ostrich order, valued for its skin.

**Aquarium,** a vessel, or building, devoted to the collection of marine or fresh-water animals. Large buildings were erected at Brighton, Scarborough, and many other seaside resorts, as well as in London and numerous inland towns, to which the title of Aquarium was given; but in recent years these buildings have for the most part been turned into mere pleasure resorts. The Brighton Aquarium until 1927 still maintained to a great extent its original character. A magnificently fitted aquarium has recently been erected at the Zoological Gardens, Regent's Park. The Westminster Aquarium site is now a great metropolitan church centre.

**Aquatint** is a method of etching on copper, by which imitations of drawings in water-colours, Indian ink, bistre, and sepia are produced.

**Aqueducts** were known to the Greeks, but were perfected by the Romans. There still exist several Roman aqueducts, including the Aqua Julia, constructed under Vipsarius Agrippa, and the Aqua Felici, restored by Pope Sixtus V. Among modern aqueducts may be mentioned that of Glasgow, which brings water to that city from Loch Katrine; that of Manchester, which taps Thirlmere; and that of Liverpool, with Lake Vrnwy in North Wales as its source.

**Arabesque,** the term applied to the elaborate decorations introduced into Europe by the Spanish Moors. The arabesques of the Vatican galleries, by Raphael, form a splendid example.

**Arabian Nights,** a collection of fascinating tales of the Orient, of mixed Indian, Persian, Arabic, and Egyptian origination, and first made known in Europe by Antoine Galland, a French Oriental scholar whose original translation was called *The Thousand and One Nights.*

**Arabic Numerals** were introduced into Europe by the Arabs in the 8th century. They consist of the characters, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, and after the introduction of printing came into general use, being much simpler than the Roman numerals.

**Arachnida,** name given by Lamarck to a class which includes spiders, scorpions, mites and ticks without antennæ or wings.

**Aramaic,** the language of the Aramæans or Syrians, the common dialect of those trading people in the 1st century A.D.

**Araucaria,** a kind of cone-bearing tree of the pine family, distributed over various parts of the Southern hemisphere.

**Arbalast,** a steel crossbow set in a shaft of wood and worked with a trigger, introduced by the Normans.

**Arbitration, International.** In recent times many attempts have been made to decide international disputes by this means—sometimes with success. The latest and most promising development of the idea, however, is that embodied in the League of Nations established at the Peace Conference of 1919, and if that succeeds war is practically abolished. The Washington Conference 1921–2, the Council of Cannes and the Genoa Conferences may here be referred to. The Palace of Peace at The Hague (the gift of Mr. Andrew Carnegie), inaugurated in 1913, is specially dedicated to the cause. One of the most famous of international arbitrations was that in 1872 between Great Britain and America concerning the "Alabama" claims. Numerous general arbitration treaties have been entered into between other countries. At the famous Conference at The Hague in 1899, suggested by Russia, an international arbitration scheme of extensive powers was approved, though it was not sufficient to deal with the disputes which brought on the war between Russia and Japan in 1904. Germany's action in forcing the Great War was the greatest defiance of the principle the world has ever witnessed, and bitterly has she had to pay for her total ignoring of the rights of nations. The International Arbitration League, of which Mr. Burt, M.P., was president, has existed since 1870.

**Arbor Day,** a day devoted to promoting the growth of trees. First adopted in Nebraska, but now the movement has spread to all parts of the American Continent, and to South Australia. In some parts of England also the idea finds favour.

**Arbor Vitæ** is the name given to the tree-like appearance of the cerebellum when it is cut through, due to the arrangement of the white and grey nerve matter. Also the name of a cone-bearing plant of the cypress order possessing medicinal virtues.

**Arcadia,** a district of Peloponnesus (Morea) whose inhabitants in the days of the Pelasgi were of extreme simplicity, and the term has ever since been used to denote an idealised country of primitive things.

**Arch** was introduced into architecture by the Romans, and was thereafter widely adopted in relief to the straight-line methods of Greece.

**Archæology** deals with the relics of ancient times, constructing historical deductions, and ascertaining the manners and customs of past periods, therefrom.

**Archæopteryx,** a bird which is supposed to show the connecting link between reptiles and birds, its fossilised remains revealing some of the characteristics of both orders.

**Archaism** is a rhetorical term, denoting a style of composition or discourse of an obsolete or antiquated kind, admissible in poems and other writings of a highly idealised or allegorical form, but otherwise out of place.

**Archbishop,** the title of the two highest dignitaries of the English Church: the Archbishop of Canterbury, called the Primate of *all* England, and the Archbishop of York, styled the Primate of England.

**Archil,** a purple pigment, obtained from a species of lichen; turns red by application of acid.

**Architecture,** or the art of building, is of three main classes—military, naval, and civil—the general application of the term being to the last named. The five leading orders of architecture are the *Doric,* the oldest, of which the best examples were shown in the Greek temples; the *Ionic,* another Greek variety, lighter and more decorative, as shown in the Erechtheum at Athens; the *Corinthian,* introduced in the time of Alexander the Great, well known by its graceful columns and enrichments; the *Tuscan,* which the Romans invented—a solidified *Doric;* and the *Composite,* which combined the leading features of the Ionic and Corinthian. As exemplified in modern times, more especially in England, architecture is exceedingly varied in

form, but between the 6th and 17th centuries we get at least six distinctive styles. First, the Saxon and Norman; next the Semi-Norman; then the Early English or Gothic (of which Westminster Abbey and York Minster furnish prominent examples); the Decorated English; the Perpendicular English (15th century); and the Debased English (1509 to 1640). During the early Stuart period there was the Renaissance style, which obtained a strong footing. Then we come to the Queen Anne style, which is of a more domestic order; and in later times there has been a revival of nearly all styles, sometimes in their pure form, but more often presenting an adaptation or combination of styles. We have more primitive examples in the architecture of the earlier nations—Egyptian, Assyrian, Etruscan, Persian, Chinese, and Jewish—all possessing more or less individuality of feature, the result partly of local, climatic and other requirements, and also of some special artistic evolution.

**Arctic Exploration** dates from a very remote period, King Alfred relating stories of early Polar expeditions, but it was not until the 16th century that men began to make serious attempts to discover either a North-west or North-east passage. Sir Hugh Willoughby, Davis, Chancellor, Baffin, Frobisher, and Henry Hudson were the most famous early explorers. The Company of Merchant Adventurers and the Hudson Bay Company were promoters of such schemes, and all through the 18th century attempts were being made to penetrate the Polar regions. In 1818 George III. offered a reward of £20,000 to any one who should make the North-west passage, and Scoresby, Ross, Parry, and Franklin all became associated with Arctic expeditions. Ross and Parry went out in 1818, and then came Sir John Franklin's ill-fated expedition in 1845. When Franklin failed to return and no news could be obtained concerning him, a number of search expeditions from Great Britain and America were undertaken. Kennedy, McClure, Rae, Belcher and McClintock in turn succeeded in making important discoveries, and evidence was found of the perishing of Franklin and his crews. Lieutenant Greely made an important expedition in 1881–1884, and those of Nares and Markham added to our knowledge. Dr. Nansen's crossing of Greenland in 1888, and his subsequent journey with the *Fram* in 1893–1896, were memorable events. Nansen and Lieutenant Johansen, with two kayaks and a number of dogs, reached 86° 14′ N., 200 miles nearer to the Pole than had been reached before. The expedition verified the theory that there was a current flowing across the Polar region from the New Siberia Islands. Mr. Jackson discovered a large open sea, and Lieutenant Peary in 1902 found it covered with ice. The latter rounded the north part of Greenland in 1900. H.R.H. the Duke of the Abruzzi's expedition, under Captain Cagni, in 1899 reached 86° 33′, 22 miles father north than Nansen. In 1906 Commander Peary got within 201 miles of the Pole, the American thus approaching nearer by 35 miles to the objective than the lowerer of Nansen's north record. In September, 1909, however, the world was startled by the news that Dr. Cook, an American explorer, had actually reached the Pole, but later evidence does not substantiate this. This was followed closely by the announcement that Peary had also planted the Stars and Stripes at the Pole, and the Commander has since published a full description of his discovery. Several attempts to explore the Polar regions have been made by air. The Italian dirigible "Italia" was lost in an attempt in 1928, and Captain Wilkins flew over the North Pole about the same time. Captain Amundsen set out in a seaplane in June to try to discover the "Italia," but though some of the crew of the "Italia" were eventually found, Amundsen was never heard of again.

**Argali**, a kind of wild sheep found in Siberia.

**Argillaceous Rocks** are a sedimentary group, including the shales and clays, into the composition of which aluminium largely enters.

**Argon**, a chemical element discovered by Lord Rayleigh in 1894 in air.

**Argonaut** (Paper Nautilus), an aquatic animal of the cuttle-fish order.

**Arianism**, so called after Arius of Alexandria, who denied Christ's divinity and caused the Emperor Constantine to summon the Council of Nice, 325 A.D.

**Aricine**, an alkaloid contained in the bark of arica, and also in *Cinchona ovata*.

**Aries**, the Ram, the first of the signs of the Zodiac.

**Arion**, the horse of Adrastus in Greek mythology, which was said to have the gift of utterance and of prophecy, and figured in the Theban war.

**Arithmetic** did not flourish to any great extent until the adoption of the Arabic numerals. It is supposed to have originated as a science in India. The system of the Greeks and Romans was complicated and it was not until the 16th century that the science reached any great development.

**Ark of the Covenant** was the sacred chest, overlaid with gold, which occupied the inner sanctum of the Temple, and symbolised God's covenant with his people.

**Armada, Spanish**, has reference, in this country, specially to the naval expedition fitted out by Philip II. of Spain in 1588 against England, commanded by the Duke of Medina Sidonia. It comprised 129 ships, of which 65 were each of more than 700 tons; it was manned by 8,000 sailors and carried 19,000 soldiers and more than 2,000 cannon, with food for 40,000 men for six months. Against this formidable force Elizabeth had only 80 ships, manned by 9,000 sailors, under Lord Howard of Effingham, under whom served Drake, Hawkins, and Frobisher. The British Fleet awaited the Armada off Plymouth, and at Tilbury was a considerable defensive land force under the command of the Earl of Leicester. On July 19 the ships of the Armada were sighted off the Lizard, disposed in a crescent seven miles long from horn to horn. The excellent manœuvring of the English, their fire-ships, and a gale from the N.W. combined so effectively to cripple the Spanish ships that the Armada was scattered in confusion, a very small remnant contriving to reach home. Elizabeth had a medal struck bearing in Latin the inscription, "God blew, and they were scattered."

**Armadillo**, a genus of animals belonging to South America, and carrying a hard bony covering over the back, under which the animal can completely conceal itself when attacked, rolling itself up like a hedgehog.

**Armageddon**, according to the Revelation of St. John, the great battle in which the last conflict between good and evil is to be fought.

**Armature**, the portion of an electrical dynamo consisting of wire coils so arranged as to give when rotated an increased flow of electrical energy.

**Armet**, a helmet of metal worn in war by the French in the 13th and two succeeding centuries.

**Armillary Sphere**, an astronomical apparatus with circles representing the equator, ecliptic, etc., arranged round a globe, in their relative positions.

**Arminianism**, the doctrine of Jacob Harmensen, who was born in Holland in 1560, especially directed against Predestination.

**Armistice**, a temporary truce or a complete cessation of hostilities by agreement of both sides of forces at war. Armistice Day, Nov. 11, commemorates the cessation of hostilities in the Great War, Nov. 11, 1918, and the signing of the Armistice between the Allies and Germany. Two minutes' silence at eleven o'clock in the morning is observed throughout the British Empire on that day, and a special service is held at the Cenotaph in Whitehall, London, and at the tomb of the Unknown Warrior in Westminster Abbey.

**Armless and Legless M.P.s.** The late Mr. Arthur MacMurrough Kavanagh, who in the eighties of last century was an active legislator in the House of Commons, was born without arms or legs. He was famed as a yachtsman and horseman, and travelled on horseback across Russia and Persia. He rode with the Carlow Hounds, and with the pen held between his teeth wrote a good "hand." Major J. B. Brunel Cohen, who was returned to parliament in 1918, lost both legs in the war.

**Armlet**, a bracelet worn on the upper arm in the East as part of the insignia of royal rank and power.

**Armour**, protective covering worn by those engaged in military pursuits, and consisting of a great variety of pieces and material, from hauberks of mail to a complete panoply of plate.

**Army.** An organised equipment of land forces for carrying on the work of war. Egypt possibly had such an organisation under Sesostis, 1600 B.C. The Persians later on were similarly equipped, but it was the Romans who brought into operation an immense regular army in which every citizen between 17 and 45 was compelled to serve. The Turks were the first among modern European nations to create a standing army in the 14th century; and Charles VII. of France had a force of 25,000 trained soldiers. There was no proper standing army in England until the reign of William III. In 1691 an Act was passed authorising a force of 65,000 men, and although this number was afterwards greatly reduced, whenever war broke out the regiments were added to, and England had 200,000 men in the field during the War of the Spanish Succession. There was no regular barrack accommodation in England before 1792. For the Peninsular War Great Britain got together an army of 240,000. After Waterloo, Army matters were neglected until the Crimean War; Parliament then began to devise improved Army schemes. A Volunteer and a Militia auxiliary force had been organised, and in 1871 Lord Cardwell effected a revolutionary change with his system of localisation, linked battalions, short service, and the abolition of purchase. Further improvements were introduced, but in the Boer War of 1899-1902 we were once more unprepared, and had to suffer loss, humiliation, and defeat. Mr. Brodrick's Army Corps scheme did not work out well; and still another plan of Army reorganisation was evolved in 1904 by Mr. Arnold-Forster, providing for a total "paper" strength of 927,684 men. A new Army Order was issued on Jan. 1, 1907, by Mr. (later Lord) Haldane, then War Secretary, providing for the allocation of all regular troops to a particular command, and giving the station of every unit in the British Army. Before the Great War (1914-18) the British Army had a strength of 711,575 effectives, but by April, 1915, we had about 750,000 men at the front, and the casualties of 139,000 had been made good. From month to month the augmenting of the Army continued, and at the beginning of Aug., 1917, there were on active service and in training over 7,000,000 men. All the overseas dominions (including India and South Africa) helped nobly to swell the number. The British losses during the war in all fields of operation (land, sea, and air) were approximately nearly 950,000 lives, while Germany had a death roll of nearly two millions. That the armies of the Allies were able to cope successfully with Germany's unparalleled military equipment is splendid testimony to the patriotic spirit which has animated them. In France, Germany, Austria-Hungary, and Russia every able-bodied man was subject to service. The pre-war standing army of the United States was fixed at a maximum of 100,000 enlisted men and a minimum of 60,000, with voluntary enlistment and a five years' service. But after her entry into the war in 1917 a rapid mobilisation took place providing if necessary for a strength of several millions. The voluntary Army raised by Britain and its overseas dominions for this war was by far the biggest voluntary military force the world has ever known. In addition to the ordinary recruiting methods, an extensive appeal was made by posters and press advertisements. But nothing short of conscription would suffice. In July, 1915, the National Register Bill was passed providing for compulsory registration. Lord Derby was appointed Director-General of Recruiting. In April, 1916, an Act was passed bringing in all outstanding "eligibles" up to 41 years of age by compulsion, and by the Man-Power Act of April, 1918, the age limit was extended up to 50. After 1918 drastic reductions of forces were made, and demobilisation drew back into civil life the vast majority of the survivors of those who joined up for the war. Increased rates of pay were made to officers and men in 1919. For 1928-29 approximately 200,000 men formed the regular army, the Reserves being 110,000 and the Territorials 189,000. The British Army in India has a strength of about 60,000 men, in addition to 160,000 native regulars and 140,000 reserves, State forces and Territorials. Some sections of the British Army are gradually being mechanised.

**Arnica**, the name of a genus of plants of which the dandelion is a leading example.

**Arnotto**, a reddish-yellow dye obtained from the seeds of the *Bixa orellana*, a South American plant. It is employed for colouring cheese and butter, also in chocolates and soups; and a preparation of the pigments imparts an orange tint to certain varnishes.

**Arpeggio**, in music, indicates the striking of a chord or notes in rapid succession, instead of simultaneously.

**Arquebus**, one of the earliest forms of firearms. The piece was discharged by a match applied manually to the touch-hole, and later by a trigger.

**Arrack** is the East Indian name for distilled spirit generally, but especially for that made from the fermented juice of the coco-nut or from rice.

**Arragonite**, a mineral consisting of carbonate of lime in a crystalline form, sometimes found pure and sometimes mixed with other metals in minute quantities. Crumbles to powder under heat. First discovered in Arragon.

**Arrowroot**, obtained from the rhizomes of the tropical maranta, also from the potato and the arum. It provides a pure starch food, suitable for invalids.

**Arsenals** are repositories for storing, or workshops for making, arms, guns, accoutrements, stores, etc. The chief English arsenals are at Woolwich, Deptford, Chatham, Pembroke, Sheerness, Portsmouth, and Plymouth: the chief arsenals of France are at Cherbourg, Brest, Toulon, L'Orient; of Russia at Kronstadt and Sevastopol; of Germany at Danzig and Wilhelmshaven; of Italy at Spezia.

**Arsenic**, a chemical element, regarded by some as a metal, of a crystalline and brittle nature, usually met with as a constituent of other minerals, but sometimes by itself. One of the most virulent of poisons.

**Artesian Wells**—so called because of their first being discovered at Artois—are borings made through strata which water cannot permeate to others of a porous kind which are full of water. The fountains in Trafalgar Square are fed by artesian wells sunk through the London clay into the chalk about 400 ft. At Passy, near Paris, there is an artesian well 1,923 ft. deep, and at Grenelle one about 1,800 ft. They are very valuable in countries where agriculture depends on irrigation. At St. Louis, Missouri, there is one 3,843 ft. deep; and one in Western Queensland reaches the depth of 4,000 ft.

**Articles.** The Six Articles are those contained in an Act of Henry VIII. upholding Transubstantiation, Clerical Celibacy, Auricular Confession, and other doctrines which the Reformation put in their proper place. The *Thirty-Nine Articles* drawn up in 1562 comprise the doctrines of the Anglican Established Church, and must be subscribed to by all taking holy orders therein.

**Artificial Silk**, a textile made of cellulose. It is a substitute for real silk. Its production is very cheap, and the finer sorts are with difficulty distinguishable from natural silk. It is one of the most flourishing industries of England and Germany.

**Artificial Sunshine.** A scientific station or botanical laboratory has been established at Wisley, near Weybridge, devoted to the growth of plants by electric light as a substitute for sunshine. The fact that artificial light enables plants to grow and fruits to ripen has long been known to men of science. In 1879 and 1880 the late Sir William Siemens made some successful experiments in this direction.

**Artillery**, the science and art of gunnery; the implements of war employed therein; and the men constituting the military corps in charge of

the cannon of an army and trained to their use. In the British Army the artillery force is divided into the three sections of Horse, Field and Garrison Artillery. The headquarters of all are at Woolwich, as is also the Royal Military Academy through which pass the cadets who later become artillery officers. The weapons of artillery employed in the Great War were far more powerful than in any previous conflict. The French 75-millimetre field guns proved most effective weapons; the Germans used their gigantic field and siege guns, commanding a great range and firing shells of from 275 to 1,600 lb.; and the British field guns and howitzers proved of remarkable efficiency, while the armoured cars, known as "Tanks" (copied by the Germans), were remarkably powerful engines of destruction.

**Arum**, a genus of plants of the Araceæ order, of which there is but one British species, the wake-robin or cuckoo-pint, sometimes also styled "Lords and Ladies." Its pointed leaves and spikes of scarlet berries are familiar hedge-side objects. The latter are poisonous. In Switzerland the rhizomes are employed as substitutes for soap.

**Arundel Marbles**, a collection of ancient sculpture formed by Thomas Howard, Earl of Arundel, in the 17th century and presented to Oxford University by his grandson, Henry Howard, who became Duke of Norfolk.

**Aryan** is a term used to denote the lingual and ethnological groups otherwise known as Indo-European or Indo-Germanic. Comprises two branches, Western or European, and Eastern or Armenian. The Aryan languages show common origin by their vocabulary, syntax, and inflexions. The word *Aryan*, derived from the Sanskrit, means an "honourable lord of the soil": the nearest to the parent tongue is Sanskrit, and the chief divisions in Europe are the Teutonic, Romance, Slav and Celtic. The Turks, Magyars, Basques, and Finns are non-Aryan. The common ancestors of the Aryan groups dwelt among the Pamirs at a period of remote antiquity.

**Asafœtida**, a well-known drug made from the juice of plants of the Umbelliferæ order, including celery, parsnip, etc. Has a very offensive odour.

**Asbestos**, designates a peculiar form of mineral, occurring in crystals in pyroxene, and, massed together, is fire-proof. Found in Cornwall and some parts of Scotland, but the finest comes from Savoy, and it is also abundant in Canada and Tasmania.

**Ascension Day**, or Holy Thursday, is the 40th day after Easter.

**Asceticism** was originally the term applied to the training by Greek athletes. The Stoics and others used it to express the mastering of the passions. The idea passed into Christianity, and from celibacy and abstinence was carried to terrible lengths in the way of self-mutilation, torture, and human sacrifice. The chief manifestations of Asceticism in modern times have been Monasticism and the various forms of personal humiliation, fasting, penance, pilgrimage, etc., but the principle survives nowadays only in a very mild form.

**Ascidium**, the typical genus of the truncated mollusca. The sea-squirt is a familiar example. The Darwinian development theory traced the ascent of man from this low animal condition.

**Ascot Races** are an annual fashionable function dating from 1711 and taking place on Ascot Heath, only six miles from Windsor, in June. Have always had royal patronage. The course is nearly two-miles long.

**Asgard**, the Heaven of the Scandinavian mythology.

***Ash**, a familiar tree of the olive family, remarkable* for its thick foliage and height of growth, often attaining from 100 to 150 feet. Is a valuable timber tree, tough and elastic, and largely used for wheels. In Scandinavian mythology the first man and woman were the ash and the elm, and the court of the gods was held under an ash. In the Highlands of Scotland it used to be thought lucky to give infants ash-sap as their first food.

**Ashburton Treaty** was signed between Great Britain and the United States in 1842 and settled some boundary differences between Canada and the State of Maine, and also dealt with the African Slave Trade.

**"Ashes, the,"** the symbol which distinguishes the winning cricket team in the biennial test matches between England and Australia, and consisting of the ashes of a cricket ball.

**Ashlar**, a term designating the flat dressed stone as prepared for building use.

**Ash Wednesday**, first day of Lent, on which ashes were sprinkled on the head as sign of penitence under an injunction of Pope Gregory the Great in the 6th century.

**Asmodeus**, a demon whose story appears in the apocryphal book of Tobit, and figures frequently in Jewish traditions. Asmodeus is the supernatural figure in Le Sage's *Le Diable Boiteux*.

**Asp**, a small poisonous snake, often mentioned in ancient literature and traditionally supposed to have been used by Cleopatra in killing herself. It belongs to the cobra da capello genus.

**Asparagus** was a favourite vegetable with the ancient Romans, and is much prized to-day. Possesses a perennial root and yields the edible stalks every spring.

**Asphalt**, or mineral pitch, is a bituminous substance, the result of decayed vegetable matter, containing 80 per cent. of carbon, with hydrogen, nitrogen, and oxygen. Is largely used, mixed with sand, chalk, etc., for making road surfaces in dry climates, such as France, Italy, Germany and America, and to a considerable extent also in this country, though the English climate is too humid for its general adoption, it becoming slippery with moisture. The ancient Egyptians used it for embalming, and the Babylonians made wells of it. Trinidad, the Rhone Valley, the Dead Sea, and many other places yield asphalt. An artificial asphalt largely composed of coal tar is used as asphalt in England, though in big cities are numerous examples of Italian material.

**Assassins** were first heard of in Persia about 1090. They were a secret religious sect, at the bidding of whose chief they murdered persons as an act of duty. Similar bodies were formed in various connections in later times, but the term assassination is now only used to specify the slaying of some public personage, and does not necessarily imply plot or collusion, although the majority of assassinations in recent times have been connected with political or anarchist movements. Among the most notorious instances of assassination may be mentioned the following:—Julius Cæsar, 44 B.C.; James I. of Scotland, 1437; Rizzio, 1566; Henry IV. of France, 1610; Marat, 1793; Lincoln, 1865; Garfield, 1881; Lord Frederick Cavendish and Mr. Burke, 1882; Alexander II. of Russia, 1881; President Carnot, 1894; the Empress of Austria, 1898; King Humbert, 1900; President McKinley, 1901; M. de Plehve, 1904; the Grand Duke Sergius of Russia, 1905; Carlos I., King of Portugal, and the Crown Prince, Luiz, 1908; Archduke Francis Ferdinand of Austria and his wife, June 28th, 1914.

**Astarte**, a bivalve mollusc, of which there are many widely distributed fossil species, but only some twenty living species inhabiting the Arctic and North Atlantic oceans.

**Asteroids** were unknown until the discovery of Ceres by Piazzi in 1801; at present over 500 are catalogued, the application of photography being responsible for the great majority. Most of the minor planets are mere celestial footballs, some having a diameter of only five miles. Their orbits lie between those of Mars and Jupiter. Whether these bodies are the fragments of a large planet is a question that is not yet determined.

**Astrakhan**, the curled wool of a species of black sheep native to the Russian province of Astrakhan.

**Astrology**, the so-called science of the stars. Certain almanacs continue to appear year after year whose chief claim to support is based on astrological pretensions and predictions. Astrology, however, was a serious study at one time; monarchs and other illustrious personages were frequent consulters of the astrologists, and had their horoscopes cast. The Chaldeans are supposed to have invented astrology, which is an abstruse and involved systematisation. Astrologers divide the heavens into twelve equal

parts called *houses*, and endow the planets with certain influences and found their predictions on the positions occupied by the heavenly bodies at a person's birth or at any critical period. For a horoscope it is important to discover in which sign of the Zodiac was the sun at the native's birth, also the position of the moon and which sign was rising.

**Astronomy**, the oldest and one of the most fascinating of sciences, was in early times associated with astrology, but by a long series of observations and mathematical calculations a gradual knowledge of the movements of the heavenly bodies grew up, and it now ranks as one of the positive sciences. Pythagoras (520 B.C.) understood the revolution of the earth upon its axis, but it was not until a thousand years later that his theory gained general acceptance, when the keen and spacious minds, first of Copernicus, and then of Tycho Brahe and Galileo, demonstrated the truth of the Pythagorean theory. With the setting forth of the Copernican system, astronomy was placed on a sure foundation, and the movements of the planets began to be more clearly comprehended. Naturally there was much that was crude and imperfectly defined in the system of Copernicus, but it was a working basis, and the studies of Kepler and Galileo, making their observations with the telescope, resulted in an immense increase of astronomical knowledge. Newton, to whom we owe the discovery of the law of gravitation, the improvement of the telescope, and many other discoveries, placed physical astronomy on well-defined lines. Halley, Laplace, Herschel, and other eminent astronomers also added to the further comprehension of the science, and in our own day a vast accumulation of knowledge on this interesting subject has resulted from the improved scientific apparatus and equipment now available.

**Atavism**, the "breeding back" to remote ancestral characteristics, observed in all forms of animal life.

**Athanasian Creed** is named after St. Athanasius, who flourished in the 4th century, and is an exposition of his doctrine of the Trinity and the Incarnation, but is supposed to have been written by Hilary, Bishop of Arles, in the 5th century.

**Atheism** is the denial of the divine, and it assumes three forms—denial of the existence of God, denial that God has been *proved* to exist, and denial of the possibility of knowing of divine existence.

**Atherine**, a pretty little fish found in the Mediterranean and along the south coast of Britain. The latter variety is familiarly styled the sand-smelt.

**Athletics** of all kinds are more generally indulged in to-day than at any former period. In the ancient Greek and Roman times wrestling and running were regular sports, chiefly contested by trained professional men, and great honour was paid to the winners. Euthymus, Milo and Hipposthenes were among the more celebrated "classical" athletes, while Plato, Pythagoras, and Cleanthes were amateur contestants of no mean renown. The Isthmian Games at Corinth, and the Olympian Games on the banks of the Alpheus in the Peloponnesus, were immensely popular; whilst the same kind of games continued to be practised more or less in all countries, from century to century, though perhaps with the keenest zest in England. Here in mediæval times, in addition to wrestling and running, archery, *quarterstaff*, jumping, and other athletic games were much in vogue. The developments in athletics during the 19th century were surprising. At the Universities and the public schools, and in connection with military regiments, industrial establishments, and all kinds of institutions, athletic clubs were formed, while every town, village, and hamlet had its athletic clubs in sufficiently large numbers to afford youths and young men everywhere the opportunity of becoming members. The whole country became interested in athletic sports, and cricket in the summer and football in the winter have their adherents in every nook and corner of the kingdom. France and Germany have also in recent years taken to athletic sports, and in the United States all the English games are played with the addition of baseball, which is the American national game, as lacrosse is the national game of Canada. The defeat of our English polo and lawn tennis champions in the United States were among the events of 1913. During 1915–16 nearly all the principalBritish athletic fixtures were suspended owing to the war, but there was a surprising revival in all fields of athletics in 1919. Women are now more than ever going in for athletics of most forms. See *Sports and Pastimes* section.

**Atlantic Cable Telegraph.** Telegraphs were talked of for some years before an attempt was made to accomplish the feat of laying one. Professor Morse in America suggested the idea as early as 1845, but it was not until 1858 that it assumed a practical shape, Sir Charles Bright succeeding in that year in laying the first cable between Valentia, in Ireland, and Newfoundland. It was 2,500 miles long. From a variety of causes, however, this first cable was not worked with success. A second cable was laid in 1865, the famous *Great Eastern* steamship being utilised on the occasion, but the cable broke in mid-ocean, and for the second time failure had to be written in respect to the scheme for connecting England and America by telegraph. The following year, however, a further attempt was made with complete success, a new cable was laid, and the one of the previous year was picked up and spliced, thus two Atlantic cables were finished at the same time. There are over 16 cables across the North Atlantic. In Oct., 1924, a new cable was completed between New York and the Azores, capable of transmitting 1,700 letters a minute. Cable telegraphy is now being superseded by wireless telegraphy.

**Atom** was, until recently, thought to be the smallest indivisible particle—the unit of matter; but recent work has shown this to be erroneous, and Sir Ernest Rutherford has succeeded in partially breaking up the atom.

**Atomic Theory.** The theory as first put forth by John Dalton at the beginning of the 19th century defines the atom as the smallest mass of an element which has all the characteristic properties of that element by which the latter can be identified. Originally conceived of as being an indivisible minute unit, later theorists separate it again into protons and electrons. However, the chemical activity of the electron appears to be less than that of the atom, so that the older formula seems to hold good in the sense that the atom is the smallest mass of a substance which can retain the essential chemical activities. The most popular theory as to the internal structure of the atom at the present time is probably that of Sir E. Rutherford.

**Atrium** was the central court of a Roman house, uncovered in the centre, usually with a marble tank (impluvium) beneath the opening to receive the water from the gutters of the surrounding roof.

**Attainder** is a term for the taint that attaches to a person or to his estate after he has been convicted of treason or felony and sentenced to death. Since 1833 descent may be traced through an ancestor, and since 1870 no forfeiture results from conviction for treason or felony.

**Attar (or Otto) of Roses** is an essential oil of roses prepared principally in Bulgaria. It takes 200 lbs. of roses to produce 1 oz. of attar, and during the Great European War the wholesale price reached nearly £5 per ounce.

**Attorney**, one who acts for another in legal matters. The term is used in two ways (1) "attorney-at-law," now called "solicitor," who acts for his client and (2) all agents employed in any business or to do any legal act for another, or under special authority by deed then called "power of attorney." Attorneys cannot appear for clients in a superior court.

**August**, named after the Emperor Augustus, because it was his "lucky" month.

**Auk** is the name given to a genus of swimming birds now extinct. It lived in the temperate region of the North Atlantic, and bred largely on S. Kilda. The female laid only one egg a year. The eggs, of which some 66 or 67 are known to exist, realise very large prices when offered for sale.

**Aulic Council**, the personal Council of the old

German Emperors, superseded by the Confederation of the Rhine in 1806.

**Aurora Borealis,** or Northern Lights, are seen both in the Northern and Southern Polar regions. The centre of the meteoric arch corresponds probably with the magnetic north, and the phenomenon is generally seen two or three hours after sunset. It is constantly moving, but may remain visible for several hours. When the rays are very bright, they are of varied colours—green, rose, violet, etc.

**Austerlitz, Battle of,** was fought near Brunn, in Moravia, on December 2, 1805, when Napoleon, with 70,000 men, defeated the forces of Russia and Austria, numbering 95,000.

**Auto-da-Fé,** or Act of Faith, was the ceremony connected with the execution of heretics under the Inquisition of Spain and Portugal, the persons condemned being burned alive. The king and court generally attended in state.

**Automata** are self-moving machines worked by invisible mechanism, and have existed since ancient times when Archytas of Tarentum invented an automatic pigeon. The most perfect constructor of modern automata was Vaucanson, who, about 1740, invented a flute-player and a duck that could eat, drink, and quack. Kempelen's chess-player was a celebrated automatum that attracted much attention in the early part of the 19th century. In toyland, automatic contrivances of a very ingenious kind are common. In recent times Mr. Maskelyne has made and exhibited in London automata of wonderful ingenuity.

**Autonomy** denotes the right of self-government, and was first used in reference to the municipalities of ancient Greece, where the right of separate government was allowed.

**Auto-suggestion,** a process of conscious suggestion to one's own mind and allied to self-hypnotism. The great exponent of auto-suggestion in recent times was Monsieur Emile Coué, who will be remembered by his popular catch-phrase: "Every day and in every way I am (so and so)."

**Autumn,** the third season of the year, begins with the autumnal equinox about September 22, and ends on December 21, but the term is generally understood as covering the period between the middle of August and the middle of November.

**Avalanches** are of four kinds. (1) Powdery avalanches consisting of snow which has become loose and dry from long frost. (2) Creeping avalanches, which are loosened by Spring, but being on a gentle slope, creep down slowly by the force of their own weight. (3) Glacier avalanches, masses of ice which split off in summer with a great noise, and go tearing down a precipice to be smashed to pieces at the bottom. (4) The real avalanches of huge accumulations of snow, which are hurled over almost perpendicular walls of rock into the valleys beneath.

**Avalon** is the earthly paradise of Celtic mythology.

**Avebury Temple,** a famous Druidical ruin—probably of the late Stone Age—near Marlborough.

**Aventine,** one of the seven hills of Rome.

**Avernus,** a lake in Italy whose vapours were supposed to be fatal to birds, and whose sides were so steep that it was deemed the entrance to Hades.

**Avesta,** the title of the sacred books of the Parsees.

**Aviation.** (See **Aerial Warfare.**)

**Avoirdupois** (avoir du pois, "goods of weight") is used in the United Kingdom for everything except metals, precious stones, and drugs.

**Axe,** one of the first tools devised by primitive man in all parts of the world. Axes of stone, bronze, and rough iron have been found in the geological strata.

**Axiom,** a statement of general truth which admits of no dispute.

**Azrael,** the angel of death of the Turks and Arabs.

**Aztecs,** the name of a native and powerful race found in Mexico when the Spaniards first discovered that country and with difficulty subdued.

**Azymite,** an ecclesaistical term denoting such as insist on the use of unleavened bread in the administration of the Sacrament of the Lord's Supper.

## B

**Baal,** the god of the sun, and meaning lord, or master, was worshipped by the ancient Chaldeans, Phœnicians, and Assyrians.

**Babel, Tower of,** described in Gen. xi. 9, the erection of which led to the confusion of tongues.

**Babirôussa,** a ferocious wild pig, native of the Celebes, sometimes called the horned-hog, from the fact that the long upper tusks, growing upwards, pierce the upper lip and curve backwards like the horns of some of the ruminants. It is longer-legged than ordinary swine.

**Baboo,** a term signifying "Mr." or "Sir" among Bengali Indians, and often used to indicate a native who tries ineffectively to write English, hence the expression Baboo-English.

**Baboon,** a species of monkey, ranking next to the apes, with short tails and large heads. The common baboon is a native of Guinea.

**Babul Tree,** an Indian tree of the acacia order, yielding an extremely hard wood largely used for railway sleepers, and also producing an edible and medicinal gum.

**Babylonian Captivity** of the Jews captured by Nebuchadnezzar at the taking of Jerusalem in 586 B.C. lasted upwards of 50 years, until Babylon was in turn taken by Cyrus.

**Baccarat,** a French card game played by any number of bettors and a banker.

**Baccharis,** an oil-yielding plant, of many species, widely distributed over the Western Hemisphere. Plowman's spikenard is perhaps the best known variety in this large genus, and the resinous product of local species is used medicinally in Brazil for febrile and rheumatic disorders.

**Bachelor,** an ancient word of obscure origin and varied meaning. Was early in use in connection with University degrees. Pope Gregory IX. introduced the term to denote the passing of the first grade in the academic course in the University of Paris in the 13th century. Later it was applied to single men generally, and in some countries taxes have been imposed on men who remained bachelors.

**Bacillus,** the leading division of the group of minute plants named bacteria, and including the *tubercle bacillus*, the cause of consumption. Other bacilli are the *bacillus diphtheria*, causing diphtheria; *bacillus pestis*, causing the plague; and others, including leprosy, glanders, etc. (See **Bacteriology.**)

**Baconian Philosophy,** the inductive philosophy of which many maintain that Lord Bacon was the founder; more widely "Baconian" means anything pertaining to Francis Bacon, Lord Verulam (1561–1626). (See the *Biographical Section* of "Pears' Cyclopædia.")

**Bacteriology** is the science of Bacteria, founded by Pasteur, and comprising what is called the "germ theory" of disease. Dr. Koch has been another eminent worker in the same field, and the discoveries resulting from scientific effort in this direction are of the utmost importance. Bacteria are the causes of fermentation and putrefaction, and in time, as far as disease is concerned, may be exterminated. To experiments in the science of bacteriology we owe our fuller knowledge of sanitary principles and of preventive hygiene as well as of the active principles of agriculture, brewing, etc.

**Bactris,** a genus of palms common in the marshy places of the tropics and certain parts of America. The long slender stems are largely converted into walking-sticks. The Tobago-cane is a bactris exported from Jamaica.

**Badger,** a carnivorous animal of the Otter family, but very easily tamed. Of nocturnal and burrowing habit. Badger-hunting is an exciting sport.

**Badges** are a part of heraldry, and in early times usually bore some allusion to the wearer's name or office, or some incident in his career, and were worn by retainers as a kind of livery. Distinctive badges are worn by officers of every rank in the Navy and Army.

**Bagavel,** a right of levying duty on all goods entering Exeter city for sale, granted by Edward I., the proceeds to be devoted to public purposes.

**Baggala,** a two-masted boat of about 200 tons burden, used in the Arabian seas for commerce

and formerly for piracy; "dhow" was an alternative name given to these fleet vessels.

**Bagiments Roll**, was the record by which the Scottish clergy were taxed prior to the Reformation.

**Bagous**, a genus of marsh beetles, of the weevil family; there are several British species.

**Bagpipes**, a musical wind instrument, chiefly played in Scotland and Ireland, and comprising bellows and pipes. In Assyria, India, and China a form of bagpipes was in use in ancient times, and in Italy they are common at the present day. All the Highland Regiments have their bands of pipers.

**Baikalite**, a dingy green mineral, found near lake Baikal in Asiatic Russia; it is a variety of pyroxene, allied to sahlite.

**Bailey**, comprised all the space within the outer walls of a castle except the keep.

**Baille**, is a Scottish term for the magistrate of a municipal corporation or royal burgh.

**Bailiwick**, an ancient legal term denoting the limits of a bailiff's jurisdiction.

**Bairam**, a festival in Mohammedan countries.

**Bakshish**, the Eastern term for "a present" or gratuity; its bestowal is very often cunningly contrived by servitors or officials.

**Bala Beds**, the Silurian group of rocks near Bala, N. Wales, composed chiefly of sandstones and shales and rich in limestone fossils.

**Balance**, a form of lever supported in the centre, and having scales at each end for ascertaining the weight of a substance or goods. Stability and sensibility are the two chief requisites of a true balance; the first characteristic returning the balance to its original position after a weighing has occurred, the second showing a response to the slightest action.

**Balcony**, a projecting portion of a house, of stone, wood, or iron. Known to the Greeks and Romans, and now general in Italy. Introduced into England in the 16th century.

**Baldachin**, the silken canopy used in Roman Catholic processions and carried over the Host. Some are of great size and stationary, that in St. Peter's at Rome being over 120 feet high.

**Baldrick**, an ornamental belt worn across the shoulder or round the waist, to support bugle or sword.

**Bâle, Council of**, lasted from 1431 to 1443, and included several meetings of Roman Church dignitaries, the object being to reconcile the Hussites.

**Balearic Crane**, the crowned crane of the Balearic Islands in the Mediterranean and the North African mainland, distinguished by its yellowish, black-tipped occipital tuft and by its trumpet note.

**Baleen**, the name given to a series of horny plates growing and hanging from the palate into the mouth of certain species of whales.

**Balista**, a large military engine, of crude contrivance but considerable effectuality, anciently used for hurling missiles in war by the Romans and others.

**Ballad**, a term used originally in regard to popular songs of war or romance, and only properly applied to folk compositions in narrative form such as those included in Bishop Percy's famous *Reliques of Ancient English Poetry*. Scott, Lewis, Coleridge, Keats, and in later times Tennyson and Swinburne, have all produced effective pieces of the old ballad form. The term ballad is given to songs in general so long as they are simple in theme and construction.

**Ballast**, is weighty matter placed in the bottom of a ship for balancing purposes, and varies in amount with the build, the size, and the cargo of a vessel. Water is now in general use for ballast.

**Ballet** was admitted into the old Greek religious exercises, and also formed part of the Roman pantomime, when a story was represented by ballet action. France adopted the ballet in the 16th century, and it was greatly patronised by Henry IV. and Louis XIV. Ballets were highly popular in the early part of the 19th century in connection with operas and many dancers of note took part in them—Taglioni, Fanny Essler, and others. An active revival of the ballet has taken place in Europe and America in recent years, consequent mainly upon the passionate and intense style of dancing practised with so much acceptance by members of the Russian ballets, the late Anna Pavlova and Tamara Karsavina being among the chief exponents of this style of dancing, while Maud Allan, the American *danseuse*, has won much fame for impersonation dancing.

**Ballistic Curve**, the actual course taken by any projectile upon discharge.

**Ballistraria**, a cruciform aperture in the walls of a fortress, through which the archers fired arrows.

**Balloon.** (See **Aerial Navigation.**)

**Ballot**, or secret-voting, was in use to an extent under the Greeks and Romans, and was advocated in England in the 17th century, but it was not until the 19th century that the idea was adopted as part of a political programme. Test ballots were taken at Manchester in 1869, and the first London School Board was elected by ballot in 1870. Then followed Mr. W. E. Forster's Ballot Act of 1872, since which date all Parliamentary and municipal elections have been by ballot. Previous to this the ballot system had worked with advantage in Australia, France, and other countries, and in England it makes distinctly for purity of election.

**Balsa**, a fishing raft or boat, used chiefly along the Pacific coast of South America.

**Balsam**, the name of a wide genus of plants bearing handsome flowers. A term given also to certain liquids and substances used as ointments or unguents and mostly obtained from trees. Thus, the old Balm of Gilead was from the bark of certain shrubs growing in Egypt and Arabia Felix.

**Baltimore Bird**, a lively black and orange plumaged starling of the oriole sub-family extending from Brazil to Canada; builds a well-constructed hanging-nest.

**Balusters** are small pillars, short distances apart, made of metal, stone, or wood, used as supports for cornices, etc., or for enclosing stairs. A range of balusters and that which they support are called a balustrade.

**Balzarine**, a light dress material, of mixed cotton and worsted manufacture.

**Bambino**, an image of the Infant Christ in the church of the Ara Coeli at Rome, and supposed to possess miraculous powers.

**Bamboos**, a genus of strong grasses, growing from 50 to 60 feet high, and much used by the Chinese for all kinds of purposes. The shoots of some species are tender and esculent; the short canes are used as walking sticks.

**Bampton Lectures** were instituted by the Rev. John Bampton, who left £120 a year (since considerably increased) for a course of eight divinity lectures to be delivered at Oxford in St. Mary's church every other year and to be published within two months of their utterance. Only Oxford and Cambridge M.A.'s are eligible. The fee for the lectures is now between £150 and £200.

**Ban or Bann**, a proclamation or public notice whereby a thing is commanded or forbidden. Now used to signify publication of intending marriage.

**Banana** (*Musa sapientum*), a large herbaceous plant cultivated in tropical and semi-tropical regions in great abundance, and one of the most productive plants known. The fruit of the banana is the staple food of the natives in many of the Pacific Islands, and of late years has been largely imported into England, great quantities now coming from Jamaica and other West Indian islands. Compared with wheat, the productiveness of the banana is as 133 to 1, and as against potatoes 44 to 1. Fresh bananas to a value of over two millions sterling are now imported into this country. In 1920, the value of bananas from Jamaica alone was about £2,000,000.

**Banco, Sittings in**, those of a Superior Court of Common Law in full session, as distinguished from the proceedings of the judges at *Nisi Prius*, or on circuit. Now business is done by the Divisional Court of the High Court.

**Band of Hope**, an organisation possessing over 30,000 branches, founded in 1855 for promoting temperance principles among children.

**Bandana**, the name given to a red spotted handkerchief usually made of cotton, but formerly only applied to silk handerchiefs of that colour and design.

**Bandicoot**, an Australian burrowing animal, of rat-

like appearance, which carries its young in a pouch. The Indian *Mus giganteus*, as large as a rabbit, is also called a bandicoot. The oriental animal is a grain feeder, and the name signifies really "pig-rat."

**Banner**, a flag indicating rank, office, or command, including the standard or national banner, regimental colours, a ship's flag, pendant, ensign, etc.

**Banneret**, a grade of knighthood conferred by the sovereign for some heroic act on the field of battle, and so called from the fact that the knight was given a banner in exchange for his pennon.

**Bannock** is cake made of barley meal, much favoured in Scotland, and distinct from the cake of oatmeal.

**Banns of Marriage** are public proclamations of intention of marriage, and must be announced in church on three successive Sundays; then, if no just cause or impediment be advanced against the union proposed, it can take place at any time within three months. This may be dispensed with by licence of any Bishop or Archbishop or by special licence of the Archbishop of Canterbury.

**Banshee** is a figure in Irish superstitions, supposed to give warning of death.

**Bantu** is the name of a group of African languages spoken by Zulus, Kaffirs, and others.

**Banyan** is the name of a curious tree of India and Ceylon. Its peculiarity is that it throws off shoots from its main branches that grow down and take root in the ground as separate stems.

**Baobab**, or Monkey-bread tree, is found in West Africa. Its trunk sometimes attains a girth of 70 feet, and there are specimens supposed to be thousands of years old. Yields a pulpy fruit from which a drink is made, and the dried leaves are eaten.

**Baptism** is a rite practised, either with infants or adults, by almost all Christian sects except Quakers. In the Church of England the baptism of infants is regarded as the act by which they are admitted "into the visible Church of Christ." The Baptists perform the rite only with adults and by the immersion of the entire body.

**Baptistery**, a building or portion of building devoted to the rite of baptism. The most famous baptisteries are those of Florence and Pisa, erected in the Middle Ages, which are detached from their mother churches.

**Baptists** came into notice at the Reformation. For a time they suffered much persecution, but gradually made headway by their zeal and sincerity. To-day this sect is spread over all parts of the Protestant world, though not always in large communities. They are strong in the United States. Throughout the world the Baptists have over 7,000,000 communicants, over 400,000 being in England and Wales.

**Barbarian** in the times of ancient Greece meant anyone who could not speak Greek. Now the term is applied to savage or uncivilised people generally.

**Barbary Ape** is a small species found on the rock of Gibraltar, its ancestors having probably been brought from Barbary. It is the only kind of monkey existing in Europe.

**Barbel**, a European river fish, deriving its name from a sort of beard hanging from its jaw.

**Barberry**, a berry-producing shrub, typical of the genus Berberidaceæ. Grows in a large compact bush, and bears bright red berries growing in clusters.

**Barbers** are an ancient and honoured fraternity. There was a Guild of Barbers long before 1308, when we get the record of Richard le Barbour being appointed Master, to have "supervision over the trade." In the time of Edward IV. they were the only persons who practised surgery; hence the old title barber-surgeons. The London Barbers were incorporated in 1462, and a rival Company of Surgeons of London was afterwards set up. In time the latter only were permitted to act as surgeons, although even then the barbers might follow "blood-letting and drawing teeth." The barber's pole is a relic of the barber-surgeons' days, the filet representing bandaging.

**Barbette**, an elevated platform in fortresses or on war-vessels from which heavy guns are fired.

**Barbican**, a fortified entrance to a castle or city, with projecting towers. In the London street called Barbican there was formerly a barbican in front of the city gates.

**Barcarolle**, a Venetian gondolier's song applied to instrumental as well as vocal compositions.

**Bard**, among the ancient Celts a poet or minstrel whose mission was to sing of heroic deeds. They were supposed to have the gift of prophecy, and were exempt from taxes and military service.

**Barebones' Parliament**, so called from the nickname of one of its members, "Praise-God Barebones." It was specially selected by Cromwell, and sat from July 4, to Dec. 13, 1653.

**Barges** are generally flat-bottomed boats, but the term is applied to most slow-moving river boats, from royal state barges to house-boats, and sometimes to "lighters" and "keels" employed in canal and other waterway goods traffic.

**Barilla**, a soda carbonate obtained from the burning of plants in salt marsh lands, once in great demand but now little used, having been superseded by a carbonate produced from common salt.

**Barium**, a metal usually occurring as sulphate of barium and carbonate of barium, but only obtained by powerful action. Sir Humphry Davy having passed a strong electric current through chloride of barium to obtain it. It is white, lustrous, and heavy.

**Bark**, the external covering of trees, comprises the cuticle or *epidermis*, the outer bark or *cortex*, and the inner bark or *liber*. It is applied to many uses, and numerous kinds, rich in tannin, are utilised for tanning purposes. Various species of oak bark are most used in Europe; in North America, the hemlock spruce; and it is the presence of pasture and hemlock spruce forests round Quebec that has caused large leather trade. Many barks are used as medicines.

**Barley**, a cereal plant whose grain is chiefly used for malting purposes. There are several species, but in the United Kingdom the spring barley, the long-eared, and the winter kinds are mostly cultivated.

**Barlow Lens**, a modification of the object-glass of the telescope, increasing its magnifying power without the loss of light which would ensue from the use of an eye-piece of shorter focus. Named after Mr. Peter Barlow, Professor of Mathematics at Woolwich, 1808–1847.

**Barnacle** is a kind of crustacean, often found in large numbers attached to the bottoms of ships, rocks, or timbers, under water. There is also a species of goose called the barnacle.

**Barometer**, an instrument for measuring the weight of pressure of the atmosphere, and was invented at Florence by Torricelli, pupil of Galileo, in 1644. Ordinarily, it is a glass tube 3 ft. long, filled with mercury, and inverted into a vessel also containing mercury, this causing the liquid in the tube to descend a few inches, leaving a *vacuum* at the top. The pressure at all points in the same horizontal plane of a liquid being equal, the surface of the mercury, after the inversion of the tube, cannot remain in one plane as when the atmosphere is pressing equally, but must rise when the air gets heavier and fall when the air get lighter. Gay-Lussac's barometer is siphon-shaped, with two scales graduating in opposite directions to a zero point; Bunter's is a slight improvement on this. (*See also* Aneroid.)

**Baronet**, is a title instituted by James I. The first baronet was Sir Nicholas Bacon, but numerous others were made about the same time, the fee charged for the honour in each case being £1,000. It is the lowest of hereditary titles, and is pretty freely dispersed among those who distinguish themselves in trade, industry, politics, or special civic service. James I. placed the limit of number of baronets at 200. To-day there are in Great Britain over 1,500.

**Baron of Beef** is a double sirloin, not often seen in these days, but common in olden times at court and civic feats.

**Barons.** The first baron created by letters patent in this country was John Beauchamp de Holt, Baron of Kidderminster, on Oct. 10, 1387. Of course there were barons long before that,

but the origin of the rank is more or less lost in antiquity, along with that of the name. It has been derived from the Latin "baro," signifying "a simple or foolish man, a blockhead." The old German "bar," meaning "man," is considered more probably the origin. Skeat connects it with the verb "to bear," suggesting that the first meaning was "bearer," "porter." In old legal diction, "baron et feme" merely meant "man and wife."

**Barque**, a three-masted vessel without a mizzen top-sail. The term, however, is often applied to almost any small ship.

**Barracks** are buildings for the lodging and accommodation of soldiers, officers and men, and exist in all towns where bodies of troops are stationed. It was not until towards the end of the 18th century that barracks began to be erected, and even down to the close of the French War in 1815 the provision in this direction was very defective. After the Crimean War the barrack system was thoroughly re-organised, and in London, at Aldershot, and in the garrison towns many fine and extensive barracks have been put up in recent years.

**Barrel Organ**, a musical instrument in which the music is made by a barrel or cylinder, set with pins and staples, which rotate so as to open the valves for admitting the wind to the pipes. Though common at one time, they are now largely superseded by piano organs.

**Barricades** are temporary street fortifications usually erected by insurgents at times of revolution, and the most notable have been those of Paris. In 1830, 1848, and during the Commune disturbances of 1871 they were much resorted to, and were the scenes of many sanguinary conflicts.

**Barrister** is a person qualified to practise at the English or Irish Bar. A barrister in practice in England must be a member of one of the four Inns of Court—Lincoln's Inn, the Inner Temple, the Middle Temple, or Gray's Inn. Admission is obtained by passing certain examinations, keeping twelve terms (extending over 3 years), and paying certain fees. The ranks and degrees of barristers are (1) Barristers ordinary, who wear stuff gowns; (2) King's Counsel, who wear silk gowns, and are admitted within the Bar; and (3) Serjeants-at-law, all extinct, no fresh appointments having been made since 1868. The term "Common Serjeant" is still employed in the City of London.

**Barrow** is an ancient artificial earth-mound supposed to be a burial-place. There is one at Silbury Hill, near Marlborough, which covers over 5 acres, and rises to a height of 170 ft. Sometimes they are formed of stones, and receive the name of cairns. The Roman tumulus was of a similar description.

**Bar Sinister**, a term often improperly used to describe the two diagonal lines drawn from left to right, from the sinister chief to the dexter base of an heraldic shield, and supposed to be a mark of illegitimacy. The right term is "bend sinister," and it is not absolutely certain that the illegitimacy interpretation is the correct one.

**Bartizan** is a small battlemented turret at the top of a tower.

**Basalt Rocks** are dark coloured and of igneous origin, and occur either as lava currents, as in Mull and Staffa, or as intrusive sheets, like the Edinburgh Castle Rock and Salisbury Craig. One of the most noted examples of basaltic columns is that of the Giant's Causeway in Ireland.

**Basanite**, a smooth black siliceous mineral, or flinty jasper; a crypto-crystalline quartz, sometimes styled the Lydian Stone. An alloyed metal being rubbed across basanite, the mark of colour left will indicate the nature and depth of the alloy, hence it obtains its name, which signifies, in Greek, "a touchstone."

**Base**, a chemical term denoting that which combines with an acid to form a salt. It is always a compound body, and the oxide of either a metal or of an elementary group possessing the power of a metal.

**Basel, Council of**, was the last of the three great Councils held in 1431–1443.

**Bashi-Bazouks**, irregular Turkish troops, consisting of a rough but brave class of men from the Asiatic p[illegible]

**Basilisk** is a lizard of aquatic habits, with an elevated crest (which it can erect or depress at will) down the centre of its back.

**Basques** are an old race living in the Pyrenees, with a language of their own, different from all other languages, and enjoying ancient privileges of a curious kind.

**Bas-Relief** ("low relief"), a term used in sculpture to denote a class of sculptures the figures of which are only slightly raised from the surface of the stone or clay upon which the design is wrought.

**Bass**, a genus of fish with spiny fins, of the Perch family, found in the sea only in Europe, but inhabiting fresh waters in America.

**Bassoon**, a musical wind instrument of three octaves, the bass of the reed band. Invented by an Italian canon in 1539.

**Bastille**, a term originally used to denote any old French castle, but gaining its chief significance by being the name of the former State prison of Paris, destroyed by the mob on the outbreak of the Revolution in 1789.

**Bastinado**, a beating, administered on the soles of the feet, formerly inflicted with cruel frequency in China, Turkey, and elsewhere in the Orient.

**Bastion**, an earthwork standing out from a rampart, of which it forms a principal part. Usually five-sided, the fifth side opening into the interior of the fortification. The front face of an ancient Roman bastion was generally convex and semicircular.

**Bat**, an order of mammals, with fore-limbs held together by a membrane that serves the purpose of a wing. It has small eyes and large ears, and is of nocturnal habits, only emerging from its concealment at the approach of darkness. Bats are mostly insectivorous. The Vampire-bat, which sucks the blood of sleeping animals, occurs only in South America.

**Bath Brick** is made exclusively at Bridgwater, Somersetshire, and there only because the river Parrett deposits, for a distance of a few hundred yards, the peculiar compound of sand and slime of which its familiar blocks are composed. Farther up the stream the silt contains too much mud; lower down the proportion of sand is too great. Every ebb, therefore, the workmen remove the soil which has been deposited there with the previous tide.

**Bath, Order of**, was established by Henry IV. in 1399, and is the second in rank of English knightly orders, the Garter coming first. At first it was a military order only, but since 1847 has had a civil division also. In the Order are three classes: G.C.B., or Knight Grand Cross of the Bath; K.C.B., or Knight Commander of the Bath; C.B., or Companion of the Bath. Companionship of the Bath does not carry knighthood or entitle to the prefix "Sir." The King is the head of the Order. The badge is a crimson ribbon and star, with the motto "Tria juncta in uno."

**Bathos** is an unconscious lapse from the sublime to the trivial, and is often the result of over-eagerness to be impressive.

**Bath-stone** is a kind of limestone found in quarries near Bath, and of the oolite formation. It is soft and easily worked when "green" from the quarry, and becomes hard with exposure in suitable places.

**Batrachia**, an order of amphibians, of which frogs and toads are typical representatives. The young of these animals are tadpoles, and grow from eggs or spawn, at first living entirely in the water. The subsequent developments, including the substitution of lungs for gills, are rapid and interesting.

**Battalion**, a body of infantry, 1,096 strong on a war footing, and organised in eight companies, and commanded by a lieutenant-colonel, assisted by two majors, an adjutant, eight captains, and sixteen lieutenants. Two or three battalions may be combined to form a brigade.

**Battering Ram**, a military apparatus mounted on wheels, and composed of a heavy, iron-bound beam, which was impelled with great force upon the walls of a besieged place.

**Battery**, a number of cannon with their equipment

of men and horses. A field or horse-battery usually comprises six guns, a mountain-battery four 7-pounder guns, a siege-battery four heavy guns. The equipment in men and animals varies, however, according to circumstances.

**Battle-Axe** was a weapon of defence in early times, but superseded by the arrow and spear.

**Battlement**, a raised wall running along the top of a building, with embrasures through which an enemy could be fired upon. At first solely military, later it was frequently used as an architectural ornamentation.

**Battles** involving immense slaughter have been fought in past wars, but recent records reveal a far more serious carnage. In the wars of the French Revolution and those of Napoleon, which surged backward and forward over Europe from 1793 to 1815, it is estimated that the French lost two millions in killed alone. In nine of the battles in which Napoleon himself took part, the losses were as follows:—

| Battle. | | Men engaged. | Killed and wounded. |
|---|---|---|---|
| Austerlitz . . | 1805 | 148,000 | 25,000 |
| Jena . . . | 1806 | 98,000 | 17,000 |
| Hylau . . . | 1807 | 133,000 | 42,000 |
| Friedland . . | 1807 | 142,000 | 34,000 |
| Eckmühl . . | 1809 | 145,000 | 15,000 |
| Wagram . . | 1809 | 370,000 | 44,000 |
| Borodino . . | 1812 | 263,000 | 75,000 |
| Leipzig. . . | 1813 | 440,000 | 92,000 |
| Waterloo . . | 1815 | 170,000 | 42,000 |

In the Peninsular War, England left fifty thousand dead and the French a quarter of a million behind them in Spain. At Salamanca we lost 15 per cent. of our troops, and at Albuera 65 per cent. In the Crimea the total losses of Russia and the Allies were put at 480,000, and Britain lost 22 per cent. of her men; but there were no great decisive battles with enormous slaughter. The American Civil War, which lasted from 1861 to 1865, involved a loss of six hundred thousand men. In the seven months of the Franco-German War, 1870-71, the killed and disabled numbered 371,751. A million Germans and 710,000 Frenchmen took the field, and the following were the casualties:—

| | French. | Germans. | Total. |
|---|---|---|---|
| Killed . . . . | 41,000 | 19,782 | 60,782 |
| Died of wounds . | 36,000 | 10,710 | 46,710 |
| Died of sickness . | 45,000 | 14,259 | 59,259 |
| Disabled . . . | 116,000 | 89,000 | 205,000 |
| Totals . . | 238,000 | 133,751 | 371,751 |

In four of the principal battles the following were the results in killed and wounded:—

| | French. | Germans. | Total. |
|---|---|---|---|
| Woerth. . . . | 32,000 | 11,000 | 43,000 |
| Mars-le-Tour . . | 26,000 | 16,200 | 42,200 |
| Gravelotte . . . | 28,500 | 20,100 | 48,600 |
| Paris . . . . | 30,000 | 13,300 | 43,300 |

In the Russo-Turkish War of 1877-78, with its total loss of nearly 200,000, the only notable battle was before Plevna, when in the course of a protracted siege there fell in a single day 18,000 out of 80,000 Russians engaged. In the Russo-Japanese War many of the battles were of the most deadly character. At the battle of Liau-yang the Russian losses in killed were nearly 20,000 and the Japanese losses about 18,000. At Sha-ho, the Russian casualties were estimated at 60,000, the Japanese at 16,000; and the battle of Mukden, in which nearly a million soldiers were engaged, was even more sanguinary. Battles during the Great War lasted usually several days and the losses were enormous. During the first three months of the war, the German drive for the Channel Ports cost the French in killed, prisoners and wounded, 854,000 men, the British 85,000 and the Germans 677,000. In the first three weeks alone—to the victory of the Marne, the French lost 330,000 killed and prisoners and 280,000 wounded, and most of these casualties occurred from Aug. 21 to 24 and Sept. 5 to 9, that is to say in a period of eight days' fighting. The figures for the total casualties during the Great War are as follows:—

| Country. | Deaths. | Wounded. |
|---|---|---|
| British Empire . | 1,089,919 | 2,400,988 |
| France . . . | 1,393,388 | 1,490,000 |
| Germany . . . | 2,050,466 | 4,202,030 |
| U.S.A . . . . | 115,660 | 205,700 |

**Battue** is the term applied to the modern practice of employing beaters to force game to a certain point where sportsmen are in waiting with guns to shoot it.

**Bauble**, a short stick or wand, surmounted by a representation of a human head, ass-eared, carried by the fools and jesters of olden days.

**Bauxite**, a mineral mainly consisting of the oxides of iron and aluminium.

**Bawbee**, an old Scotch copper coin, equivalent to one halfpenny of to-day.

**Bayeux Tapestry** is believed to have been wrought by William the Conqueror's Queen, Matilda, and represents 72 scenes relating to the Norman Conquest. It is 230 feet long by 20 inches wide, and was executed for Bayeux Cathedral.

**Bayonet**, a weapon taking its name from Bayonne, where it was first made about 1660. It was originally fitted into the gun-barrel, but General Makay, in 1689, introduced the socket-bayonet, which allows the gun to be fired with the bayonet fixed.

**Bay-salt**, a coarse kind of salt obtained from the salt marshes of certain parts of the English and other coasts, and drawn from sea-water allowed to settle in salterns or salt ponds.

**Bay-window** projects and is usually semi-octagonal or semi-hexagonal in plan; the bow-window forms the segment of a circle.

**Bdellium**, a kind of gum-resin formerly used in medicine. It is of bitter taste and strong odour.

**Bdellometer**, a cupping-glass, fitted with a scarifier and exhausting syringe; substituted in surgery for the employment of the living leech, and preserving for examination the blood drawn.

**Beacon**, a fire-signal, given from the tops of hills, was much in use in early times. According to the *Iliad*, Agamemnon thus signalled the fall of Troy to Mycenæ; and the English signalled the approach of the Spanish Armada. On many prominent parts of our coast, and on inland heights, beacon-pans were erected when a French invasion was feared.

**Beads** have been used as personal ornaments from the earliest times, valuable specimens having been found in the tombs of the ancient Egyptians. They are made of various materials, from precious stones to glass. They have been and are much used as objects of barter in dealing with uncivilised races.

**Beagle**, a small hound that racks by scent, and formerly used for hare hunting.

**Beans** are the seeds of certain food-plants of many varieties, and include the common bean, the French bean, the kidney bean, or haricot. India and South America yield special species. All beans possess a high proportion of nutritive qualities, the common bean excelling wheat in that respect. The Greeks and Romans used white and black beans in balloting for magistrates, the black meaning an adverse vote.

**Bear**, a genus of mammals of the *Plantigrade* section of carnivora, using the entire sole of the foot in walking. Found in most parts of the globe except Australia. The common brown bear was once spread over the whole of Europe, including England, but now is confined to the northern forests of Europe and Asia. The black bear of America is nearly allied to the brown species. America has also a larger kind, the grizzly. In the Arctic regions the polar bear forms a distinctive species, and differs from the rest in being exclusively carnivorous. The other bears feed mostly on roots, fruits, honey, etc. Bear-baiting was one of our "Old English sports," but was made illegal in 1835.

**Bear-bind**, the English name for *Calystegia*, a genus of convolvulus, called also "hooded bind-weed."

**Beard** is one of the distinctive signs of manhood, and was regarded as a sacred possession by ancient races. The Jews were proud of their beards and wore them through the days of their Egyptian bondage, though the Egyptians shaved. The Greeks and Romans of the ancient

days mostly shaved, and the term barbarous (beard-wearing) was applied for a long period to people who were considered out of the pale of polite society. Still, beards were largely worn even then, and came to be associated with wisdom. Alexander the Great prohibited beards among the soldiery, and soldiers in all countries have since been generally beardless. Beards have been taxed occasionally, as in Russia by Peter the Great, and at an earlier date in England. In modern times beards have been worn or unworn as a monarch or male leader has, for no particular reason, set the example. Shaving of the beard continues to be largely practised in all ranks of life in this country, though the moustache, once despised by the English, has now been in vogue for many years. Bearded women occur occasionally, and have sometimes been exhibited.

**Beau-ideal** is a conception of the mind of some perfect object free from all shortcomings.

**Bauxite.** (*See* **Bauxite.**)

**Beaver,** a genus of mammals of the *Rodentia* order, with short, scaly ears, and webbed hind feet. Attains a length of from 2½ to 3 feet, and lives in communities where possible, as in North America, constructing dams and habitations. Beavers are found in Russia and Poland. Beaver skins are of considerable commercial value, but are not imported as largely as formerly, other skins besides that of the beaver being now used for hat making.

**Bed of Justice,** the seat occupied by French kings in their House of Parliament, but not used later than 1787, by Louis XVI. at Versailles.

**Bedchamber, Lords of the,** are twelve members of the royal household, who wait in turn upon the Sovereign on State occasions. They are controlled by the Groom of the Stole. Each lord receives £1,000 a year, and the Groom of the Stole £2,000.

**Bedford Level** comprises parts of Norfolk, Suffolk, Huntingdon, Northampton, Lincoln, and Cambridge, generally called the Fens, 70 miles long and 20 to 40 miles broad. It was waste until reclaimed and drained by two Dukes of Bedford in the 17th century, but now is for the most part fertile agricultural land.

**Bedlam** (a corruption of Bethlehem) was a priory in Bishopsgate, afterwards converted into a hospital for lunatics. The asylum was transferred to St. George's Fields, Lambeth, in 1815. The term "bedlamite" came to be applied to any person behaving like a madman. (*See* **Abraham-men.**)

**Bed-mouldings,** the mouldings of a cornice in Roman and Grecian architecture occurring immediately beneath the corona.

**Bedouins** are Arabs who live in tents and are spread over the whole of Northern Africa and Western Asia. They are divided into independent tribes, each governed by its own sheikh. They live on their flocks and herds, rice, etc., and are prone to robbery. Supposed to be the descendants of Ishmael.

**Bedrepe,** an ancient term signifying the day's work in harvest-time exacted from tenants by their over-lord in the feudal period.

**Beds** are of ancient origin, and came in with civilisation. In ancient Egypt, Greece, and Rome they were used, and the form has remained much the same in all ages. The Anglo-Saxons had wooden beds in recesses, the bedding being of straw. The "four-poster," which remained the model for many centuries, was introduced in the 16th century, and many handsome specimens of carved and heavily draped beds of this kind, on which kings and queens have slept, are still preserved. At the Victoria and Albert Museum they show the Great Bed of Ware, capable of accommodating a dozen people, and said to have belonged to Warwick, "the King-maker." It is of oak and bears the date of 1463. Within the last half-century, metal has come into general use for bedsteads—iron, brass, and steel being used. The advantages they possess are many. In the matter of bed equipment—bedding, mattresses, etc.—the improvement has been marked in recent years. The old-time feather-bed still remains for those who appreciate the luxury, but health is best promoted by harder substances.

**Bee,** a familiar family of insects of the *Hymenoptera* order, mentioned in the Bible and by many writers of antiquity, and a most interesting object of study. Aristotle and Virgil in ancient times, and Lord Avebury and Maeterlinck in recent times, have described their industrial queendoms and forms of government. The hives are tenanted by the queen bee; working bees, or neuters, being imperfectly developed females; and drones, males. The workers do all the honey gathering and storing, and the constructing of the cells, which are divided into store cells and egg cells. The queen—and there is but one queen to a hive—only lays eggs and governs, obtaining complete obedience from the workers. The drones form less than one-tenth of the population of the hive, and their lives are over in about three months. At the proper time, and then only, the queen quits the hive for her "nuptial flight," followed by the drones, which gather round her in the air. After impregnation she returns to the hive, and begins to fulfil her mission of egg-laying, depositing egg after egg at the rate of some 200 a day in the cells prepared for them. The eggs which produce the workers are first laid, then those of the males, and finally those of the females. The process of hatching the perfect insect takes about 21 days. When the new queens arise among the newcomers, the old queen tries to destroy her rivals; and where there are more than one young queen, the same enmity exists between them, and in apiculture they have to be separately guarded and liberated singly at wide intervals. Each queen thus attracts a swarm of her own, and other bee colonies get formed in fresh hives.

**Beech.** The common beech is one of the finest of our trees, with massive trunk and smooth, shiny bark. Its horizontal branches, covered with close foliage, make a deep shade. Its wood is rather brittle, but capable of being utilised in the manufacture of many industrial articles.

**Bee-eater,** a pretty bird of the genus *Merops*, frequent in North Africa, and an occasional British visitant. It has a black-bordered yellow patch on the throat; but is mainly brownish-red, with blue markings on the head, and has long greenish tail-feathers.

**Beef-eater,** is the name given to the Yeomen of the Guard. They originally formed part of the guard of Henry VII. The word is a corruption of *buffetier*, one who attends the buffet. Their dress dates from Henry VIII., who, some have said, made them dress in thick costumes so that they might look as fat as himself.

**Beele,** a tool of the pick order, specially designed for the use of miners.

**Beelzebub,** corruption of Baal or Bel, whom the Philistines worshipped at Ekron.

**Beer,** a liquor made by fermentation from malted barley and hops. A similar drink was known in Egypt long before the Christian era, and was probably introduced into Great Britain by the Romans. Beer contains from 2 to 5 per cent. of alcohol. Ale, small beer, and bitter beer are varieties depending on strength and proportion of hops. Porter and stout are prepared like beer, but owe their peculiar flavour to the use of a proportion of malt heated so as to convert part of the sugar to caramel.

**Beer-money** was payment to non-commissioned officers and soldiers in the English army in lieu of beer or spirits, but abolished in 1873 and pay substituted.

**Beesha,** a genus of bamboo indigenous to the Malay Archipelago and Chittagong, having the seeds enclosed in a fleshy pericarp.

**Beeswax,** the secretion of the bee, used for the formation of the cells or honeycomb of the hive; when melted it is what is commercially known as yellow wax, white wax being made by bleaching. Being impervious to water, it acts as a good resistant and is an article of much utility.

**Beeswing,** is a fine filmy tartar formed by age in port and other wines, so called from the fanciful resemblance of the deposit to a bee's wing.

**Beet,** a genus of plants of the *Chenopodiaceæ* order, and a native of the shores of the Mediterranean, but now cultivated as a food, pickle, and vegetable. The leaves of the white beet are used like spinach. The red variety has a thick root, and it is estimated that 12 per cent. of its whole

weight is sugar, hence the rise and growth of beet sugar.

**Beetle,** an order of coleopterous (or sheathed-winged) insects, comprising over 150,000 different species. They possess two pairs of wings, the hinder ones being but rarely used for flight. They mainly remain concealed during day-time, and are found on land, in water, on plants, among stones, in the ground, and in wood. They feed on animal and vegetable matter, and have a value in destroying noxious insects and putrefying substances.

**Beg or Bey** is a Tartar and Turkish title (equivalent to prince, or chief) given to superior military officers and distinguished foreigners. The latter form of the word, bearing an analogous meaning, is commonly met with in Tunis and Northern Africa generally.

**Begum,** a Turkish lady of princess rank, or a female relative of a native Indian ruler.

**Behemoth** is the name of a large four-footed beast referred to in the Book of Job; probably the hippopotamus, but by some considered to be the elephant, and by others the rhinoceros.

**Behring Sea Arbitration,** between Great Britain and the United States, in regard to the seal fisheries, took place in 1893 in Paris, resulting in the sea being declared open beyond the territorial limits, according to the British contention, and in certain restrictions for the preservation of the seals.

**Bel and the Dragon** is the title of certain supplementary chapters to the "Book of Daniel" of an apocryphal character. First appeared in the Septuagint, but the Jewish Church did not accept it as inspired. In 1546 the Council of Trent declared it to be canonical.

**Belfry** was in early times a movable tower used in sieges for defence. Gradually the term was applied to any watch-tower or alarm-bell tower, and finally to any tower where a bell was hung.

**Belgæ,** the name given to the Teutonic and Celtic tribes inhabiting certain parts of Gaul and Britain in and before the time of Julius Cæsar.

**Bell is,** literally, "a hollow body of metal used for making sounds." Bells are usually made from bell-metal, an alloy of copper and tin. Small bells used for interior functions are often made of silver, gold, or brass. Ordinary hand-bells are of brass. From the 7th century large bells have been used in England in cathedrals, churches and monasteries. The largest bell in the world is the Great Bell of Moscow, which weighs 198 tons, is 19 feet high and 60 feet round the rim. It was cast in 1653, but fell down in a fire and remained sunk in the earth until 1837, when the Emperor Nicholas caused it to be placed on a platform, and the interior of it is now used as a chapel. The largest bell in use is another in Moscow which weighs 128 tons. The Great Bell at St. Paul's, cast in 1881, weighs 17½ tons, and is the largest in the United Kingdom. Other gigantic bells are the Great Bell at Peking (53 tons); Nanking (22 tons); Cologne Cathedral (25 tons); Big Ben, Westminster (13 tons); Great Peter, York Minster (10 tons). The Curfew bell is rung in some parts of England to this day, notably at Ripon. The number of changes that can be rung on a peal of bells is the *factorial* of the number of bells. Thus four bells allow 24 and eight bells 40,320. For private houses of any pretensions, hotels, etc., electric bells are now generally in use, the old wire pull-bell being largely superseded.

**Belladona (Deadly Nightshade),** a well-known poisonous wild plant found in Southern Europe and Western Asia. The alkaloid atropine it contains is valuable in medicine, although a large dose is poisonous.

**Bell, Book, and Candle.** To curse by "bell, book and candle" was a form of excommunication in the Romish Church ending with the words:—"Do to the book, quench the candle, ring the bell."

**Belles-Lettres,** a term that embraces all descriptions of elegant literature—rhetoric, poetry, history, criticism, philology, etc.

**Ben, or Beann,** a Gaelic word signifying mountain or "mountain head." It occurs in many places in the British Isles, as Ben Nevis, Ben Lomond. Takes the form of Pen in Wales and Cornwall.

**Benedicite,** the hymn of the three children in the fiery furnace, used in the morning service of the Church of England when the *Te Deum* is omitted.

**Benedictines** are followers of St. Benedict, and have at different times consisted of various religious orders, such as the Cistercians, those of Camaldoli and Vallombrosa, the Silvestrines and the Celestines, also the Prænonstratensians and the Grandmontensians. They were introduced into England at the beginning of the 7th century, and were called the Black Monks (not to be confounded with the Black Friars, who belonged to the Dominican order) because of the colour of their dress. Several Benedictine monasteries and convents still exist in the kingdom. There were also Benedictine nuns.

**Benedictus,** a canticle used in the morning service of the English Church, and deriving its name from the first word of the Latin version, *Benedictus,* blessed.

**Benefit of Clergy,** a privilege allowed in ancient times to clerkymen offenders, exempting them from punishment by the ordinary courts and leaving the bishop's court to deal with them. The privilege was extended in Tudor times to all who could prove their ability to read, and Ben Jonson was among those who took advantage of this easy ordeal, after he had killed a man in a duel. Elizabeth withdrew most of the old privilege, however, and in 1827 the system was entirely abolished.

**Benefit Societies.** (*See* **Friendly Societies.**)

**Benevolence,** a name given to demands made by certain English kings for loans from subjects or corporations. Abolished in 1688.

**Benewith Tree,** the old name of the honeysuckle on both sides of the Scottish Border.

**Bengal Light** is a blue signal-light, used at sea in time of shipwreck. It is of nitre, sulphur, and the black sulphide of antimony, in proportions of 6, 2, and 1 respectively.

**"Bennet Biscop"** (the 12th January) is the anniversary of the English St. Benedict, usually called Bennet Biscop. He first introduced Gregorian music, glass-making, mullioned windows, and painting, and was foster-father and tutor of the Venerable Bede.

**Benthamism,** the philosophy of Jeremy Bentham, the essential principles of which were that the end and aim of human life is happiness, as exemplified in the presence of enjoyment and the absence of pain. Communities and individuals, it taught, should strive after the greatest happiness of the greatest number, the effort to achieve the greatest good of all being accounted in itself the highest morality.

**Benzene,** a compound of carbon and hydrogen, discovered by Faraday, and the starting-point in the production of aniline dyes.

**Benzoic Acid** is produced by heating gum-benzoin and condensing the vapour, and by other means. Of use in bladder diseases.

**Benzoin,** a gum-resin used in perfume making, and obtained from an East Indian tree (*Styrax benzoin*). Has numerous commercial uses, and is employed medicinally in chronic lung complaints.

**Berberine,** a basic substance, extracted from the bark of the greenheart tree of Guiana, valuable medicinally as a febrifuge and tonic in substitution for quinine.

**Berbers** are the inhabitants of the mountainous parts of Barbary and the northern portion of the Sahara, who are supposed to be the descendants of the aborigines of North Africa. They live mostly in the fastnesses of the Atlas Mountains, and number about 4,000,000.

**Bergamot,** an essential oil obtained from the rind of a species of citrus grown in Calabria, and largely used in perfumery.

**Berlin Congress,** held at the conclusion of the Russo-Turkish War of 1878. All the European Powers were represented, and the Treaty of Berlin was the result.

**Berlin Decrees,** issued by Napoleon I. in 1806, with the avowed object of destroying the commerce of Great Britain, by setting up a state of blockade against this country.

**Beryl,** a mineral, of which the emerald is a variety. Is yellowish, greenish-yellow, or blue, and is found in veins which traverse granite or gneiss, or embedded in granite, and sometimes in allu-

vial soil formed from such rocks. Transparent specimens of this lapidary's gem are found in Brazil, of the best aquamarine description. The beryl of Scripture was probably the chrysolite or topaz.

**Berzelium,** a chemical element resulting from thorium dioxide, and possessing immense illuminating power. Dr. C. Baskerville, of North Carolina, was its discoverer, and gave it its name in honour of Berzelius, the Swedish chemist who discovered thorium.

**Bessemer Process,** a metallurgic process superseding puddling with certain descriptions of cast-iron, and for the manufacture of steely iron for many purposes. First disclosed before the British Association in 1856; the process consists in the forcing of atmospheric air into molten cast-iron.

**Betel,** the leaf of an Indian climbing plant, of pungent, narcotic properties; much used by the natives of India, who chew it. It is destructive to the teeth, and reddens the gums and lips.

**Bethlehem,** the birthplace of Jesus and of King David, is now an inwalled village of white stone houses, about six miles south of Jerusalem. Famous for its Church of the Nativity, built like a cross, and below which is a crypt where the Saviour is said to have been born.

**Betting** is largely indulged in to-day, and exists among all nations. Numerous prohibitive laws have been passed in England with a view of minimising the evils of the practice; but so long as horse-racing remains a national pastime, betting is not likely to decline, it being in connection with racing events that betting is chiefly carried on. Professionalism, as evidenced in the operations of bookmakers and tipsters, is an element of harm, but such people have no legal status. Betting houses have not had legal existence in England since 1853, and since 1874 advertisements of such houses, whether in or out of the kingdom, have been illegal. No restrictions are placed, however, on betting on racecourses and at private clubs, so that betting continues among all classes; several "bookmakers"—operating on some sort of system that precludes the possibility of serious loss—having made large fortunes. The first to adopt any special method in betting was William Ogden, in 1793. In France, in order to discourage bookmaking, a mechanical system called the Pari-Mutuel is sanctioned, which practically constitutes a lottery. Very large sums are frequently staked in England on the racing of horses, and many have been ruined by the craze. Apart from racing, many odd bets are recorded. A man named Corbet, in the knee-breeches days, laid and won his bet that his leg was the handsomest in the kingdom. In George II.'s reign a bet was made that the slums of London could produce an uglier man than Heidegger, the King's Master of the Revels, and an old hag of St. Giles was produced who seemed to outdo the German in hideousness, but on a woman's bonnet being placed on Heidegger's head the palm of ugliness was at once awarded to him. Sir Mark Sykes, a Yorkshire baronet, was giving a dinner party in 1809, and, the conversation having turned upon Napoleon and the risks of assassination he ran, Sir Mark offered to pay any one, who would then and there give him 100 guineas, a guinea a day as long as Napoleon lived. A clergyman, named Gilbert, took the bet, paid the money down, and for three years continued to receive his guinea a day; then the squire repudiated the transaction, there was a law-suit, the baronet winning. Street betting is prohibited by the Street Betting Act, 1906. Any person frequenting or loitering in streets or public places for himself or another is guilty, and liable to imprisonment after a third offence. Bets are irrecoverable at law by S. 18 of the Gaming Act, 1845. Under the Gaming Act, 1922, money paid by cheque for bets cannot be recovered. The electric Totalisator was introduced in 1928–29. The first report of the Racecourse Betting Control Board showed that over £534,281 were laid on in bets in 76 days. The government receipts on the Betting Tax are over £2,000,000 per annum.

**Bhang,** a hemp plant containing highly narcotic and intoxicating properties. The natives of India chew its leaves and seeds, and the drug called *hashish* is yielded by the plant.

**Bible**—The Old Testament and the New Testament. The Old Testament—the prehistoric portion—consists of 39 books, and is divided into three parts: (1) the Law, (2) the Prophets, (3) Miscellaneous Writings. The Hebrew text as now printed is called the Massoretic. The apocryphal books, excluded from the Bible used by the Protestants, are accepted by the Roman Catholics. (*See* **Apocrypha.**) What is called the King's Bible, on which the Coronation oath is taken, includes the Apocrypha. The books of the New Testament were written in Greek, and are believed to be the work of the Apostles, or contemporaries, but there is no definite knowledge on the subject. The whole Bible was translated into Latin (*Vulgate* version) about 400 A.D. Portions were translated into the Anglo-Saxon in the 8th century, and the Venerable Bede put the greater part of St. John's gospel into English, but it was not until 1536 that a complete English version appeared—the Coverdale Translation. The Authorised Version dates from the reign of James I. A Revised Version belongs to recent days (New Testament, 1881; Old Testament, 1885), but it has not entirely displaced the Authorised Version.

**Bible Christians,** a sect founded in Cornwall in 1815 by Mr. W. O. Bryan, a local preacher in the Wesleyan body. It obtained a large following, chiefly in the south-west counties of England, and was credited in 1851 with 482 places of worship, with a congregational aggregate of 34,612 at evening service on a given Sunday. It has now amalgamated under one governing body—the United Methodist Church—from the end of 1907 forward with the Methodist New Connection and the United Methodist Free Church.

**Bible Society** is an association founded specifically with the object of translating, printing and circulating the Scriptures. Certain other societies have combined this object with the circulation of other Christian books, e.g. the Society for Promoting Christian Knowledge (founded 1698) and the Religious Tract Society (founded 1799). In 1710 Baron Hildebrand von Canstein founded at Halle, in Saxony, the Institute which was perhaps the earliest Bible Society in the specific sense: it still functions as the Canstein Institute. Our British and Foreign Bible Society was founded in 1804 and became the mother of a numerous offspring, the chief of which are the American Bible Society (founded 1816) and the National Bible Society of Scotland (founded 1861). The B.F.B.S. has issued over 430,000,000 copies of the Holy Scriptures (complete and in portions) printed in 655 languages and dialects. In 1930 it circulated 11,888,226 books, including 1,704,487 in English. During the past twenty years it has, on the average, issued the Scriptures in a new translation every six weeks.

**Bibles with Nicknames.** Among the earlier versions of the Bible were many instances of curious misprints, and for the more scarce of these Bibles, nicknamed from their errors, a large price is realised whenever one is offered for sale. The Vinegar Bible in the late Duke of Cambridge's sale derived its appellation from the misprinting of the word "vinegar" for "vineyard." The Breeches Bible, also known as the Geneva, was issued in 1560 with a preface by Calvin; it owed its name to the mention of a garment not usually associated, out of Scotland, with women—a garment now known as "aprons," Genesis iii. 7. Mr. Gladstone had a copy of the Bishop's or Treacle Bible in his library at Hawarden. It was printed by Richard Jugge in 1572, and Jeremiah viii. 22, in it runs, "Is there not tryacle at Gilead; is there no phisition there?" And this volume has the variorum rendering, Judges ix. 53, of "All to break his head" as "All to break his brayne panne." In another edition the rendering is, "But a certaine woman cast a piece of millstone upon Abimelech's head and brake his braine pan." Lord Haddington has a copy of the "Treacle Bible" in his pew in Tyninghame Church, North Berwick, together with copies of the Bug and Breeches Bibles; and a copy was sold at Lord Ashburnham's sale,

June, 1897. An early issue of the Bug Bible in 1551 gives Psalm xci, 5, as "need to be affrated for any bugges by night," but the issue of 1560 has "afraid" for "affrated." The modern word "terror" was not the first substituted, "feare" appearing in the issue of 1608. In one Bible the word "rosine" was used where "balm" now occurs, with a note "For at Gilead did grow most souveraign balme for wounds." Of Bibles which are rare, that of 1551 is sometimes said to be the scarcest. In 1661, what has been styled the "Wicked Bible" was published, receiving the name from its having the word "not" omitted from the Seventh Commandment. A similar error occurs in a small pearl Bible of 1653, in which St. Paul is represented as asking "Know ye not that the unrighteous shall inherit the Kingdom of God."

**Bibliomancy,** divination by certain references at hazard to pages, lines, or verses of the Bible, and frequently resorted to in olden times.

**Bicycle,** a two-wheeled machine (successor to the velocipede of three wheels) which came into vogue about 1880. It consisted of one high wheel driven by pedals, and a small connecting wheel behind. In its present form, with two wheels of even circumference, pneumatic tyres, and effective gearing, it has been widely adopted by men and women of all classes. The motor-bicycle is the latest form of this road machine.

**Bilboes,** a word derived from Bilbao, in Spain, are long bars of iron, secured by a lock, and used for imprisoning offending sailors on board ship. The bars clasp the feet. The punishment is styled "putting in irons."

**Bill,** in Natural History, is the horny, lipless, and toothless jaw of a bird, the upper and lower portions being generally equal, except in birds of prey, when the upper is longer. The bill is used for seizing and dividing food, for fighting, nest-building, etc.

**Bill of Rights,** or Declaration of Rights, was the document setting forth the conditions upon which the British throne was offered to William and Mary in 1688. This was accepted and ultimately became an Act of Parliament.

**Billeting** is a system of feeding and lodging soldiers and their horses by quartering them on the inhabitants of a town. It is a privilege that can be compelled to be granted.

**Billiards,** a game played on a rectangular table with cues and balls. Louis XIV. made it fashionable. The earliest English description of it is in Cotton's "*Compleat Gamester*" (1674). Among the most famous scorers are Roberts, Bennett, Peall, Taylor, Dawson, Stevenson, Reece, Inman, Falkiner, Newman and Smith, who recently made a record break of over 2,700. The present champion is J. Davis. (See Pears' *Dictionary of Sports and Pastimes.*)

**Binnacle,** a table or box on which the compass of a ship is placed, and stands in front of the steering apparatus and steersman.

**Biograph,** (*See* **Kinematograph.**)

**Biology,** deals with the phenomena of living matter, describing its properties, growth, changes and conditions. Starting with the protoplasm, it traces the operations of life through the various classifications, the metamorphoses undergone in plant and animal life, and their development, distribution, organism, and functions. The study of biology has in recent times been advanced in all directions—by naturalists, zoologists, botanists, physiologists, pathologists, and others—and, studied as a whole by Darwin, Huxley, Tyndall, Wallace, and other brilliant scientists, now fills a large space in the scientific work of the time. Darwin's *Origin of Species,* formulating the theory of evolution in plants and animals, greatly broadened the scope of biological inquiry, and led to a better comprehension of the causes of variation.

**Birch,** a genus of forest trees of the alder order, and only found in northern regions. In Britain the birch grows to goodly proportions, and forms one of the most graceful of our trees, with its drooping branches and egg-shaped leaves. It has a white bark, which is used for tanning, steeping nets, sails, etc. The Red Indians make canoes of it.

**Birdlime** is an adhesive substance placed on twigs of trees, walls, wire netting, or elsewhere, to trap birds, and is prepared from the middle bark of the holly, mistletoe, or distaff thistle. It is also made from flour admixed with other adhesives.

**Bird of Paradise,** a bird allied to the crows, found almost exclusively in New Guinea, the males having the most beautiful plumage of long branching feathers.

**Birds,** or Aves, are, next to mammals, the highest order of animal life. They are vertebrate, warm-blooded, oviparous, are covered with feathers, and possess wings. In construction they vary greatly, according to their classification and their conditions of life. Birds are of three distinct classifications—*Carinatæ,* possessing keeled breast-bones and having power of flight; *Ratitæ,* having raft-like breast-bones, and incapable of flight; and *Saururæ,* a lizard-tailed genus, of which only one species has been known—the extinct archæopteryx.

**Biretta,** a four-cornered head-covering worn by ecclesiastics of the Roman and English Churches and varying in colour according to the rank of the wearer. A cardinal's biretta is red, a bishop's purple, a priest's black.

**Bishop** is a Christian ecclesiastic or officer exercising supreme spiritual authority in the diocese or province to which he is appointed. In the Church of England there are at present 46 bishops, all nominated by the Crown. Two of these are archbishops—Canterbury and York. The bishoprics are as follows:—Archbishop of Canterbury, salary £15,000; Archbishop of York, £9,000; Bishop of London, £10,000; Durham, £7,000; Winchester, £4,500; Ely, £4,000; Bath and Wells, Oxford and Salisbury, each £5,000; Carlisle, £4,500; Lincoln, £4,500; Norwich, £4,200; Peterboro, £4,500; St. David's, £2,400; Gloucester, £4,300; Bangor, Chester, Chichester, Hereford, Litchfield, Liverpool, Manchester £4,200 each; Rochester, £4,000; Ripon, and Worcester, £3,900 each; Birmingham and Southwell, £3,180 each; Newcastle, £3,400; Exeter, £2,800; Southwark, Truro, and Wakefield, £3,000 each; Bristol, £2,577; St. Albans, £2,500; and Sodor and Man, £2,000. In 1914 three new bishropics were established, Sheffield, Chelmsford, and St. Edmundsbury and Ipswich; in 1918 Coventry and Bradford were similarly honoured, each of the five with a salary of £2,500. The Archbishops of Canterbury and York, and 24 bishops in the order of seniority, sit in the House of Lords. The (Disestablished) Church of Ireland has 2 archbishops, each receiving £2,500, and 11 bishops, and the Episcopal Church in Scotland 7 bishops. There are 92 Colonial bishops. The Church of Wales was disestablished in 1920.

**Bismuth,** a brittle, reddish-white metal found in various rocks, and readily fusible. Melts at a temperature of about 260° C.

**Bison,** a ruminant animal, comprising the European and the American bison. The former is found in Lithuania and the Ural and Caucasus Mtns. The American bison is practically extinct in its wild state.

**Bittern,** a bird of the heron genus, with long, loose plumage on the front and sides of the neck. It is a solitary bird inhabiting marshes, but rare in Britain.

**Bitumen,** a combustible mineral substance, the term embracing various mineral (so-called) oils and resins, such as naphtha, petroleum, mineral pitch, asphalt, mineral caoutchouc, etc. Of the bitumen-impregnated resins, the most economically important—Elaterite—is only found in the Odin lead mines, in Derbyshire, in a coal mine at Montrelais in France, and in a coal mine near South Bury in Massachusetts; it is used for embalming.

**Bivalves,** a term applied to shell-fish whose shell consists of two valves, lying one on each side of the body, such as mussels, oysters, and cockles.

**Blackbird,** or **Merle,** a familiar song bird in Britain, Europe generally, and parts of Northern Africa.

**Blackcock,** the male of a variety of black-feathered grouse, abundant in Britain and Scotland, about as large as a hen. It has touches of white on wing covers and under the tail.

**Black Death** a fierce epidemic or plague, which carried off thousands all over Europe in the 14th century, one-third of the population of England

dying from it. This terrible disease has disappeared. Its appalling virulence may have been attributable to unsanitary conditions.

**Black Hole of Calcutta**, was the place where a number of English were confined in 1756 by order of Suraj-ul-Dowlah. Into a noisome space, 20 ft. square, 146 persons were driven, and only 23 were found alive the next morning.

**Blacking**, formerly a composition of powdered boneblack, oil, raw sugar, or molasses, vinegar, and sulphuric acid; but now made from various waxes. Used as a boot and leather polish.

**Black-lead**, graphite or plumbago, a mineral found in Norway, Siberia, Spain, Canada, the United States, Ceylon, etc.

**Black-letter**, the Old English or Gothic type first used in printing blocks.

**Black Watch**, the popular name of the 42nd and 73rd Highlanders, so called because the companies out of which they were formed in 1739 had been employed to watch the Highlanders.

**Blankets** of the best and thickest kind are composed wholly of wool, but what are known as "Union" blackets are of cotton warp and wool weft, the cotton being hidden by a process of "teazling."

**Blast-furnaces** were invented by Darby early the 18th century, and had the effect of bringing coal into general use as a furnace fuel. Wood had been previously used. The hot blast introduced by Neilson in 1828 was a still further improvement.

**Blasting**, a method of loosening or breaking masses of solid matter by means of explosives.

**Bleaching**, the art of whitening textiles. The old method was to bleach by exposure to the sun; but chemical bleaching is now general, chloride of lime being utilised for the purpose. Sun-bleached linen has advantages in durability not possessed by chemically bleached fabrics.

**Blende** (commonly called Black Jack) is a principal ore of zinc. It is a sulphide of zinc.

**Blenny**, a group of marine fishes with spiny rays, part of the fin running along the back. Several species are found around the British coast.

**Blight**, a noxious influence exerted upon vegetation by inauspicious atmospheric conditions, or by attacks of parasitic fungi or injurious insect life.

**Blind People.** There are about 1,200,000 blind people in the world, the most serious sufferers being the natives of our Indian Empire, whose blind number 443,653; Russia in Europe comes next with 247,000; then Egypt with 148,280. In the United Kingdom, before the war, there were about 33,000 blind persons, over 25,000 of whom belonged to England. The number of blind has been considerably augmented by the war. The proportion of blind people to each million inhabitants in 1914 was: in Egypt, 13,133; Russia, 1,492; India, 1,408; Bulgaria, 1,329; Spain, 1,275; the United Kingdom, 780. Belgium was lowest with 429 per million.

**Blind-worm**, or Slow-worm, a reptile of the lizard order. Found in most parts of Europe; non-venomous. Its principal food is the slug.

**Blockade**, an operation for capturing a town or fortress, preventing the besieged from receiving supplies. A naval blockade hinders the entrance or egress of the enemy's ships from a port.

**Blockhouses** form an important feature of guerilla warfare. The houses are of logs or corrugated iron, and covered in with earth to render them fire- and bomb-proof, and loopholes are made for firing through. Arranged in lines, and surrounded by barbed wire fencings, with a line of troops aiming at trapping the enemy, effective captures are often made.

**Block-system**, on railways, establishes a method of signalling whereby the distance between two signal boxes can never be occupied on the same line of rails by more than one train at a time.

**Blood**, the life-giving and sustaining circulating fluid of animals. In animals having a backbone it is red; in the lower animals it is colourless. Blood is either arterial or venous; that is, either contained in the arteries which carry the fluid from the heart to the tissues, or in the veins through which it is returned to the heart to be re-purified. Under the microscope, blood reveals a composition of nearly colourless liquid, and a large number of corpuscles, some red, some white. The red corpuscles distribute the oxygen from the lungs, the purpose of the white corpuscles remains something of a mystery.

**Bloodhound**, a dog celebrated for its keen scent, and deriving its name from its power of following a trail of blood. Bloodhounds are sometimes used for hunting, and for tracking fugitive criminals.

**Bloodstone**, a green variety of quartz, spotted with jasper, like blood-drops. A kind of hæmatite iron-ore used for burnishing is also called bloodstone.

**Bloody Assize**, the series of trials presided over by Judge Jeffreys, when over 300 prisoners concerned in the Monmouth Rebellion were sentenced to death under circumstances of atrocious cruelty, and nearly 1,000 others were condemned to be sold as slaves.

**Blowpipe**, an instrument used for driving a blast of air or gas into a flame to increase its temperature. Used in soldering metals, and in analytical chemistry and mineralogy for ascertaining the nature of a substance under great heat.

**Blue-bird**, a habitant of North America, deriving its name from its deep blue plumage. It is one of the few song birds of America, and familiar in the woods from early spring to November.

**Blue-Books** are Acts of Parliament, reports, or papers issued by order of Parliament, and receive the name from their usually being enclosed in blue covers. Blue-books have been issued since 1681.

**Blue-breast**, a name sometimes given to the blue-throated warbler (*Phœnicura suecica*), a pretty little native British bird.

**Blue-coat School.** (*See* **Christ's Hospital.**)

**Blue-gum**, a species of Australian tree, yielding eucalyptus oil, an antiseptic medicament of great use in bronchial affections.

**Blue Monday**, the Monday immediately preceding Lent, when in the 16th century many churches were bedecked internally with hangings of blue.

**Blue-peter**, a flag of blue, with a white square in the centre, used by British seamen as a signal for sailing, for recalling boats, etc.

**Blue Ribbon**, a term in general use to express the highest prize in any form of competition, the Derby being the "blue ribbon" of horse-racing, and so on. The expression is derived from the highest order of English knighthood—the Garter—which has for the chief part of its insignia a garter of blue velvet.

**Blue-stocking**, a name given to women of literary pretensions. There was a Bas-bleu Club in Paris.

**Blue Vitriol**, sulphate of copper, used for dyeing purposes, principally for after-treating certain dyed colours to render them fast.

**Blunderbuss**, a short, bell-mouthed musket with wide bore, capable of firing many balls at once, and much used in the 17th century.

**Boa**, a term applied to a family of snakes of large size, some attaining a length of 30 ft. They are not poisonous, but kill their prey by crushing—constriction—hence the name "boa constrictor." They occur both in the Old World and the New.

**Boar**, or Wild Hog, an animal largely distributed over the forest regions of Europe, Asia, Africa, and South America. It has a longer snout and shorter ears than its descendant the domestic hog, and is provided with tusks. Having to forage for itself, it is a more active and intelligent animal than the pig of the sty, and offers good sport to the hunter.

**Board of Trade**, a department of the British Government forming a permanent Committee of the Privy Council and presided over by a member of the Cabinet. Its constitution dates from an Order in Council of the 5th March, 1786, by which amongst the members of the Board are the Archbishop of Canterbury, Speaker of the House of Commons, the Paymaster-General and the Master of the Mint, but the business of the office is wholly controlled by the President. A Committee appointed in 1904 to inquire into the position and duties of the Board of Trade recommended that the President should be on the same footing as a Secretary of State, with the title of Minister of Commerce and a salary of £5,000.

**Boat**, an open vessel, propelled by oars or sails, or both. The boats of a ship of war are the launch,

barge, pinnace, yawl, cutters, jolly boat and gig; of a merchant vessel, the launch, skiff, jolly boat or yawl, stern boat, quarter-boat and captain's gig. Every British passenger ship is compelled to carry a launch and proper equipment of lifeboats.

**Bobierrite,** a colourless mineral, found in Peruvian guano in the form of six-sided prisms; a tribasic phosphate of magnesia, it is named after Bobierre, who first described it in 1868.

**Bode's Law,** an astronomical law discovered or confirmed by Bode in 1778, which indicates the relative distances of the planets from the sun. Thus, we write the numbers:—0, 3, 6, 12, 24, 48, 96; each, after the first, doubling the one preceding it. If 4 be added to each of these numbers, they give the numbers 4, 7, 10, 16, 28, 52, 100; these totals being, approximately, the distances at which the principal planets are apart from the sun, the real distances being:

| Mercury. | Venus. | Earth. | Mars. | Jupiter. | Saturn. |
|---|---|---|---|---|---|
| 3·9 | 7·2 | 10 | 15·2 | 52·9 | 95·4 |

There is only a failure in the 28.

**Bodleian Library,** connected with the Oxford University, and named after Sir Thomas Bodley, who in 1598 restored and added greatly to its treasures. A copy of every book published in the United Kingdom has, under the Copyright Acts, to be sent free to this library.

**Boer War,** lasted from the 11th October, 1899, when the Boers invaded Natal, to the 31st May, 1902, when the Peace Treaty was signed at Pretoria. At first the operations of the British troops in Cape Colony were unsuccessful, and disastrous reverses were sustained. Lord Roberts was then sent out as Commander-in-Chief, with Lord Kitchener as Chief-of-Staff, and from February, 1900, when Kimberley was relieved and Cronjé was compelled to surrender and Ladysmith and Mafeking were relieved, the struggle was practically over.

**Bog,** a piece of marshy ground, upon which it is difficult to base a firm foundation.

**Bog Iron-ore** is a kind of brown hæmatite found largely in the peat bogs of Ireland.

**Bog-Oak,** oak that is found buried in peat bogs, and is of a deep black colour throughout.

**Bohemian Brethren,** a religious society of the 15th century (Hussites), who were persecuted and compelled to worship in secret. Prague was their headquarters. The Moravians sprang from them.

**Boiler,** a vessel of wrought iron or steel in which steam is generated. Generally the globular shape has been adopted; the marine boilers are cheese-shaped, and the locomotive boiler is constructed with the multitubular flue, the fire-box being placed at one end.

**Boiling-point** is the temperature at which the pressure of the vapour is equal to the pressure of the atmosphere. Under increased pressure the b. p. rises and under less pressure, as on the top of a mountain, it is lower. As represented on the Centigrade scale the b. p. of water is 100°; alcohol, 78·4°; and ether, 35·6°. On the Fahrenheit scale, the b. p. of distilled water is 212°.

**Bole,** a red clay containing oxide of iron, much used in adulterating articles of food that are naturally red.

**Bolshevism,** the Revolutionary majority which under Lenin took over the government of Russia in 1918, establishing a communistic centralised control of economic production and distribution on the basis of a Federal Government.

**Bombs** are hollow iron (or other metal) balls, charged with explosive material and fired by clockwork or other mechanism, or alternatively by a time fuse.

**Bonal,** an antiseptic oil combining disinfectant and healing properties.

**Bone-setting.** (*See* Osteopathy.)

**Book of Common Prayer** contains the services of the Church of England, and is in the main the same as that of Edward VI., with modifications introduced at later dates.

**Book of the Dead,** a book of ancient Egyptian prayers, copies of which have been found in mummy cases.

**Books,** were originally formed, it is supposed, from beech-bark. At first, collected writings were produced in the form of rolls; then in volumes; and when the art of printing spread, they began to be issued in bindings upon the principle still in vogue. The earlier books were massively bound, with metal clasps and bands, and samples centuries old survive to show the durability of their workmanship. Books are technically described, according to their sizes, as 4to, 8vo, (quarto, octavo), and so on, the names indicating the number of folds in a sheet. Thus when a book is printed on a sheet folded in half, it is known as *folio* and consists of 4 pages; doubled in half again, it gives 8 pages, and is *quarto* size; doubled once more it is *octavo* and consists of 16 pages; and by a further doubling we get 16 mo; while other methods of folding give 12 mo, 18 mo, 24 mo, 36 mo, etc.

**Boomerang,** a weapon used by the Australian aborigines, made of wood, in the form of a parabola, one side flat, the other round. When thrown forward into the air, it whirls round and rebounds behind the point from which it was projected. Used both as a missile of war and for killing game.

**Borax,** the biborate of sodium, found in Peru, California, Tibet, and elsewhere; it acts as a mild alkali upon the alimentary canal, and makes a useful gargle in inflammation of the throat and mouth membranes, and is also a valuable preservative of food, but its use in this connection is now restricted.

**Borough English,** an English custom still obtaining in a few places, whereby, in default of a testamentary disposition to the contrary, landed property descends to the youngest son in exclusion of elder brothers. This term is obsolete since 1st Jan. 1926.

**Botany** is the science of the vegetable kingdom, and its broad classifications comprise Structural Botany, Physiological Botany, Systematic Botany and Economic Botany, terms which explain themselves. Plants comprise an axis or main shaft, which bears the branches, leaves, and flowers; the root, which is usually in the ground, is the medium by which the nourishing substance necessary to the plant's life is obtained from the earth. The stem is the leaf-bearing part of the plant; when hard, it is called woody, when soft, herbaceous. Branches are shoots from the stem, and of the same structure; leaves grow from the branches, and are of various forms. A leaf comprises two parts, the stalk and the blade. The flower is a clusterous modification of leaves which becomes the medium of the plant's reproduction. Plants are flowering or non-flowering.

**Boulevard,** in its original significance, meant the rampart of a fortified city; it is now given to any important thoroughfare planted with trees, especially in Paris.

**Bounds Beating,** an old custom still occasionally indulged in, and taken part in by the parish clergyman and officials, who on Ascension Day make the round of the parish boundaries with long sticks of willow, with which they beat the ground at the more important boundary points.

**Bounty** is an extra recompense given as an inducement to the performance of any special service or work, and in particular to soldiers and sailors.

**Bow,** an instrument for propelling arrows, and, in the days when it was a weapon of war, was usually made of yew or ash, and was about 6 feet long, with an arrow 3 feet. It was the weapon with which Crecy, Poitiers, and Agincourt were won. The cross-bow was Italian and was adopted in France, but did not become popular in Britain. For its use in archery as a diversion, see Pears' *Dictionary of Sports and Pastimes.*

**Bow Bells** is the peal of the London church of St. Mary-le-Bow, Cheapside, within sound of which one must be born to be entitled to be called a "cockney."

**Bower-bird,** an Australian bird which constructs on the ground a bower-like shelter of sticks to which it resorts more especially during the breeding season, though not laying its eggs there.

**Bowie-knife** is a long one-edged knife of great strength, invented by Col. Bowie, and much used in America at one time.

**Box,** a plant bearing a very hard and fine wood, and common to both Europe and Asia. It is of two varieties—a shrub that grows 8 or 10 feet high, and a dwarf variety used for garden edging that only grows to a height of a few inches. Box is the best medium for wood engraving, and in

the North of England is used for knurrs (wooden balls) for the game of "knurr and spell."

**Boxers**, a section of Chinese who in 1896 rose against foreigners and were guilty of many massacres and atrocities, the movement being especially directed against missionaries. A combined European force was sent out against the Boxers in 1900, and not only was the rising suppressed, but large indemnities were demanded and conceded.

**Boxing Day** is the day succeeding Christmas Day, and gets its name from the custom of giving Christmas boxes on that day. It is a Bank Holiday in England.

**Boycott**, a term used in connection with a person that the general body of people, or a party or society, refuse to have dealings with. Originally used when Captain Boycott was declared apart from recognition by the Irish Land League.

**Boy Scouts.** (*See* Scouts.)

**Boys' Brigade, The.** Founded 1883. Object:—"The Advancement of Christ's Kingdom among Boys." Methods:—Bible Class, Drill, Club-Rooms, Ambulance, Swimming, Life Saving, Physical Training, Signalling, Music, Games, Summer Camps. Present strength in Great Britain is 100,000 officers and boys, and nearly 50,000 juniors.

**Bracelets** have been in use as personal ornaments from the most remote times. They are frequently referred to in the Bible, and were worn by men as well as women in ancient Egypt. In modern times they have attained great beauty and variety of form and setting, and, decked with gems, constitute a rich adornment to a well-shaped wrist.

**Brahminism**, the chief religion of the Hindus, is an adaptation rather than an adoption of the doctrine set down in the sacred books of *Vedas*, and was built up on the system of caste. In Brahminism there is a supreme God, with a Divine Triad consisting of Brahma, Vishnu, and Siva. There are four castes: the Brahmins, or priests; the Kshatryas, kings and soldiers; the Vaisyas, who are traders; and the Sudras, or slaves. Many other divisions and subdivisions of caste have been developed from these four, and the preservation of caste is regarded as a Hindu's foremost duty.

**Braille**, an alphabet for the blind, a raised dot system of notation applied equally to music; invented by a Frenchman called Braille in about 1830, and now in world-wide use by the blind. The National Library for the Blind in Great Smith Street, London, is a free lending library of *c.* 178 thousand volumes of Braille books and music.

**Brake**, the common English name of a fern of the *Pteris* genus of Polypodiaceæ, of abundant and vigorous annual growth.

**Bramble** is another name for the blackberry bush, of which there are over 20 species in Britain, and numberless varieties.

**Branding** for crimes is still common in some countries, and was not entirely abolished in England until 1822.

**Brandy**, obtained by distilling, is chiefly prepared in France, the Cognac variety being the best.

**Brandywine, Battle of**, fought between the British and the Americans in 1777, resulting in victory for the former.

**Brank**, a sort of bridle, with gag, which in olden times used to be fastened to the head and mouth of scolds as a punishment, the offender being compelled to parade the streets and stand at the market cross.

**Brass** is a compound metal containing two-thirds of copper to one-third of zinc, and while being harder than copper, is more easily worked.

**Brass, Monumental**, an engraved plate of brass let into or affixed to the grave-slabs of more or less important persons in many ancient churches, and bearing representations of their effigies, armorial coats, etc.

**Brazil Nut**, the seed of a large myrtle common in Brazil, and grown in clusters of from fifteen to fifty nuts, enclosed in huge woody coverings.

**Bread-fruit Tree** is a native of the South Sea Islands, and supplies the natives with a wholesome food. The fruit is the size of a melon and contains a white pulpy substance, which is roasted before being eaten. The plant has been successfully acclimatised in the West Indies.

**Breakwaters** are artificial structures of stone or concrete built across the entrances to harbours to stay the force of the sea and leave the inner portion calm and safe for ships. There are fine breakwaters at Plymouth, Dover, Aberdeen, etc.

**Breeding**, in one of its senses, implies the art of improving animals by selection or treatment intended to produce certain special qualities of their progeny. It is an art that has of late years been practised with highly successful results in the breeding of horses, sheep, cattle, fowls, cage-birds, fish, economic "insects," etc., some of the results reached being very remarkable, almost amounting to the production of new species.

**Brevet** is a special commission entitling an officer to a rank in the army higher than that which he really holds in his own regiment, without increase of pay.

**Breviary** (meaning abridgment) is the short service book of the Roman Catholic Church, and in its present form was fixed by Pope Pius V. in 1568.

**Brewing** is the art of preparing a fermented beverage, chiefly beer and ale, from an infusion of grain. Intoxicating drinks have been brewed in all ages and countries from the most remote times. In Britain, brewers have been among the richest of our citizens, and several prominent members of the body have been ennobled. There are in the United Kingdom nearly 5,000 breweries, over 3,000 of which do not produce 1,000 barrels each a year; while one firm brews over 2,000,000 barrels, and another firm 1,000,000 to 1,500,000 barrels. The tendency is for amalgamation of the industry into huge joint-stock concerns to the gradual extinction of the small individual brewer. The number of brewers decreased by nearly one-half from 1904–5 to 1907–8. (*See* Beer.)

**Bricks** are uniformly shaped and sized portions of baked clay used for building. All the ancient nations made bricks, at first only baking them in the sun, and afterwards by means of fire. The Israelites were employed in brick-making during their captivity in Egypt. The Romans used bricks for all ordinary building purposes, and introduced them into England. In these days brick-making is mainly done by machinery, by methods which greatly increase the power of production as well as improve the quality of the bricks. Tiles are also made by machinery.

**Bridal**, a nuptial feast, properly "bride ale," "ale" being formerly the term indicating a festival of any kind in this country.

**Bridewell**, a house of correction formed out of the old palace of St. Bride, Blackfriars, by Edward VI. Demolished in 1864. The name is still frequently applied to buildings used for a similar purpose.

**Bridge**, originated in Russia, and derives its name from the Russian "biritch." Lord Brougham is said to have introduced the game into England from France.

**Bridges** are structures for continuing roads across streams, rivers, ravines, or roads at a lower level, and until the adoption of the arch by the Romans were of rude construction. Until the 18th century the art of bridge-building was in its infancy; it has only been since road traffic assumed large proportions, by the development of industries and increase of population, that the art has come to be practised on a great scale on scientific lines. Wood was the first material used for bridge-ways; then came stone; towards the end of the 18th century iron was brought into use; and now steel has largely superseded iron. Among the most famous of ancient bridges is that of St. Angelo at Rome, built by Hadrian, A.D. 13. The first stone bridge across the Thames was completed in 1209, and upon it were a number of timber houses. This old London Bridge, as it was called, stood until the 18th century. The Bridge of the Rialto at Venice dates from 1588. Old Westminster Bridge and old Blackfriars Bridge were built about the middle of the 18th century. Waterloo Bridge was opened in 1815. Suspension Bridges of the modern type were introduced about 1820. Telford's Menai Suspension Bridge begun in 1819, had a catenary span of 570 feet. The first tubular form of bridge was the Britannia, across the Menai Straits, designed by

Robert Stephenson and built by Sir William Fairbairn. The Victoria Bridge across the St. Lawrence at Montreal, is a tubular structure 7,000 feet long. Other famous bridges are the Niagara (suspension); the Forth Bridge (cantilever), with two central spans of 1,710 feet and two anchor spans of 680 feet long, including approaches; the London Tower Bridge (suspension), 900 feet from bank to bank. One of the largest bridges in the world is the Tay Bridge in Scotland: 10,527 feet long. The Zambesi Bridge connecting the Trans-Zambesi Railway with the Shiré Highlands Railway in Nyasaland, begun in 1930, will be about 2¼ miles long. It is expected to take four years to construct and will cost over £1,500,000. The Sydney Harbour Bridge, one of the great feats of modern engineering, opened for traffic in 1931. It took seven years to build at a cost of over £6,000,000 and is 3,770 feet long.

**Bridgewater Treatises,** a series of eight theological treatises written by eminent divines in accordance with a bequest of the Earl of Bridgewater, who left a sum of £8,000 for this purpose at his death in 1829.

**Bridgewater Trust.** This famous Trust was formed by the third and last Duke of Bridgewater, famous as being the founder of inland navigation, who amassed part of his great wealth by speculation in the canal which bears his name. He died unmarried in 1803, and left most of his property, with a priceless collection of pictures, to his nephew, George Granville, Marquis of Stafford (first Duke of Sutherland), with reversion to his second son, then aged three years. The latter, in 1833, assumed the arms and name of Egerton, was raised to the peerage as Earl of Ellesmere, and is the grandfather of the present holder of the title The Trust came to an end in 1904, an event that was celebrated by Lord Ellesmere with great festivities, at which 600 tenant farmers and heads of departments were entertained at Worsley Hall, near Manchester, the Earl's country seat.

**Britannia Metal,** a silvery-white alloy composed of tin, copper, zinc, antimony and bismuth, and occasionally lead, capable of a high polish, and used for various kinds of metal ware.

**British Association for the Advancement of Science, The,** was founded in 1831, to stimulate scientific inquiry and promote intercourse between men of science, and holds an annual session in various towns. It is divided into 13 sections—mathematics and physics, chemistry, geology, zoology, geography, economics and statistics, mechanics, anthropology, physiology, botany, education and agriculture. The President each year is one of the most eminent scientists or public men of the time.

**British Broadcasting Corporation** is a Government department controlling in 1930 twenty-one broadcasting stations in Great Britain and Ireland. There were 3,160,000 licences issued in 1930. Apart from dance music, nearly 65,000 hours of music is broadcast annually. Great progress has been shown in the selection of programmes. Educational topics, news items from all parts of the world, plays, operas, speeches of international importance are daily to be heard. Portable wireless sets, crystal sets and loud-speakers are used for the purpose of "listening in" to the B.B.C.

**British Legion,** founded by Earl Haig in 1921, is an organisation to serve the interests of ex-Service men. There are 3,564 branches in Great Britain, also many overseas branches and many local benevolent committees. The funds are mainly obtained from the sale of poppies on "Poppy Day." The figures for 1928 were £582,360 16*s.* 10*d.* There is also a women's section of the B.L. The headquarters of the B.L. are at Haig House, 26 Eccleston Square, London.

**British Museum,** opened in London at Montagu House in 1759, was founded by Sir Hans Sloane's collection, which the British Government acquired for £20,000, though worth four times as much. In 1823, the present building in Great Russell Street was started, and completed in 1847, from designs by Sir R. Smirke. The library building was opened in 1857, and its large circular reading-room, 140 feet in diameter and 106 feet high, is probably the finest in the world. The library, to which copies of all books published in Great Britain have to be sent free, is a great treasure-house of books, ancient and modern. George III.'s library of 70,000 volumes, valued at £200,000, was added to it by a gift of that monarch's successor in 1823, and many other valuable private collections have been derived in a similar way. The museum portion contains a series of invaluable collections of sculptures, antiquities, bronzes, jewels, geological specimens, rare manuscripts, and books. The Natural History Department is now separately housed at South Kensington. The Science Department (Kensington) is replete with working models of all kinds of machinery. The British Museum is supported by Parliamentary grants, varied in amount, according to the annual requirement. A large new wing, including marble exhibition and print exhibition rooms, was opened in May, 1914.

**Brocade,** a special kind of cloth in which the design or pattern is woven in relief on the surface of the material.

**Bronze** is an alloy of copper and tin, sometimes with zinc, iron, or lead added.

**Brownies,** according to old country superstition, were household fairies who in the night-time performed various domestic duties for the good people who had won their favour.

**Buccaneers** were pirates and something more. They formed organised fleets in the 17th century, and as their depredations were chiefly directed against Spanish shipping, the British Government did not specially interfere with their operations. One commander of buccaneers, Henry Morgan, was knighted, and made Governor of Jamaica. They ceased to be of much effect after England and Spain made peace.

**Bucephalus,** Alexander the Great's celebrated war-horse, whose memory his owner perpetuated in building a town bearing the animal's name.

**Buckingham Palace,** erected for George IV. in 1825, was also the London residence of Queen Victoria, and of Edward VII., the latter improving it considerably. The present king, however, has made great extensions to the royal home, which thus becomes for the first time of real palatial importance.

**Buddhism** is supposed to have originated in India about the 6th century B.C., the founder being a native prince named Siddhartha Gautama. Around this personality many strange and mystic myths gathered, Buddha representing the highest mystic state of human existence, the supreme of being, beyond which is no recognition of a God. In Buddhism, *Nirvana* is the perfecting of knowledge and the completest attainment, and involves the realisation of developing conditions tending to the highest blessing. There is no caste in Buddhism. Researches of recent years have brought to light much that had been obscure in this doctrine, and in its more modern phases Buddhism has been freed of much of its superstitions, its idolatrous practices and its Vedic gods, and remains in its purity a philosophical system in which self-conquest and universal charity are leading elements. Buddhism, driven out of India by the Brahmins, together with Confucianism and Taoism, is now the religion of the people of China, Japan, Ceylon, Siam, Burma, and Nepaul —some 450,000,000 in all.

**Buffalo,** a species of wild ox, of stronger build than the domestic variety, and still existing in large numbers in the wilds of Africa.

**Building Societies,** or clubs, have existed in England since the beginning of the 19th century, but it was not until 1834, when the Friendly Societies Act was passed, that building societies began to spread. In 1836 a short Act gave additional privileges. The early building societies were of the terminable order—that is, they were limited to a specified number of members, and ceased to exist when all the members had received the value of their shares. "Permanent" building societies began to take shape about 1846, the members consisting of two classes—investors, and those who obtain advances upon mortgage. This system worked so satisfactorily that new building societies sprang up in all parts of the kingdom and at the present time there are over 1,000 such societies in the United Kingdom, with nearly 1¼ million mem-

bers. The share capital is 170 millions, mortgage and other assets total 255 millions, and over 70 millions were advanced in the year. The Building Societies Act of 1894 made it compulsory on all societies to file regular returns of the property held by them. The Halifax (Yorks) Society has a total of 180,000 members and advanced over 12 millions during 1929.

**Bullets and Billets.** During the Franco-Prussian War no fewer than 197,000 projectiles were thrown into Mézières for a loss of 400 lives. At Sedan, however, firing was far more deadly, for 9,000 combatants perished from the 240,000 projectiles fired. This was a far heavier mortality than that which attended the defending Spaniards at the landing of the American marines at Santiago. There, from a fusillade from machine guns and rifles alone of 25,000 rounds, only sixty-eight casualties resulted. The marksmanship of the Japanese in their war with China was by no means good, but in 1904 against the Russians they showed far deadlier effectuality. British firing in the last Boer War was better than in former wars, but hardly a subject for boasting; but in the Great War (1914–18) it reached a high standard of efficiency in spite of a terrible wastage of projectiles.

**Bundesrath,** the old German Federal Council, consisted of fifty-eight members, elected by the different States. Its function was to confirm, amend, or reject Bills passed by the Reichstag.

**Bye Plot,** of 1603, an unsuccessful plot to capture James I and to detain him until he promised greater toleration to Roman Catholics and Puritans.

**Caaba.** (*See* Kaaba.)

**Cab,** the name given to a one-horse four- or two-wheeled public vehicle, came into vogue in the early part of the 19th century. Eight four-wheeled cabs (or cabriolets were licensed in 1833, and as they were run at much lower rates than the hackney coaches they soon became popular. The hansom cab, the invention of Mr. Joseph A. Hansom, came a few years later. There are today over 10,000 cabs in London alone, most of which are propelled by mechanical power. The taxi has almost entirely replaced the hansom, and now practically represents the cab traffic of London. The four-wheeler survives in very small numbers.

**Cabal,** a term derived from the French word *cabale*, is used to designate any small faction of political or private intriguers, and gained prominence and special significance when applied to the unpopular Ministry of Charles II.'s time, whose initials—Clifford, Ashley, Buckingham, Arlington, and Lauderdale—composed the word.

**Cabala,** a mysterious Hebrew theosophy, which had its rise in the 10th century, and was announced as a special revelation, enabling the Rabbis to explain the hidden meanings of the sacred writings. This was carried to great excess, later cabalists pretending to read signs and evidences in letters, forms, and numbers contained in the Scripture.

**Cabinet,** in England, is the governing political executive body of the State, comprising the chief officers of the executive, with the First Lord of the Treasury (usually the Prime Minister) at its head. The ministers generally recognised as having the prescriptive right to Cabinet rank are in addition to the Premier, the Lord Chancellor, the Lord President of the Council, the Lord Privy Seal, the Chancellor of the Exchequer, the 7 Secretaries of State, for the Home, Foreign, Colonial, War, Air, Transport, and Indian Departments respectively, and the First Lord of the Admiralty, although in recent war-time many augmentations were necessary, including a special War Cabinet; the Presidents of the Board of Trade, the Ministry of Health and Labour, the Board of Agriculture, and the Board of Education, as also the Secretary for Scotland, the Postmaster-General and the Chancellor of the Duchy of Lancaster are added at the discretion of the Prime Minister. The Ministry includes all the members of the Government who are also Privy Councillors.

**Cable** is the rope or chain that is attached to a ship's anchor. Chain cables are now in general use except for very deep waters. A cable's length is 100 fathoms, 200 yards. Submarine telegraph cables are composed of copper wires.

**Cacao** is an evergreen tree, from 16 to 40 feet high, growing abundantly in tropical America, the West Indies, Ceylon, etc., yielding a nutritive fruit, from which cocoa and chocolate are manufactured.

**Cachalot,** a cetacean chiefly inhabiting the Northern seas, called also the spermaceti whale. The Mexican and South Sea sperm-whales, allied species, are found in warmer waters; all swim in schools.

**Caché,** a hole in the ground where food or travel impedimenta are stored, a term and practice introduced into America by French emigrants.

**Cachet, Lettre de,** was a private letter of State, signed by the King, much in use in France up to the time of the Revolution, for consigning obnoxious or troublesome people to prison without trial.

**Cactus,** a prickly plant, as the name implies, of exogenous nature and varied form and size, fleshy and succulent, and often leafless and of very abnormal shape. The "Indian fig" class have sessile flowers, which bloom at night and quickly die.

**Cadet,** a name given to a younger son of a noble family, and also applied to young men in training for officership in the army or navy.

**Caduceus,** the name of the wand of authority borne by Hermes, or Mercury, being a plain rod, the fillets of which are in the form of snakes, surmounted by a couple of wings. A herald's staff of office is sometimes styled a caduceus also.

**Caffeine,** a highly stimulative alkaloid found in coffee and tea, possesses a bitter flavour.

**Cainozoic,** a geological term used to indicate all the strata which lie above the chalk—that is, the "most recent" strata. Tertiary is an alternative and equivalent term.

**Caique,** a long narrow boat peculiar to the Bosphorus, and usually propelled by oars (from two to sixteen in number), and sometimes with sail.

**Cairngorm,** an hexagonal crystal of yellow-brown hue found on the Cairngorm peak in Scotland, and much used in jewellery ornamentation. The same kind of crystal exists in Brazil, India, and Cornwall.

**Calcium,** a widely diffused metal of light yellow colour, burning vividly at red heat. It is not found in a free state, but occurs in combination with most of the native silicates. Calcite, limestone, marble and chalk are calcium carbonates.

**Calc-spar** (Calcite) is one of the commonest minerals, and occurs in a wide variety of crystalline forms of the hexagonal system. It possesses the property of perfect cleavage, and easily splits up into rhombs.

**Calculating Machines** of many kinds have been from time to time devised. They are mostly multiplying or dividing machines. The first to attract special notice was that of Babbage, which was intended to calculate even algebraical problems, but it was never completed. Tide-predicting machines, machines for integrating differential equations, machines for adding, logical machines, calculating scales, etc., are all of the same class, but as it is impossible to endow a machine with brains, the services of these apparatus do not carry us very far.

**Calendar,** a collection of tables showing the days and months of the year, its astronomical recurrences, chronological references, etc. The Julian Calendar, introduced by Julius Cæsar, fixed the average length of the year at 365¼ days. On this arrangement of the year, there was a loss of 11 minutes and 10 seconds per annum. The shortcoming was rectified by the Gregorian Calendar, introduced in Italy in 1582, but not adopted in England before 1752, when 11 days were dropped out of the calendar. The Gregorian year is 365 days, 5 hours, 49 minutes, and 12 seconds.

**Calendering,** a mechanical process by which textile fabrics are rolled and pressed to a smooth and even surface.

**Calends,** the first day of the month in the Roman calendar, when interest fell due, and proclamations as to the order of days were made.

**Calico** is white, unprinted cotton cloth, and received its name from Calicut in India, whence it was originally imported.

**Caliph**, the name given to the heads of the Moslem faith, and means successor—that is, successor to Mahomet. At first, the title could only be borne by direct descendants of the Prophet, but only four so-called "perfect" caliphs reigned after Mahomet at Medina. Then others of the Prophet's tribe succeeded. There were 13 caliphs at Damascus between 661 and 750, and 37 at Bagdad between that date and 1258, when the Turks overthrew the old dynasty and finally swallowed up the caliphate. The Sultanate having been abolished, there is no official caliph now.

**Calisthenics**, the art of exercising the muscles and limbs in order to increase their strength and improve the grace of form and movement.

**Calotype**, the name of a class of pictures produced by a process invented by H. Fox Talbot about 1840, and something akin to the daguerreotype, introduced about the same time. Later photographic developments superseded both.

**Calumet**, a sacred decorated reed tobacco pipe used as a symbol of peace or war by the Indians of North America, the bowl being composed of soap stone, and the tube, which is long, being decked with feathers. To accept the calumet when offered is to be friendly, to reject it is to proclaim enmity. There is also a distinctive calumet of war used only on a declaration of war between tribes.

**Camarilla**, a term originally applied to a coterie of Court favourites, who, by their influence, practically directed the policy of Ferdinand of Spain in the second decade of the 19th century. The name has since come into use to denote any similar clique.

**Cambrian Group** of strata belongs to the Silurian series, and was so named by Professor Sedgwick because of its abundant development in Wales. It is the lowest and oldest strata containing fossil remains, which include zoophytes, molluscs, crinoids, worms, and crustacea.

**Cambridge University** was probably founded in the reign of Henry III., although as a seat of learning it is mentioned in 916, when certain privileges were confirmed. The principal Colleges, with the dates of foundation are: St. Catharine's, 1473; Christ's, 1505; Clare, 1326; Corpus Christi, 1352; Downing, 1800; Emmanuel, 1584; Gonville and Caius, 1348; Jesus, 1496; King's, 1441; Magdalene, 1542; Pembroke, 1347; Peterhouse, 1284; Queens', 1448; Sidney Sussex, 1596; St. John's, 1511; Trinity, 1546; Trinity Hall, 1350; Selwyn, 1882.

**Camel**, a large ruminant quadruped, inhabiting Asia and Africa, where it is largely used as a beast of burden. There are two species—the Arabian camel or dromedary, with only one hump; and the Bactrian, or double-humped

**Cameo**, the name given to a precious stone upon which some design has been carved in relief. There is an agate cameo at the Sainte Chapelle, Paris, which measures 13 inches by 11, and depicts the apotheosis of Augustus. Shell cameos are now common.

**Cameras** are instruments by which a convex lens is made to reflect and depict the image of an external object upon a screen. It is constructed in the form of a box, in two compartments, and is, in fact, like the human eye, a camera obscura. Photographic cameras are made in many shapes and sizes and specialised as landscape cameras, copying cameras, portrait cameras, snapshot cameras, and so forth. (*See* Photography.)

**Camisards**, a French Protestant party of the early part of the 18th century, originating in the Cevennes, and resorting to arms in support of their faith.

**Camlet** was the name of a very fine dress fabric, made from silk and camels' hair. In modern days there are many cheaper kinds of camlets, in the construction of which wool and goats' hair play an important part.

**Camomile**, a low, close, creeping, composite perennial plant, cultivated for its flowers, which are white with a yellow centre. Camomile flowers are of an exceedingly bitter taste, but an infusion of them is valued as a remedy for biliousness and as a tonic.

**Camorra**, an Italian secret party largely composed of criminals, and at one time influencing politics considerably by their terrorising action. Naples was the birthplace of the movement. In 1912 the ring-leaders were brought to trial and sentenced to long terms of imprisonment.

**Camp**, a place where soldiers are or have been encamped. Roman camps were entrenched and rectangular, with fosse and vallum. There were four gates, and the enclosure was laid out in streets, the broadest being 100 feet wide, the others 50 feet wide. Camps are much more elaborate under the modern military system. Among the permanent camps of instruction, those of Aldershot in England and Chalons-sur-Marne in France are best known.

**Campaniles**, or bell-towers are usually detached from their parent church, but not always. The most famous are in Italy, and are lofty and elaborate structures. That of Giotto at Florence, in connection with the cathedral of Santa Maria del Fiore, is architecturally the finest in the world. Other famous campaniles of Italy are those of Cremona (395 feet high) and Pisa (the Leaning Tower). The pointed campanile of St. Mark's, Venice, which fell a few years ago and has been rebuilt, is a much admired example. Campaniles as separate structures are seldom found in Great Britain; the finest is that of the Westminster Roman Catholic Cathedral. The bell-turrets of St. Paul's in London and St. Peter's at Rome are only a form of campanile.

**Campus Martius** was a large plain used by the ancient Romans as a military camping ground. It was situated between the Quirinal and Capitoline hills, and is to-day entirely built over and forms the heart of modern Rome.

**Canal**, a watercourse made by man, and used for navigation purposes. There are 4,673 miles of canalised rivers and canals in Great Britain and Ireland.

**Canary**, a wine that from Tudor times to Georgian days was much consumed in this country, and is frequently alluded to in our older literature. It is a product of the Canary Islands, hence its name.

**Candle-fish**, so called from the fact that the Indians of North America utilise its dried oily body as a candle. It is a small fish abounding on the Pacific Coast.

**Candlemas**, an English and Roman Church festival in celebration of the Purification of the Virgin and the Presentation of Christ in the Temple, and deriving its name from the great show of candles made on the day (2nd February) in the Roman celebrations.

**Canoe**, a kind of light boat employed by many peoples in primitive times, made originally of a hollowed tree trunk, or of bark or skins attached together over a rude framework, and generally propelled by paddles. Large canoes were used by the islanders of the South Seas and elsewhere for war purposes. Canoes of to-day, employed in civilised lands for pleasure purposes, are very light boats, narrow in the beam, and are constructed from strong thin wood, galvanised iron, steel, water-proofed canvas, or other suitable material. Mr. MacGregor travelled thousands of miles in Eastern waters in his famous canoe, the "Rob Roy."

**Canon**, a term applied to signify a recognised rule for the guide of conduct in matters legal, ecclesiastical, and artistic, or an authoritative ordinance; thus we have Canonical Scriptures, Canon Law, etc. A Canon is also a dignitary of the Church, usually a member of a cathedral chapter in the Anglican communion, or in the Roman Church a member of an order standing between regular monks and secular clergy.

**Canonical Hours** were seven in number in the Western Church: Matins and Lauds, before dawn; Prime, early morning service; Tierce, 9 a.m.; Sext, noon; Nones, 3 p.m.; Vespers, 4 p.m.; Compline, bed-time.

**Canonisation**, the entering of a person who has been dead over fifty years on the list of saints of the Roman Catholic Church, after proof of purity and distinction of life has been accepted. This having been done, a day is named for the future keeping of the anniversary of the saint's death, and thenceforward appears in the Church Calendar.

**Caoutchouc**, or **India-rubber**, an elastic, gummy substance, extracted from various tropical trees.

**Cap**, literally any head-covering article of dress. The "Cap of Maintenance" is carried before the

Sovereign at the Coronation, and is used symbolically in heraldry.

**Capercailzie**, a northern moor-bird, inhabiting Scotland and Sweden, and living on fir-shoots.

**Capet**, the family name of a race of French kings, founded by Hugh Capet in 987. The houses of Valois (1328) and Bourbon (1589) were of the same blood, and Louis XVI. was tried and sentenced under the name of Louis Capet.

**Capital Punishment** is the carrying out of the sentence of death. There were 160 offences punishable with death in England, but to-day murder is practically the only crime that constitutes a capital offence in this country. Capital literally means "affecting the head"—that is, life—of a person, and refers to the now obsolete punishment of decapitation. At the present time it means death by hanging; several attempts have been made to abolish it. C. P. has been abolished in Belgium (1863), Switzerland (1874), Roumania (1864), and Holland (1870).

**Capitol**, a term that was first applied to the Temple of Jupiter on the Capitoline Hill, Rome, completed in 507 B.C. It was several times destroyed by fire and rebuilt. The existing Capitol, a large portion of which serves the purpose of a museum, was erected from designs by Michael Angelo. In all the chief cities of the ancient Roman Empire there was a capitol or town-hall. In the United States the building occupied by Congress at Washington bears the name of the Capitol, and the halls of the legislative assemblies of the different States are so named.

**Capricorn**, a zodiacal constellation between Sagittarius and Aquarius, figured out in ancient times as having the head of the goat and the hind part shaped like a fish.

**Capstan**, an apparatus on ships for raising anchors or other heavy work. It is of upright form and made of wood or iron, and turns on a vertical axis, moved by poles fitted into sockets in the upper part. On steamers the capstan is worked by steam.

**Capuchins** are members of a mendicant order of Franciscans, founded in the 16th century, and named from the capouch or cowl worn by them. They are still a numerous order, though freed from many restrictions applied to them in earlier times.

**Caravan**, a band of travellers or traders journeying together for safety across the Eastern deserts. These caravans sometimes form a very numerous party.

**Carbohydrates**, the name of a group of organic bodies containing carbon atoms allied with hydrogen and oxygen in the proportion in which they form water. Starch, sugar, glucose, cellulose, and gum are of this group

**Carbolic Acid** results from the distillation of coal-tar, and is composed of carbon, hydrogen, and oxygen. In its pure state it crystallises and is almost colourless. In odour it resembles creosote. It is a valuable antiseptic, and is poisonous in large doses. Treated with certain acids and alkalies, it is used for various dyes.

**Carbon**, a chemical non-metallic element found as the diamond, graphite, and in the amorphous form of charcoal, coke, lampblack, soot, etc. Its distribution as an element extends through the whole of the animal and vegetable kingdom, and the number of its components is beyond enumeration.

**Carbonari**, members of a secret political society originated in Naples, and at one time very numerous. Their chief aim was to free Italy from foreign rule, and they exerted considerable influence in the various revolutionary movements in the first half of the 19th century. Their name was adopted from the charcoal burners (*carbonari*), and their passwords, signs, etc., were all in the phraseology of the fraternity.

**Carbonic Acid**, a gaseous compound consisting of 12 parts of carbon and 32 of oxygen, colourless and odourless, and resulting when a substance containing carbon is burnt with a free current of air. Used as the effervescing element in aërated beverages, champagnes, bottled beer, etc. It is largely evolved from fissures in the earth, and is a constituent of the after-damp that so often causes explosions in mines, though not itself inflammable.

**Carbonic Oxide**, a colourless inodorous substance formed of 12 parts of carbon and 16 parts of oxygen, and very poisonous. It is produced when any substance largely composed of carbon is consumed with only a small supply of air.

**Carboniferous System**, in geology, is the term used to designate the strata from which coal is obtained. It is in three groups: the coal-measures, the millstone-grit, and the mountain-limestone.

**Carbuncle**, the name of a deep-red stone of the garnet order, found in the East Indies.

**Cardamon**, the seeds of various zingiberaceous plants, mainly indigenous to Malabar, aromatic and tonic, and useful medicinally in purgative compounds and carminatives.

**Cardinal**, a Roman Catholic ecclesiastical dignitary of the highest rank. Cardinals are divided into three classes consisting of 6 cardinal bishops, 50 cardinal priests, and 14 cardinal deacons—70 in all. They are appointed by the Pope, and are associated with him in the government of the Church. A cardinal's dress consists of red cassock, a rochet, a short purple mantle, and a low-crowned red hat with cords and tassels.

**Cardinal Sins**, according to mediæval classification, were seven in number: pride, vanity, indolence, avarice, gluttony, envy and anger.

**Cards**, as a game, dates back to a very early period, and became known in Europe in the 14th century. A great variety of card-games, including whist, baccarat, nap, euchre, poker, bridge, etc., is played, and wherever gambling has been indulged in on a large scale cards have been the most usual instrument. A duty of 3d. per pack on English playing-cards is imposed, and a maker of such cards has an annual licence of 20s. to pay. (See Pears' *Dictionary of Sports and Pastimes.*)

**Caribs**, a tribe of American Indians, now mainly confined to South America and Dominica, but originally from the Caribbean Isles.

**Caricature** has for its object the exaggeration of the defects or peculiarities of persons or things so as to render them ridiculous. It is an art that was practised by the ancients, but did not attain real power and force until after the invention of printing. England has from the 18th century forward produced many eminent artists in this line, from Hogarth, Rowlandson, and Gilray in Georgian days, to Sir John Tenniel, Sir F. Carruthers Gould, Max Beerbohm and the cartoonists of *Vanity Fair*. Among the caricaturists of social things the leading names of modern times in England are those of Cruikshank, Hablot K. Browne, Leech, Richard Doyle, Charles Keene, du Maurier, Phil May, Tom Browne and Raven Hill. *Punch* has been the chief medium of English political and social caricatures since 1842; and Sir F. Carruthers Gould's political caricatures in the *Westminster Gazette* were among the most humorous things of their kind; at the present time, among the most famous English caricaturists are Max Beerbohm, Frank Dyson, David Low, Poy (P. H. Fearon), and Tom Webster.

**Carlists**, a Spanish political party espousing the claim of the descendants of Don Carlos, brother of Ferdinand VII., to the throne of Spain. On the death of the latter in 1855, Isabella, his three-year old daughter, was proclaimed Queen, leading to a civil war that was maintained with varying success until finally crushed in 1876.

**Carlovingians**, the second dynasty of the French kings (established 753), included such notable rulers as Charles Martel and Charlemagne. In 987 the Capet dynasty succeeded.

**Carmelites**, a body of mendicant friars taking their name from Mount Carmel, where the order was first established in 1156. The Saracens persecuted them, and they made their way to Europe, founding monasteries and convents in various countries, many such institutions still existing, while there are several Carmelite convents in the United States.

**Carnival**, the great festival which takes place in Roman Catholic countries on the last three days before Lent, when people give themselves up to the wildest revelry, buffoonery, and masquerading. It is only in the chief cities of Italy, however, that the custom is kept up with anything of the old spirit. At Nice a modernised form of it is given, of which the "battle of flowers" is a feature.

**Carob**, a wild plant growing abundantly on the Mediterranean coast and yielding a bean or

pod that forms nutritious food for cattle and horses.

**Carolite,** an English gold coin of the Stuart period, at first of the value of twenty shillings, and subsequently worth 23 shillings.

**Carp,** a well-known fresh-water fish, found in plenty in most European and Asiatic still waters and sometimes reaching a length of 4 feet. The gold-fish common to our ornamental waters and aquariums are of this family.

**Carpets** are thick fabrics used for covering floors, and were first made in Eastern countries—Egypt, Persia, India, etc.—finding their way to Europe in the Middle Ages. A carpet factory was established in France in the time of Henry IV., and one was set up at Mortlake, in England, in the reign of James I. It was the custom in early times to use single carpets for covering beds, couches, tables, etc. The best-known English carpets are the Axminster, Kidderminster, and Wilton. In modern times the production of carpets has been greatly improved and extended by the aid of steam-power and ingenious machinery.

**Carronade,** a short piece of ordnance of large calibre, with a powder-chamber similar to that of a mortar. It was first made at the Carron Ironworks, Scotland, hence its name. Much used in the Navy from 1779, but now superseded by improved guns.

**Carthusians,** an order of monks founded in 1086 by St. Bruno at the Grande Chartreuse, near Grenoble, and introduced into England about a century later. They built the Charterhouse (corruption of Chartreuse) in London in 1371. Their habit includes a hair-cloth shirt and cowl. The liqueur *Chartreuse* was invented by the order in their mountain retreat and is still their secret. For many years they have derived large revenues from the sale of the cordial.

**Cartoons** are properly designs of the actual size of an art work as it is intended to be completed, and made for frescoes, tapestries, or mosaics. The most celebrated cartoons are the seven painted by Raphael, now at the South Kensington Museum. The artist executed 25 in all, but only these seven, which Rubens obtained for Charles I., remain. A political pictorial caricature or symbolic design is also styled a "cartoon" nowadays.

**Cartridge,** a case of metal, paper, or pasteboard, containing the exact charge of gunpowder or other explosive required for a rifle or gun.

**Casein,** the leading nitrogenous element of milk, which coagulates by the action of rennet, or acids, when it takes the form of curd.

**Cashmere,** a soft silky fabric, made from the hair of the Cashmere goat, and the object of a considerable industry in India, cashmere shawls being often of great value. There is also a kind of Cashmere largely manufactured in this country from Asiatic wools and cotton.

**Cassowary,** a large bird of the ostrich family, inhabiting the Molucca Islands, New Guinea, and North Australia. It is of black plumage, with three toes, and has a horny crest upon its head. In fleetness it can outstrip the horse.

**Castanets,** spoon-shaped shells of hard wood or ivory, attached by cord to the thumb, and stuck together by the middle finger, making a crisp sound. Castanets are of Moorish origin, and used by dancers as time-beating accompaniments.

**Caste,** a term used to specify the different social classes into which the laws of Brahminism divided the Hindus. The four leading castes are: (1) the Brahmans or priests; (2) the military caste; (3) the Vaisyas or traders; (4) Sudras or labourers. There are many subdivisions also, the Sudras alone having 36. The Pariahs are considered beneath all classification of caste. Caste is a term adopted in other countries also in regard to class distinction.

**Castor-oil Plant** is a native of India, but now widely distributed in all hot regions. It grows to a considerable height, has broad palmate leaves, and bears a spiny fruit containing seeds which when bruised yield the well-known oil. The first yield of the oil is obtained by simple pressure. This is castor oil in its "cold drawn" and purest form. A more copious quantity results from heating, but not so good.

**Casuistry,** in ethics, is a subtle process of reasoning by which nice points of conduct and conscience are settled.

**Cat,** the general name for all quadrupeds of the *Digitigrade* section of the carnivorous order, from the lion down to the domestic cat. The latter is supposed to be descended from the Wild Cat once so common in Britain and other parts of Europe. Egypt is credited with having been the first country in which the cat was domesticated. The finest varieties are the Angora (or Persian), the Maltese, and the Manx.

**Catacombs** are subterranean or built-up places of interment. The most famous are those of Rome, constructed by the early Christians, where in times of persecution they concealed themselves. They are of great extent, consisting of a labyrinth of vaulted galleries, 4 to 5 feet wide, at different levels. These Roman catacombs are said to have contained over 6,000,000 bodies and to have extended scores of miles in length, though not more than about six miles are now accessible. Catacombs have also been discovered in Naples, Cairo, Paris, etc. Attached to some modern cemeteries are catacombs of the built-up order, formed of chambers of stone or brick in the walls of churches or mausoleums.

**Catamaran,** a float or raft of three or more pieces of wood lashed together. Used mostly on the Coromandel coast.

**Catapult,** a military engine used in ancient times for throwing missiles of stones, spears, and arrows. They were constructed of wood, and by means of a freed spring ejected the massed missiles with great force into the ranks of an enemy. The balista (*q.v.*) of the Middle Ages was an adaptation of this.

**Cataracts** are gigantic waterfalls. The most famous are those of Niagara in North America, the Orinoco in South America, the Victoria Falls on the Zambezi in Africa, the Falls of the Rhine at Schaffhausen, and the Cascade of Gavarni in the Pyrenees. Cataract, surgically, signifies an affection of the sight.

**Catechism,** an elementary book of principles in any science or art, but more particularly in religion, in the form of questions and answers. There is a great variety of these, including the Lutheran, prepared by Luther in 1529, Calvin's Geneva (in 1536), and the Anglican, in the Book of Common Prayer.

**Catechumens,** a term applied in the primitive church to children of Christian parents, who were admitted as neophytes, and occupied a place apart in the church.

**Caterpillar,** the larva of a lepidopterous insect, worm-like in its segmented body, usually furnished with feet, often curiously marked and coloured, and frequently more or less hairy.

**Cathedral,** the chief church of a diocese, so-called from its containing a Bishop's seat, or episcopal chair. The finest cathedral in the world is that of St. Peter's at Rome, founded in 1450. Other celebrated cathedrals are Notre Dame of Paris, the cathedrals of Cologne and Milan, St. Paul's in London, Canterbury Cathedral, York Minster, and the cathedrals of Durham, Bristol, Gloucester, Peterborough, Exeter, and Liverpool (new).

**Cat's-eye,** a kind of quartz, much valued as a gem, opalescent, and of various shades.

**Caucus,** an American term designating a private authoritative body of politicians whose duty it is to select candidates for office and deal generally with party business. It was first used in this country at Birmingham in connection with what was called the "Liberal Six Hundred." Lord Beaconsfield employed the term satirically. The word has since come into common use, although generally in an uncomplimentary way.

**Cavalier,** a name adopted during the troubles of the Civil War to designate the Royalist party; it is also used generally in reference to a knightly, gallant, or imperious personage.

**Cavalry** is the part of an army consisting much of troops that serve on horseback, and now less used than in former times. The cavalry of the Greeks and Romans were generally members of noble families, and down to the Middle Ages something of this distinction was continued. After the invention of gunpowder, this branch of the military service underwent great changes; and in more recent times, with the development of heavy artillery, cavalry has been less promi-

nent than before. The British Army has 30 regiments of cavalry: 2 of Household Cavalry, 5 Dragoon Guards, 2 Dragoons, 6 Lancers, and 12 Hussars. The Transvaal War of 1899–1902 showed the special value of mounted infantry, and in the Great War the services of the cavalry were highly distinguished in many fields. Since 1929 the cavalry is gradually being mechanised and horses are being abolished. In recent manœuvres there was very little horse warfare.

**Caves** are natural hollow places in the earth, largely met with in limestone or volcanic rocks. Fingal's Cave in Staffa is noted for its splendid range of basalt columns, and at Malham and Kirkdale in Yorkshire, and Kent's Hole near Torquay, are far-extending caves. The mammoth cave of Kentucky extends through many miles of labyrinthine windings.

**Cavemen.** From the traces found in various geological strata of the pre-historic period we find that races of people existed who lived in caves which served them as refuges against predaceous beasts.

**Caviare** is a Russian preparation made from the salted roe of certain fish, such as sturgeon, sterlet, and sevruga, and much appreciated by epicures.

**Cayenne Pepper** is made from the dried and baked pods of various kinds of tropical capsicum.

**Cedar,** a dark-leaved, cone-bearing, horizontal-branched evergreen tree that grows to a considerable height and girth, the best known species in this country being the Lebanon Cedar, which was introduced into England in the 17th century, and is now of frequent occurrence here. Its native regions are the mountains of Western Asia and the West Indies.

**Celluloid,** a compound of gun-cotton, camphor, and other ingredients, producing a substance that closely imitates ivory, or, when coloured, numerous decorative objects, such as coral, amber, tortoiseshell, etc.

**Cellulose,** a carbohydrate, and a constituent of nearly all plants and vegetable structures. By being treated with strong acids and boiled with water, glucose is obtained. Cellulose occurs in an almost pure state in the fibres of linen and cotton.

**Celts,** an ancient race of Western Europe, originally settled in Gallia, and afterwards spread over other parts of Europe, including Britain. The two chief divisions of Celtic Britons were the Gaels of Ireland and the North of Scotland, and the Cymri of Wales. The descendants of these races still retain many of their ancient characteristics, and considerable interest is manifested in their language and literature.

**Cement** assumes various forms, glue, sealing-wax, paste, putty, and other adhesives constituting one class, but the main class consists of substances for binding together brick or stone, and comprises mortar, Portland cement, Roman cement, and plaster of Paris, each possessing qualities rendering it specially adaptable to certain purposes.

**Cenotaph** (Greek = empty tomb), a monument erected in Whitehall, London, to commemorate all those who gave their lives in the service of the British Empire during the Great War. The permanent structure was unveiled by the King on Armistice Day, 1920.

**Censors** were Roman magistrates vested with the power of keeping a record of all citizens, and of controlling the manners, morals, and duties of the peoples. In more recent times in England censors have been appointed by the Government in connection with publications of the Press or for the stage. Under Charles II. there was a licensor of the Press. The only special censor in England is the Examiner of Plays. By a new regulation issued in January, 1912, the Lord Chamberlain will grant licences for the performance of stage plays to managers of music-halls within his jurisdiction to such as apply for them, under certain restrictions. In 1913 a censor of cinematograph films was established. In war time a special censor is appointed to check the reports intended for newspapers. During the Great War (1914–1918) an official censorship of a far-reaching and very strict kind was in operation, giving rise to much resentment because of its frequent block upon the dissemination of news. The literary censorship in this country is severe. In recent years the "banning" of certain books by D. H. Lawrence, James Joyce and M. Radcliffe-Hall gave them exaggerated prominence, the smuggled copies of the books fetching high prices.

**Census** was the title given in ancient Rome to a register of citizens, with full particulars as to their family, children, slaves, and so forth. The term is now used in regard to the general enumeration of population which takes place in Great Britain and Ireland and the British Colonies every ten years. From 1931 to take place every five years in England and Wales. The first official census in this country was that of 1801; the last in Great Britain was taken in April 1931.

**Centre of Gravity** is the point through which the entire weight of a body seems to act by the force of gravity. This centre may be found either by experiment, such as suspending the body to a string, when the true vertical position will be marked, or by the rules of geometry. The centre of gravity of a straight bar is at the middle point, and of a circle it is the geometrical centre.

**Ceorl,** the name given to an Anglo-Saxon freeman, who was usually in bond-service to a landed proprietor, but could become a "thegn" if he became possessed of 600 acres of land, with a church and a house upon it, but three generations had to elapse before any descendant of his could be ennobled.

**Cerium,** a scarce metallic element discovered in 1803. It is capable of precipitation to powder, and only exists in combination in the minerals cerite, allanite, and a few others. Salts of cerium, mixed with salts of thorium, are used in the manufacture of gas mantles.

**Cestus,** the name given to a girdle worn by Greek and Roman women around their waists, and generally decorated. It was also the name of the loaded gauntlet worn by boxers in the Roman arena.

**Cetacea,** the order of mammals comprising the whale, dolphin, and porpoise, which, though strictly aquatic, breathe air, suckle their young, and are warm-blooded.

**Chain Armour** was composed of links of hammered iron, and worn over garments by soldiers in the 12th and 13th centuries. These garments were called coats of mail, and were superseded by armour made of metal plates.

**Chalcedony,** a fine quartz occurring chiefly in Chalcedon, and much used by jewellers for necklaces, bracelets, etc. It is found in various colours, in some of which it takes distinctive names, as onyx, carnelian, agate, and sard.

**Chalk,** a white soft mineral consisting of carbonate of lime only slightly consolidated. It is made into lime by burning, and becomes whiting when purified. Chalk forms the Cretaceous system, and is abundant in the South of England, where it reaches a thickness occasionally of a thousand feet. Chalk fossils reveal mollusca, sponges, and sea-urchins. Of the many chalk preparations black chalk, Spanish white, red chalk, and French chalk may be mentioned, though none of these is pure chalk.

**Chalybeate Waters** are waters impregnated with iron, or containing iron in solution. Chalybeate springs are numerous in England and other parts of the world, and are valuable in restoring strength after illnesses and improving the blood.

**Chama,** a genus of large bivalves of the mollusc family, found in tropic waters, especially amongst coral reefs. *Chama gigas* weighs sometimes as much as 300 lb., and one valve has been employed as the basin of baptismal fonts in various churches.

**Chamberlain,** an official having the direction of the private apartments of a monarch or nobleman. The Lord Great Chamberlain of England is an hereditary official, and his chief duties are to attend the Sovereign at his coronation, take charge of the ancient palace of Westminster, and see to the furnishing of the Houses of Parliament and Westminster Hall on State occasions. This office is held jointly by the families of Cholmondeley and Willoughby d'Eresby in alternation. The Lord Chamberlain of the Household is the acting superintendent of the Royal Household, and receives his appointment from the Ministry of the day, and is a member

of the Privy Council. Chamberlains are also attached to various city and other corporations.

**Chambertin**, a well-known brand of red Burgundy, the product of the vineyards of the Côte d'Or, France.

**Chameleon**, a family of lizards of which there are numerous species. The common chameleon is a native of Africa, and is about 12 inches long, including tail. It is remarkable for its power of changing colour to resemble its surroundings when surprised, a power that is due to the presence of pigment-bearing cells beneath the skin. It is slow in movement, and insectivorous.

**Chamois**, a species of antelope, and a native of Western Europe and Asia. It is not much larger than a goat, lives in mountainous regions, and possesses wonderful leaping power, so that it is very difficult to capture. Its flesh is much esteemed, and from its skin chamois leather is made.

**Champagne**, the celebrated sparkling wine made from the grapes of the vineyards of the district of France, of which Rheims is the headquarters.

**Chancellor** was the title of a chief officer of the Roman Empire, but at the present day is used to designate in England the leading dignitary of the law and Parliament, and in Germany the highest officer of the State. In former times the Lord Chancellor of England was the King's most trusted adviser, and exerted immense influence. Before the Reformation he was generally an ecclesiastic. The Lord Chancellor is the Keeper of the Great Seal, a Privy Councillor, and Speaker of the House of Lords. His salary is £10,000 a year, and he receives a pension of half that sum. There was a separate Chancellor for Ireland, but this was a judicial office, with a salary of £6,000 a year. The term is also used of the Exchequer, Duchy of Lancaster, of Dioceses, Universities and of the Garter.

**Channel Tunnel.** A scheme to bore a tunnel through 20–30 miles of chalk under the sea between Dover and Calais was proposed in the second half of the 19th century. The bill authorising the work was rejected in 1883. In 1930 the scheme was again proposed by many enthusiastic supporters. The tunnel would be the longest ever made and an engineering wonder of the world. It would consist of two tubes with frequent connections. Electric trains would run through, taking only ½ hour and reducing the journey between London and Paris by about 2 hours. The estimated cost, however, being more than 35 million pounds, the attendant military risks and doubt as to feasibility of construction led the Government in June 1930 to reject the proposal.

**Chantry**, a private church or chapel established and endowed for the maintenance of priests to perform daily Mass for the souls of certain specified persons. Chantries were numerous in England up to the Reformation, and some few still remain.

**Chapel Royal**, the church dedicated to the use of the Sovereign and Court, and at present situated in St. James's Palace.

**Chapel of Ease**, a place of worship for parishioners living at a distance from the parish church.

**Charcoal**, a term applied to wood that has been subjected to a process of slow smothered combustion and generally refers to the carbonaceous remains of vegetable, animal, or combustible mineral substances submitted to a similar process. Charcoal has many uses, being employed as fuel for gunpowder making, as a disinfectant, and as a filter. It is practically insoluble except when reduced to a fine powder.

**Charity Commissioners**, an important body appointed by the Charitable Acts Trust of 1853 for inquiring into, and dealing with, charitable trusts in general and endowed schools. By Orders in Council made under the Education Act 1899, however, the powers of the Commissioners over endowments for purely educational purposes have, to a considerable extent, been transferred to the Board of Education.

**Charterhouse**, a famous school that was in Aldersgate Street, London, but removed to Godalming. In connection with the school is an almshouse on the old London site endowed by Thomas Sutton in 1611. Thackeray, as well as Addison, Grote, and other eminent men, were Charterhouse

**Chartism**, the political principles of a body of advanced reformers who appeared in England about 1838, and agitated for "six points" of popular reform, viz., manhood suffrage, annual parliaments, vote by ballot, abolition of the property qualification, payment of members, and equal electoral districts. The movement spread through all parts of the country, and assumed revolutionary proportions in 1848, when meetings of a violent character, attended by vast multitudes, were held, and it was deemed necessary to take strong measures of protection in regard to public men and public buildings. The Chartists threatened to resort to "physical force," and large bodies were put under a sort of military drill by night in secret places, and for a brief period the attitude of the Chartists was extremely threatening. Numerous disturbances took place, and many arrests were made, some Chartists being sentenced to death for high treason, but subsequently respited and sent into transportation. An Irish barrister, Feargus O'Connor, assumed the leadership of the movement, but committed so many absurdities that he brought undeserved ridicule upon what was in the main a legitimate movement. It attained its height during a period of intense distress amongst the working classes, and with the improvement of trade and the relief of taxation, it gradually died down, but the main principles for which it contended have since received practical acceptance.

**Chasuble**, a sleeveless vestment worn by ecclesiastics over the alb during the celebration of Mass. It is supposed to symbolise the seamless coat of Christ. Its use in English churches was prohibited in 1552, but again permitted after 1559. It gradually fell into disregard, however, but some fifty years ago was resumed in the High Church services.

**Chauvinism** is a term applied to any exaggerated devotion to a cause, more particularly to excess of public or military enthusiasm. The word springs from Nicholas Chauvin, whose extravagant devotion to Napoleon I. made him a laughing-stock.

**Cheese**, an article of food made from the curd of milk, which is separated from the whey and pressed in moulds and gradually dried. There are many varieties of cheese, according to the method of preparation, or the quality of the milk. Among the best-known of British cheeses are the Stilton, Cheddar, Cheshire, Gloucester and Wensleydale; while of foreign cheeses we have Parmesan, Dutch, Gorgonzola, Roquefort and Gruyère. The soft cheeses, such as Camembert, Brie, and cream, only keep for a short time. Large quantities of colonial cheese now come from Canada and New Zealand.

**Cheetah**, the large spotted cat of Africa and Southern Asia, often called the "hunting leopard" because of its employment in the chase. It is long-legged with non-retractile claws, and not unlike some fleet-running dogs in general appearance, but its facial presentment and voice betray the feline.

**Cheka.** (*See* **O.G.P.U.**)

**Chemistry** is the science which analyses and describes the properties and composition of various natural substances. It had its rise in alchemy and has gradually developed into a science of vast magnitude and importance, engaging the study of the most eminent scientific minds. According to chemical theory all substances are composed of indivisible atoms. It demonstrates that an elementary substance is made up of groups of allied atoms, while a compound substance consists of atoms of different kinds, chemically united. Most substances belong to different groups of atoms called molecules, the smallest proportion into which the substance can be divided.

**Chenille**, a soft cord material of silk or worsted used in embroidery, lace-making, and sometimes for carpets and wall-hangings or curtains.

**Cheque**, an order on a bank for the payment of money on presentation to the person named in the document, or to the bearer. It does not require endorsement when made out to bearer, but must be endorsed when payable to order. Each cheque requires a twopenny stamp in this country. A cheque that is crossed (by having the words "& Co." written transversely be-

tween parallel lines) can only be paid through a bank. A banker is liable for loss on a forged cheque unless he can prove carelessness on the part of the drawer.

**Cherokees,** a North American tribe of Indians, once a powerful and warlike nation occupying a large portion of the Allegheny range, but now residing within the Indian Territory under civilised rule of law and very prosperous.

**Chess,** an ancient game of Eastern origin. (See Pears' *Dictionary of Sports and Pastimes.*

**Chestnut,** the fruit of the chestnut tree; those of the Spanish chestnut, *Castanea vesca,* furnish a favourite esculent. The wood is used in carpentry; while the horse-chestnut (*Æsculus hippocastanum*) is much employed in brush-mounting and in cabinet work.

**Chiaroscuro,** a term used in painting to denote the arrangement of light and shade in a picture. On the proper handling of chiaroscuro depends the fidelity of depiction of objects and distances.

**Chicory,** a plant largely used for mixing with coffee and not regarded altogether as an adulterant, being credited with certain dietetic virtues. In England, however, where chicory is added, the fact must be stated on the package sold to the public. The dried roots of the plant only are used, being ground into powder before mixing.

**Chiltern Hundreds,** the name of a district of the Chiltern Hills where offenders used to hide to escape capture. This gave rise to the appointment of a Crown official who was called the steward of the Chiltern Hundreds. The duties of this office long since ceased to be of meaning, and by a pleasant fiction, when a member of the House of Commons cannot resign his seat without disqualification by accepting a place of profit under the Crown, he accepts the stewardship of the Chiltern Hundreds, which is commonly held to constitute such a place, and this is tantamount to resignation.

**Chimpanzee,** a large anthropoid ape, a native of tropical West Africa, of a dark brown colour, with arms reaching to the knee, large ears, and a general organisation resembling that of man. It possesses considerable intelligence, can walk erect with ease, and when full grown is about four feet high.

**Chinchilla,** a South African rodent. Grey in colour, and black and white underneath. It is greatly esteemed for its beautiful fur.

**Chintz,** a cotton cloth, generally glazed and covered with floral or other designs. It is largely used for furniture coverings.

**Chipmunk,** a squirrel-like animal of the Tamias genus, common in the United States.

**Chippendale Furniture** was introduced in the reign of George I. by Thomas Chippendale, a Worcestershire cabinet-maker who migrated to London and set up for himself in St. Martin's Lane, Charing Cross. He was fonder of inventing designs for furniture than of making it, and in 1752 published a book of patterns; the London furniture-makers of the day soon began to model their work upon it. Of course, only a small portion of the so-called "genuine old Chippendale" in existence can have come from the shop in St. Martin's Lane.

**Chirograph,** an indenture drawn in evidence of title to property, landed or otherwise, and prepared (usually on parchment) in a special manner of engrossing.

**Chiromancy** is the old name for palmistry or divination by the hand. It was greatly practised in olden times, and has had a considerable revival in recent years.

**Chiropody,** the treatment of the hands and feet for the cure or prevention of disease, especially applied to the removal of corns, warts, etc.

**Chlamys,** a loose military cloak or mantle, worn formerly chiefly by horsemen, and permitting the free use of the arms.

**Chloral,** a colourless mobile compound discovered by Liebig, and obtained from chlorine and alcohol, or chlorine and starch.

**Chlorine,** a gaseous element of the halogen family, obtained by the action of manganese dioxide on hydrochloric acid. It unites easily with many other elements, the compounds resulting being termed chlorides. It is of great importance in bleaching, and is a valuable disinfectant.

**Chlorite,** a grass-green or darker green group of minerals of micaceous structure, found in the tin mines of Cornwall.

**Chlorodyne,** an anodyne remedy containing morphine, chloroform, prussic acid, and extract of Indian hemp, flavoured with sugar and peppermint. It is often administered to children to induce sleep, and, when unskilfully given, sometimes leads to unfortunate results.

**Chloroform,** a volatile colourless liquid, is prepared for commercial purposes by distilling a mixture of chloride of lime, alcohol and water; but for medical use it is made from chloral, which yields a purer distillation. When the odour is inhaled it produces unconsciousness and insensibility to pain. It owes its discovery to Liebig, and its first application for medical purposes to Sir James Young Simpson.

**Chocolate,** a paste made from the kernels of the cocoa tree and flavoured with sugar, vanilla or other substance. Chocolate beverage is made by dissolving chocolate in boiling water or milk. It was thus used by the Mexicans largely, as far back as the time of Montezuma.

**Chouans,** a party of Breton Royalists who were bitter opponents of the Republic, and defended their cause bravely, until La Roche put them down in 1796. There were later risings, but Napoleon, by ordering the execution of their leader, Cadoudat, in 1804, crushed the movement.

**Chough,** a bird of the crow family, with fine black plumage tinged with blue and purple. It is found in Cornwall, the West of England, the mountains of Wales, and in the Hebrides.

**Chrism,** the sacred ointment consecrated by a Bishop, and used in the rites of baptism, confirmation, ordination, etc. It is now only employed sacerdotally in Roman Catholic and Greek churches.

**Christadelphians,** members of a religious sect which holds that immortality can be obtained by believers only. They have peculiar views of the Trinity, reject infant baptism, and have strange theories about the Millennium.

**Christianity,** the religion proclaimed by Jesus Christ. Its principles are set forth in the New Testament, and its churches abound all over the world. About one-third of the inhabitants of the globe are Christians.

**Christian Science** represents the belief that disease, sin, and death can be defeated by faith.

**Christmas Cards** are a modern institution. The first genuine Christmas card was sent in 1844, and it is believed the sender was W. E. Dobson, R.A. He had a friend from whom he received certain courtesies of which he desired to show some especial appreciation. The time was Christmas. So, after some thought, he made a sketch symbolising the spirit of the festive season and posted it to his friend. The sketch was done on a piece of Bristol board about twice the size of the modern letter-card. It depicted a family group toasting absent friends among appropriate surroundings. And from this small beginning the idea, now so largely utilised, and constituting such a vast industry, was developed.

**Christmas Rose,** a plant of the Ranunculus order (*Helleborus niger*), it flowers, under normal conditions, about the close of the year.

**Christolyte,** a sect of sixth-century Christians who believed that upon the descent of Jesus into Hades he left there both His human body and soul, and rose again with His Divine nature alone.

**Christ's Hospital,** or "Blue Coat School," was founded by Edward VI. on the site of an old Greyfriars monastery, and down to a few years ago was one of London's best known scholastic institutions. It was pulled down to make room for extensions of St. Bartholomew's Hospital and the new General Post Office Building (in Newgate St.). The school is now carried on at Horsham. Coleridge and Charles Lamb were Blue Coat boys.

**Chromascope,** an instrument for demonstrating the three optical effects of colours; viz., the reflection of speculums, the transmission of light through transparency, and the refraction of lenses and prisms.

**Chromatics,** the science which investigates and explains the properties of the colours of light, and of natural bodies, forming a chief branch of optics.

**Chromium,** a yellow metal obtained from chrome ironstone, a mineral compound of chromic, ferric, and ferrous oxides, extensively used for plating the bright parts of motor-cars.

**Chronea,** a wingless dipterous insect found amongst snow and ice in Sweden in winter-time, brownish-yellow on the head, and long-legged.

**Chronology,** the science of computing periods of time by orderly division, and of assigning to events their proper relative dates.

**Chrysoberyl,** a mineral found in rolled pebbles in Brazil and Ceylon, in fine crystals in the Ural, and in granite in the United States, is of a yellowish-green colour, and when opalescent makes an attractive gem.

**Chrysocolla,** a silicate of copper, apparently produced by decomposition of copper ores. It is of a blue-green colour, and derives its name from its slight resinous lustre and transparency.

**Chunchuses,** a race of Chinese brigands ranging through Manchuria and Mongolia, and accused of serious robberies during the Russo-Japanese war.

**Church Army,** a Church of England Mission, somewhat on the lines of the Salvation Army, founded in 1882 by the Rev. W. Carlile, and doing great good among the submerged masses.

**Church of England** was organised in 673 by Archbishop Theodore, who settled the number and boundaries of its dioceses, and divided each diocese into parishes. The conversion of England to Christianity was mainly the achievement of St. Augustine, who in 597 founded the see of Canterbury. The church was in communion with Rome from the first, but was not brought strictly within Papal jurisdiction until after the Norman Conquest, although at no time was the domination of Rome complete over the English Church; so that when the Reformation took effect in the 16th century it was not so much the displacing of an old church and its supplanting by a new one which took place as a strengthening of an anti-papal action which had long been maturing.

**Church of Scotland** was constituted at the Reformation. The union of the Church of Scotland with the United Free Church was effected in October 1929, after 86 years of separation. The total membership in 1930 amounted to 1,284,449. The chief official is the Moderator, chosen annually, who ranks next after the Lord Chancellor; the Sovereign himself is represented by a Lord High Commissioner. The Church organisation is controlled by Kirk Sessions, Presbyterian, Synods and the General Assembly.

**Cid,** a famous Spanish hero of the 11th century, Don Rodrigo Diaz, who, before he was twenty, led a Spanish force against the Moors, and drove them out of Spain. He is celebrated in poem, play and romance.

**Cider,** a fermented liquor made from the juice of apples by crushing the fruit to pulp when ripe. The cider of Devonshire, Somersetshire, Worcestershire, and Herefordshire is the best.

**Cinchona,** an evergreen tree common in the warmer portions of the American continent, growing at a high altitude and famous for its bark, which gives us the valuable drug, quinine. It was introduced into India in 1860, and its product occupies an important position in pharmacy.

**Cinematograph.** (*See* **Kinematograph.**)

**Cinnabar,** an ore which yields mercury by heating.

**Cinnamon,** the dried bark of a tree common in the East Indies, and forms a valuable spice.

**Cinque Ports** were originally important sea-ports on the Southern coast of England, including **Hastings,** Romney, Hythe, Dover and Sandwich, which were the five original Cinque Ports. Winchelsea and Rye were added later. These ports were required to furnish a certain number of ships, ready for service, and in return they were granted many privileges. The official residence of the Lord Warden of the Cinque Ports is Walmer Castle. Lord Beauchamp has been Warden since November, 1913.

**Cirrus Cloud.** (*See* **Clouds.**)

**Cistercians,** an order of monks and nuns taking their names from Cisteaux, near Dijon, where their first convent was established in 1098. The monks wear white cassocks, the nuns white dresses.

**Citric Acid** is contained in limes and lemons mostly. It is of value in medicine and in the preparation of effervescent beverages.

**Citron,** the fruit of a tree of the lemon order, with thick rind, much used for candied peel.

**Civet,** a carnivorous quadruped from which civet perfume is obtained. In Abyssinia the animal is kept in confinement for the sake of this secretion.

**Civil List** is the record of expenditure in connection with the maintenance of the royal household and the dignity of the Crown. It is fixed in the first session of Parliament after each monarch's accession. The amount fixed on the accession of Queen Victoria was £406,000 a year; for Edward VII. it was raised to £470,000; and further augmented for George V.

**Clairvoyance,** the power of mental vision, said to enable its possessors while in mesmeric trance to see persons and happenings at a distance.

**Clay,** a term used to designate certain plastic, earthy compounds composed of hydrated silicates of alumina. China clay, from which porcelain is made, is the purest clay, and is obtained by the natural crumbling of felspar, which is found only in Cornwall in this country, but is well distributed in China, Japan, and the United States. Other varieties are pipe-clay, fire-clay, potter's clay and brick clay.

**Cleopatra's Needle** on the Thames Embankment is of the time of Tothmes III (1500–1450 B.C.). Presented to the British Government by Mehemet Ali in 1819, but not brought to this country until 1878. Its weight is 180 tons and it is 68½ feet in height.

**Cliff-Dwellers** were aboriginal tribes who had their homes in recesses of the rocky cliffs of New Mexico and elsewhere in the South-western regions of what is now the United States.

**Cloaca Maxima,** the name of the great underground sewer of Rome, constructed in the reign of Tarquinius Priscus (*circa* 588 B.C.) and still extant in its chief structural features.

**Clock,** a horological contrivance differing from a watch in not being adaptable to transit, save in a minor and unimportant way, and usually having a motive spring or weight, and geared train, with a pulsative device to govern the rate at which the mechanism shall move; also commonly having a figured dial and index hands. One of the earliest inventions for time-keeping was the dial, upon which the clepsydra followed. Archimedes knew how to set wheels going by springs and weights, but who first regulated their speed and applied their controlled motion to a pointer traversing a dial has not been ascertained. But about A.D. 1000 a student at Cordova University added the escapement to a pendulum clock in that seat of learning. In 1228, a clock was, it is recorded, placed in the Palace Yard in London, after which date clocks became general.

**Clocks of the Crown.** The different Royal Palaces contain a number of Crown clocks. A careful inventory is kept of those at Windsor in the Lord Chamberlain's Department. This inventory contains entries of 230 clocks which fill two large volumes. Many of them are works of art of the highest order, and one in particular possesses an interest of quite a romantic historical character. This is the clock that Henry VIII. gave as a present to Anne Boleyn on her wedding day. It rests on a modern gilt bracket in the Chapel retiring room, and is only four inches deep and ten inches high. Formerly it belonged to Horace Walpole, and when his effects were sold at Strawberry Hill, Queen Victoria bought it for £110 5s. The weights are encased in copper gilt and beautifully engraved, "H.A." and true-lovers' knots on one, and "H.A." alone on the other. In the footmen's room at Windsor there is a specimen of an "Act of Parliament Clock"—a kind of clock that grew out of a Tax imposed on watches by Pitt. This tax caused watches to be much less worn, and tavern-keepers adopted a bold mural timepiece for the benefit of their customers. These timepieces were called "Act of Parliament clocks." The horological curiosity at Buckingham Palace is the Negress Head Clock—a French spring-balance production by Lepine, whom Voltaire engaged to establish a watch manufactory near Geneva. In this clock the hour numerals are shown in one of the negress's twinkling eyes and the minutes in the

other. It stands two feet five and a half inches high, the head and bust of the negress being in ormolu and enriched with magnificent decorative features. Of another clock in Buckingham Palace, made by Alexander Cumming, an Edinburgh man, for George III., it is said that Cumming received £2,000 for it and £200 a year for looking after it.

**Clog**, a wooden shoe, often strengthened with iron attachment, worn by factory and other workers in many industrial districts in our own country, and by the peasantry of numerous Continental nations. Clog-dancing is a performance in which the dancer wears wooden footwear to provide a loud accompaniment, and the exercise is one which admits of the attainment of considerable skill.

**Cloisonné**, a kind of fine pottery with enamelled surface, decorated with elaborate designs, the outlines of which are formed by small bands or fillets of metal. The Byzantines excelled in this work, but in the 20th century Japan and China led in Cloisonné-ware.

**Cloisters** are arched covered walks attached to monastic and ecclesiastical buildings, and usually consist of a series of vaulted arcades surrounding a quadrangle. They were mainly intended as places of exercise and relaxation for the monks.

**Closure**, a device by which debate is cut short in the House of Commons. By a rule of 1887, any member, with the consent of the Speaker, or Chairman, can move that "the question be now put," and if the motion be carried by a specified majority the discussion ceases and the question is voted upon. A similar rule obtains in both the French and American legislative assemblies.

**Clouds** are collections of visible vapour suspended in the upper atmosphere at a considerable height—two to three miles on an average. When similar vapours gather close to the earth they form what we call *fog*. Clouds are the result of a process of evaporation that is continuous over sea and land. They are usually classed as follows: the *cirrus*, feathery or resembling locks of hair; the *cumulus*, dense, hill-like masses, called summer clouds; the *stratus* or night cloud, which forms in level streaky sheets; the *cirro-stratus*, a collection of small round dappled clouds, usual in hot weather; the *curro-stratus*; the *cumulo-stratus*; and the *nimbus*, or rain-cloud.

**Clover**, various plants of the *Trifolium* genus, of which there are about 200 species. The best known kinds are *White Clover*, a common pasturage product in nearly all parts of the world; and *Red Clover*, the most widely cultivated of all, much esteemed as fodder for cattle.

**Cloves** are the dried flower buds of a species of myrtle, grown principally in the East Indies.

**Coal** is a carbonaceous mineral substance, commonly black and easily breakable, and may be either dull or shiny. It is very inflammable, and has formed for a long period the most important substance for fuel in employment in most civilised lands. It is composed of chemically altered vegetable matter, chiefly the timber of long extinct lycopodiaceous trees, and is found as a sort of stratified rock in the coal-measures. The best coal for fuel purposes is that belonging to the Carboniferous series of the Palæozoic system. Anthracite coal has lost nearly all its hydrocarbon by change or by pressure, and this and the more highly bituminous coals are greatly employed in manufacturing industries the world over, while those less so are used for household purposes. A ton of best quality (bituminous) coal will yield 10,000 cubic feet of gas and 10 gallons or so of tar, leaving behind a chaldron of coke and 20 gallons of ammoniacal liquor. The total annual coal production of the world now exceeds 1,200,000,000 tons, valued at over £420,000,000 (in 1928 the value of British coal alone was £152,516,000). The United States yields more than Great Britain, and the two great English-speaking nations between them produce two-thirds of the universal coal output. It is calculated that there remain something like 138,000,000,000 tons of coal available in Great Britain and Ireland alone within a depth of 4,000 feet. There are about 3,200 coal mines in the United Kingdom, employing 1,250,000 persons, but in 1928 only 938,988 persons were employed though the gross value of output was not diminished much. It is to be noted that modern methods of machine coal-cutting cannot always be applied to old hand-worked diggings.

**Coal Mining by Machinery** has been somewhat slow in being adopted in this country. For some years it has been in use in America and on the Continent. Now, however, electric power is being rapidly introduced, and in many collieries performs the work of pumping, hauling, coal-cutting, winding and lighting. The electric coal-cutter represents one of the greatest of these improvements. Under the old system the undercutting of the seam so that it could be blown down was the hardest and most disagreeable work which the miner had to do. He had to lie on his side to use his pick, and continually inhale coal dust. Besides the work being hard the system was not economical, as the miner wasted a great deal of coal. The machine-cutter, which is necessarily of powerful construction, is placed at one end of the coal seam. As soon as the current is turned on, the cutter arm—a revolving chain 6 feet long—swings round and cuts its way into the seam, requiring no bed, but travelling along on its own "shoes," forming its bed as it moves, hugging always closely to the seam, going up and down inclines, and steadily moving forward towards the fixed prop, to which is attached a steel rope. The machine is a steel box, weighing 2,400 lb. It is 8 feet long, 28 inches wide, and 16 inches high. It is always partly embedded in the coal by its own weight. It requires very little attention. One man, a miner of a mechanical turn, has to look after the electric apparatus; another stands guard with a pick over the revolving chain, shovelling away coal which may fall and tend to clog the wheel. The next operation after the coal is undercut is for holes to be drilled in the face of the seam by electric drills, when the coal is blown down ready for the miner to pick into smaller lumps and fill into trucks.

**Coaling Stations** are of the utmost importance to maritime nations as points of equipment, repair and refuge. Britain's principal coaling stations include Aden, Hong Kong, Singapore, Sierra Leone, St. Helena, Simonstown (South Africa), Jamaica and Mauritius. Her far-reaching Colonial possessions give to Great Britain a vast advantage over other Powers in this respect.

**Coal Tar.** (*See* Aniline.)

**Coast Action**, the influence of the sea on the coasts. The erosion of the shores of Britain having occasioned justifiable apprehension, the matter was referred to a Royal Commission in 1906.

**Coastguard Service**, an organisation formed in smuggling times for the prevention of contraband operations. The Coast Guard Act 1856 provided "better defence of the coasts." It is now under the Board of Trade, although the vessels are manned chiefly by reserves of the Royal Navy.

**Coat of Arms**, in heraldry, is a device containing a family's armorial bearings. In mediæval times it was an actual coat upon which such device was embroidered, and knights wore it over their armour.

**Cobalt**, a steel-grey metal, malleable, and resembling nickel, found in combination with arsenic and sulphur. It is of great value in the arts as a colouring medium, its protoxide yielding a brilliant blue, largely utilised for colouring glass and porcelain, as well as a painting pigment.

**Cobra**, the hooded snake of India, Ceylon, and Africa, and one of the most venomous of the vipers. It grows to a length of 4 or 5 feet and possesses the power of dilating its neck and head to a hood-like shape when disturbed, and has a bright mark on its neck which gleams like a pair of spectacles.

**Coca**, a South American shrub, which yields three crops a year of leaves and flowers. The leaves are chewed by the natives and act as a strong stimulant, enabling them to withstand hunger and fatigue to an astonishing degree. It is used in medicine as a tonic, and yields the alkaloid cocaine. Over 50,000,000 pounds of coca leaves are gathered yearly, and the bulk of this yield is consumed in South America.

**Cochineal**, a dyestuff consisting of the dried bodies

of the females of a remarkable class of insects of the *Coccus* genus. These insects, which exist in countless myriads in tropical America, Java, etc., feed on a special cacti which is cultivated for them, and are gathered twice a year. The colouring principle contained in the insects is carminic acid, and is a brilliant crimson. It takes 70,000 insects to make a pound of the dye-stuff.

**Cochliodus,** a fossil genus of fish of the shark order, found in the carboniferous limestone of Bristol and elsewhere. They possessed lateral teeth, marked with sub-spiral ridges and grooved after the manner of the shell of a univalve.

**Cocinin,** a chemical term signifying an admixture of glycerides of myristic and lauric acids.

**Cock-a-Bendy,** a contrivance for twisting ropes, consisting of a hollow piece of wood through which a pin runs. By reason of the rotation of this pin when the cock-a-bendy is held in the hand, twist is imparted to the rope.

**Cockades** came into general use when the House of Hanover succeeded to the British throne. In later times the cockade became a badge of servitude. At one time it was only allowed to be worn by soldiers, but nowadays every British subject has cockade rights if he cares to exercise them. Its use is now mainly confined to the servants of the wealthy.

**Cockatiel,** a common name for the small cockatoos of the Calopsitta genus.

**Cockatoo,** a white-plumaged bird of the parrot family with a movable crest, usually of some shade of yellow. Cockatoos are inhabitants chiefly of Australia and the Malay Archipelago, and much in favour as pets.

**Cockatrice,** a basilisk or fabulous serpent supposed by an exploded tradition to have been hatched from a supposititious egg of a cockatrice by a serpent. Its glance or breath was, according to legend, fatal.

**Cockle,** the popular name of the shell-fish of the genus Cardium, found plentifully in sandy bays near low-water line; there are numerous British

_____, commonly called the black-beetle, is a genus of insects that are distributed over many countries, though a native of Asia. It is of nocturnal habits, infests kitchens, pantries, etc., and is often difficult to get rid of.

**Cocktail,** an iced drink, much in fashion since the war as an appetiser, is prepared by mixing spirits with bitters, sugar and some flavouring. A champagne cocktail is champagne mixed with Angostura bitters. The varieties are innumerable.

**Cocoa.** (*See* Cacao.)

**Cocoa-nut Palms** are tropical trees which grow to the height of from 50 to 100 feet, and have their tops surmounted by feather-like curving leaves. The fruit of this tree is the ordinary cocoa-nut, and grows in bunches of from 12 to 20. The fibre of the husk is used for a variety of purposes, such as making drinking cups, spoons, brushes, matting and cordage. The trunk of the tree is utilised in the manufacture of various fancy articles.

**Cod** are well-known food-fish, found in abundance upon the British coasts and upon the banks lying off Newfoundland, their capture and preparation for market, and the extraction of the oil they yield, forming important industries.

**Codes,** a term used to designate a system of laws properly classified. Some of these codes are of very ancient date. Codes were made by the Gothic tribes as well as by the Romans, who formulated several codes of historic importance, including the Theodosian code, summarising the Roman laws from the time of Constantine to 438; the Papian code, devised for the Roman subjects of the Burgundians, 517–523; the Justinian code, 527–565 (the most important of the Roman codes), and the Gregorian code, another collection of Roman laws. The most important of modern codes is the Code Napoleon, compiled between 1803 and 1810, which still is in force. Frederick the Great made a code of laws for Prussia in 1751.

**Codex,** a name referring to the manuscripts of Scripture, and comprising the Sinaitic codex of the 4th century, the Vatican codex of the same period, the Alexandrin codex of the 5th century, and others.

**Coffee,** a shrub found originally in Arabia and Abyssinia, but now extensively grown in the West Indies, Brazil, India and Central America. It yields a seed or berry which, after undergoing the necessary preparation, is ground and largely used in most countries as a popular breakfast beverage. The best coffee is the Mocha, an Arabian variety. Coffee is a stimulant of great value, but its consumption in this country has fallen off of late years owing to greater consumption of tea and cocoa. The beverage was introduced into Europe in the 16th century, and the first London coffee shop was opened in 1632.

**Cognac.** (*See* Brandy.)

**Cohesion** is the state of cohering or uniting the particles of a homogeneous body. Its power is determined by the force required to separate its parts. This power is strongest in solid bodies, and weakest in elastic fluids, such as air and gases.

**Coke** is a substance formed from coal by heating it without access of air, and comprises about 90 per cent. of carbon. Its value is that it burns without emitting smoke or flame; thus it is largely used for smelting and heating purposes where the presence of smoke would be objectionable or injurious.

**Cola-nut,** the name of a seed obtained from the cola tree, of tropical Africa, Brazil, and the West Indies. It has strong stimulative qualities, and contains two or three times as much caffeine as coffee.

**Colonel,** the title of a military officer, and ranking next above a lieutenant-colonel.

**Colony** is a settlement of people who have migrated from their native land to some possession of the mother country. The Phœnicians were the first colonists we read of, and established themselves in various parts of the countries bordering on the Mediterranean. The Greeks were also considerable colonists, and later the Romans, Britain being at one time a colony of the Roman Empire. Colonisation, in its more modern significance, was the result of important geographical discoveries made in the Western World in the 14th century, and later by the Spaniards, Portuguese, Dutch and French. From about the beginning of the 17th century England developed a colonising spirit which soon extended the boundaries of the Empire. Newfoundland, Virginia, India, the West Indies, gradually became British. Australia, New Zealand and South Africa were added, and even when the 13 colonies of America were lost to England, her possessions remained and continue to this day of immensely greater extent than the colonial possessions of any other country. The latest colonies to be incorporated with the Empire were those of the Transvaal, Orange River, and Kenya Colony. It is estimated that one-sixth of the land of the globe is comprised within the British Empire. During the progress of the war (1914–18) the Allies succeeded in taking from Germany the whole of the 1,100,000 square miles of her Colonial territory.

**Colosseum,** the name of the Flavian amphitheatre at Rome, begun by Vespasian and finished by Titus A.D. 80. In general outline it still remains one of the most magnificent ruins in the world. It is 607 feet long, 512 feet broad, and 159 feet high. On the ground storey there are 80 vaulted openings. In the arena of this great building the famous gladiatorial displays and mimic naval battles used to be given, and 87,000 spectators could be accommodated.

**Colossus** is the name which the ancients gave to any statue of gigantic size. The Colossus at Rhodes, which was a bronze statue of Apollo, was the most famous, and reckoned among the seven wonders of the world. It was 70 cubits high, and stood astride of the mouth of the harbour, so that ships could sail between its legs. It was destroyed by an earthquake in 224 B.C.

**Colour-Blindness** is a defect of vision inducing blindness to certain shades of colour. It is stated that this defect shows itself in from two to six per cent. of males, while under one per cent. of women suffer from it. This colour-blindness is sometimes total, but in the majority of cases only partial.

**Column,** in architecture, is an upright solid body

serving as a support or decoration to a building. Columns consist of a pedestal, a shaft, and a capital, over which the supported entablature rises. They are named according to the styles of architecture of which they form part, being Doric, Tuscan, Ionic, Corinthian, or Composite as the case may be.

**Colza Oil** is obtained from crushed rape-seed, and is valuable both as a lubricant and an illuminant.

**Combustion**, the process of burning, arises from the rapid oxidation resulting from the combination of oxygen with any inflammable material.

**Comets** are celestial bodies which move about the solar system in elliptical parabolic orbits. Usually these star-like bodies are accompanied by a long stream or tail of light. The parabolic comets are seen once only, and do not reappear; the elliptical comets are periodic, and their recurrence can be calculated with accuracy. Comets are of enormous magnitude, sometimes covering millions of leagues, but their light is feeble in comparison with that of a star. The great comet years, so far as recorded, have been 1456, 1680, 1811, 1843, 1858 (Donati's), 1861, 1874 and 1881.

**Comitia** were gatherings of the Roman people for the purpose of voting on public affairs. The *comitia curiata*, composed of representatives of the patrician families, dealt with State affairs; the *comitia centuriata*, consisting of five classes, voted on laws, capital crimes, and imperial affairs; and the *comitia tributa*, a plebeian assembly, was concerned with local matters.

**Comitium**, the place of assembly of the Roman citizens; it stood adjacent to the Forum, of which it was sometimes reckoned a part.

**Commander**, a naval officer next in rank below a captain. His position is that of sole commander of a vessel of the third or fourth class, or of second in command of a first- or second-class ship.

**Commander-in-Chief** was the title of the highest officer in the British Army until 1904, when in its place the office of Inspector-General of the Forces was created, to which position the Duke of Connaught was appointed, being succeeded in 1907 by Gen. Sir J. D. P. French, who resigned in 1914, and was followed by Gen. Sir C. W. H. Douglas. Field-Marshal Sir H. Wilson, Bart., G.C.B., D.S.O., was C.-in-C., or Chief of the Imperial General Staff, as the position is now called, until 1922, when he was succeeded by the Earl of Cavan. The present Chief is F.-M. Sir Geo. F. Milne, G.C.B., D.S.O.

**Commodore**, a naval officer ranking next below a rear-admiral and next above a captain. It is a title usually conferred upon a captain appointed to a particular service, and is only temporary.

**Common Law**, in England, is the unwritten law established by custom, usage and precedent, and not by statute. Both statute law and equity overrule common law when courts are called upon to decide between them.

**Commons** are unenclosed tracts of land sometimes dedicated to the use in common of the inhabitants of the township in which they lie. In old times almost every parish had its common, but now many have been enclosed and built upon. There were four chief rights of commons: (1) estovers—the right of taking wood for house building or firewood; (2) pasture, or right of grazing beasts; (3) turbary, or right of digging turf; (4) piscary, or the right to fish.

**Commune** is a municipal administration division in France, Italy or Belgium, generally presided over by a mayor and municipal council.

**Commune of Paris** was originally the Paris Revolutionary Committee, established in 1789, but superseded by the Convention of 1794. The second Paris Commune was that of 1871, which took possession of Paris after the withdrawal of the German soldiery, and destroyed the Tuileries, the Vendôme Column, the Hôtel de Ville and other public buildings, but was ultimately suppressed by the National troops.

**Communism**, the system which claims to put an end to private ownership and establish the absorption of all proprietary rights by the State for the common good. It also claims the right of the State to control production, distribution, and consumption, and an equitable division of labour.

**Compass (or Mariner's Compass)** is an instrument by which the magnetic meridian is indicated, and comprises a horizontal bowl containing alcohol and water, a card upon which the 32 points of the compass are marked, and the steel needle which always points to the meridian. The origin of the Mariner's Compass is unknown, but it is supposed to have come from China.

**Complex**, a term used in psychology to denote a group of impressions or ideas which are the result of suppressed thought, instinct or desire, and which reacts upon the subject without revealing its real nature or cause to conscious reason. Complexes produce abnormal mental and physical states and irrational actions. Psycho-analysts in their treatments endeavour to resolve their patients' complexes.

**Compurgation** was a system of trial which prevailed up to the reign of Elizabeth, whereby an accused person could claim the right to summon twelve personal friends to testify their belief in his innocence. From this system grew trial by jury.

**Conchology**, the science of shells, which was usually divided into three classes—univalves, bivalves, and multivalves.

**Conclave**, an assembly of Roman Catholic Cardinals met together to elect a Pope.

**Concomitance**, a doctrine teaching that Christ's body exists entire under each symbolic element.

**Concordance**, a supplement of references, notes, and explanations added to any important work such as the Bible, Shakespeare's plays, etc.

**Concordat**, an agreement or convention between the Pope and a secular government regarding ecclesiastical matters The Concordat of Worms in 1122 between Calixtus II. and the Emperor Henry V. was famous as deciding a long struggle in regard to investiture. In 1801, Napoleon concluded a concordat with Pius VII., defining the restored relations between the head of the Church and the French Roman Catholics.

**Concrete** is a substance formed by uniting in coagulated masses various hard materials such as stone chippings and particles, sand, gravel, and lime, or preferably Portland cement. It is much used for floors, foundations, sea-walls, etc. In recent years reinforced concrete—*i.e.*, concrete combined with steel—has come greatly into use, and performs a powerful part in large constructional work.

**Condor**, a large vulture of brilliant black plumage, and having a circlet of white feathers round its neck. It is a native of the Andes.

**Condottieri** were mercenary soldiers engaged in the wars of the Italian States in the Middle Ages.

**Conger-Eel**, a marine eel sometimes found of the length of 10 feet and weighing 100 lbs.

**Congregationalists**, or **Independents**, are the oldest sect of Nonconformists and hold that each Church should be independent of external ecclesiastical authority. They sprung from the Brownists, who arose in Elizabeth's days, but were compelled to take refuge in Holland. Under Cromwell they were able to extend their ministrations and became a powerful body. Charles II.'s Act of Uniformity drove them forth again, but they regained full liberty of worship under William III. In the British Isles there are 2,650 Congregationalist ministers, about 5,000 churches, and nearly half a million communicants, while the number of communicants throughout the world is over 1,250,000.

**Congress**, the legislative assembly of the United States, which first met on March 4, 1789. It consists of a Senate and a House of Representatives.

**Conic Sections** form a division of the science of geometry, and deal with such curved lines as can be produced by the intersections of a plane with a right circular cone. Five sections can be found—the triangle, parabola, hyperbola, circle, and ellipse.

**Coniferae** are cone-bearing trees, including firs, pines, cedars, cypresses, junipers, yews, etc., and are widely distributed.

**Conjunction**, in astronomy, means the meeting of two or more heavenly bodies in the same longitude.

**Conscience Money** is money paid to the Chancellor of the Exchequer by persons who have previously omitted payment and are prompted to do so by their conscience.

**Conscientious Objector**, a pacifist, a man who

refuses to do military service for moral or religious reasons. The Military Service Act, 1916, in Great Britain, gave prominence to this subject. The objectors during the Great War were sent to prison camps or given work in non-fighting units. Under the Representation of the People Act, 1918, all C.O.'s were disfranchised for 5 years.

**Conscription**, a system of compulsory military service by lot or enrolment. France, Germany, Austria, and Russia have compulsory service, rendering all able-bodied males liable to a term of soldiering. Under the recruiting movement headed by Lord Derby in 1915 men of military age were required to enrol or attest, and single men unattested became enlisted under operation of a time limit. The Military Service Act of May, 1916, established general compulsion in the United Kingdom, excepting Ireland, for the duration of hostilities only.

**Conservative.** The Party name adopted by the Tories about the time of the passing of the first Reform Bill (1832).

**Consistory**, a term applied to the private council of state under the Roman Empire, but in later times used to designate the higher ecclesiastical courts and senates of the Anglican and Roman Churches.

**Constable**, an office of high rank in mediæval times, and still, in some few offices, representing considerable dignity. Before the introduction of the police system in England every hundred and parish had its constables upon whom devolved the duty of keeping the peace. The official designation of a policeman is police constable. In 1914 a force of special constables was organised for the war period, numbering about 30,000 within the Metropolitan Police District and some 120,000 in the country.

**Constellation** is the term applied to a group of fixed stars. According to Ptolemy, there were 48 constellations; now there are 85.

**Constitution** implies the organisation of the great body politic of the nation with regard to legislative, judicial, and executive authority and power. The legislative power is vested in the King, the Lords spiritual and temporal, and the House of Commons. The judicial authority rests with the judges and magistrates, not removable after appointment except for very serious fault; the jury system, which is a very important part of the British constitution, affording a guarantee that no accused person can be dealt with as guilty until twelve of his peers have convicted him. The executive power is nominally in the hands of the Sovereign, but is really exercised by the responsible ministers, who owe their positions mainly to popular preferment, in this country.

**Consubstantiation** is the belief that the body and blood of Christ become part of the bread and wine partaken of at Holy Communion.

**Consul**, the title borne by the two chief magistrates of the Roman Republic. Three consuls were appointed for France after the dissolution of the Directory in 1799, Napoleon becoming First Consul and holding the office until 1804, when he was made Emperor. At the present day diplomatic and commercial representatives abroad of the British, American, and other governments are styled consuls.

**Contraband Goods** are such as are prohibited to be imported or exported, especially such as are not allowed to be sold to belligerents in time of war.

**Convention** is an assembly of representative persons delegated to decide important questions.

**Convocation** is an assembly of ecclesiastics for dealing with church affairs. There are only two in England, those of Canterbury and York, under the headship of their respective archbishops.

**Coolies** are Asiatic labourers employed in large numbers in tropical and sub-tropical lands for plantation and menial work of all kinds.

**Copper**, one of the most familiar of metals, used in ancient times as an alloy with tin in producing bronze, and preceding iron as an industrial material. Copper ores are most abundant in North America, Spain, Chili, Australia, and Prussia, also yield large quantities. The chief copper-mining region of England is Cornwall, and Swansea has attained great celebrity as a copper-smelting district. All copper compounds are poisonous. Copper sulphate is largely used in calico-printing and in the production of blue and green pigments. The yearly quantity of copper raised throughout the world is some 790,000 metric tons, over 78,000 tons being from the British Empire, mainly Australia and Canada. The consumption of copper for ammunition purposes in the Great War (1914–18) was so vast as to deplete all the usual sources of production, and led to much contraband traffic between neutral and belligerent countries, the extra supply from America being very large.

**Copperas**, sulphate of iron, or green vitriol, employed in the manufacture of ink and black dyes.

**Copts**, descendants of the ancient Egyptians, professing a modified Christianity, the head of their system being a Patriarch. They do not marry out of their own race.

**Copyright**, the right of publishers and authors to prevent the issue of unauthorised editions of their works by the Copyright Act of 1842. The publishing rights of any book remain the property of the author's heirs and of his publisher on the basis of the original contract, for fifty years after his demise. The Berne Convention to protect copyright in all countries was agreed in 1872 and was signed by representatives of all the great countries except America. At the present time Russia also does not recognize the Convention. The last country to join was Jugo-slavia in 1929.

**Coral**, a hard calcareous substance secreted by certain zoophytes for their habitation and support, varying in colour and texture, some being red or pink and some white, some compact and smooth, and some rough and porous. The structure of the coral secretions assumes a variety of forms, fan-like, tree-like, in mushroom shape, and so forth. Red coral is mainly obtained from the Mediterranean. The coral reefs of the Pacific and Indian Oceans and the Red Sea are often many miles in extent.

**Cordite**, a smokeless explosive adopted for small arms and heavy artillery by the British Government in the naval and military services in 1889, and composed of 58 parts of nitro-glycerine, 37 of gun-cotton, and 5 of vaseline. It is a jelly or plastic dough, and used in the form of sticks or tubes.

**Corduroy**, a strong cotton fustian, ribbed and made with a pile, cut so as to leave a surface ridged in the direction of the warp.

**Cork**, the bark of a species of oak grown largely in the South of Europe and North Africa. The cork tree is said to yield bark every six to ten years for 150 years, and grows to a height of from 20 to 40 feet. Its lightness and elasticity enable it to be used for a variety of commercial purposes, especially for stoppers of bottles.

**Cormorant**, a large swimming and diving bird, of which there are over 20 species. It lives mostly on fish and is famed for its voracity. It is found in Europe, Asia, and America.

**Corn**, a term used to designate such cereal products as are used as food, but more especially applied to wheat in this country, to oats in Scotland, and to maize in America.

**Cornell University**, at Ithaca, New York State, was founded by Ezra Cornell, and affords education to 3,000 male and female students.

**Corn Laws** were statutes intended for the benefit of British Agriculture, and were for the most part prohibitive of exportation and imposed a duty on imported corn. From 1436 to towards the middle of the 19th century such laws were in force, and were often of a very stringent nature. These laws became so oppressive and caused corn to reach so high a price that the poorer classes were plunged into distress. A powerful anti-corn law agitation was organised, of which Cobden, Bright, and Villiers were the leaders, and Sir Robert Peel, in 1846, passed an Act lowering the corn duty to 1s. per quarter. This gave quick relief, turned England into a Free Trade country, and led to a period of prosperity. The corn duty was ultimately abolished entirely.

**Coronation Expenditure.** King Edward VII.'s coronation established a record, costing the sum of £359,000, that of George IV. cost £238,238; and that of William IV. only £50,000, it being announced that "it was the hope of the King

and the Ministers to prevent a heavy burden from falling on the people."

**Coroner,** an officer whose duty it is to hold inquests on the bodies of people who are suspected of having died from other than natural causes. He is usually both a lawyer and a doctor; an inquest takes the form of a legal inquiry, a court being constituted, with a jury, the coroner being the presiding officer. Fire inquests are held only in the City of London under a special Act of Parliament.

**Corporation,** a body of persons, authorised by law or Crown grant, to carry out certain specific duties, and to hold property or accept responsibilities as if but one person. Corporations, which have been known from very early times, are either sole or aggregate; that is, consist of only one person, or two or more persons. A bishop and his successors may form a sole corporation, a mayor and aldermen an aggregate corporation. Every city and town of importance in England is governed by a municipal corporation, consisting of a mayor, aldermen and councillors. A mayor is elected for one year, an alderman usually for six years, and a councillor for three.

**Corpus Christi Festival** is one of the great celebrations of the Roman Catholic Church, and takes place on the Thursday after Trinity. It was instituted by Pope Urban IV. in 1264.

**Cortes,** the name of the Parliamentary assemblies of Spain and Portugal.

**Costly Treasures.** Mr. Pierpont Morgan was the possessor of some of the costliest things in the world. He bought the late Lord Anglesey's rock-crystal ewer which fetched 4,000 guineas at auction in London. Among Mr. Morgan's other treasures were the Raphael Madonna of St. Anthony of Padua, for which he paid £100,000; four tapestries after Boucher, which cost him two million francs; ten decorative panels painted by Fragonard for Madame Dubarry, valued at over £100,000; and Gainsborough's "Stolen Duchess," for which he gave £30,000. He bought the Pfungst collection of antique bronzes for £15,000; and the Gavet collection of Rembrandt etchings for a similar sum; he owned the famous old silver gathered together by Herr Gutmann; and paid something like £90,000 for the Mannheim collection. His library included such rare treasures as the "Evangelia Quatuor," bought for £10,000; a 5,000 guinea copy of the "Psalmorum Codex," the manuscript of Book I. of "Paradise Lost." Record prices were paid in 1926 for Gainsborough's and Romney's pictures, and during 1928 enormous prices were paid for books and pictures—mostly going to America. At Sotheby's in 1930 a Rembrandt portrait fetched £18,500 and an anonymous Flemish portrait £15,500. Another Rembrandt at Christie's was sold for £19,950.

**Cotton,** the name of a plant of several species, bearing large yellow flowers with purple centres. These centres expand into pods, which at maturity burst and yield the white fibrous substance known as cotton. Cotton grows most abundantly in the United States, but is also cultivated with success in the West Indies, India, Brazil, and the Levant.

**Cotton Industry** of Great Britain maintains at least three millions of people. The capital invested in it is not less than £400,000,000, and it pays every year something like £40,000,000 for the raw material, by far the greater part of which comes from foreign countries. That raw cotton is manufactured into yarn and fabrics valued roundly at £100,000,000, and little more than a fifth of the product is consumed in the home market. Eighty per cent of the total production of the Lancashire spindles and looms goes to foreign countries in spite of tariff walls, into neutral markets, and into our own possessions. It is estimated that there are about 140,000,000 spindles for the spinning of the world's cotton; and of these this country has over 55,000,000. The industry, however, has now lost its former importance, partly owing to the introduction of other cheap textiles, such as art silk, and the means of producing the correct conditions of atmosphere, etc., for manufacture in other climates, notably in countries where cotton is grown. The manufacture of Egyptian cotton is becoming of great importance. A series of strikes and lock-outs has also told on the industry.

**Cotton Seed Oil** is an oil extracted from the seed of the cotton plant, and is of considerable commercial value; used as a substitute for olive oil.

**Count,** a foreign title of nobility corresponding in a sense to that of an English earl, but of much inferior status socially in reality. The wife of an English earl is called countess.

**County** signified originally the territory of a count or earl; now it comprises a shire or one of the administrative areas into which the kingdom is divided. England and Wales have 52 counties, Scotland 33, and Ireland 32. Some cities and towns are also counties in themselves, so constituted by charter.

**County Councils** were established by the local Government Act, 1888. They are popularly elected bodies, invested with administrative powers, including the making and keeping in repair of roads and bridges, considerable educational authority, the control of reformatory and industrial schools and lunatic asylums, the appointment of coroners, the licensing of music halls, and many other duties. County Councillors are elected for three years, and county Aldermen for six. A chairman is elected by the whole body, and may be chosen from the outside.

**County Courts** were established in England in 1847, the jurisdiction being then limited to actions up to £10. Numerous extending Acts have since been passed, and up to December 31, 1904, actions to the £50 limit, or by agreement up to £100 could be brought therein. The Act which came into operation January 1, 1905, however, raised the limit of the ordinary jurisdiction to £100. There are now 54 county court circuits, and about 500 courts. Annually over a million and a quarter actions are instituted in our county courts. Of bankruptcy petitions something like 75 per cent. are filed in the county court. The County Courts Act 1919 introduced further changes, making the appointment of Judges pensionable at 72 years. The number of Judges is limited to 60, who must be barristers of seven years' standing.

**Coup d'Etat,** a sudden act of State of a revolutionising character and carried out by force. The best known example of modern times was the overturning of the French National Assembly by Louis Napoleon in 1852, whereby he became Emperor.

**Courier,** a servant or factotum accompanying a person or party on a journey, to make and superintend the arrangements as to conveyance and accommodation; formerly the term implied a messenger despatched on any mission of importance necessitating speed and circumspection.

**Court Leet,** a court of record held annually before the steward of any particular manor or lordship; anciently the term meant a local criminal court for dealing with petty offences. This term became obsolete on 1st January, 1926.

**Covenanters** were a body of Scottish Presbyterians who in 1638, and again in 1643, pledged themselves to uphold the Presbyterian faith, as against both prelacy and popery.

**Covent Garden,** in London, now a great flower and fruit market, was once a convent garden owned by the abbot and monks of Westminster.

**Crabs** are familiar crustaceans, carrying a shell, breathing through gills, and being provided with ten external limbs or claws, the side and smaller limbs being used for walking, and the two front claws for grasping purposes.

**Crape,** a light, crimpy fabric made from silk, the natural gum being utilised for the production of the crisp, wavy character of the material. A coarser kind of crape is made from cotton.

**Creed,** a brief enumeration of a particular belief or religion. The Apostles' Creed is adapted from 1. Corinthians, xv., 3–8. The Nicene Creed, which proclaims the Godhead of Christ, was promulgated at Nicæa in 325. The Athanasian Creed, which expounds the doctrine of the Trinity, dates from the 5th century.

**Cremation,** the ancient custom, revived in modern times, of burning the dead. Many scientific men commend the practice on hygienic grounds, and numerous eminent people have in recent

years been cremated in accordance with instructions given by will. The principal crematoria in England are at Woking and Golders Green, also at Manchester and Glasgow.

**Creole**, a West Indian and Spanish American term applied to a person born in the country but of a foreign race. It is also used for a negro born in the country, not brought from Africa.

**Creosote**, a substance obtained from coal-tar by fractional distillation. It is a valuable antiseptic, prevents decay in wood, and is used to give a peaty flavour to whisky.

**Cretaceous System** is the term given to the uppermost strata of rocks of the Mesozoic period. It has the following subdivisions: Maestricht beds, chalk with flints, chalk devoid of flints, chalk marl, upper greensand, and gault.

**Cricket**, an old English outdoor game, played as far back as the 13th century, and now the national summer game. (See Pears' *Dictionary of Sports and Pastimes.*)

**Cricket**, a genus of insects of the grasshopper order, which move by leaps. The male produces a chirping noise by the action of its wings.

**Crimean War** was begun in the spring of 1854, and lasted until March, 1856. Great Britain, France, Sardinia and Turkey were engaged as allies against Russia.

**Crimp**, a person whose nefarious occupation was to decoy men into naval or military service for a consideration or, alternatively (sometimes also incidentally), one who kept a house of accommodation to which sailors were allured and plundered. The payment of "crimpage" by shipcaptains or owners is now illegal, and "Jack ashore" is protected as much as possible from land-sharks of the crimp genus.

**Crinoline** was the name given to a stiff material, originally of horse-hair, worn by ladies as a skirt-expander from about 1855 to 1860. (*See* **Farthingales.**)

**Crocodile**, the name of the largest existing reptile, and classed with the alligator and the gavial. The crocodile inhabits the Nile region, the alligator the lower Mississippi, and the gavial is found in the waters of the Ganges.

**Crofters** are farmers of the western coast-islands of Scotland, who occupy very small holdings and eke out a living by fishing and other occupations.

**Cromlech**, the name given to an ancient monumental erection consisting of a large rough stone placed on three or more upright stones and found in various parts of Great Britain and the Continent.

**Crookesite**, a brittle mineral of leaden-grey hue and metallic lustre, found in Norway, and named after Sir William Crookes, the discoverer of thallium.

**Crore**, a Hindoo word meaning ten millions, and used commercially to signify that number of rupees.

**Crosier**, the staff, or crook, of a bishop carried before him on special episcopal occasions. It is generally richly decorated in gilt at the top.

**Cross-words**, a puzzle which consists of a square composed of a number of blank spaces which have to be filled up with letters which will make words that can be read both horizontally and vertically. These words must correspond to clues provided with the puzzle. Most of the daily newspapers, including *The Times*, provide a cross-word for their readers, and some offer monetary prizes for their solution.

**Crow**, a genus of well-known birds, including the common crow, the rook, the raven, and the jackdaw. It is a gross feeder, living on flesh, garbage, insects, etc., is of black plumage, and builds in trees.

**Crusades** were military expeditions undertaken by some of the Christian nations of Europe with the object of wresting Jerusalem from the Mahommedans. Peter the Hermit started the agitation in 1095, and from that date to 1271 various crusades were undertaken. There were eight crusades in all: 1st, 1096–9, under Godfrey of Bouillon, which succeeded in capturing Jerusalem; 2nd, 1147–9, led by Louis VII., and unsuccessful; 3rd, 1189–92, in which Richard I. took part, against Saladin, also unsuccessful; 4th, 1202–4, led by Count Baldwin of Flanders, and resulting in the founding of a Latin empire in Constantinople; 5th, 1217, led by John Buenne; 6th, 1228–9, under the Emperor Frederick II.; 7th, 1248–50, led by St. Louis (Louis IX. of France); and 8th, and last, 1270–71, under the same leadership, but resulting in failure. Millions of lives and an enormous amount of treasure were sacrificed in these enterprises, and when all was done Jerusalem remained in the possession of the "infidels."

**Cryolite**, a mineral found in extensive beds in Greenland, and one of the main sources of aluminium. It is also used for making a creamy white glass in conjunction with silica and oxide of zinc.

**Crypt**, a vaulted subterranean portion of an abbey, cathedral, or church, now generally used for burials or monumental purposes.

**Cryptogamia**, the twenty-fourth and final order in the botanical system of Linnæus, including the Fungi, Algæ, Filices, and Musci.

**Crystal Palace**, a gigantic glass and iron building standing at Sydenham, erected in 1852–54, mainly from the materials of the Hyde Park Great Exhibition building of 1851. It covers over 200 acres, with the grounds. Financial difficulties made an application to the Court of Chancery necessary in 1911, and a sale of the estate was ordered. Attempts were made to save the property for the nation, and the Court fixed £210,000 as the sale price. The Earl of Plymouth thereupon paid a deposit of £20,000, and the public was appealed to for subscriptions for the balance. On June 30, 1913, a sum of £90,000 was still wanting, although meanwhile Lord Plymouth had advanced the money for the legal completion of the purchase. Within twelve days from June 30, however, in response to an appeal through *The Times* the £90,000 was raised, and the Crystal Palace now belongs to the people.

**Cubism.** (*See* **Post Impressionism.**)

**Cuckoo**, a well-known migratory bird which is found in Great Britain from April to July, and has a very characteristic note, uttered during the mating season only by the male. It lays its eggs in the nests of other birds, but only one egg in each nest.

**Culdees**, the name of a Scottish monastic fraternity, not attached to any of the recognised orders, and existing from the 9th to the 14th century.

**Cuneiform**, the term applied to the written arrow-headed characters found in Assyria, Persia, and Mesopotamia. Good examples may be seen in the British Museum, some of them several thousand years old.

**Cupola**, the inner portion of a dome. Famous cupolas are those in the Roman Pantheon, the Mosque of St. Sophia at Constantinople, St. Peter's at Rome, and St. Paul's in London.

**Curfew**, the bell which William the Conqueror ordered to be rung at eight o'clock each night in the towns and villages of Britain, as a signal to the inhabitants to extinguish lights and go to bed. It was abolished in 1100, but at Ripon, Sandbach, Chesham, and Wokingham is still rung as a matter of custom.

**Curlew**, a wading bird of which there are several species. It frequents marshy places, feeds on worms and insects, and possesses a very long curved bill.

**Cyanogen**, a compound of nitrogen and carbon, obtained from heated dry mercury cyanide, and highly poisonous. It combines to form numerous cyanides, and is of great use in producing, in combination with iron, various deep-blue pigments, including Prussian blue, Chinese blue, etc.

**Cyclone**, a circular, whirling wind of great power and intensity, occurring in warm climates.

**Cymri**, or Kymri, a branch of the Celtic race which settled in Wales and Cornwall.

**Cynics** were a set of Greek philosophers, founded by Antisthenes, the pupil of Socrates. They held that virtue was the only good, and condemned arts, sciences, pleasures, and riches. Diogenes was the most famed of the cynics.

**Cynocephalus**, a genus of monkeys of the Old World with dog-like heads, and belonging to the baboon branch of the Simiadæ.

**Czar** was the title of the Emperor of Russia, and is derived from Cæsar. The first Czar was Ivan IV., crowned in 1547. The Czar's wife is styled Czarina, and his eldest son Czarewitch.

**Czechs** are a Slavonic people, also known as Bohemians; they inhabit part of Czecho-Slovakia, formerly Bohemia, Moravia, etc., and number some 13,600,000.

**Dab**, a species of flat fish, common round the British coast, and a better table fish than the flounder.

**Dabber**, a mass of cotton-wool or similar soft material fastened in a circular form, and used by etchers and engravers for "dabbing" their plates.

**Daboya**, an Indian viperine serpent, venomous, and of nocturnal habits, of the genus *Daboia*.

**Dace**, a small fresh-water fish of the carp family, of elegant shape and silvery appearance.

**Dacelo**, a quaint-looking bird of the kingfisher order, common to Australia, one variety of which is known as the "laughing-jackass."

**Dachshund**, a German badger-hound, remarkable for its short legs and long body.

**Dacite** consists of plagioclase and quartz, together with minerals of the hornblende and pyroxene families. Occurs mostly in Transylvania and the Cordilleran districts of America.

**Decoits**, Indian brigands, or professional robbers, who were formerly very numerous and terrorised the districts they infested, especially Lower Bengal. Occasional bands of them still give trouble in the more remote places.

**Dacrydium**, a genus of plants of the yew family, native of New Zealand and the East Indies, the young branches of which are used in the making of a beverage not unlike spruce beer.

**Dactyl**, a measure in versification, consisting of a foot of three syllables, the first long, and the second and third short, as *lovingly, verily*.

**Dactyliomancy**, the art of divination by means of finger rings, now less resorted to than formerly.

**Dactylomys**, a South American rodent of the size of a rat, possessing a long scaly tail.

**Dactylopterus**, a fish of the gurnard family, with wing-like pectoral fins; sometimes known as the flying fish, though that appellation is more generally given to *Exocætus exiliens*.

**Dado**, a term denoting the portion of a pedestal between the base and the cornice; also applied to the lower part of the walls of a room when decorated differently from the upper part.

**Dafila**, a kind of fresh-water duck, with long supple tail, found in Europe, Asia, and America. The pintail duck belongs to this genus.

**Dagger**, a sharp-pointed instrument for stabbing, used in mediæval times as a private weapon, and still occasionally carried on the person in Italy and Spain.

**Dagger-ale**, a kind of liquor often referred to in 16th century English literature, and sold at the sign of the Dagger in Holborn, a London house much frequented by the gallants of the time.

**Dagoba**, an edifice dedicated to the custody of relics of Buddha, and numerous in the temples of Ceylon and other Buddhist countries.

**Dagonal**, the feast of the Philistines in honour of Dagon, their god, which was depicted with the head of a man and the lower part of the body like a fish.

**Daguerreotype**, a photographic process invented in Paris by M. Daguerre during the years 1824–39, resulting in the employment of the camera for the exposure of a silver plate, sensitised by iodine fumes in a dark chamber.

**Dahabiyeh**, a kind of boat much used on the Nile, broad at the stern and tapering off gracefully at the prow. It carries one or two masts and lateen sails.

**Dail Eireann**, the name of the elected legislature of the Irish Free State.

**"Daily Mail,"** an Imperial-Unionist halfpenny (now 1d.) morning paper commenced in 1896 by the Harmsworths.

**"Daily Mirror,"** founded in 1904 by the Harmsworths as a penny morning illustrated paper for women, but, being unsuccessful on those lines, was turned into a general halfpenny illustrated, and became popular. Now 1d.

**"Daily News and Leader,"** a London Liberal morning paper, started as the *Daily News* in 1846, whose first editor was Charles Dickens. Among its later editors have been Sir H. W. Lucy, Mr. E. T. Cook, and Mr. A. G. Gardiner. Its price was reduced to a halfpenny in 1904 (now 1d. again). Absorbed the *Daily Chronicle* in 1930 and is now the *News-Chronicle*.

**"Daily Telegraph,"** an Imperial-Unionist London morning newspaper, started in 1855, and having a large circulation. Lord Burnham is chief proprietor. Sir Edwin Arnold was editor for many years. Until the war its price was 1d., it then became 2d., but from 1930 has reverted to 1d.

**Daimio**, a feudal lord of Japan, forming a class who, from independent princes, have declined to governors of their particular districts under the rule of the Mikado.

**Dairies** are properly places where milk is stored and converted into butter and cheese, but in large cities the term is applied to shops where milk is sold only. Great improvements have been made in recent years in the construction and management of dairies, and hand processes in the making of butter, cheese and the filling of bottles have been largely superseded by mechanical power.

**Dais**, an elevated part of a floor or a platform, in a large room or hall. It usually has a seat or seats upon it, and is covered with a canopy. It is the place of honour occupied by the most distinguished personages, as the King, a bishop, etc.

**Dak**, the name given to the native post service in India, maintained by relays of runners.

**Dalmatian Dog**, the old-fashioned coach dog, white, spotted with black.

**Dalmatic**, a wide-sleeved ecclesiastical vestment, reaching below the knee. Worn by bishops and deacons over the alb or stole.

**Dama**, the scientific name of the fallow deer, which is fawn coloured or brown, with white spots.

**Damask**, a textile figured fabric, made in various forms, with silk threads of many colours, as originally woven in the city of Damascus; in a combination of silk and wool or cotton; in linen only for table-cloths, etc.; or in cotton.

**Damaskeening**, the art of inlaying one metal upon another, largely practised in the East in mediæval times, especially in the decoration of sword blades. In its modern form it has been greatly developed.

**Damp**, humidity, moisture, assumes numerous forms. Fire-damp, however, has nothing to do with humidity or moisture (the term damp in this case being derived from the German *Dampf*, vapour), but consists of a poisonous vapour met with in mines and often the cause of explosions; choke-damp is mainly composed of carbonic acid gas, and causes suffocation.

**Dan**, a mining term applied to a vessel in which water is conveyed to the surface.

**Danalite**, a translucent mineral occurring in various parts of the United States of America.

**Danburite**, a substance found in crystals in various regions of America, and in Switzerland, and of a yellowish-white colour. A borosilicate of calcium.

**Dancette** is an architectural term, applied to a form of zigzag moulding often found in ancient buildings.

**Dancing**, a form of exercise, generally performed to a musical accompaniment and comprising many different styles. It was originally adopted as a religious observance, was gradually developed with the advance of music, and in modern times has been highly cultivated professionally. On the stage it is one of the greatest attractions in the form of ballet, and in private life is much indulged in, balls and dances forming a leading society diversion. Among the different styles of dances, step dances performed by one person —such as the jig, hornpipe, etc.—are among the oldest, while dances executed in pairs, including the waltz, fox-trot, one-step, etc., are more modern. Of what are called square dances, the country dance takes precedence in point of time; they also comprise the quadrille, the reel, mazurka, etc. Minuets, gavottes, cotillions, etc., belong to the stately period of the 17th and 18th centuries; the tango has had a temporary vogue in recent years. Bands playing syncopated music are now provided for dancing at most of the leading restaurants.

**Dandie Dinmont**, species of Scotch terrier.

**Dandies**, the name given to a class of exquisites prominent in early Victorian days, and who attracted attention by excessive regard for dress.

**Danegeld**, a tax imposed in England in Anglo-Saxon times to raise funds for resisting the Danes. Edward the Confessor abolished the tax, but it was revived by the Conqueror and subsequently retained, under another name, long after all danger from the Danes was past.

**Danelaw** was the law enforced by the Danes in the fifteen English counties occupied by them in the 9th century, and extending from the Thames to the Tees northward, and from Watling Street to the North Sea eastwards. The country occupied was also called the Danelaw or Danelagh.

**Danes' Blood**, a common plant of the elder family, deriving its name from the tradition that it originally grew from the blood of Danes killed in battle.

**Danites**, the title by which a secret order of Mormons was known, and to whom many serious crimes were attributed.

**Darien Project** was an unsuccessful scheme entered upon at the close of the 17th century by Paterson, the Scotch financier, for colonising the Isthmus of Panama and thereby diverting trade in the direction of Scotland.

**Darter**, a genus of birds of the pelican family, with pointed bill and long serpent-like neck. Two species only are known: one in Africa, the other in America.

**Dartsnake**, the name of a serpentine lizard of the Aconitas family, noted for the darting manner in which it attacks its prey.

**Dasyurus**, the name of a carnivorous quadruped, hairy tailed, and of the opossum family, with white spots; confined to Australia and Tasmania.

**Datary**, a Roman ecclesiastical functionary, who acted for the Pope in all matters relating to the issuing of grants and dispensations; the dater or dispatcher of the Papal bulls.

**Date Palm**, a native of Northern Africa, where it is grown in great profusion. It is also known in Southern Europe and Western Asia to some small extent. It grows from 60 to 80 ft. high, and its fruit is of great value as a food. From the leaves the Africans make roofs for their huts; ropes are made from the fibrous parts of the stalks; and the sap furnishes a stimulating beverage.

**Daubreite**, a substance of a yellow colour found in earthy masses in Chili, and a bismuth oxychloride. Named after Daubrée, the French mineralogist.

**Dauphin**, the title borne by eldest sons of the Kings of France from 1349 to the Revolution of 1830.

**Dauw**, an animal of the zebra order, with black and white stripings. A native of Africa.

**Davenport**, a small ornamental writing desk much in vogue in the 19th century.

**"Davy Jones,"** a nautical term of a humorous turn supposed to apply to the spirit of the sea; it is said among sailors, when a person dies at sea, that he is committed to "Davy Jones's locker."

**Day**, a period of 24 hours; or the period of the sun's position above the horizon each day. The exact measure of time covered by a day is 23 hours, 56 minutes and 5 seconds. The Babylonians counted their day from sunrise to sunrise, the Hebrews and Athenians from sunset to sunset, and the Romans from midnight to midnight.

**Day Nurseries** are modern institutions, the result of a movement for the protection of the young children of working people, and consist of *crèches* where infants are nursed and cared for while their mothers are at work. They originated in France.

**Deacon**, an ecclesiastical official, who assists in some of the smaller ministerial duties in church or chapel; in the Anglican Church he ranks below a priest.

**Dead Languages** are such as the ancient Greek and Roman tongues, which are no longer spoken but are preserved in literature.

**Dead-Oil**, the name given to oily products obtained from the distillation of coal tar, and heavier than water, such as naphthaline, creosote, etc.

**Deal**, the name given to planks of fir-tree wood of Northern Europe, 9 inches wide and three inches thick, fifty cubic feet of which form a load, and 100 superfical feet a square. An American deal, it should be noted, is 12 inches broad and 2½ inches thick, and of the uniform length of 12 feet.

**Dean**, a Church of England dignitary, ranking next below a bishop, and the head of the Chapter of a cathedral.

**Dean of Faculty**, a Scottish law officer appointed to preside over the Faculty of Advocates.

**Dean of Guild**, the name given, in the days of guilds, to their chief officer, and now only used to designate the head of a royal burgh or merchant company, who superintends buildings.

**Dear Deer Forests.** Some of the Scottish deer forests are of enormous extent and fetch very high rentals. The forest of Mar alone, with its 80,000 acres, is almost as large as two of the counties of Scotland; Blackmount covers nearly as much ground as the county of London; Reay stretches over a hundred square miles; and there are fourteen other forests, ranging from 30,000 to 51,000 acres. In all, these Scottish forests, which number over 150, have an area four times as large as Westmorland, and yield a rental revenue of about half a million pounds sterling. For a single forest, Ivercauld, a rent of £5,000 has been asked, and paid; Invermark would not be considered dear at £4,000; Glenquoich at £3,000; and Mamore at £2,500; The county of Perth has a yearly shooting value of £150,000, and the shires of Ross, Argyll, Aberdeen, and Inverness have a sporting revenue averaging little short of six figures apiece. Coignafearn, which was let a couple of generations ago for £30, found a tenant not long since for £2,000.

**Death's Head Moth**, a large insect, not uncommon in England, and remarkable because of its having on its thorax the outlined semblance of a human skull. It emits a peculiar, mournful sound when startled.

**Death-watch.** The so-called death-watch, with its mysterious ticking in the night time, is due to nothing more serious than the furniture-beetle. The larva of this insect burrows in the furniture, making the pinholes which are often to be seen in old furniture. It is three years in its pupa condition, and at last becomes a little brown insect with a great talent for shamming dead, so that it is not very much observed. These beetles often strike the wood of their galleries with their heads, and so produce a ticking sound which is a call to the mate. The ticking is most frequent in the summer months, but in warmed rooms it may be heard at any time.

**Debenture**, a document or certificate signed by a public officer, corporation or company, acknowledging indebtedness for money lent and guaranteeing repayment with interest.

**Debuscope**, a modification of the kaleidoscope, invented by M. Debus, a French optician, and consisting of two highly polished silvered plates, set at an angle of 70° with each other before any object to obtain reflected variations of design.

**Decade**, the number 10, or a period of 10 years.

**Decalogue**, the Ten Commandments, which, as related in Exodus, were given by God to Moses on Mount Sinai, and contained on two stone tablets.

**Deceased Wife's Sister's Marriage Act** was passed in 1907. This measure was put before Parliament for many years; it usually passed the Commons, but was rejected by the Lords, the bishops being its real stumbling-block. Marriages with sisters of deceased wives are legal in many countries, including Canada, Australia and Ceylon.

**December**, the twelfth month of the year, and the tenth of the old Latin calendar. The Anglo-Saxons called it Mid-winter monath and Yule monath.

**Decemvirs** were a special body of ten Roman magistrates, invested with extensive governing powers. The first decemvirs were elected in 451 B.C.

**Deciduous Trees** are such as shed their leaves, or "fall" at maturity, or at certain seasons, as distinguished from evergreens or permanent foliaged trees or shrubs.

**Decimal System** is based on a unit of 10, and for purposes of calculation is much simpler than the English system. It is in operation in France and other European countries, also in the U.S.A.

**Decimation** was a term originally applied to the punishment of putting to death of every tenth person, but in modern times is used in its

broader significance to indicate any form of wholesale slaughter.

**Deck**, the floor of a ship, and in large vessels comprehending the first or lower deck, middle deck, and main deck, which is the uppermost, except the reserved elevated part known as the quarter-deck.

**Declaration of Independence** was an Act by which the first American Congress, on July 4th, 1776, declared the American colonies to be independent of Great Britain.

**Decollation** is the act of beheading or decapitation, as a form of punishment. Decollation was very generally resorted to in mediæval times, but it is confined mainly to France at the present day, the guillotine being the beheading instrument.

**Decomposition** is the act of disintegrating the elements of any compound substance. Oxygen and hydrogen are obtained by the decomposition of water, but these substances themselves cannot be decomposed.

**Decree** is a special edict or regulation issued by a supreme or governing power The judgment of a a superior court is also called a decree.

**Decree Nisi**, a law term used in regard to a Divorce Court decree which annuls a marriage, if at the end of six months nothing arises to interfere with the decision, whereupon it is made absolute and the parties are free.

**Dedication** implies the consecration to sacred purposes of any building or ground, and has also a more general application to the setting apart of any building, institution, or enterprise to a special use. The term also attaches to the inscription by an author as a mark of esteem.

**Deemster**, a judge in the Isle of Man and in Jersey, who, without process or any charge, decides all controversies between the parties.

**Deer** are hoofed, horned, or antlered ruminants very widely distributed, and including many species. No true deer are found in South Africa or Australia.

**Defender of the Faith**, a title given to all English monarchs from the time of, and beginning with, Henry VIII. Originally conferred by Pope Leo X, then withdrawn, and afterwards re-conferred by Parliament.

**Deism** upholds the theory that there is a personal God, but rejects revelation and the Christian doctrines.

**Delawares**, a tribe of Red Indians once very numerous in Philadelphia, on the banks of the river from which they take their name, but now settled for the most part in Arkansas.

**Delft ware**, a kind of enamelled pottery first made at Delft in Holland in the 14th century.

**Deliquescence**, the process of liquefaction or dissolving by the absorption of moisture from the atmosphere. For instance, chromic acid crystals on exposure to the air quickly deliquesce.

**Delphinus**, the scientific name for the dolphin family, and consisting of numerous species. Each jaw contains from 80 to 90 small pointed teeth.

**Delta**, a triangular tract of land between diverging branches of a river at its mouth, and so called from its general resemblance to the Greek letter Δ *delta*. The best known examples are the deltas of the Nile, the Ganges, the Niger, and the Mississippi.

**Delta metal**, a copper and zinc alloy, with a small portion of iron added, possessing almost the strength of iron and non-rustable, and used in industry.

**Deluge**, a flood, a term commonly applied to the story of the Deluge contained in the Bible, in which Noah and the Ark figure. A similar tradition lingers in the mythologies of all the ancient nations.

**De Lunatico Inquirendo**, the name for a writ sanctioning an inquiry into the condition of mind of a supposed insane person, with power to secure a due administration of his affairs if shown to be insane.

**Democracy** is the condition of direct popular government—"by the people for the people"—the executive powers being vested in representatives elected by the people. A republic is in theory the most perfect form of democracy, as in the United States, France, Switzerland, Argentina, Brazil, Mexico, and other States, though in practical working the democratic idea is to some extent lost sight of in some of these, and something akin to dictatorship prevails. In Great Britain the Government is a democracy in so far as the House of Commons is concerned, and aristocratic domination is supposed to be held in check by the power of popular representation.

**Demoiselle**, the Numidian crane, a wading bird.

**Denarius**, a silver coin of ancient Rome, worth about 7½d. English, first coined 269 B.C.

**Dendiculus**, a member of the moulding ornamentation of Ionic and also Corinthian entablatures, over the frieze and under the corona, but properly speaking, because of its projection, part of the latter. It consists of a row of relieved rectangular blocks, at regular intervals, resembling teeth, hence the name.

**Dendrite**, any stone or mineral on which appears natural tracery resembling trees, leaves, or flowers, the result of the action of the hydrous oxide of manganese.

**Denier**, an old French coin, and the chief silver coin of Europe during the mediæval period.

**Density**, a term by which we assess the quantity of matter in any given bulk. As Clerk Maxwell puts it, "the quantity of matter per unit of space is defined as the density of the mass filling that space." The density of gold is 19·3, silver 10·5, copper 8·9, earth 5·6, diamond 3·5, air 0·0013.

**Dental**, pertaining to the teeth; as dental forceps, dental cavity, dental pulp, etc.

**Dentex**, a kind of fish common in the Mediterranean.

**Deodand**, the name given in old English law to a personal chattel which had been the cause of an individual's death. This chattel—it might be a cart that had run over and killed a man—was declared a deodand and forfeited to the king to be applied to religious uses. Deodands were abolished in 1846.

**Deodar**, a coniferous tree of the cedar order.

**Department**, a division of a country or province, applied in France to the chief administrative territories, which again are subdivided into arrondisements. In the work of British government, each separate division is named a department. Thus we have the Home Department, the War Department, the Colonial, Indian and other Departments.

**Depas**, a double-handled drinking-cup used in ancient Greece, and referred to by Homer.

**De Profundis** (out of the depths), the first two words of the Latin version of the 130th Psalm, and commonly used to designate this psalm.

**Derby**, the leading English horse race, run on the Epsom course on the last Wednesday in May or the first Wednesday in June. Originated in 1780 by the twelfth Earl of Derby, carries with it a stake of about £6,000, and is competed for by the best three-year-olds of the time. Owing to the war it was run at Newmarket in 1915–18, as the "New Derby," the stakes being reduced from £6,450 to £2,400. In 1919, however, the Epsom Derby was resumed, when there was a very memorable gathering.

**Derham**, an ancient Arabian silver coin, still current in Eastern countries, worth about 3d. English.

**Derrick**, the name of a special jib crane, for lifting and moving heavy weights. It was originally applied to a kind of gallows built by a Tyburn hangman called Derrick in the 17th century.

**Dervish**, a Mahommedan mendicant monk, of which there are over 30 orders, including howling and whirling dervishes.

**Descloizite**, a scarce olive-green mineral substance, scientifically described as a vanadate of lead and zinc, found in Argentina and other parts of the American continent, named after Des Cloiseaux, a French mineralogist.

**Deserts** are large barren, uninhabited tracts of country, chiefly in hot climates. The most famous are those of Sahara, Arabia, and Central Asia (the Steppes). A large uninhabited region beyond the Mississippi was once called the Great American Desert, but it now has cities and prosperous farms built upon it.

**Desmidiaceæ**, a kind of microscopic fresh-w algæ, unicellular, and often assumi chain-like forms.

**Destiny**, a supposed foreordained end, an overmastering force that impels the current of events to a final climax. In ancient times, fate, or

destiny, was a common belief, and regarded as unavoidable.

**Detectives** are secret police employed in collecting evidence or effecting the capture of offenders in cases of more than ordinary difficulty. There are also numerous detective agencies in the chief cities of the world.

**Determinism**, the theory that man's actions are "uniformly determined by motives acting upon his character." The term was first used by Sir William Hamilton, and does not support fatalism.

**Detonating Powders** are chemical compositions which explode when heated or suddenly struck. There are many of these compounds. Ammonia with silver or gold, the chloride and iodide of nitrogen, and the fulminates of silver and mercury are among the best known detonating compounds.

**Deuteronomy**, the fifth book of the Pentateuch, purported to have been written by Moses, and containing the statement of the law, but regarded by many modern critics as of a much later period.

**Deutzia**, a genus of East Indian deciduous flowering shrubs, of the Syringa order. The inner bark of the stems is used in Japan for poultices, and the leaves for polishing purposes.

**Deviation of the Compass**, caused by the counter-attraction of the iron of a ship, is generally corrected by putting magnets near the compass, and by careful watching and calculation.

**Devil**, the spirit of evil, Satan, Beelzebub, "the tempter," the enemy of God and of good, to whom a varied personality has been given by different religious systems in different ages.

**Devil-fish**, a strange marine animal of large size and of several species. As it is met with in European waters it is called the fishing frog, and the chief American species is the giant ray.

**Devil-worship** consists in a belief in, and of incantations to propitiate, evil spirits. This kind of worship is confined to certain primitive races of Asia and Africa, and a few Red Indians of North America.

**Devioscope**, an apparatus by which the relation between "the angular velocity of the earth and that of a horizon around the vertical of any place whatever" can be ascertained.

**Devitrification**, the process of rendering glass soft and pliable, incidentally depriving it of transparency.

**Devonian System** in geology refers to the strata between the silurian and the carboniferous formations, and is also termed the Old Red Sandstone Formation.

**Dew** is the vapour which collects in small drops on the surfaces of substances by atmospheric condensation, chiefly in the night time. It is most abundant in hot climates and gathers freely on bodies that are not good conductors of heat, such as grasses, etc.

**Dextrin**, a white, odourless, viscid substance of the same composition as starch, from which it is obtained. It is used as gum, being the material put on the backs of postage stamps and other articles which are required to be made adhesive. It also is utilised in calico printing.

**Dhole**, the wild dog of the Deccan, of a bright bay colour, and living on game, which it hunts in packs.

**Dhow**, a one-masted trading vessel, much in evidence on the east coast of Africa and the Red Sea, and formerly employed in the transportation of slaves.

**Diacope**, a species of fishes of the perch family, possessing a notched operculum and tuberculate; inhabitants of the Indian seas, and often reaching a length of three feet.

**Diadem** was originally a head ornament or fillet worn only by royal personages and from being of plain white material came to be of rich gold embroiderings, and set with precious stones. Now the term is applied to a crown or other head-badge worn by royalty, or the head ornament of a peeress, which, however, is more frequently styled a tiara.

**Diæresis**, the sign (¨) placed over the second of two vowels coming together, and indicating that each is to be pronounced distinct from the other, as *aërated*; also employed to indicate that a vowel, ordinarily silent, must in this case receive pronunciation, as "Oh, cursëd spite"; "My belovëd," etc.

**Diagometer**, a form of electroscope for measuring the conducting power of different bodies, having a magnetised needle for an indicator, invented by Rousseau.

**Dial, or Sun Dial**, an instrument for telling the time of day by a shadow thrown on a marked surface. This was the first form of outdoor clock, and was introduced into Europe from the East. It is made in various forms—horizontal, upright, or inclined.

**Dialect** is a form of speech special to a locality or district, and differing from the general literary language of the country. In England these dialects are numerous, but in all of them some survivals from what was once good old English speech are to be found. From the works of Chaucer, Spenser, Shakespeare, and from even later writers, many words are to be read that are obsolete as regards modern literary expression, but are still familiar in dialect idioms. The dialect that has forced itself most into modern literature is the Scotch, a fact largely due to the compositions in dialect of Burns and other Scottish poets. For the full understanding of the force and meaning of English dialects, Professor Wright's monumental *Dictionary of Dialects* is to be commended.

**Diallage**, a kind of pyroxene, green in colour, and of foliated structure; common in serpentine rocks.

**Diamagnetism**, the phenomena revealed by certain substances which, under magnetic influence and suspended, assume a position showing the longer axis at right angles to the magnetic lines of force.

**Diamantine**, ultimately hard, adamantine.

**Diameter**, a straight line passing through the centre of a circle or other figure, terminated at both ends by the circumference. In architecture, the diameter of the lower bed of a column, divided into 60 parts, constitutes the scale whereby all the parts of a classical order are measured.

**Diamond** (a corruption of *adamant*) is pure carbon, and the most valued of precious stones, though, before the art of cutting was perfected, diamonds were considered inferior to the ruby and emerald. India was in former times the chief diamond country. At the present day, South Africa yields the largest quantities, between 3-4 million metric carats being mined yearly, over 126,000 men being employed in S.A. diamond mining, and in Brazil and Australia there are many rich diamond mines. Diamonds mostly occur in alluvial deposits. They form the hardest known substance and have a high refractive power. The largest diamond ever found is the Cullinan Diamond, which was discovered in the Premier diamond mine, near Pretoria, South Africa, in January, 1905, and in 1907 was presented to the King in commemoration of the granting of self-government to the Transvaal; it weighs 3,030 carats, and is valued at fifteen million sterling. It is three times as large as the largest of the other big diamonds of history. The largest diamonds found previously were:—

| | Place of discovery. | Weight in carats. |
|---|---|---|
| "Excelsior" . . | South Africa | 971 (uncut) |
| "Great Mogul" . | India | 280 (cut) |
| "Regent" | India | 410 (uncut)<br>136½ (cut) |
| "Orloff" . . . | India | 900 (uncut) |
| "Koh-i-noor" . | India | 103 (cut) |

"Excelsior" was found by Captain Ed. Jorgansen. In its natural state it was valued at £1,000,000, but purchasers of such gems are not plentiful, so in 1904 it was cut into nine smaller gems. The "Great Mogul" is another famous diamond which has vanished. It weighed 280 carats after being cut, and in size and shape resembled half an ordinary chicken's egg. Its history is romantic. It was seen at the Court of Aurungzebe in 1665 by a French jeweller, stolen at the sacking of Delhi in 1739, and broken up. The largest cut diamond up to the cutting of the Cullinan was the "Orloff," which adorned the Czar's sceptre. It was stolen from an Indian idol's eye, and sold to Catherine of Russia. It now weighs just on 200 carats. The famous

"Koh-i-noor" is an Indian stone, and is the property of the Royal Family. It weighed nearly 900 carats uncut, but by bad cutting was brought down in weight to 103 carats. Other famous diamonds are the "Pitt" (136 carats), the "Florentine" (133 carats), and the "Star of the South" (124 carats). Over £600,000,000 worth of diamonds exist in the world, more than half belonging to Americans.

**Diamond-beetle,** a South American beetle of very brilliant, luminous, spotted marking.

**Diana Monkey,** a large African monkey that derives its name from the supposed resemblance of its white frill to the crescent bow of the goddess Diana. The Palatine monkey of Pennant, *Cercopithecus Diana.*

**Diana's Temple at Ephesus.** The temple of Ephesus, built after the model of Karnac, was looked upon as the greatest of the "Seven wonders of the world." Its interior length was 425 feet, its breadth 200 feet; its roof was supported by 127 richly sculptured pillars, each the life-work of a king. Originally erected by Ctesiphon, it was enlarged and enriched by every succeeding prince. On the day that Alexander the Great was born, Erostratus tried to destroy it by fire, and partly succeeded; the Ephesians rebuilt it, and the world at large contributed to its restoration. Some years later Alexander the Great commanded his engineers to improve and beautify it. At the entrance to this famous temple was placed the "Altar of Sacrifice." In the Adytum was a second altar, the "Altar of sweet herbs." At the entrance to the Penetralia was a third, the "Altar of sweet incense," on which only the richest and most costly perfumes were placed. The statue of Diana was behind purple curtains.

**Diapason,** the concord of the first and last tones of an octave, and the fixed rule by which organ pipes and other instruments are arranged to proper pitch.

**Diaper,** a figured textile fabric, the pattern of which is small and is shown in the material, without resorting to colour or difference of fibre. Many kinds of decorative products, treated in the same style, are termed diaper work.

**Diaphoretics** are medicines used to induce perspiration, and thereby increase the action of the digestive organs.

**Diaspore,** an infusable hydrate of aluminium, almost colourless, and occurring in crystals and foliated masses. A small portion placed in a flame instantly disperses.

**Diathermy,** application of electrical heat to the treatment of various diseases. The cautery knife for the removal of tonsils, etc., is now sometimes used instead of the scalpel and promotes better healing of tissues.

**Diatite,** a hard cement, compounded of shellac and silica.

**Diatomic Acid,** an organic acid derived from diatomic alcohol.

**Diatonic Scale** represents the use of musical tones, intervals, and harmonies without chromatic variation.

**Dicæum,** the name of a group of small sun-birds, with red plumage, and short, slender bills, inhabiting the East Indies.

**Dice,** an ancient game played with small ivory cubes, each face of which is spotted with black marks like domino pieces, and thrown from a box held in the hand, the one who throws the highest number of spots being the winner. The Lydians played dice.

**Dictaphone,** a dictating machine used in offices. It records the dictator's voice on to a wax cylinder, which when full, the typist, wearing earphones, places into a transcribing machine. The voice is then reproduced, and the typist types the words as she hears them. This eliminates stenography. The wax cylinder can be shaved and used repeatedly.

**Dictator,** the title given by the ancient Romans to their supreme magistrates under the republic, in times of great exigency. The term was limited to six months, but while it lasted the Dictator's rule was absolute. Another class of dictator was the Greek Tyrant, and many despotic rulers of more recent times have in effect, if not in name, been dictators. In Paraguay and other South American countries the title of Dictator has been borne by numerous rulers.

**Dictionary,** an alphabetical list of words, giving their meanings, and in many cases their pronunciation and etymological significance. The earliest English dictionaries of any pretensions to accuracy and completeness were those of Bullokar (1616) and Cockeran (1625). Dr. Johnson's famous dictionary was published about the middle of the 18th century. Of the 19th and 20th century dictionaries, there are the Standard, the Century, Webster's, Ogilvie's, Chambers's, Nuttall's, Skeat's, and numerous others, and from the 50,000 words of Johnson's day we now have Dictionaries of from 400,000 to 500,000 words. The most elaborate of English dictionaries, however, is the *New English Dictionary*, edited by the late Sir James A. H. Murray, LL.D., and Mr. Henry Bradley. In addition to word dictionaries, there are dictionaries of many other kinds—of music, biography, etc.

**Didymium,** a supposed element discovered in 1841 by Mosander, but pronounced by more recent investigators to be a compound of two elementary substances. It is a yellow-tinged white metal. The term didymium is also applied in botany to a genus of minute fungi, with double peridium, growing on rotten wood, bark, etc.

**Dies Iræ** (the Day of Wrath), a famous 13th century Latin hymn, sung at burial services, and taking its place in translated form in the English hymnology.

**Diet,** an assembly of dignitaries or delegates called together to debate upon and decide important political or ecclesiastical questions. The most famous Diets in history were those of Worms in 1495 and 1521, and the Diet of Augsburg of 1530, all of which dealt with matters of religious controversy awakened by the Reformation movement. The National Assembly of Poland, known as the Diet, which was abolished on the Third Partition, has been revived as a name for the present Legislative Assembly of the Republic of Poland.

**Diffusion** is the process of mixing two fluids or gases by contact, and takes place by mutual attraction. It is most rapid between gases. Liquids diffuse much slower than gases, and as it is laid down by what is called Graham's law, "the rates of diffusion of different gases are in the inverse proportion to the square roots of their relative densities."

**Digit,** a finger or toe. In arithmetic any number of one figure is a digit, the nine Arabic numerals being indicated by the fingers in counting on them, as one, two, three, four, five, six, seven, eight, nine.

**Dika Bread,** a West African vegetable substance, prepared from the fruit kernel of the *Magnifera Gaboniensis*, and somewhat resembling cocoa. It furnishes a nutritive food to the natives.

**Dilemma** in logic is an argument which resolves itself into two alternative conclusions, each of which amounts to a denial of the proposition maintained. Hence the term the "horns of a dilemma." The often quoted example of a dilemma from Gellinus may be repeated:—"Every woman is fair or ugly; it is not good to marry a fair wife, because she will flirt; it is not good to marry an ugly wife, because she will not be attractive; therefore, it is not good to marry at all."

**Dilettante,** a term applied to amateurs in any of the arts or sciences.

**Dimensions** are measured magnitudes and involve the qualities of length, breadth, and thickness. A line has only one dimension: length; a plane surface two: length and breadth; and a solid three: length, breadth, and thickness.

**Diminutives** are grammatical expressions denoting smallness or littleness, as illustrated in the suffixes, "kin," "ler," "ling."

**Dimorphism,** the quality of assuming two distinct forms not derivable from each other. For instance, carbon, which is graphite in one form, is the diamond in another. Pasteur demonstrated that dimorphism most commonly occurs when the two forms are close to the limit of their respective systems.

**Dinar,** a gold coin of the ancient Arab dynasties, usually of the weight of 65 grains troy. In the British Museum there is an example of a dinar struck in the time of Haroun-al-Raschid. In modern times the standard unit of Serbian, and

now of Yugoslav currency, formerly worth about one shilling and now worth nearly 2d.

**Dingo**, the wild dog of Australia, which is very like a wolf. It is of a reddish colour with a bushy tail and is very destructive to sheep.

**Dinner**, the chief meal of the day, was in olden times partaken of about midday, but the fashionable hour for dinner has undergone many changes, eight o'clock being now the formal dinner hour in Court circles. In the time of George III. it was four o'clock; under George IV. it was six o'clock; then it came to be seven; but Queen Victoria set the example of eight o'clock dinners.

**Dinornis**, an extinct bird of the ostrich order.

**Dinosauria**, the name of a group of extinct reptiles of the Mesozoic period, some of which were of immense size—much larger than crocodiles.

**Dinotherium**, an extinct quadruped of enormous size, the fossil remains of which have been discovered in the Tertiary strata along the Rhine and elsewhere. It had a trunk like the elephant, and tusks, and was about 18 feet long.

**Diocese**, a territory under the pastoral authority of a bishop. The term originated in the time of the Roman Empire, and represented then rather an administrative territory than an ecclesiastical one.

**Diopside**, a variety of pyroxene occurring in prismatic crystals, and having for its bases calcium and magnesium, with some slight addition of iron. It is found in Piedmont.

**Diopsis**, a genus of insects of the fly family, peculiar for the enormous projection of the sides of the head. They are natives of the tropics of the Old World.

**Dioptase**, a scarce copper ore occurring in prismatic emerald green crystals, and composed of silicate of copper; found in Tartary and Nassau, and sometimes styled emerald-malachite.

**Dioptric System**, a method of illuminating lighthouses by a central lamp which transmits light through a series of refracting lenses.

**Diorama**, a series of spectacular paintings exhibited in a darkened room with the light thrown on to the pictures in such a manner as to produce optical effects that give the appearance of reality. These effects can be varied so as to represent night or day scenes, or scenes of cloud or sunshine, as may be desired. The diorama was the invention of Daguerre and Bouton in 1822, and was first shown in London in 1823.

**Diorite**, a rock of crystalline structure composed of felspar and hornblende, and occurring in association with magnetite and apatite. It used to be classed as greenstone.

**Diplodocus**, a class of extinct mammoth reptiles belonging to Mesozoic times. Fossil remains of it have been discovered in Colorado and Wyoming, and in 1905 a cast of one of these huge monsters, taken from the original in the Pittsburg Museum, was presented to the British Museum by Mr. Andrew Carnegie and is now at the Natural History Museum, South Kensington. It has been named the Diplodocus Carnegii, and is 84 feet in length, having been reconstructed out of four defective skeletons all found in Wyoming. The height to the top of the spines of the dorsal vertebræ is nearly 14 feet. Four thousand centuries are supposed to have elapsed since it lived.

**Diploma**, a certificate of authority signed by the heads of universities, colleges, or other learned bodies, conferring upon the recipient some honour, degree or privilege, and usually affording evidence of the passing of a properly qualifying examination.

**Diplomacy**, the practice of official intercourse between nations, as carried on by ambassadors and other agents of states and governments.

**Diplomatics**, the science of diplomas, or ancient writings, and the deciphering of them. It is also (and now more commonly) called palæography.

**Diptera**, an order of insects, the name of which was supplied by Aristotle. Their main characteristic is that they are two-winged, and the common house-fly is the best known example. There are said to be 9,000 varieties of these insects in Europe alone, including gnats, blow-flies, mosquitos, tsetses, etc.

**Diphthong**, the conjunction of two vowels pronounced in one syllable. What is called a proper diphthong combines the sound of both vowels, as in "boy," "noise," "out," etc., while the improper diphthong only represents the sound of one of the vowels, as in "pail," "breach," "juice," etc. Belonging to the latter class are the diphthongs "æ" and "œ," but these are confined to words from the Latin or Greek.

**Diptych** was a folding two-leaved tablet of wood, ivory or metal, with polished inner surfaces, utilised for writing with the style by the ancient Greeks and Romans. The same term was applied to the tablets on which the names of the persons to be commemorated were inscribed in the early church. In art any pair of pictures hinged together is styled a diptych.

**Directory**, a term applied to the executive of the later French Revolution period, from Oct., 1795, to Nov. 9th, 1799, when Napoleon overthrew it and established the Consulate. The term, as in general use, signifies a book in which names of residents, traders, etc., in any particular locality or sphere are recorded, such as the London Post Office Directory, the Directory of Directors, etc.

**Dirge**, a hymn or song of mourning and lamentation, which may be music only, or a song only, but is usually a combination of music and words.

**Dirk**, an ancient Scottish stabbing weapon, dagger-shaped but much longer and heavier. It was usually worn in a scabbard.

**Discipline**, a specific training in accordance with strict regulations, and applying to religious, military and civil guidance.

**Discus**, a circular piece of metal or stone about 12 inches in diameter, used in athletic contests by the ancient Greeks and Romans. Throwing the discus was a very favourite game, which was deemed worthy of celebration in the famous statue of a Discobolus of the 5th century B.C., now preserved amongst the Townley marbles in the British Museum.

**Disestablishment** is the withdrawing of State support from Church organisation. The agitation for the disestablishment of the Church of England for some years past has slumbered. The Irish Protestant Church was disestablished in 1869. An agitation for the disestablishment of the Church in Wales, carried on for many years, led to the passing of a Bill, and the Church was finally disestablished in 1920.

**Disk**, an astronomical term denoting the seemingly flat surface of celestial bodies as seen by the eye.

**Dispensing Power** was a right claimed by English kings of releasing any of their subjects from oaths and vows on payment of certain indulgence fees, but the Bill of Rights of 1689 abolished this privilege, and since then the Pope has been the only authority claiming to exercise such rights. It was the gross abuse of the dispensing power that led to the Reformation.

**Dissenters** are those who decline to conform to the uses of the Established Church. All Nonconformist bodies, whether Protestant or Papist, are included in the term Dissenters.

**Distaff**, the staff of a spinning wheel, being a cleft stick on which wool, cotton or flax was wound for spinning on the spindle. It was held between the left arm and the side. In olden times there was a "Distaff Day," which fell on the day after "Twelfth Day," so named because women were then supposed to resume their distaffs.

**Distal**, applied to the end of a limb or bone in anatomy, or to an organ in botany, furthest removed from the point of attachment.

**Distance** is the space between two objects, or between two points of time, and is calculated by various methods. What is called an accessible distance can be measured by an ordinary linear measure; inaccessible distances are calculated by triangulation. The line of distance is a straight line between the eye and the chief point of the plane; the mean distance of a planet from the sun is an arithmetical mean between its greatest and least distances.

**Distemper**, a pigment prepared for a special method of painting, and consisting of colours mixed with a binding medium soluble in water.

**Distich**, a term used in poetry to indicate a couple of lines or verses constituting a complete idea, and, according to modern usage, rhyming.

**Distillation** is the process by which the spirit of a substance is obtained by evaporation and condensation. This is effected by heating the sub-

stance in a still; the liquid becomes volatilised, the volatile substance passes through a condenser and emerges in a liquid form. The volatile liquids are thus separated from those that are non-volatile and from solid matters. Distillation is used in the production of spirituous liquors and essences.

**Distinguished Service Order** was instituted by Queen Victoria in 1886 for rewarding exceptional service in the Army and Navy. Its badge is a gold cross, with a crown on one side and the royal cypher on the other, each enclosed in a laurel wreath.

**Dithyrambus**, a Greek lyric composition originally written in honour of Bacchus, but afterwards developed in celebration of other gods and heroes, and generally couched in excessive strains of laudation.

**Diuretics** are drugs or agents for aiding the secretion of urine.

**Divertissement**, a short musical entertainment which is usually accompanied by dancing.

**Diving Bells** are bell-shaped mechanical contrivances filled with air in which a diver can sit and be lowered into any body of water, fresh air being supplied through a communicating flexible pipe. The diving apparatus now mostly used, however, is called the "diving helmet," which fits over the head, and renders the diver free to move about at the bottom of the water in comparative safety.

**Divorce** is a legal dissolution of the marriage tie, and in England may be either complete, or limited—in the old legal term—a mensa et thoro (from board and bed). In the latter category may be included what is termed judicial separation, which does not allow of the separated persons remarrying. Since July 18, 1923, a wife can obtain a divorce for adultery alone on the part of the husband. In England several thousand suits for divorce are instituted each year, but not much more than half of them are successful. In the Courts of Summary Jurisdiction, however, the decrees of judicial separation amount to many thousands. In 1925 further grounds were made legal on which a wife could separate from her husband. The question of Divorce Law Reform is still being debated.

**Dobra**, a Portuguese gold coin, common in the 18th century, and of the value of about £3 11s. 9d.

**Docket**, a summary copy of any decree; a brief list, or label; derived from dock, to curtail.

**Dockers' Strike**, in connection with the London docks, occurred in 1889, and lasted for five weeks, over 16,000 men being directly concerned. Other strikes of dockers took place in 1912 and 1925.

**Docks** are enclosed water spaces wherein ships rest while being loaded or unloaded, or waiting for cargo. The wet dock is simply for loading and unloading; the dry dock, or graving dock, is for overhauling and reparing vessels, and is so constructed that, after a ship has been docked, the water can be drawn off; and the floating dock a rectangular structure which is sunk beneath a ship and raises it. The largest series of docks in the world are those on the Thames, extending many miles. Those of Liverpool are the next largest. The launching of big vessels of the *Mauretania* type renders a large increase of dock accommodation necessary. King George V. dock at Woolwich (1921) can accommodate the largest vessels afloat. The docks at Rotherhithe cover an area of nearly 400 acres.

**Doctor**, a term of wide application, applying not only to such as practise medicine, but to doctors in all the learned professions; thus there are doctors in Divinity, doctors of Laws, doctors of Philosophy, doctors of Music, doctors of Science, etc.

**Dodo**, an extinct bird of Mauritius which is known to have existed towards the end of the 17th century. It was a clumsy, short-legged bird, unable to fly, and gradually died out because of its inability to stand against the animals imported into the island by settlers. Some paintings of the Dodo, made by Dutch artists who actually saw it, give us a very fair idea of this curious bird.

**Dog-days** date from July 3rd to August 11th, covering a period of 40 days, when Sirius, or the dog-star, rises and sets with the sun. The ancient superstition was that this star exercised direct influence over the canine race.

**Doge**, the chief magistrate of the Venetian Republic, an office which existed from the 8th century to 1797. He was elected for life up to the 16th century, when the term of office was curtailed to two years.

**Dogfish**, a well-known genus of fishes of the shark family, but considerably smaller than that marine terror, seldom being more than 3 feet in length. They are numerous on the British coast, and are the great enemies of the fisheries.

**Dog Licences** are necessary for all dogs over six months old, and the cost per dog is 7s. 6d., the licence dating from January 1st in each year. Dogs for tending sheep or cattle, or for leading blind persons, are exempt.

**Dogmatics**, the science which seeks to describe the various Christian doctrines. The term is also applied to the medical theories propounded by Hippocrates.

**Dogs** belong to the genus *Canis*, and descend probably from one or more wild species, such as the wolf, fox, jackal, etc. The domestic dog is usually grouped in six classifications: wolf-dogs —including the Borzoi, Eskimo, Newfoundland, St. Bernard, sheep-dog, etc.; cattle and watch-dogs—comprising the German boarhound, the deerhound, the Danish dog, etc.; the greyhounds; the hounds—such as the staghound, bloodhound, foxhound, pointer, etc.; the curs—terriers, etc.; and the mastiff breeds—including the various mastiffs, the bulldog, pug, etc. The subdivisions of these classifications—which are by no means arbitrary—are numerous and fanciful, especially when what are called "toy-dogs" come under consideration. The dog does not reach full growth until two years old. It does not perspire, but expels heat through the tongue, which it hangs out when hot. A litter of puppies is usually from six to eight, and the period of gestation is 63 days.

**Doily**, a small napkin or table mat, used to place glasses or earthenware on; also the name of a species of woollen fabric.

**Doit**, an old Dutch copper coin worth about a farthing; also the name of an old Scotch coin once current, worth from one-eighth to one-twelfth of a penny.

**Dolce**, a musical term indicating that the music has to be rendered softly and sweetly.

**Doldrums**, a nautical term applied to the portion of the ocean lying near the equator, where variations of weather from calm to squall are so frequent as to render navigation difficult.

**Dole**, an apportionment of money, food, or other charitable gifts, distributed according to the terms of the charity. In olden times doles were often associated with monasteries and churches, and some still survive. There was dole-bread and dole-beer. The "benefit" received under the Unemployment Insurance Act is commonly referred to as "the dole."

**Dolerite**, a basaltic rock of the greenstone order.

**Dollar**, the unit of the monetary system of the United States and Canada, and coined in gold and silver. Dollars are in use in many other countries, especially in the Republics of South America, and the word is derived originally from the German thaler. The United States dollar of 100 cents, is nominally worth about 4s. 2d. in English money.

**Dolls** are puppets, mostly representing babies, but occasionally puppets of men and women, soldiers, sailors, etc. An immense trade is done in dolls. Dickens has a doll-maker (Caleb Plummer) in his *Cricket on the Hearth*, and he has also the "dolls' dressmaker" in *Our Mutual Friend*.

**Dolomite**, the name given to a limestone rock containing a large percentage of carbonite of magnesia in crystallised form.

**Doloroso**, a musical term denoting a sorrowful or plaintive style of playing.

**Dolphin**, an ocean mammal of the whale family, from 6 to 8 feet long, with a long sharp snout, and of an active disposition. They abound in most temperate seas and swim in shoals.

**Dome**, a large cupola, hemispherical in form, rising over the main building of a cathedral or other prominent structure. The finest existing dome, that of the Pantheon at Rome, is also the oldest, dating from the time of the Emperor Augustus. It is 143 feet high, and 142½ feet wide. The dome of St. Peter's, in the same city, stands 330 feet high, but its diameter is 3½ feet

less than that of the Pantheon. The dome of the cathedral at Florence is 139 feet in diameter and 310 feet high; and the dimensions of St. Paul's London, are 112 feet in diameter and 215 feet high.

**Dome Cover**, the copper or brass cover to the dome of a locomotive engine, to prevent heat radiation.

**Domesday Book** is the famous register of the lands of England framed by order of William the Conqueror. According to Stowe, the name was derived from *Domus dei*, the name of the place where the book was deposited in Winchester Cathedral; though by others it is connected with doom in the sense of judgment. Its compilation was determined upon in 1084, in order that William might compute what he considered to be due to him in the way of tax from his subjects. William sent into each county commissioners to make survey. They were to inquire the name of each place, the possessor, how many hides of land were in the manor, how many ploughs were in demesne, how many homagers, how many villeins, how many cottars, how many serving men, how many free tenants, how many tenants in soccage; how much wood, meadow, and pasture; the number of mills and fish ponds; what had been added to or taken away from the place; what was the gross value at the time of Edward the Confessor. So minute was the survey that the Saxon chronicler of the time reports "there was not a single hide, nor one vintage of land, nor even, it is shame to tell, though it seemed no shame to do, an ox, nor a cow, nor a swine was left that was not set down." The record, which did not take in Northumberland, Cumberland, Durham, and parts of Lancashire and Westmorland, was completed on November 15, 1086, and was comprised in two volumes—one a large folio, the other a quarto. The first is written on 384 double pages of vellum in one and the same hand, and in a small but plain, character, each page having a double column. The quarto is written on 450 pages of vellum, but in a single column, and in a large, fair character. The original is preserved in the Public Record Office.

**Dominant**, in music, the fifth tone of the modern scale, and the reciting tone in the Gregorian scales.

**Dominicans** were the mendicant friars of the Middle Ages, the order being established in 1216 in Languedoc by Dominic de Guzman. They formed a powerful body, being, next to the Franciscans, the most noted. The Jesuits overshadowed them, however, from the 16th century, though they are still to be found in many countries.

**Don**, originally a Spanish title of nobility, but now accorded to persons of the higher classes as a courtesy title. At the English universities the term is applied to college Fellows or authorities.

**Donatists**, an early Christian sect formed in Africa in the 4th century as a protest against the election of Cæcilianus as Bishop of Carthage. They were headed by Donatus, and held that they only represented the true Church. Subjected to many persecutions and repressive acts, they continued to exist up to the 7th century, though the conciliatory measures of St. Augustine in 411 won many Donatists back to the orthodox fold.

**Donative**, a term in ecclesiastical law signifying a benefice given to a person without formal induction.

**Donjon**, the keep, or inner tower of a castle, and the strongest and most secure portion of the structure. This was the last refuge of the garrison, and there was usually a prison on the lower floor, hence the name *dungeon*.

**Don Juan**, one of the favourite libertine adventurers of literature, the drama, and opera. Byron took his "old friend Don Juan" for the hero of his longest poem, which remains a fragment in spite of its length. Mozart composed his great opera "Don Giovanni" around the subject.

**Don Quixote**, the "knight of the doleful countenance," the hero and title of Cervantes' classic story.

**Doonga**, a rough kind of East Indian canoe, constructed from a single piece of wood, and carrying a square sail. Used chiefly in salt-collecting around the shallow waters of the Ganges.

**Dora**, the popular name for the Defence of the Realm Act, 1914, under which numbers of regulations controlling shop hours and the sale of certain commodities, etc., were brought into use. Mr. Justice Scrutton referred to it as Dora in the Law Courts in 1914, since when it has passed into the language.

**Dorado**, a small southern constellation named by Bayer, appearing to the north of the Magellanic cloud.

**Dorians**, the name given to an early Greek race who traced their origin to Dorus, father of Æolus. They were at one time very powerful, and held the southern and western parts of Peloponnesus.

**Dormer**, the name of a special kind of window projecting from a sloping roof, and of vertical form. Such windows were common to the architecture of the Netherlands, northern France, and Belgium from the 14th century, and form picturesque features of general architecture.

**Dormouse**, a small, squirrel-like rodent widely distributed throughout Europe and Asia, and living mainly on fruit and nuts. It is of nocturnal habits, and sleeps through the winter.

**Dort, Synod of**, convened in 1618–19, resulted in the adoption of Calvinism as the Reformed religion, and the condemnation of the teachings of Arminius.

**Dory, John**, a species of mackerel found in European seas, and a good table fish. The name is from the French Doré, yellow and gold.

**Dot**, a French term indicating the property which a wife brings to her husband on marriage, and is usually settled on the woman, being her separate property, though the income from it may go towards the general household expenses.

**Dotterel**, a bird of the plover family, appearing in the spring and autumn in large numbers in the higher latitudes of Europe, and common in the mountain regions of Scotland.

**Double-entendre**, a corruption of the French phrase "double entente," and used in English to indicate a word or sentence of indelicate double meaning.

**Doublet**, a body garment worn by men from the 15th to the 17th century; at some periods with skirts and belt, at others padded at the hips and in the sleeves. In their later form, under the Stuarts, doublets were made without sleeves and formed a sort of vest.

**Dower**, the share allowed by law to a widow out of the real estate of her deceased husband, if he dies without having made other disposition in her favour. There are many ways of barring dower, and though at common law the widow's dower amounts to one-third of the husband's real property, it is seldom that it is left open for such a claim to be substantiated in its entirety. Abolished by Administration of Estates Act 1905 except with regard to descent or devolution of entailed interest.

**Drachm** (or Drachma), the name of the chief silver coin used by the ancient Greeks and worth about 10d. of English money. It is also—in the first form—a term used in English apothecaries' weight, representing the eighth part of an ounce, and in avoirdupois weight equalling the sixteenth part of an ounce.

**Draco**, a northern constellation, the Dragon.

**Dragoman**, an Oriental term used to designate a guide or interpreter. In some regions it is not considered safe to travel without an attendant of this kind. They often assume larger responsibilities, however, and contract for the organisation of caravans, and the carrying out of tours.

**Dragon**, a fabulous monster common to folk-lore in most countries; generally represented as a winged reptile, with fiery eyes and breath of flame. A dragon guarded the garden of the Hesperides; in the New Testament there is mention of the "dragon, that old serpent, which is the devil"; St. George, England's patron saint, is supposed to have overcome the dragon; mediæval legend abounds in dragons. In heraldry it has also a conspicuous place; and in China was the imperial emblem.

**Dragonade**, the term given to the series of persecutions of Huguenots in France in the reign of Louis XIV., dragoons being chiefly employed in the work. Since then the term has been used in reference to any onslaught on the people by soldiers.

**Dragonet**, the name of a genus of fishes of the *Callionymus* family, beautifully coloured, and

about a foot in length. They are common on the British coast and in the Mediterranean.

**Dragon Fly**, the common name of a well-known class of insects having two pairs of membraneous wings, and often of very brilliant colours. They are swift of flight and may be seen hovering over sheets of water in the sunshine all through the summer.

**Dragon's Blood**, a dark-red resinous substance obtained from the fruit of a Malay palm, and possessing medicinal virtues which are highly valued for dental and other purposes. It is also employed as a colouring material.

**Dragoons**, a mounted military force dating from the 17th century, and at first serving alternately as infantry and cavalry as needed. They are now classed as heavy or light dragoons, and are among our regular cavalry troops.

**Drama**, a composition in verse, or prose, or both, with characters and a succession of scenes, representing some story of human or supernatural action. Thespis and his car give us the first crude form of the drama; then we have the virile developments shown in the Greek drama with its two distinctive branches, Tragedy and Comedy. After the classic days of Greece and Rome, the drama lost much of its power, and in the miracle plays and "moralities" of the Middle Ages we find little of real dramatic force. In England there was the splendid dramatic revival which gave us Shakespeare, Marlowe and the other famous Elizabethans. The subsequent distinct English dramatic periods are those of the Restoration, noted for its licentiousness, and the Georgian, in which Goldsmith, Colman, Sheridan, and other dramatists took part. In more recent times the drama has undergone notable developments, passing from the poetic drama to opera bouffe, from opera bouffe to Gilbert-Sullivan opera and musical comedy, with a later tendency to problem and sexual subjects, revues, and so on, which it is difficult to characterise.

**Dramatic Unities**, as prescribed in ancient times, comprise Time, Place, and Action.

**Draughts**, a game played with dark and light pieces on a chequered board. (See *Pears' Dictionary of Sports and Pastimes.*)

**Drawbridge**, a bridge that can be lifted up so that no passage can be made across it. It was a usual feature of a fortified castle in the Middle Ages, and was raised or lowered by chains and levers. It spanned the fosse, and on the approach of an attacking party was raised and formed a special barricade to the gate. Modern drawbridges are such as are raised to allow of the passage of boats up and down a river or estuary. The Tower Bridge is a famous London bridge of this type.

**Dreams** are ideas and images that pass through the mind during sleep, or probably in that very short interval which lasts from being fast asleep to wide awake. They are sometimes the outcome of waking thought and action, but appear in a distorted and fantastic form. Still, no matter how strange the figures and incidents of a dream may be, one is never surprised thereat. Many superstitions have gathered round dreams, especially in olden times when they were interpreted by seers. There is the old proverb that "dreams go by contraries," which is sufficient for many people. "Nightmare" is a terrifying dream usually traceable to indigestion.

**Dredging Machine**, an apparatus employed in collecting mud and silt from the bottoms of harbours, rivers, canals, etc. They are usually flat-bottomed, carrying a crane, and an endless chain of buckets, which descend into the water, collect the mud, etc., bring it up, and discharge it into the flat alongside the machine. Steam dredges, of which there are many forms, are now generally in use.

**Dress** came, we are told, into vogue in the Garden of Eden, though it must be admitted that it did not make much of a show at that early period. Its first object was utility. Gradually a desire to make it decorative sprang up, and fashions began to be set. From that time, dress has run its course through the ages with many variations and eccentricities, according to climate, whim, and need, and at the present time is more diversified and more generally costly than

**Dripstone**, a projecting stone or moulding over a doorway, for carrying off dripping rainwater.

**Droshky**, a light, four-wheeled, topless vehicle, much used in Russia.

**Dross**, the name generally applied to the refuse of molten metal, composed of slag, scales, and cinders.

**Drought**, a period of dry weather, is a normal and recurring condition in many warm climates, and is frequently provided against by irrigation. In Great Britain droughts do not often occur. The summer of 1921 was the driest for very many years. In 1802 there was a drought in England of 49 days.

**Drugget**, a cheap kind of carpeting made of mixed materials, but usually containing a fair proportion of woollen fibre. It has often a printed design on the upper surface, but is made also sometimes of one colour. The term is likewise applied to a protective covering used for carpets, etc.

**Druggist**, a dealer in drugs; the business is usually nowadays combined with that of an apothecary, who compounds and prepares the drugs he sells.

**Druids** were priests of the old Celtic races of Gaul, Britain and Ireland. Their religion was made up of nature worship, symbolism, and a belief in special deities. The Druids were greatly venerated by the people, and, in addition to matters of religion, they were entrusted with the administration of justice. They regarded the oak as the symbol of the Supreme Being, and their rites were usually performed in oak groves, and the mistletoe that grew on the oak was held to represent man's dependence upon God. Human sacrifices were part of their religion, and the serpent was one of their objects of worship. At Stonehenge in Wiltshire, Avebury, Chipping Norton, Keswick, and other places, the circles of huge stones which have been preserved from primitive times are regarded as Druidical remains.

**Drum**, a percussive musical instrument, consisting of a hollow circular body of wood or metal, the ends of which are closed in with tightly-stretched pieces of membrane, which emit more or less vibrant sounds when struck with sticks. Drums are usually of three kinds—the *bass drum* held horizontally and beaten at both ends; the *side drum*, slung to the side, and played on the uppermost end with a pair of wooden drumsticks; and the *kettle-drum*, the shell of which is of copper or brass, and the head formed of parchment. Kettle-drums are mainly used in cavalry bands in pairs.

**Drupe** is the general scientific term for stone fruit. The stone forms the inner part of the fruit, and encloses a seed or kernel, the latter being liberated after setting in the ground by the decomposition of the shell.

**Drury Lane Theatre** is the oldest London playhouse. There was a theatre of the name in the Stuart period. It was destroyed by fire in 1671. The next theatre on the site was built by Wren, and burned down in 1809. The present house dates from 1812. Sheridan was its manager for a long time.

**Druses**, a Syrian religious sect in the mountains of Lebanon, fierce and warlike in nature. A great massacre of Christians by Druses occurred in 1860.

**Dryocopus**, a large blackbird of the woodpecker family, having a scarlet crest, and found in N. Europe.

**Dry-rot** is caused in timber by a fungoid growth, and occurs chiefly in damp situations. The most effective treatment is saturation with creosote. Dry wood always escapes dry-rot.

**Dualism** is a term used both in religion and in philosophy. In religion it involves the doctrine of two distinct principles, one good, the other evil, as the controlling influences; in philosophy it opposes materialism and idealism, and insists that spirit and matter are separate substances.

**Dublin University** was founded by Queen Elizabeth in 1591, as the College of the Holy and Undivided Trinity. There are over 800 undergraduates and about 200 graduates in the professional schools.

**Ducat**, a coin formerly widely current on the Continent, first coined in Apulia in the 12th century. A gold ducat was worth about 9s. of our money, and a silver ducat half that sum.

**Ducatoon**, a large silver coin once current in the republic of Venice, and worth about 6s. English.

**Duchess**, the wife or widow of a duke, or the lady who has in her own right control or sovereignty in a duchy.

**Duck**, a bird of the Anatidæ family, widespread and of many species, the Mallard or Wild Duck being regarded as the common ancestor. (See Pears' *Dictionary of Poultry*.)

**Duck-bill**, a fur-covered mammal inhabiting Australia and Tasmania, possessing a bill like a duck and a body resembling that of an otter. Called also the duck-mole and the duck-billed platypus.

**Duck-Hawk**, the common name of the moor-buzzard. In America the peregrine falcon bears this name.

**Ducking-stool**, or **Cucking-Stool**, an old English instrument of punishment, consisting of a chair suspended by a pole over a sheet of water. It was used for "common scolds," the virago being tied in the chair and dipped in the water. One was used at Leominster in 1809. The Domesday Book has a reference to the ducking-stool.

**Ductility** is a property possessed by most metals which renders them capable of being stretched without breaking. Gold is the most, and lead the least ductile of metals, the order being gold, silver, platinum, iron, copper, palladium, aluminium, zinc, tin, lead. In animated nature the spider and the silkworm, with their elastic secretions, are the most noted examples of ductility.

**Duelling** originated in France in the so-called days of chivalry, and lingers there still in a more or less serious fashion. It existed in England through mediæval times, and down to the days of George III. In the German army and among German students there are frequent duels of a kind, but in no country at the present time are such encounters indulged in, except on rare occasions, with intent to kill. In Great Britain and America duels are now looked upon as childish or foolish methods of settling disputes, and are an offence against the law. The Duke of Wellington fought a duel with Lord Winchilsea in 1829. Castlereagh, Pitt, Sheridan, Fox, and Canning had all taken part in duels. A duel, it will be remembered, is a chief incident in "The Rivals."

**Duet**, a musical composition for two voices or two players, and, in the case of the pianoforte, can be performed on one instrument.

**Duke**, the highest rank in the British peerage next to that of a royal prince. Edward, the Black Prince, eldest son of Edward III., who died before his father, was the first English Duke, being created Duke of Cornwall in 1337, at the age of seven, since which time all Princes of Wales have held that title.

**Dukeries**, a range of English woodland and park country, mainly in Nottinghamshire, comprising the adjacent demesnes of several English dukes and nobles. The Dukeries include Sherwood Forest and the estates of Welbeck Abbey, Clumber Park, Worksop Manor, and Thoresby Hall.

**Dukhobortsi**, a Russian sect founded in the 18th century by Procope Loupkin, and still numbering many thousand followers. They deny the divinity of Christ, reject rites, ceremonies and images, and give a mystical interpretation to the Bible. The sect was banished to the Caucasus in 1841, and in later years the Russian authorities have dealt severely with them. Some 7,000 of them settled in Canada in 1899. At the 1921 census there were 12,648.

**Dulcimer**, an ancient stringed musical instrument. The strings or wires, which are tuned to scale and consist of from two to three octaves, are stretched across a wooden box, and are played upon with light cork-headed hammers.

**Dulse**, a crimson-coloured seaweed, eaten as food in Scotland and New England.

**Duma**, the Russian National Parliament, started on popular lines in 1906, and reconstructed in 1907, but abolished by the Bolshevists.

**Dunciad**, Pope's famous satire in verse, in which he replied to the attacks of his enemies and denounced the critics and poetasters with scathing effect.

**Dunes** are hills of loose sand which form on the sea-coasts. In some places they have aggregated at the mouth of an estuary, and, remaining fixed, have caused the estuary to be blocked against the tide.

**Duodecimals**, a system of arithmetic enabling the number of feet or inches in a rectangular surface to be worked out by a calculation of twelfths. It is also called "cross multiplication."

**Duodecimo**, a sheet of paper folded into twelve leaves, written "12mo."

**Duodenum**, the first portion of the small intestine, connecting with the stomach, and receiving the hepatic and pancreatic secretions.

**Dura Mater**, the anatomical name for the outer membrane of the brain and spinal cord.

**Duramen**, the hardened inner part of the wood of large trees.

**Durbar**, an Indian official reception held by either the King-Emperor, the Viceroy or a native Prince. The most important durbars of recent times have been those held in 1877 at Delhi when Queen Victoria was proclaimed Empress of India, the one held in 1903 when King Edward VII. was proclaimed, and that of 1911, when the coronation of his present Majesty was celebrated with great splendour, and the removal of the capital from Calcutta to Delhi, and other great concessions were proclaimed.

**Durham University**, founded in 1832, comprises University College, Bishop Hatfield's Hall, Durham College of Medicine and the Durham College of Science, Newcastle.

**Durian**, a tall tree common in the Malay Peninsula, cultivated for its edible pulpous fruit, largely eaten by the natives. It possesses a fœtid odour, and is sometimes in consequence called the "Civet durian."

**Dwarfs** are persons of very diminutive size, of which many notable examples are recorded in history. They are generally regarded as curiosities. Stanley reported a tribe of dwarfs in Central Africa. Geoffrey Hudson, Charles I.'s dwarf, was only 18 inches high at 30 years old. The smallest of modern dwarfs were "General Mite," 21 inches, and "Tom Thumb," 31 inches.

**Dyaks**, the native race of Borneo.

**Dyestuffs** are of numerous kinds, and have been greatly extended in modern times by chemical discoveries. They include cochineal, indigo, logwood, madder, fustic, and the various aniline matters now forming a great feature of dyeing.

**Dyke**, the term applied to masses of igneous rock which have flowed into grooves of strata or become infused therewith; the word also signifies, in alternative usage, a sea wall and an open drain.

**Dynagraph**, a machine for recording the condition of a railway line, the speed of a train, and the amount of coal and water used on a journey.

**Dynamics**, deals with natural forces either in motion or at rest, describing their positions, velocities, and constitution.

**Dynamism**, Leibnitz's doctrine that all substances in nature involve force.

**Dynamite**, a powerful explosive whose chief element is nitro-glycerine. It was discovered by Nobel in 1867, and has a disruptive force of about eight times that of gunpowder.

**Dynamo**, an electric machine consisting of electro-magnets, between the poles of which is an armature of coils of insulated copper wire, which is made to revolve by mechanical power, thus producing the electric current.

**Dynasty**, a succession of monarchs of the same family, as the Carlovingian dynasty, the Bourbon dynasty, the Plantagenet dynasty, etc.

**Dytiscus**, the name of a large and common water-beetle, a voracious feeder on larva, tadpoles, and a typical amphibian.

**Dziggetai**, the name of the wild ass of Asia, referred to in the book of Job, and found in herds on the steppes of Central Asia; related to the onager.

## E

**Eagle**, a large diurnal, raptorial bird of the Falconidæ family, having some ten species, including the Golden, the Russian, the Imperial, and the Bald Eagles. Eagles are fairly common in Europe, Asia, and Africa, but only the Golden Eagle is found in America.

**Eagle**, a ten-dollar gold coin of the United States. There is also a double-eagle of 20 dollars.

**Eagle Wood**, a name given to *Aloexylon agallochum*, a fragrant Asiatic wood yielding a resinous gum from which certain medicaments are made. It is also used for incense, and a cordial is concocted from it.

**Ear**, the organ of hearing, comprises in mammals, the *external ear*, containing the pinna and auditory meatus; the *middle ear*, containing the drum or tympanum; and the *internal ear*, through which the sound vibrations are transmitted to the brain.

**Ear-ring**, a very ancient form of personal adornment worn by both sexes in Oriental nations. In Anglo-Saxon times ear-rings were worn in Britain, but from the 10th to the 15th century were out of fashion. In Elizabethan days they were revived, and have since continued to be used, more or less. In early Victorian days they were common again.

**Earl**, a British title of nobility of the third rank, duke and marquis coming first and second. The title dates from Saxon times, and until 1337 ranked highest in our peerage.

**Earl-Marshal**, an office hereditary in the family of the Dukes of Norfolk, the "premier earls of England," whose duty it is to direct all great ceremonies of State, coronations, and so forth. He is also head of the College of Arms. Viscount Fitzalan was deputy E.M. during the minority of the present Duke who came of age in 1929.

**Early English Architecture**, is the pointed style, with long lancet-headed windows, and came between the Norman and the Decorated periods. It continued through the 12th and 13th centuries.

**Earth**, our habitable globe, is the third of the planets of the Solar system in order from the Sun, and revolves upon its axis in one sidereal day, the whole earth revolving around the sun in an ellipse in one year. The distance of the earth from the sun is 93,000,000 miles. The shape of the earth is that of an oblate spheroid, its axes measuring 7,926 miles and 1,041 yards, and 7,899 statute miles and 1,023 yards, respectively. Two-thirds of the earth's surface is covered with water. It has only one satellite, the moon.

**Earthenware**. The term comprises objects or utensils composed of non-translucent, baked or fired clay, and may be either unglazed or enamelled. The word is frequently employed to designate only the coarser kinds of pottery.

**Earth-Nut** is a class of plant of low growth, with a bulbous edible root, slightly aromatic.

**Earthquake**, a violent disturbance of the earth's action. Earthquakes are frequent in hot countries, more particularly in South America, but they occasionally occur in colder regions, though only in a mild form, and are not unknown in England. An earthquake shock has an undulating motion, varying in duration, sometimes lasting only a few seconds, at other times continuing in a series of shocks for a considerable time. The most serious earthquake of modern times was that of Lisbon in 1755, in which 50,000 people lost their lives. There was a destructive earthquake in San Francisco in 1906. In January 1907, Jamaica suffered severely, and particularly the capital Kingston. Earthquakes occurred in North and Central Italy in 1920; in Japan (Tokyo and Yokohama) in 1923; in New Zealand (Napier) and in Nicaragua (Managua) in 1931; also the severest shock ever felt in London on June 7 of the same year.

**Earthworm**, of which there are several species, has a cylindrical body, tapering at both ends, and segmented into rings. It moves by contraction of its rings, aided by retractive bristles; is eyeless, but has a mouth, gullet and stomach. Earthworms exist in immense numbers, and perform an important part in the scheme of nature by loosening the soil and rendering it more amenable to tillage. They also form a valuable food for birds and many mammals, and are unequalled as bait for certain kinds of fish.

**Earwig**, a genus of insects of the cockroach family, possessing two pairs of wings, and anal forceps. It is of nocturnal habits, lives on vegetable matter, and hides by day under stones or bark. The old belief that it deliberately creeps into people's ears is altogether unfounded.

**Easement**, a legal term applied to a privilege enjoyed by anyone over another's property, the most familiar examples being the right of way and ancient lights. It arises in one of two ways: (1) by the severance of one tenement in two parts, (2) by prescription.

**Easter**, the annual Church festival in commemoration of the resurrection of Christ. The name is derived from Eostre, the goddess of Spring. The date cannot fall earlier than March 22 or later than April 25. In the summer of 1928 the House of Commons passed the third reading of a bill for a fixed Easter, provided that no serious opposition is offered by the various Churches. The date suggested was the first Sunday after the second Saturday in April—to take effect in April 1930. At the end of 1929 the English Churches had not made a decision, but the Pope did not see any reason for the alteration.

**Eastern Question**, a term applied to the problems connected with the government of the provinces or states on the south-east of the Turkish Empire in Europe. From the Crimean War to the Great War of 1914–18 it was a menace to European peace, but the Great War has entirely changed the situation.

**East India Company** was incorporated by Elizabeth in 1600. By 1613 the company obtained a charter of privileges from the Great Mogul, and set up a factory at Surat, India. Under Charles I., the company suffered severe losses and were compelled to open a subscription for new stock, although Madras and St. Helena had been added to their possessions. During the Commonwealth the company's charter was annulled, but renewed three years later, when a new stock of £370,000 was raised. From that time the fortunes of the company improved. In 1662, Bombay came under the Company's influence, and developed into an important trading port. Complications arose later. France wanted power in India, and a fierce struggle for supremacy ensued, but Clive gained the victory for England, and after 1765 the company received the revenues of Bengal, Behar, and Orissa; thenceforward British dominion in India remained undisputed except by native princes. In 1772 a governing constitution was formed, and Warren Hastings was appointed the first Governor-General. In 1781 a new charter was granted, and in 1784 Pitt established a Board of Control of the India Company. A great increase of trade resulted, and this rule continued down to 1858, when, as a result of the mutiny, the Crown assumed the sovereignty.

**Eastward Position**, a position assumed at the altar by an officiating clergyman at the communion service and formally declared illegal in 1870.

**Eau de Cologne**, a popular distilled perfume first manufactured at Cologne in the 18th century by Johann Maria Farina, an Italian, and now made in large quantities in Cologne and elsewhere.

**Eau de Luce**, an antispasmodic stimulant composed of certain parts of mastic, oil of amber, alcohol, oil of lavender, and aqua ammonia.

**Eavesdropper**, one who secretly listens to the private conversation of others. Offenders of this kind were often severely punished in olden times.

**Ebionites**, were a religious party of Judaizing Christians of some prominence from the 2nd to the 4th century. They contended for the authority of the Mosaic law, denied the divinity of Christ, and opposed the teachings of Paul.

**Eblanine**, a crystalline spirit procured from crude pyroxylic spirit.

**Ebony**, a name applied to various hard, black woods, the best of which are grown in Mauritius and Ceylon. There are also Indian and American varieties. Only the inner portions, the heartwood, of the trees are of the necessary hardness and blackness. Ebony is largely used in ornamental cabinet work, for piano keys, canes, etc.

**Ecballium**, the scientific name of the squirting cucumber, so named from the fact that when ripe it breaks from the stalk and ejects its seeds and juice from the hole made by the breakage.

**Ecce Homo** ("Behold the Man!"), used in reference to the pictures and sculptures representing Christ crowned with thorns.

**Ecclesiastes**, a book of the Old Testament, the word signifying "the preacher." Supposed to contain the reflections of Solomon, though many critics dissent from this view.

**Ecclesiastical Commissioners** are an incorporated body, existing since 1836, whose duties are to administer ecclesiastical revenues and manage ecclesiastical property generally. The body consists of the two English Archbishops, all the Bishops, the Lord Chancellor, and principal officers of State, the Deans of Canterbury, St. Paul's, and Westminster, the Lord Chief Justice, and nine lay Commissioners. Since 1840 the Commissioners have augmented or endowed over 7,500 benefices, and effected a total increase of incomes of benefices of over a million and a quarter sterling per annum. In 1907 a Pension Fund scheme for poor and infirm clergy was established by the Commissioners.

**Ecclesiastical Courts,** dealing exclusively with church affairs, are those of the Archdeacons, the Bishops, and the Metropolitan (York or Canterbury), with the Judicial Committee of the Privy Council as the final Court of Appeal.

**Ecclesiasticus,** the title of one of the books of the Apocrypha, dating from about 180 B.C. Its alternative title is "The Wisdom of Jesus, the Son of Sirach."

**Echidna,** an animal of the ant-eater family, inhabiting Australia and Tasmania. It lives on insects, burrows, lays eggs, and in structure is nearly allied to birds. Owing to its prickly spines it is commonly called the Porcupine Ant-eater.

**Echinodermata,** the generic term of the invertebrate animals of the sea-urchin and starfish class.

**Echo** is a sound repetition or repercussion caused by some obstructing object, which throws the sound waves back to their starting point. Woods, rocky defiles, valleys, mountains, or walls all act as echo-producers under favouring conditions.

**Eclectics,** a philosophical system built up of selected parts of other philosophies. First used by early Christian writers.

**Eclimaster,** a genus of starfishes, including the *E. sepositus* and the *E. sentus*, with sheathed spines at the angles.

**Eclipse,** an obscuration of the light of the sun, moon, or other heavenly body by the passing of another body either between it and the eye or between it and the source of its light. The sun is eclipsed by the moon intervening between it and the earth; the moon by the earth passing between it and the sun. Eclipses vary in number from year to year. During 1929 there were two eclipses of the sun but none of the moon, in 1931 two total eclipses of the moon and three partial eclipses of the sun, and in 1932 four eclipses, including a total solar eclipse and a total lunar eclipse.

**Ecliptic,** the circle describing the course of the earth round the sun. Its position at a given date is styled the *fixed ecliptic*; the position of the fixed ecliptic in relation to the equinox is the *mean ecliptic*; and *true ecliptic* is the mean ecliptic as affected by inclination. *Obliquity of the ecliptic* signifies the angle of inclination of the ecliptic of the equinox.

**Ecumenical Council,** a specially summoned gathering of the heads of the Roman Catholic Church when important questions of church doctrine and polity are to be decided. Papal infallibility was the authoritative pronouncement of the last great Ecumenical Council held in 1870.

**Edda,** the book of the mythological lore of Scandinavia, written by Snorri Sturluson in the 13th century.

**Eddystone Lighthouse** stands on a group of rocks about nine miles from the Cornish coast and fourteen from Plymouth. The present structure is the fourth that has occupied this dangerous position. The first was of wood, completed by Winstanley in 1700, but three years later washed away, its architect with it. In 1709 a second and stronger wood lighthouse was built by Rudyard. This lasted until 1755, when it was destroyed by fire. Smeaton built the third lighthouse, of granite and Portland stone, on the model of an oak trunk, and this, which was finished in 1759, withstood the storm and tempest for over a hundred years, being superseded by the present building, erected in 1879–82 by Sir James Douglas. It is wholly of granite. Its light can be seen over seventeen miles, and in foggy weather it sounds a two-ton bell.

**Edelweiss,** a white perennial flower of the daisy order, common in Alpine regions.

**Edentata,** the name given to an order of mammals which are either entirely toothless or without incisors. Sloths, ant-eaters, and armadillos belong to this order.

**Edible Nests** are built by certain birds of the Swift family in sunless caves in Madagascar, Ceylon, New Guinea, and other places. These nests are formed of a jelly-like mucus secreted from a salivary gland, and in China fetch as much as the equivalent of £7 or £8 a pound. They run about 50 nests to the pound. Soups are made of them. It is only the first nests that are of value. When these have been taken away the birds build a commoner nest composed in great part of grasses, etc.

**Edict of Nantes.** (*See* Nantes, Edict of.)

**"Edinburgh Review,"** the great Whig quarterly from 1802 until 1929, was edited by Jeffrey, and numbered among its contributors Lord Brougham, Sydney Smith, and Macaulay.

**Edinburgh University,** founded 1582, and now one of the leading medical centres of the kingdom. The annual value of its fellowships, bursaries, etc., is over £25,000. About 4,000 students matriculate yearly. Conjointly with St. Andrews, Glasgow, and Aberdeen, it returns three members to Parliament.

**Education** in the United Kingdom has only been compulsory since 1870, when Board Schools were established in all parts of the country. The elementary school age was fixed from 5 to 14, with exemption for proficiency after 11. Under the Education Act of 1870, there grew up in England and Wales a system including about 2,500 schools. Since the passing of the Education Act of 1899 the Board of Education has been the educational authority. In 1902 a new Education Act was passed by which Board Schools were abolished and new education authorities were set up in England and Wales, consisting of county, borough, and urban district councils. No denominational formulary was to be taught in the Council's schools, except that in cases of schools not provided by the local education authority religious instruction shall be provided in accordance with the provisions of the original trust deed (if any). There are in England and Wales nearly 21,000 public elementary schools, affording accommodation for over 7,000,000 scholars, and 126 schools for blind and deaf children, and 450 for defective and epileptic children. A Welsh Department of the Education Board was established in 1907. The number of secondary schools in England and Wales recognised for the Education Grant in 1929 was 1,350, with *c.* 212,000 boys and *c.* 188,000 girls on the register and of whom a quarter come up with free places from the elementary schools. Technical education is provided in evening and day schools, and training for elementary teachers in special colleges. In Scotland over 800,000 scholars are on the elementary and higher grade schools register; and in Ireland there are over 8,600 elementary schools, with an aggregate of over 700,000 pupils on the register. For the higher education of men and women there are several Training Colleges. A greatly improved Education measure was introduced by Dr. Fisher, the Education Minister, and passed in 1918, and further important schemes for extending educational facilities are projected A Bill proposing to raise the school-leaving age from 14 to 15 in England and Wales passed the 3rd reading in 1931, but was defeated in the House of Lords Feb. 8, 1931. The total extra cost involved would be between 3 and 4 million pounds per annum. In 1930 Parliament voted 45½ million pounds for education in England and Wales, and over 7 million for education in Scotland.

**Eels** are soft finned, serpentine fishes, almost without scales, abundant in European waters, salt and fresh. They do not generally exceed 3 feet in length, the females being larger than the males. Young female eels make their way from salt to fresh water, and when full-grown return to the sea for breeding purposes. The Conger (marine) eel grows to more than twice the size of the fresh-water eel. The Electric eel of South America is a variety of great interest possessing the power of emitting electric shocks.

**Effendi,** a Turkish courtesy title suffix, usually

accorded to the official and professional class, and equivalent to the modern English use of esquire.

**Egg-plant**, a plant cultivated for its ovate fruit, varying in colour from dark purple to white. In great esteem as a vegetable in America.

**Egret**, a bird of the heron family, of pure white plumage, famed for its beautiful silky tufts which appear in the breeding season. There are two varieties, the larger kind is found in Eastern Europe, North Africa, and America, the smaller is confined to Eastern Europe and Asia.

**Egyptian Vulture**, a numerous species common in Eastern countries, and valuable for the scavenging duties it performs. It is considered a moral offence to kill one of these birds.

**Eider Duck**, a large duck of which there are five species. It is an inhabitant of northern latitudes, and supplies the beautiful soft down called "eider down." These birds line their nests with down which they pluck from their breasts, and it is this that is so much prized. Down plucked from an eider duck is of much less value. In certain parts of Norway and Scotland the haunts of eider ducks are preserved. Eider down is so elastic that a pound or two of it will fill an ordinary bed covering.

**Eiffel Tower**, built in Paris in 1887–89; 985 feet high, and cost £200,000.

**Eikon Basilike** (Royal Image), the title of a work issued in 1640, supposed to have been written by Charles I. in support of kingly divinity, and replied to by Milton in the same year with his *Eikonoklastes* (image breaker).

**Eire** (or **Eyre**), an old legal term still in use in Scotland in connection with the circuit of judges. Justices in eyre were judges journeying from assize to assize for the purpose of holding trials.

**Eisteddfod** (a sitting) was originally a congress of Welsh bards and minstrels, and dates from before the 12th century. These assemblies, discontinued for a long period, were resumed in 1819, and have been held yearly since, each lasting three of four days. Their object is to foster the Welsh patriotic spirit; they are devoted to orations and competitions in poetry, singing, and harp-playing, prizes being awarded to the successful contestants. The proceedings are in Welsh and in English. In 1909 the festival was held in the Albert Hall.

**Eland**, the largest species of antelope, a native of Africa; has large pointed horns, stands 5 feet high at the withers, and weighs several hundred pounds. It is a fleshy animal and much valued as food.

**Elasticity**, implies a power of expansion by strain, and a reversion to the original form when the strain is withdrawn. Perfect elasticity is presented by gases and liquids, while solid bodies vary in elasticity according to their composition. The greatest amount of elasticity is possessed by India-rubber, tempered steel, ivory, glass, etc., the least by lead, clay, and fats.

**Elateridæ**, a family of beetles of a numerous species with short legs and indented *antennæ*.

**Elder**, a genus of small trees of the Sambucus family, with pinnate leaves, and bearing clusters of small black-purple berries. The black elder, the best known, is common in most parts of Europe, and thrives in Britain. A wine is made from its berries, and the juice is used as an aperient.

**El Dorado**, a "golden land," was an idea much favoured in the days of the early Spanish explorers. It was believed that somewhere on the South American continent there was a country abounding in gold and precious stones. Many expeditions were fitted out to discover it. Sir Walter Raleigh also went forth on this illusive quest. The term is still used in regard to any place of rich promise.

**Eldritch**, a Scottish term, signifying "frightful."

**Eleatics**, a school of philosophers established at Elea by Xenophanes, who held that "the One, or Absolute, alone is real and eternal."

**Elecampane**, a perennial plant found in damp meadows in England, and bearing a large yellow flower. The root possesses certain medicinal properties, and when dried is in popular repute as an aromatic and tonic.

**Election**, in theology, is the theory that God elects to grant eternal life and heavenly favour to a certain number of human beings, and passes over the rest. Calvinism supports the theory as absolute, Arminianism makes it conditional.

**Electra**, in astronomy, one of the Pleiades, also an asteroid, discovered in 1873 by Peters.

**Electricity** is the name given to a class of phenomena of attraction and repulsion, the true nature of which is still incompletely understood. It is customary to separate it into two divisions —frictional electricity and voltaic or current electricity. It was first discovered in its frictional form in the 6th century B.C. by rubbing amber with silk, thus creating a power of attraction. Further experiments resulted in obtaining frictional electricity by using other substances in the same way. Other means of exciting electricity were also found later. In the utilisation of frictional electricity, its distribution over the surface of a conductor has to be provided for, and electrical machines are employed for developing quantities of electricity. In voltaic or current electricity, the electricity is produced by a battery or by a coil of wire or a dynamo machine.

**Electric Light** is light produced by electricity, and is of two kinds, the arc-light and the incandescent light. The first is produced when a strong current passes between two carbon electrodes, first brought together, then slightly separated, leaving the current to continue, but setting up a resistance that causes the carbon points and the air between them to assume a white heat which gives forth an intense light, thus completing what is called the electric arc. The incandescent light is obtained by passing the current through a thin metallic wire or other strong resisting substance until it heats to the point of incandescence.

**Electric Power**, although largely utilised in manufacturing-plants and in some collieries, is still in its infancy. Modern industry and even social life are coming more and more to be dependent on the new source of power. The limitations at present placed upon its further extension are so imposed because of our lack of experience. For the moment, we have come to the limit of the voltage upon which the distance that power can be transmitted to depends. The highest in use in any successful commercial operation so far is 55,000 volts. For this limit there are four reasons: the difficulty in maintaining perfect insulation; in securing protection from lightning discharges, etc.; loss due to brush discharges from high-tension conductors; and deterioration of the high-tension conductors. The solution of these problems can only be effected by experience. Under a special Government scheme four regions of England experimented with the use of very cheap electric power in 1931 to see whether its supply will prove to be an economically profitable proposition.

**Electric Telegraph** may be said to date from 1836, when Sir Charles Wheatstone and his co-inventor Cooke introduced their Single Needle instrument, which was soon followed by the Double Needle apparatus. Morse, in 1837, invented his famous recording instrument. The first electric cable was between Dover and France, and was laid in 1850. The first Atlantic cable was laid in 1858, and the second in 1866. It was in 1899 that the first Marconi wireless telegraph messages were sent between England and France.

**Electric Tramways** were first introduced in this country in 1883 from Portrush to the Giant's Causeway, but it was not until they had been largely adopted and improved in America that they began to be more generally installed in the United Kingdom. They are now established in nearly every town of importance, and there is a total route length of considerably over three thousand miles of electric tramways and light surface railways in Great Britain. The introduction of motor 'buses has had the effect of considerably arresting the development of tramways.

**Electrolysis** is the condition established when an electric current passes through a conducting liquid, between electrodes, connected with the poles of a battery, resulting in the decomposition and separation of the liquid, if a compound. Water thus becomes decomposed into hydrogen and oxygen.

**Electrometer**, an instrument for measuring the amount of an electric discharge.

**Electronic Theory** asserts that matter when analysed into its ultimate components consists of electricity, and that electricity itself is composed of atoms. Many leading physicists have accepted the theory, for which it is claimed that it forms a working hypothesis capable of accounting for all the known phenomena of electricity.

**Electrophone**, a musical instrument invented by a Dutchman, Daniel Ruyneman. Electric currents of high tension are used and the instrument creates sharp metallic sounds.

**Electrophorus**, an instrument invented by Volta for obtaining statical electricity by induction, and consisting of a disc of resin connected with a disc of polished metal. On the resin disc being negatively electrified by rubbing with catskin or warm, dry flannel, the metal plate is placed upon it, causing the plate to be positively charged on the lower surface and negatively on the upper. At this point, if the disc be touched with the finger, the negative electricity is discharged into the earth, leaving the disc charged positively.

**Electroplating** is the process of coating metals or other substances with a metallic film, applied in a bath of the solution of the coating material, by the action of an electric current.

**Elegiacs**, a kind of verse originated by the ancient Greek poets, afterwards adopted by the Romans, and frequently used in modern times, for compositions of a mournful character. An elegiac consists of distiches, "each of a dactylic hexameter and a dipenthium." Among the Roman elegiac poets, Catullus, Tibullus, and Ovid were noted.

**Elements**, in the popular interpretation, comprises earth, air, fire and water. In chemistry, an element is a substance in the simplest form to which it has been reduced, and at the present time there are about eighty of these elements demonstrable. They are classed as metallic and non-metallic.

**Elemi**, the name given to a veinous exudation obtained from various trees of the Burseraceæ order found in most tropical regions. Valuable in pharmacy, also for varnishes, and for chewing.

**Elephant**, a proboscidian mammal of which only two species exist—the Asiatic, in India, and the African elephant. No other animals possess a trunk. Both males and females have large ivory tusks, of considerable commercial value. A full-sized elephant weighs about 7,000 lbs. and stands three yards high at the shoulders. They are the largest existing quadrupeds. Several fossil elephants of still larger bulk have been discovered, including the mammoth and the mastodon. The Indian elephant is domesticated and used as a beast of burden.

**Eleusinian Mysteries** were festivals of symbolic rites, in which representative gods and goddesses were honoured.

**Elevation**, rising ground, as a hill; also a military expression, being the angle to which the barrel of a gun is raised to throw a projectile the required distance.

**Elf**, a fairy personage of a "tricksy" disposition, who is supposed to interfere in human affairs with mischievous intent.

**Elgin Marbles**, a great collection of sculptures, got together by the 7th Earl of Elgin, in Greece, and brought to England in 1812. These celebrated treasures had originally formed part of the Parthenon at Athens, and were the work of Phidias. Lord Elgin expended over £70,000 upon them, and they were purchased for £35,000 for the British Museum, where they are now to be seen.

**Eliac** (Eleac, or Eretriac Sect, alternatively) **School**, a school of philosophy, founded in Elis by Phædo, the pupil of Socrates, but of its theories little that is definite has been preserved.

**Elixir**, a term derived from the alchemists, and referring to a substance or tincture which it was supposed would transmute inferior metals into gold, and also make old men young again. The word is now applied to many essences and decoctions.

**Elk**, the largest animal of the deer family, possessing enormous antlers, and standing, when mature, about seven feet high. The American moose is of the same family.

**Ell**, an old English cloth measure, representing a length of 45 inches. It varied in other countries, from 22 inches in Saxony to 47 inches in France.

**Ellipse**, in geometry, a compressed circle or oval, forming a curve so marked out that the sums of the distances of each point in its periphery from two fixed points are the same.

**Elm**, a large, wide-spreading tree having a dozen species, and common to Europe, India, China, and North America. It makes valuable timber, its wood being hard and durable, and for shade and ornament is unsurpassed.

**Elongation**, an astronomical term for the angular distance from the sun at which a planet is observed.

**Elopement**, a clandestine running away of a woman with a lover, rendering the man liable to punishment when the woman is under eighteen.

**Elzevir**, the name of a celebrated family of Dutch printers, who produced editions of Latin, French, and German classics, which were highly valued for their beauty of type and accuracy of printing. They flourished in the 17th century.

**Embalming**, the process by which dead bodies are preserved from decay by means of spices and drugs. The art reached perfection in ancient Egypt, as the mummies which still exist so powerfully testify. In modern times many experiments in embalming have been tried, with various degrees of success.

**Ember-days** are days set apart for fast and prayer in the English and Romish churches, at the periods appointed for ordination, viz., the Wednesday, Friday, and Saturday after the first Sunday in Lent, the same days after Whit Sunday and after the festival of the Holy Cross in September, and St. Lucia in December.

**Emblem**, a symbolical figure or design referring to some person, power, or quality, divine or mortal.

**Emblements** are land crops, or profits thereof, which belong to a tenant, or his executors, although the lease of the land may have expired before the crops matured.

**Embossing**, the art of stamping in relief letters or designs upon pliant substances.

**Embryology**, the science of embryos, tracing their development from the fertilisation of the germ or seed to its maturity, and applying to all sections of the animal and vegetable kingdom.

**Emerald**, a variety of beryl of a clear green colour and transparent. It is highly valued as a gem, and the finest come from New Granada and Peru.

**Emery**, a granular substance of the corundum order, generally mixed with other metallic substances, and used in a powdered state for polishing and grinding purposes. Emery stone is chiefly found in Asia Minor and the Grecian Archipelago.

**Emetine**, an alkaloid forming the leading principle in ipecacuanha, and largely used as an emetic; hence its name.

**Emigration** is the removal of a person or family from one country to another for the purpose of settlement, and has been a common practice from the most ancient times. The general stream of emigrants in modern times, however, has been from Europe to America, and the British race have in this movement been the most active. America, indeed, has been entirely developed by emigrants. British emigrants have had a wide field of choice, however, in Britain's vast Colonial possessions. Since 1853 an average of a quarter of a million persons has annually emigrated from Great Britain (including foreigners), the majority of them having proceeded to the United States. Canada has latterly been the most attractive region, and both the British and the Canadian governments provide ample information for those wishing to proceed to British North America. South Africa has also drawn a stream of British emigrants to its mining and other enterprises. Emigration from the British Isles, which, on account of the War, had dropped to 22,824 during 1918, rose in 1920 to 352,429 (British and Irish). Of these 246,630 went to British dominions, and a further 90,429 to the United States. In 1929, 66,915 people emigrated from England and Wales, and 28,358 from Scotland.

**Emir**, a title signifying head or chief, applied in

Mahommedan countries to princes, chiefs, or rulers. The direct descendants of Mahomet's daughter Fatima were also called Emirs.

**Empirics**, a sect of Greek physicians founded by Serapion, who maintained that practice rather than theory was the safest guide in medicine. Of late years the term has been often applied to "quacks."

**Emplectum**, a kind of masonry used by the Greeks and Romans, consisting of walls built with hollow spaces between, which were filled in with rubble. Much used in fortification construction.

**Empyrean**, the highest heaven of the Ptolemaic system, and the supposed abode of the Deity.

**Emu**, a large bird of the Struthionidæ family, inhabiting Central Australia, and resembling the Cassowary. It is unable to fly, but is very fleet of foot and frequently hunted.

**Enamel**, a vitrified substance applied as a coating to pottery and porcelain. The art was practised by the Assyrians and Egyptians, and was introduced to Europe by way of Greece. Enamels are all either of the transparent or opaque kind, and are susceptible to an immense variety of colouring, according to the metallic oxides introduced.

**Encarpus**, an architectural ornamentation consisting of sculptured representations of garlands or festoons of flowers or fruits, and generally wrought on friezes or capitals of columns.

**Encaustic Tiles** were much used in ancient times, as the evidences of ancient Rome and of the mediæval period in Europe generally clearly indicate. In modern times there has been a revival of this art, which has been very successful in many of the present-day examples of our own tile manufacturers, being more beautiful and durable than those of former times.

**Encyclical Letters**, a term used in reference to letters addressed by the Pope to his bishops upon matters of doctrine or discipline.

**Encyclopædists**, a term first applied to the eminent writers who collaborated in the French *Encyclopédie* (1751–65). These writers comprised Diderot, D'Alembert, Voltaire, Helvetius, and others, and their writings generally were sceptical as to religion, and destructive as to politics, and had great influence in popularising the social ideas which afterwards resulted in the French Revolution.

**Endive**, a plant of the chicory family grown as a hardy annual and yielding a profusion of leaves is generally used for salad.

**Endogens**, the name applied to a large family of flowering plants, of which lilies, orchids, aruns, grasses and sedges are prominent examples. The leaves are usually parallel-veined, and the flowers possess three parts. It is estimated that there are more than 20,000 species of endogens, including 5,000 of the orchid species.

**Energy** is of two kinds, kinetic, such as a body possesses by virtue of its motion, and potential, which is conserved. It is demonstrated that energy can neither be created nor destroyed. A definite amount exists, and though its form may be changed, it does not diminish. Heat is the energy of the universe emanating from the sun, and if it is made to disappear in one direction it manifests itself in another.

**Engaged Columns** are such as are partly embedded in the walls to which they belong. It is an architectural rule that at least half their thickness should stand out from the wall.

**Engelhardtia**, a genus of resinous trees, reaching in Java to a height of 200 feet. The trunk is crosscut locally for conversion into cart-wheels.

**English Language** is composed of many elements, Anglian, Saxon, Norman French, Scandinavian, Dutch and the various underlying contributions from Latin and Celtic sources. The result is a strong, expressive, composite language, now spoken by all races of English descent, including those of the United States, and the bulk of the population of the various dependencies of the Empire—Canada, Australia, New Zealand, Tasmania, Africa, etc., also largely in India.

**English Opera, the First.** The first English opera was "Dido and Æneas," written by Henry Purcell about 1689. It was written for the breaking up festivities of a school for young ladies, and the marvel of it is that it anticipated the operatic form of a hundred years later, the text being set to recitatives and melodies, and all spoken dialogue omitted.

**Engraving** is the art of cutting or otherwise forming designs of pictures on wood, stone, or metal surfaces for reproduction by some method of printing. Wood-engraving was the earliest in the field, dating from the 15th century. Later, engraving on steel and copper plates was introduced, and mezzotint, lithography, stipple, aquatint, etc. With the development of photography, and an increased knowledge of the use of acids, many readier methods of engraving were adopted, and now wood-engraving, which was formerly resorted to for all general engraving purposes, is comparatively little used. What is styled "process" engraving is the most utilised.

**Enlistment** is the act of volunteering for military or naval service. In former times recruits were considered bound on accepting bounty money, but to-day they cannot be sworn in within twenty-four hours of their enlistment, when they may withdraw if they wish upon repaying the bounty and costs.

**Ensign**, a former title given to a commissioned officer of the lowest rank in a foot regiment, and so-called because he was entrusted with carrying the colours or ensign. The rank was abolished in 1871. Officers of like rank are now styled second-lieutenants.

**Ensilage**, a method of storing and preserving fodder, vegetables, etc., in pits dug in the ground and excluded from air or light. The system was practised in ancient Rome and revived in England in the 19th century.

**Entablature**, that portion of a building which surmounts the columns and extends to the roof of the tympana of the pediments. It comprises three parts, the architrave, the frieze, and the cornice.

**Entasis**, the swell of the column in either of the orders of architecture.

**Entellus**, one of the common monkeys of India, with a ridged forehead, a long tail, and whiskers and beard. It is regarded by Hindus as sacred, and enjoys immunity from injury at their hands.

**Entomology** is the study of insects and deals with three main groups—*Ametabola*, which are wingless and undergo no metamorphosis; *Hemimetabola*, which experience metamorphosis in very similar three stages; and *Holometabola*, which go through the same metamorphosis, each stage being markedly different from the other.

**Entomostraca**, a Crustacean sub-class, known as water-fleas, remarkable for a horny shell covering, jointed, and subject to regular periods of moulting. They mostly live in stagnant waters.

**Entozoa** is a term used to designate generally internal parasites, such as intestinal worms.

**Envelopes**, as wrappers for enclosing letters, were not in ordinary use until after the introduction of the penny postage system in 1840. They were known in France, however, in the 17th century.

**Envoy**, a special diplomatic agent deputed to represent a government at a foreign court, or to perform a special service, such as the negotiation of a treaty.

**Eocene**, a geological term applied to the lower division of Tertiary strata, and evidencing the beginnings of existing species.

**Epact**, the excess of the solar over the lunar year or month, and called menstrual and annual. The epact increases by eleven from one year to the next, and by twelve in some years.

**Epaulette**, a shoulder badge fringed with cord, worn by English army officers until 1855; now confined to naval officers, and varying in form and richness according to the rank of the wearers.

**Ephemeridæ**, a typical genus of insects of the order Neuroptera. In the larval condition they exist from two to three years, but no sooner do they arrive at maturity than their lives are hurried to a close. They rise up in myriads on warm summer nights, take no food, propagate, and perish.

**Ephesus, Council of**, was held in A.D. 431, and noted for its condemnation of the Nestorian heresy. (*See* Nestorians.)

**Ephod**, a vestment worn by a Jewish high priest, and sometimes by priests of lower rank. In

olden times it was of rich texture and set with gems.

**Ephors** were the five annually elected magistrates who exercised almost supreme authority in ancient Sparta; and later, the office was adopted by the Romans. The last of the Spartan ephors existed in 225 B.C. when Cleomanes III. exterminated the existing magistrates and abolished the office.

**Epic**, a heroic narrative poem dealing with important events and introducing supernatural features; the most famous examples are Homer's *Iliad* and *Odyssey*, Virgil's *Æneid*, Ariosto's *Orlando Furioso*, Tasso's *Jerusalem Delivered*, and Milton's *Paradise Lost*.

**Epicene**, pertaining to both sexes, a term now usually applied, in grammar, to nouns which indicate indiscriminately male and female animals, as sheep.

**Epidemiology**, the science of epidemics, which in recent times has formed one of the most important branches of medical study.

**Epidendron**, any orchid growing upon trees.

**Epidiascope**, a modern magic-lantern which throws on to a screen not only transparent pictures (lantern slides) but any picture or opaque object, such as picture postcards, etc. Is much in use in schools.

**Epidote**, a mineral occurring in prismatic crystals and consisting of silica, alumina, oxide of iron, lime and magnesia, and having a fairly wide distribution.

**Epiglottis**, a lamella or cartilage designed to cover and protect the entrance to the larynx during the process of food swallowing.

**Epigram**, a term originally used to indicate a monumental inscription; afterwards applied to any concise and pointed specimen of verse, but in later times is applied to short, witty expressions in prose as well as verse.

**Epilogue**, an address, in prose or verse, delivered at the end of a play, and a usual accompaniment to the dramatic works of the 16th, 17th, and 18th centuries, but now fallen into desuetude.

**Epiphany**, a church festival celebrated on January 6, Twelfth Day.

**Epiphytes**, a genus of plants which grow on other plants, but do not derive nourishment from them, *e.g.*, ferns, mosses, lichens, and numerous orchids.

**Epithalamium**, a nuptial hymn or song, originally sung by the ancient Greeks and Romans, at the door of the bride-chamber. Many specimens of this class of composition by Sappho, Catullus, etc., have come down to us.

**Epithelium**, a layer of mucous membranes, comprising the cells of the surface of the body, with an important function in the glandular secretions.

**Epoch**, a period of time of such importance that succeeding years are numbered from it; an era is a succession of time, but an epoch is a point of time. Among the various epochs may be counted the birth of Christ, and the Reformation. There are also the geological epochs, and epochs in arts, science, and invention, as well as in history generally.

**Equation of Time** represents the difference between clock-time and sun-dial time. This difference is greatest in November, when the sun is sixteen minutes behind. The only days on which there is perfect accord between the two times are April 15, June 15, August 31, and December 24.

**Equator**, the imaginary great circle of the earth, every point of which is 90 degrees from the earth's poles, and dividing the northern from the southern hemisphere. It is from this circle that the latitude of places north and south is reckoned.

**Equidæ**, the zoological term for the family of hoofed quadrupeds comprising two genera—*Equus*, to which the horse belongs, and *Asinus*, comprising the ass and zebra. In the Tertiary period there were several other species of Equidæ — *Hipparion*, *Protohippus*, etc. — of which fossil remains have been discovered.

**Equinox**, the time when the sun crosses the plane of the earth's equator, making day and night of equal length, occurring about the 21st March and the 22nd September, when the spring and autumn quarters are respectively entered upon.

**Equites**, a body of ancient Roman cavalry, recruited from citizens of rank.

**Equity**, a term used to express a modification of the severer form of law in order to insure equal justice. It is the principle of fairness applied to general rule, and in recent times all English courts administer equity as well as law.

**Eras** are distinctive periods of time associated with some remarkable historical event or personage. The *Christian era*, dating from the birth of Christ, adopted for the reckoning of the years in the 8th century, was invented by Dionysius Exigius in the 6th century. It is now generally understood that the year 1 A.D. is put too late by at least three years. The *Jewish era* dates from 3700 B.C.; the *Julian era* from the alteration of the calendar by Julius Cæsar, 45 B.C.; the *Mahommedan era* from A.D. 622.

**Erastians**, followers of Erastus, who, in the 16th century, advocated the restriction of ecclesiastical power.

**Ergot**, a fungoid growth that affects the seeds of various grasses, causing them to blacken and lose their virtue. The ergot of rye has medicinal value, and is used to assist contraction in maternity cases.

**Eridanus**, the constellation of the winding river in ancient astronomy, situated south of the Taurus, and visible only in the southern celestial hemisphere. It contains one star of the first magnitude, Achernar.

**Erl-King**, a forest fiend of German mythology, who lured children from their homes and carried them off. In Goethe's ballad the "Erlkonig" it is a traveller's child who is lured to destruction.

**Ermine**, a small animal found in northern latitudes, and abundant in Arctic America. Its coat becomes a lovely white in winter, the tip of the tail only remaining black. Its fur is highly prized.

**Error, Writ of**, a process issued when a palpable error has been made in court proceedings, authorising its revision in a higher court.

**Erse**, the old Gaelic dialect of Ireland, and afterwards of the Lowland Scots.

**Escalator**, a mechanically moving staircase which carries people up or down, as the case may be. Greatly used in subways, underground railways, large stores, factories, etc.

**Escapement** is the contrivance by which the pressure of the wheels in a watch or other timepiece is accommodated to the vibratory action of the pendulum or balance-wheel, providing the regulating power which maintains an even impulse in spite of irregularities caused by friction or air resistance.

**Escarpement**, the face of an abrupt cliff or hill; also a portion of fortified ground whose edge is cut away almost vertically to prevent the enemy from climbing.

**Escheat**, a term in law signifying the reverting of lands to the Crown, or the original lord, through the failure of heirs.

**Escurial**, a magnificent palace built in the 16th century by Philip II. of Spain at a village 26 miles north-west of Madrid. In addition to a palatial residence it has a fine Doric church, a valuable library, and the royal mausoleum, the burial-place of the kings of Spain.

**Escutcheon**, a shield-shaped surface called a field, upon which a man's armorial bearings are represented. A woman's escutcheon is lozenge-shaped.

**Esoteric**, a term which had its origin in the teaching of Aristotle, but in later times has been applied to such doctrines as are intended only for privileged students or those of the inner circle.

**Espalier**, lattice work upon which to train fruiting or ornamental trees.

**Esparto Grass** grows in great abundance in Spain and North Africa, and the pulp is largely used for paper-making, as well as for other purposes.

**Esperanto**, a proposed universal language, invented by Dr. Zamenhof, of Warsaw, and based on phonetic principles. Many Esperanto societies exist in various countries. Introduced into England in 1902.

**Esquimaux**, the people of the Arctic regions. They dwell in skin tents in summer and closed huts in winter and live by hunting and fishing.

**Esquimaux Dog**, a very hardy animal of great utility to the inhabitants of the Arctic regions as sledge-drawers. In appearance it suggests the Pomeranian, but is of a larger breed and has a wolf-like head.

**Esquire** was formerly something of a distinctive title applied to the otherwise untitled sons of nobles, also of knights, officers, officials and professional men; now used generally as a matter of courtesy in addressing people who are of good social standing.

**"Essays and Reviews,"** the title of a volume of theological essays, published in 1860, which caused a considerable sensation in religious circles by the unusual freedom of thought it displayed.

**Essenes,** a Jewish sect established in the 2nd century B.C., aiming at a higher spirituality, and living an ascetic life. "The love of God, the love of virtue, and the love of man" was their motto. They were restricted to Palestine, and did not exist as a sect after the destruction of Jerusalem.

**Essential Oils** are oils derived from plants by distillation or expression, and much used in perfumery as well as to some extent in medicine.

**Estates of the Realm** in Great Britain are the Lords Spiritual, the Lords Temporal, and the Commons.

**Esthonia,** the name of a new Baltic republic state south of the Gulf of Finland and north of Latvia. The population is mainly agricultural. Exports are mostly dairy produce.

**Estoppel** is a legal term indicating that a person is barred of a legal remedy because of some former act which precludes him from the right. Estoppel may be either by deed or act.

**Estovers,** necessaries to which a person is entitled by law, as in the case of a tenant who is privileged to help himself to wood for fuel or repairs, or in the case of a woman separated from her husband who has a claim to alimony from her husband's estate.

**Etching,** a process of engraving, on copper usually, the design being drawn with a steel needle, and the lines produced by the action of an acid or mordant.

**Ether,** a volatile liquid, consisting of carbon, oxygen and hydrogen. It is a valuable anæsthetic obtained by heating alcohol with sulphuric acid.

**Ethics,** the science of moral conduct and duty, a study founded on psychology, and intended to determine what is right or wrong, according to circumstances, conditions, and natural powers and obligations. Aristotle, Plato, Kant, Bacon, Hobbes, Paley, Whewell, Hume, Bentham, Locke, Mill, and Herbert Spencer have all contributed to the development of Ethics, the last-named being the most illumnating of exponents of a clear ethical system.

**Ethide,** a compound formed by the union of an element with the monad radical ethyl.

**Ethnology and Ethnography** are the kindred sciences which treat of mankind, the latter classifying and describing various racial differences, while the former inquires into "the mental and physical differences of mankind and the organic laws upon which they depend." Both sciences are included in Anthropology. Ethnologists divide mankind into three classes: *Mongols*, with tawny skins, straight black hair, flat faces, and receding foreheads; *Negroes*, with black skins, flat noses, projecting jaws, dark woolly hair; and *Caucasians*, with white skins, straight foreheads, prominent noses, and hair mostly brown. The Caucasians are further divided into the Aryan and Semitic races. The Mongols are native to Asia, America, and Polynesia; the Negroes to Africa; and the Caucasians to Europe and Western Asia.

**Eton College,** a famous school for boys, near Windsor, founded 1441.

**Etruscan Pottery** comprises the early cinerary urns; black, unglazed ware, with figures in low relief; painted imitation Greek vases, and vases coated with black varnish, with figures in relief.

**Etymology** treats of the science and structure of words, including classification and derivation.

**Eucaine,** an anæsthetic which makes operations possible that might not otherwise take place owing to heart weakness, for the patient remains conscious during its use, although those parts of the body to which it is applied are insensible to pain.

**Eucalyptus,** an Australian tree that grows to a great height, and possesses remarkable properties. It exudes a valuable gum, has a fibrous bark, and is use in bronchial affections.

**Eugenics,** the science of racial progress as affected by heredity and environment, first formulated by the late Sir Francis Galton, who in 1905, in this connection, endowed a Research Fellowship at the University of London, and at his death in 1911 bequeathed to the University £45,000 for the study of national eugenics. A Galton Professorship of Eugenics was established.

**Euomphalus,** a species of extinct snail whose fossil discoidal shell is frequently found in the rocks of the Palæozoic period.

**Eupatorium,** a genus of plants of the Compositæ order, with clustrous flowers, native to America. One species, hemp agrimony, is found in Britain.

**Euphemism,** substitution of a pleasant for an unpleasant, a refined for a vulgar, word, in speech or writing.

**Euphorbiaceæ,** an order of apetalous plants of wide distribution, comprising herbs, shrubs, and trees, bearing flowers and fruit. The latter sometimes yields an acid, more or less poisonous, juice, and in other kinds yields starch cassava, certain oils, and caoutchouc. The box-tree is of this order.

**Euphuism,** an affected literary style, originating in the 16th century, and deriving its name from Euphues, the chief character in John Lyly's *Anatomy of Wit*, issued in 1579, a work of forced elegance and bombast. From these exaggerations, however, there sprung many acceptable embellishments to the English language.

**Eurasians** are half-castes, one of whose parents is European and the other Asiatic.

**Eurhythmics,** the study of rhythmic movement or dancing accompanied by music; introduced by Monsieur J. Dalcroze. It has been instrumental in improving the appreciation of music, dance, and the concentrative faculties of both children and adults.

**Euterpe,** an order of palms belonging to tropical America and the West Indies, with very long, slender stems, surmounted by a close cluster of leaves and an edible fruit.

**Evaporation** is the process by which a solid or liquid is resolved into vapour by heat. It is a process that is always in action on the surface of the earth, especially in connection with the sea and other water areas, the vapour rising therefrom, being lighter than the air, forming clouds which afterwards break, the vapour thereupon falling to earth again as rain. The same process is constantly in action over smaller surfaces, the rate of evaporation being dependent on the general atmospheric conditions.

**Evolution,** in biology, is, in the words of **Huxley,** "a general name for the history of the steps by which any living being has acquired the morphological and the physiological characters which distinguish it." The theory, as laid down by Darwin, is that all existing species, genera, and classes of animals and plants have descended from a few simple forms, the process being controlled by natural selection.

**Excommunication,** exclusion from the rights and privileges of the Church. It is of two kinds—the Greater, which means a total cutting off, and the Lesser, which only shuts out from participation in the Eucharist. In olden times, Greater Excommunications were often launched against rulers and leaders, and were regarded with considerable awe.

**Exeat,** authority to "go out," as of a bishop giving leave to a priest to remove from his diocese, or of the master of a college permitting a student to leave. In law, a writ of *ne exeat regno* is sometimes issued to prevent a witness quitting the country.

**Executions,** the carrying out of the sentence of death, are variously performed. In Great Britain the hangman performs the work within the precincts of the gaol; in France, Belgium, Denmark, Switzerland, and parts of Germany the guillotine is used, and in the United States electrocution is resorted to.

**Executor,** a person named by will to administer a testator's estate alone, or with another or others.

**Exedra** were common in ancient times, and consisted of raised platforms, approached by steps, and containing public seats for rest and conversation.

**Exetastes**, a genus of flies of the ichneumon family with impectinate claws, and having about 50 species, more than half of which are European.

**Exogens**, the old term for Dicotyledons, meaning the process of plant or tree growth where the stem forms in a succession of concentric layers, each layer marking a year's growth. Most forest trees are of the exogenous type.

**Exorista**, a parasitic fly, having its antennæ projecting from the middle of the face, and the third joint considerably longer than the second.

**Exoterics**, the opposite of esoteric, is the term applied to doctrines openly expounded.

**Exotics** are plants of tropical origin not fully acclimatised.

**Explosives** are substances by whose combustion gas is generated in such volume as to induce explosion. Gunpowder is the best known example, and has been in use for many centuries. Recent years have seen great developments in explosives, many powerful new preparations having been introduced, including nitro-glycerine, dynamite, gun-cotton, cordite, forcite, lyddite, etc. In the war of 1914–18 shells of great explosive strength dominated the conflict at almost all points, projectiles of enormous destructive capacity being employed by all the belligerents. Krupps led the way; the rest quickly followed, and the British Munitions organisation played an efficient part in supplying the Allies with shells of the requisite power.

**Extract**, an essence or tincture drawn from a substance by chemical process, the agent of evaporation being water, alcohol, or ether, or a combination of them, according to the substance to be treated.

**Extradition**, the act of giving up fugitives from justice by one country to another, and in the United Kingdom can only be granted after a magisterial investigation, when, if the claim for extradition is justified, the Home Secretary grants the necessary warrant. Great Britain has extradition treaties with nearly every country. A purely political offence is not extraditable in England.

**Extreme Unction**, the final sacrament of the Roman Catholic and Greek Churches, administered to a dying person, and consisting of the anointing with holy oil, after confession and absolution.

**Eye**, the organ of vision, assumes a variety of forms in different organisms, from the mere rudiments of eyes in infusorians to the complex and delicate visual organ of the higher animals. In man, it is a hollow ball of globular shape, consisting of an opaque membrane, the *Sclerotic* forming the outer covering of the eyeball; *Choroid* in front, a horny, transparent structure, intersected with blood vessels and nerves, and carrying the Iris and Pupil; and the *Retina*, the innermost coating of the eyeball. The optic nerve transmits to the brain the visual images received. The eyeball is filled with fluid refrative media, and the crystalline lens in the axis of vision collects the rays of light to a focus on the retina. The movements of the eye are controlled by six muscles extending from the back of the orbits to the front of the eyeball. The lachrymal gland is at the outer corner of each eye, and secretes the watery fluid called tears. Protective functions are performed by the eyelids, eyelashes, and eyebrows.

**Eyebright**, a genus of plants, of which only one species, the common Eyebright, or Eyewort, is known in Europe. Its juice is aromatic and astringent, and used to be a country remedy for eye ailments.

**Eye-teeth**, the two canine teeth of the upper jaw, next to the grinders.

**Eyra**, a species of wild cat, with reddish fur, exceptionally long body, and long tail, native to Texas, Louisiana, and South America.

## F

**Fabian Society**, an association formed in 1883 with socialistic aims, but favouring the old "moral suasion," rather than distinctly aggressive, lines. Mr. Bernard Shaw and Mr. H. G. Wells have been prominent Fabians.

**Fables** are fictitious narratives intended to enforce some moral precept, and may be either in prose or verse, and deal with personified animals and objects or with human beings. Æsop in ancient times and Hans Christian Andersen and the Brothers Grimm (in many of their stories) in later days, have given fables. Mention must also be made of La Fontaine's and Krylov's fables.

**Facsimile**, an accurate copy of an original letter, document, manuscript, or drawing. Aided by photography, facsimile reproductions have been much easier of achievement in recent years than formerly.

**Faction**, a name originally given to the contending parties in the ancient Roman charioteering sports. They were distinguished by different coloured garments, and they and their supporters were frequently drawn into fierce conflict outside the arena. In modern times the term has been mostly used to designate combinations of persons opposed to established authority.

**Factory Legislation** dates almost from the beginning of factories, when Watt's steam engine and the great inventions in textile machinery led to the establishing of these gigantic workshops. There were Factory Acts passed in 1802 and 1819, for limiting the hours of labour and prescribing health regulations, but it was not until the passing of the Ten Hours' Bill in 1847 that any really satisfactory legislation was introduced for the "slaves of the mill." There were no factory inspectors until 1833, when three were appointed. The general conditions of factory life were much improved by the Factory and Workshop Act of 1878, and other Acts on similar lines were passed in 1883, 1891, and 1895 respectively. In 1901, however, a consolidating measure was passed (called the Factory and Workshops Act, 1901) which superseded previous Acts and made the whole factory code one consolidated law. By the present law a staff of 205 inspectors (including 18 women) is employed. The Act was extended to Laundries from Jan. 1, 1908. There were 117,275 factories and 155,697 workshops (not including men's workshops, docks, etc.) upon the registers; in 1928 there were 3,315,000 men and 1,835,386 women employed. In 1929, 161,269 accidents were reported; 982 of these were fatal. H.M. Chief Inspector is now Sir Gerald Bellhouse, C.B.E., head of the Factory Department of the Home Office.

**Fagging**, a public-school custom in England, once very prevalent, but now falling into disuse, whereby junior scholars were made to perform menial duties for their seniors, receiving in return protection from the insults or attacks of other boys.

**Faience**, a kind of decorated glazed earthenware invented in Faenza, Italy, about the end of the 13th century. Wedgwood-ware is a notable example of modern faience.

**Faille**, a light silk fabric used for veiling material and other purposes of adornment. In the Middle Ages the name was applied exclusively to long veils worn by nuns.

**Fairies** are imaginary creatures supposed to be invested with supernatural powers. At one time a general belief in them was prevalent, especially amongst the peasantry, and the uncivilised races still existing cling to similar ideas. It was fancied that the world of fairyland was composed of good and evil spirits, variously embodied, always contending for supremacy, and exercising good and bad influence over humankind. If a person was lucky it was the work of the good fairy, if unfortunate the evil fairy was the cause. Early literature is crowded with the denizens of fairyland—fairies, elves, fays, sylphs, sprites, gnomes, goblins, genii, and so forth. Shakespeare's "Midsummer Night's Dream" is a fairy world of its own, and Spenser's "Faerie Queen" is a still more separate and distinct creative effort. Among the fairies of the domestic order, "Robin Goodfellow" was much talked of in England; as the "Banshee," with its warning apparition, was peculiar to Ireland; while the "Brownie," who rendered nocturnal help in household affairs, was more special to Scotland. In Oriental literature, particularly the "Arabian Nights," the fairyland opened up to us is a wonderfully vivid and active realm.

**Fairing**, a present purchased at a fair, or money given to be expended thereat.

**Fairs** were established in mediæval times as a means of bringing traders and customers together at stated periods, and formed the chief means of distribution. The great English fairs of early times were those of Winchester and Stourbridge, to which came foreign merchants as well as traders from all parts of the kingdom, everything being sold at these gatherings, from precious stones to herrings, from costly silks to homely buckram. As far as Great Britain is concerned to-day, improved conditions of transit and distribution have practically rendered commercial fairs unnecessary, though horse, cattle, sheep and pleasure fairs continue to be held; and in London there are various Fairs and Exhibitions at the Olympia, Royal Agricultural Hall, etc., such as the British Industries Fair, Ideal Homes, International Horse Show, Building Trades Exhibition, Fashion Fair, etc.; the Cattle Show in December, Ironmongery in March, Drapery Exhibition in April, World's Fair in December and January, Dog Show in February, Confectioners and Grocers' in September, Shoe and Leather Fair and Dairy Exhibition in October, Brewers' Exhibition and Public Works Exhibition in November. Famous Continental Fairs are held at Leipzig, Lyons, Vienna, Frankfort, Budapest, etc.

**Fairy Rings** are circular discolorations or indentations in fields caused by the growth or action of certain fungi, sometimes making their appearance in a single night and giving the circle the aspect of being strewn with ashes. In olden times it was imagined that these rings were the dancing circles of fairies.

**Faith-Healing** is treatment of sickness based on the doctrine that prayer and faith are the true, and only necessary, healing powers. Nevertheless, persons of certain religious sects and others who endeavour to follow out the idea, and fail to procure medical aid in cases whereby fatal results ensue, are liable to prosecution.

**Fakirs** are Mahommedan or Hindoo mendicants who are held in great regard in India. There are two classes: those who are strict devotees to the principles of Islam and are called dervishes (*q.v.*); and those who are unattached to any religious order, but are simply wandering beggars—or itinerant so-called "holy men." Some of the more fanatical fakirs commit self-mutilation, and pride themselves upon their wretchedness.

**Falchions** were a kind of sword, generally curved, used by the Roman soldiers, and afterwards adopted by other nations.

**Falcon**, a diurnal bird of prey of the *Accipitres* order, of great swiftness of wing, feeding on birds and small mammals, which it captures alive. It has a short bent bill, sharp hooked claws, and an eye of great power. The Ger-Falcon, which inhabits northern latitudes, is the most powerful of the falcon family. It was the Peregrine Falcon that was mostly used in the sport of Falconry in olden times. These birds were difficult to train, and the office of falconer was an honourable and important one. When the quarry was sighted, the bird was unhooded, and set free, and after mounting high into the air would dart swiftly down and strike the prey. The heron was the usual victim.

**Falculia**, a black and white bird only found in Madagascar, possessing a bill shaped like a sickle.

**Faldstool**, formerly a folding stool, but now applied to a small reading-desk in cathedrals and other churches at which the litany is recited by the officiating cleric.

**Falernian Wine**, famed for its place at the banquets of the ancient Romans, was made from grapes grown at Falernus. Virgil, Horace, and Martial all referred to it with enthusiasm.

**Fallow Deer** received its name from its fallow or yellow colour. It is smaller than the red-deer, and has cylindrical antlers with palmated ends. It is native to many parts of Europe.

**Falsetto**, in music, refers to the tones of a voice higher than the natural tones. It is more common in males than females, and is seldom used in choir singing except by male altos.

**Familists**, a sect existing in England and Holland in the 16th century, founded by Hans Niklas, who advocated the doctrine that religion was a matter of love rather than of faith.

**Fandango**, a lively Spanish dance executed by two persons, who usually mark time with castanets.

**Fans** were used in ancient times in Greece and Rome; seen in England after the Conquest, when they were introduced from France. Examples of Egyptian fan-handles are to be seen in the British Museum.

**Fantail**, a variety of the domestic pigeon; also a genus of Australian birds of the Muscicapidæ family.

**Fantasia**, a musical composition which does not conform to any regular style or series of movements.

**Fantoccini**, or marionettes, were first introduced in Italy, where they are still popular. Our English "Punch and Judy" descended from this source.

**Fan Tracery**, a complicated style of roof-vaulting, elaborately moulded, in which the lines of the curves in the masonry or other material employed diverge equally in every direction. It is characteristic of the late Perpendicular period of Gothic architecture, and may be seen in St. George's Chapel at Windsor and the Chapel of Henry VII. at Westminster Abbey.

**Farce** is comedy in its broadest form, usually confined to short pieces, and admitting of free and exaggerated treatment calculated to arouse laughter.

**Farmer-General**, the name given to any of the numerous aristocrats who in the days of the old French monarchy farmed certain taxes, contracting to pay the Government a fixed sum yearly, on condition that the specified taxes were collected and appropriated by themselves. The revolution of 1789 swept Farmer-Generals away.

**Farthing**, an English coin which has been current from the time of King John, when it was composed of silver. It was not until the Stuart period that the farthing was coined in copper. Half-farthings were coined in 1843. (*See* **Queen Anne's Farthings**.)

**Farthingale**, a hoop of whalebone worn beneath a woman's skirts for the purpose of extending them, fashionable in the 16th and 17th centuries. The crinoline of the 19th century was a partial revival.

**Fasces**, a badge of office in ancient Rome consisting of a bundle of rods with an axe-head protruding from them. They were carried in front of the Roman magistrates on public occasions; also used for flogging criminals before execution.

**Fascination**, a spell-like influence formerly supposed to be possessed by certain persons over others, and also thought to be a power exercised by snakes over their intended victims, but doubtful even in the latter case.

**Fascism** (Italian = bound), a brotherhood instituted in Italy in 1918 under the auspices of Signor Mussolini to counteract the influence of Socialism. The aims are strictly patriotic and nationalistic. The Fascist party triumphed at the elections in Italy 1923. Members of the party are distinguished by wearing "black shirts" and have a special salute. The intensive nationalist policy of the Fascists has greatly affected Italian political life and has had reverberations in other European states.

**Fasti Capitolini**, marble tablets found in the ruins of the Roman Forum in the 16th century, and containing a list of the Consuls from the year of Rome 250 to 765.

**Fatalism**, the theory that things are fore-ordained and must happen, as opposed to reason. Orientals are mostly fatalists, but few Europeans of prominence have in modern times allied themselves with the doctrine. Napoleon I., "the man of destiny," was, however, an avowed fatalist, as was Napoleon III.

**Fata Morgana**, the name given to a curious mirage often observed over the Straits of Messina, and supposed to be ruled by the fairy Morgana.

**Fathers of the Church** were early writers who laid the foundations of Christian ritual and doctrine. The body of their writings includes important controversial works, legal codes, histories, topographies and speculations of a scientific and philosophical nature. The earliest were the Apostolic Fathers, some of whom were contemporary with the Apostles. The next in order are the Primitive Fathers of the 2nd and 3rd centuries, including Justin Martyr, Clement of Alexandria, and Tertullian. The later Fathers were of the 4th and 5th centuries, among them

being Athanasius, Basil, John Chrysostom, and St. Augustine.

**Fathom**, a measure of depth of six feet, used in sea-soundings.

**Fatigue-Duty**, the routine employment of soldiers distinct from the use of arms.

**Fats** are oily substances forming the chief adipose tissue of animals. Among the solid neutral fats are spermaceti, lard, and suet, and composed of carbon, hydrogen, and oxygen. Stearin, palmitin, and olein are common forms of fats. Fats are saponified and converted into soaps by alkali.

**Fault**, a geological term designating a breakage or displacement in the continuity of any rocky strata. The breakage sometimes amounts to thousands of feet, but ordinarily to not more than a few feet.

**Favosites**, a fossil coral found in the Silurian, Devonian, and Carboniferous strata.

**Feathers**, the epidermal covering forming the plumage of birds. A feather comprises a main stem or shaft, a supplementary stem or after-shaft, and a series of lateral webs, each of which contains numerous small branches termed barbs. A bird carries various classes of feathers, the two main divisions being the quill feathers of the wings and tail, and the clothing feathers of the body. Feathers are of every variety of colour and of many shapes, the more beautiful of them being extensively utilised in millinery and for other adornments. Ostrich feathers are worth over £40 a pound.

**February**, the second month of the year, comprising ordinarily 28 days, but in leap years extending to 29 days. When first introduced into the Roman calendar by Numa about 713 B.C., it was made the last month of the year and preceded January. It was not until 450 B.C. that it was made the second month.

**Fee**, a payment for services, originally lands enjoyed in exchange for services under feudal law. The etymological meaning is property. The term is used in property law; *e.g.* fee-simple, an estate which can be willed freely by the owner; fee-tail, entailed property, etc.

**Felibrige**, the name of a septennial festival held in Provence, by writers of the "langue d'oc," to celebrate the troubadours of the Middle Ages.

**Felidæ**, the scientific name of all mammals of the Carnivore order which walk upon the tips of their toes, and embracing the members of the cat family, from the lion downwards.

**Fell**, a term in weaving indicating the end of a web formed by the last thread of the weft; and in sewing a form of hem in which one edge is folded over the other and secured with stitches; also a rocky upland, usually barren.

**Fellahs**, or **Felaheen**, are Egyptian labourers, agricultural chiefly, and form the lowest class of the community, possessing little or no political status. They are of Nubian, Coptic, and Arab descent.

**Felo-de-se**, one who deliberately and while in sound mind destroys himself.

**Felony**, in law, is any crime of a more serious nature than a misdemeanour. In former times such an offence was punishable by death and forfeiture of lands, but since 1870 the only felonies involving capital punishment are those of murder and treason.

**Felspar**, the name given to a group of minerals, silicates of aluminium, and occurring in crystals. It is formed in granite and other rocks of ancient formation, and is much used in the manufacture of porcelain. Moonstone is a variety of felspar.

**Felt** is unwoven wool, hair and fur matted together by moisture and heat, the fibres becoming so closely intertwined that a compact cloth surface is formed. Roofing felt is produced by mixing the material with coal-tar or asphalt.

**Felucca**, a long narrow vessel with two lateen sails; occasionally propelled by oars and used on the Mediterranean for carrying light merchandise.

**Feme (or Femme) Covert**, a legal term designating a married woman who, in consequence of being under the protection and control of her husband, cannot sue or be sued for debt (except as regards her separate property, legally secured to her), or be proceeded against in minor criminal cases because of the presumption that she would act under her husband's compulsion. Since 1st January, 1883, by the operation of the Married Women's Property Act, a married woman is in the same position as regards property and continues as a *feme sole*.

**Fencibles**, a body of volunteer cavalry organised in 1794 for service within the United Kingdom. It comprised over 14,000 men, was of great utility during the invasion panic of that period, and seems to have been the forerunner of the yeomanry cavalry.

**Fenestella**, the niche set apart on the south side of the altar for the piscina in Roman Catholic churches.

**Fenians**, an Irish organisation begun about 1855 with the object of establishing a republic in Ireland. The movement spread to the United States. In 1864 numerous arrests of Fenians were made in Dublin, and in the following year the American Fenians issued a manifesto that American officers were proceeding to Ireland to organise an army of 200,000 men. A considerable fund was raised in America, and in 1866 an attempt was made to invade Canada by a band of Fenians, but they were suppressed. The organisation continued to give trouble until about 1887, when dissensions among the brotherhood brought the movement to an end.

**Fennel**, a plant cultivated for its aromatic seeds, which are of considerable utility as a medicament; also used for salads and garnishing.

**Fens** are low-lying lands covered with water, or of a boggy or marshy nature. The Fen districts of England are chiefly in Lincolnshire and Cambridgeshire, but in recent times most of the Fen land has been drained and cultivated.

**Feoffment**, an act or deed of transfer by which the fee-simple of any specified land is transferred for a consideration from one person to another (obsolete).

**Ferret**, a carnivorous animal of the Pole-cat family, with a pointed head and long sinuous body, well adapted for following rabbits and game into their burrows and hiding-places, it being kept in this country for that purpose. It is a native of Spain and Africa, and does not exist in England in a condition of natural freedom.

**Fetishism**, the worshipping of a Fetish, any object supposed to be invested with supernatural powers, and including such objects as a serpent, a bear, a tooth, etc. It has been practised more or less by all primitive races, and is confined at the present day to a few of the savage tribes of Africa.

**Feudal System** existed in England from the Saxon period down to the end of the 15th century. It was a military and political organisation, based on land tenure, the land being divided into feuds or fiefs, held on condition that certain military duties were performed; and, in default of this, the land reverted to the superior lord. Feudal tenures were abolished by statute in England in 1660, although from 1495 they had practically been inoperative. The system was abolished in Scotland in 1747, but in France not until the Revolution of 1789. There was a feudal system in Japan as lately as 1871.

**Feu de Joie**, the discharge of guns to denote public rejoicing.

**Feuilleton**, a French term for a serial story or other light literature occupying the bottom portion of a newspaper page, and adopted in England to some extent in recent years, several of the daily journals now running serial stories.

**Fiasco**, an Italian word signifying a flask, but applied both in Italy and elsewhere to a complete breakdown or failure in any enterprise, especially in regard to musical or dramatic performances.

**Fiat** ("Let it be done"), a legal term generally applied to a decree, judgment, or warrant commanding a specific thing to be done.

**Fibre**, a thread-like filament, such as that constituting the tissues of animals and plants.

**Fibrin**, a nitrogenous compound of the proteid class, present in animal and vegetable tissues. It is a white substance insoluble in water, but dissolves in solutions of certain neutral salts. When extracted it tends to form fibre-like filaments.

**Fibrolite**, a white or light grey mineral of a fibrous structure; a sub-silicate of aluminium.

**Fidia**, a very small leaf-beetle, covered with short white hair and destructive to grape vines.

**Fieldfare**, a kind of thrush, a regular winter visitant

to this country. It is of a reddish-brown colour with spotted breast and is about ten inches long.

**Field-Marshal**, the highest rank title in the British army, and only bestowed on royal personages, and generals who have attained great distinction. The first English Field-Marshal was created in 1736, when John, Duke of Argyll, had the title conferred upon him by George II.

**Field-Officer** is of military rank between a captain and a general, as major, lieutenant-colonel, and colonel.

**Fiery Cross**, a call to arms used in the Scottish Highlands in olden times, and consisting of a wooden cross that was carried blazing to and fro among the clansmen to rouse them to action.

**Fife**, a small flute with a compass of about two octaves. Fife and drum bands are common in the army.

**Fifth-Monarchy Men** were a fanatical sect which proclaimed about 1645 that the Millennium was near at hand, when Christ would come to earth again and establish the Fifth Universal Monarchy. They were dispersed by Cromwell in 1653, but in 1661 revived and became a menace to the public peace and 17 of them were arrested and executed.

**Fig**, a tree common in most hot countries and bearing a fragrant fruit which has a large general consumption.

**Figaro**, a well-known comic character in drama and opera, invented by Beaumarchais, adopted by Mozart, and the name of a popular paper of Paris.

**Fighting-Fish**, small pugnacious Siamese fish with long anals and ventrals of five rays. They are kept in glass globes in Siam, and when brought into contact will fight to the death, these encounters being the occasion of much gambling.

**File Fish**, a fairly common fish in European waters, mostly found in the Mediterranean, but not infrequently off the southern coast of England. It averages from 18 inches to 2 feet in length, and derives its name from its toothed dorsal fin.

**Filibuster**, a name first given to pirates and buccaneers in the 17th century, who took possession of small islands or lonely coast lands, and there maintained themselves apart from any governing authority. In later times the term was used to specify men taking part in expeditions whose object was to appropriate tracts of country and settle upon them in disregard of international law. The most notable expeditions of this kind in modern times were those of Narcisco Lopez against Cuba in 1850–1, and that of William Walker against Sonora in Central America and Nicaragua, between 1853 and 1858. Both leaders were captured and executed.

**Filigree**, the name given to a class of ornamental work done with threads of gold or silver, or with fine wire, and frequently attached to apparel or decorative objects. It was made by the ancient Greeks, and in the Middle Ages was greatly in vogue, and reached a high standard of artistic beauty. It is still made in certain parts of Italy.

**Filioque**, the part of the Nicene Creed which proclaims that the Holy Ghost emanates jointly from Father and Son, and is styled the doctrine of the "double procession." It is generally accepted in the Western Church, but is rejected in the Greek Church.

**Filter**, an apparatus used for clarifying liquids and constructed in many different forms. The filtering substances used range from sand, charcoal, and sponges to porous stones and fabrics.

**Filtration** is the process of separating suspended solid matter from a liquid. This is effected by passing the liquid through a filtering medium such as cloth, paper, carbon, kieselguhr or sand, when the suspended matter is retained by the medium. In the purification of water for domestic purposes, filter beds made up of fine and coarse sand, fine and coarse gravel, and large stones are used.

**Finial** (*archit.*), the ornamental apex of a spire, pinnacle, or gable, and of Gothic origin.

**Fir**, a cone-bearing tree with small evergreen leaves and of considerable use as timber. There are four leading varieties—the Silver Fir, the Norway Spruce, the Larch, and the Lebanon Cedar. All these firs attain to a considerable height, and all yield turpentine or other resinous material.

**Fire Engines** for forcing water upon burning buildings have been known since A.D. 70. In modern times great improvements have been made in these machines. In 1929 the London Fire Brigade employed 2,000 men drawn mostly from the Royal Navy on their 61 stations. There were in use 87 motor pumps and over 100 escapes, together with about 64 miles of rubber-lined hose. There are also three river stations with 4 up-to-date floats—the "Beta" having a capacity of 3,000 gallons per minute. The Brigade deals with *c.* 6,000 fires a year within an area of 120 square miles, and costs about £750,000 per annum. The London Salvage Corps is a very important branch of the Brigade.

**Fire-Fly**, a small winged insect which is able to throw out a strong phosphorescent light in the dark. There are some remarkable specimens in tropical countries.

**Fire of London**, of 1666, extended from East to West, from the Tower to the Temple church, and northward to Holborn Bridge. It broke out in a baker's shop in Pudding Lane, and lasted four days, and destroyed 89 churches, including St. Paul's Cathedral, and many public buildings, among them the Royal Exchange, the Custom House, and the Guildhall. In the ruins were involved 13,200 houses and 400 streets.

**Fire-Proof Buildings** are such as are constructed exclusively of non-combustible materials, such as stone, iron, brick, concrete and cement. To make wood fire-proof a coating of silicate of soda is necessary. Fire-proof materials are introduced in most modern buildings.

**Fireship**, the name given to a vessel stored with inflammable and explosive material, and floated into the midst of an opposing fleet to cause destruction and alarm.

**Firkin**, a former measure of capacity, the fourth part of a barrel, now only used in reference to a small cask or tub for butter, lard, tallow, etc.

**Firman**, a document of authority issued by Oriental governments granting any special privilege or concession, containing a command or installing a new officer, or conveying protection like a passport. The decree is issued by the Sultan and signed by one of his ministers.

**Fisk University**, an American institution devoted entirely to coloured students, at Nashville, Tennessee.

**Five-Mile Act**, prohibiting dissenting ministers from preaching within five miles of "any corporate town, or of any place where they had preached since the Act of Oblivion, under a penalty of £40," was passed in 1665, but repealed in 1689.

**Fixed Stars**, those which until recently were supposed to maintain perennially their position in the firmament, relatively to each other, and which are still admitted so to do, approximately; thus being contradistinguished from the planets, or wandering stars. They form the luminosities of the constellations.

**Flabellum**, an ecclesiastical fan, formerly employed to drive away flies from the chalice during the celebration of the Sacred Mysteries; the flabellum was usually formed of the tail feathers of the peacock.

**Flagellants** were a fanatical sect which sprang into notice at Perouse in the 13th century during a time of plague. They held processions and flogged themselves as they walked naked about the streets until they bled. They declared that sins could not be remitted without such practices. The sect continued down to the 16th century, in spite of their being declared heretics by Pope Clement VI., and 90 of them being burnt at the stake.

**Flageolet**, a sweet-toned musical instrument of wood with a mouth-piece, and a tube in which finger-holes and keys are placed. It is an important musical instrument, and is said to have been invented in 1581. There is also a double flageolet, producing double notes, and played by one mouth-piece.

**Flag Officer**, a British naval officer who enjoys the right of carrying a flag at the mast-head of his ship, and is of the rank of Admiral, Vice-Admiral, or Rear-Admiral.

**Flagship, the ship that flies the Admiral's flag, and** from which all orders proceed.

**Flamen** were priests of ancient Rome dedicated to the service of particular deities, such as those of Jupiter and Mars, and were always of patrician birth.

**Flamingo,** a bird of dominant bright red or rose colour, with long slender legs, long sinuous neck, and a huge curved bill. They are picturesque birds, live on worms and molluscs, and are widely distributed, being found in Egypt, in Southern Europe and South America.

**Flannel.** (*See* Wool.)

**Flat,** a sign in musical notation (♭) indicating that the note in front of which it appears is to be played or sung a semi-tone lower than its natural sound.

**Flavine,** a dyestuff prepared from quercitron bark, producing a yellow colour.

**Flax,** a textile fibre obtained from the flax plant, which is an annual, and is largely cultivated for commercial purposes, being grown in Russia, Germany, Italy, Holland, and the North of Ireland. After undergoing various preparatory processes, the flax is spun into yarn and woven into linen fabrics.

**Flea,** a genus of parasitic insects possessing a suctorial mouth, from which protrudes a lancet-shaped proboscis, with which it pierces animal skin and draws blood. It is said that the "flea of man" [*Pulex irritans*) can leap 200 times its own length.

**Fleet.** (*See* Navy.)

**Fleet Prison,** a noted debtors' prison that stood in Farringdon Street, London, where the Congregational Memorial Hall now stands, taking its name from the Fleet Ditch. It was pulled down in 1846.

**Flemings,** the people of Flanders, whose ancestors of mediæval times excelled in the textile arts, England owes its early eminence as a manufacturing nation to the migration of numbers of Flemings to this country in the 10th and 17th centuries.

**Fleur-de-Lis,** the former national emblem of France, the flower of the lily. It was superseded by the Tri-colour in 1789, but is still adhered to by the supporters of the old French royalties.

**Flint,** a kind of silica of a light grey colour and excessive hardness, which enabled it to be utilised in the formation of cutting implements in prehistoric times, and, before the invention of lucifer matches, was used along with steel for striking lights.

**Flint Implements** are objects found in the earlier geological strata, and constituting evidence of the condition and life of the period. They include knives, clubs, arrow-heads, scrapers, etc., used as weapons, tools and possibly as surgical instruments and in religious ceremonies. At the end of the Neolithic Period and the beginning of the Bronze Age a people using a new type of stone axe become evident in Europe, advancing towards the south and central regions, and supposed by many to be the ancestors of the present European stock, or Aryans. Similar to prehistoric specimens are the flint and obsidian implements of some modern savages, *e.g.* the Maori. Ritual weapons and sacrificial knives continued to be made of stone long after the introduction of metals for practical purposes.

**Flitch of Dunmow,** a bacon flitch awarded annually at Dunmow, Essex, to any married couple presenting themselves and bringing proof that they have lived in perfect agreement for the first year of their married life. The custom originated in the 13th century, fell into abeyance in the 18th century, but has been revived in recent years.

**Flock,** a fibrous material for stuffing mattresses, upholstering, etc.; it is made by reducing coarse woollen rags, waste, etc., to a degree of fineness by machine manipulation.

**Flodden Field, Battle of** (Northumberland), was fought on September 9th, 1513, between the English and Scots when James IV. of Scotland, his leading nobles, and 10,000 of his army were slain.

**Florin,** a coin first made in France in the 13th century. The name was afterwards given to an English coin of the value of 6s. issued in 1337. The English florin of to-day represents 2s., and dates from 1849. There are florins in Germany worth nominally about 2s. 4d. English, Spain 4s. 4½d., and Holland 2s.

**Florist,** one who cultivates or is concerned in the cultivation of flowering plants.

**Flotsam.** (See Pears' *Dictionary of Business.*)

**Flounder,** one of the most familiar of the smaller flat fishes common round the British coasts, and seldom attaining a weight of over three pounds.

**Flour,** the finely ground meal of any kind of grain, but more particularly applied to that of wheat.

**Fluorine,** a chemical element found in combination with calcium or fluor-spar, and occurring in minute quantities in certain other minerals. It was first obtained by Moissan in 1886, and possesses extraordinary corroding properties.

**Fluor-spar,** a compound of calcium and fluorine, occurring chiefly in connection with silver, tin, lead, and cobalt ores. It is used in fusing refractory minerals.

**Flute,** a wooden musical instrument of much purity of tone, played by blowing through a mouth-hole, the notes being produced by the media of finger-holes and keys. The flute was familiar to the ancients, but was greatly improved by German and French instrument-makers in the 17th and 18th centuries. It has a compass of three octaves.

**Flux,** any substance used in assisting the fusion of metals. The fluxes most used for large operations are limestone or fluor-spar, and for smaller purposes, alkalies, borax, etc. Black flux is obtained from cream of tartar, and is used mainly for analytical operations, while white flux, used for decomposing minerals, is obtained from carbonates of sodium and potassium in equal portions.

**Fly,** the popular name for a large number of insects which are distinguished by having a proboscis terminating in a sucker through which fluid substances can be drawn up. The best-known species are the common house-fly, the blue-bottle, and the blow-fly. In the larval form, flies are maggots, and feed upon decaying substances, animal flesh, etc. Flies are able to walk upon ceilings or upright surfaces by having suckers at the soles of their feet.

**Fly-catcher,** a family of birds, of which there are nearly 300 species. They are insect feeders, catch their food in the air, and are more or less distributed over the world. The spotted fly-catcher and the pied fly-catcher are summer visitants of Britain.

**Fly-drill,** a kind of machine-tool having a reciprocating fly-wheel imparting steady momentum, the driving power consisting of a cord winding in reverse directions alternately upon a rotating spindle.

**Flying Dutchman,** a mythical mariner who, as the legend goes, was doomed as an expiation for his crimes to be for ever striving to reach harbour with his ship but never succeeding. Wagner constructed an opera round this weird subject.

**Flying Fish** are frequently to be seen in southern waters, and are capable of flying considerable distances—a quarter of a mile or more—without touching the water. They can be caught in nets while in flight.

**Flying Fox,** an animal of the bat family, but of much larger size, found chiefly in Africa and Asia. Its habits resemble those of the common bat, except that it feeds entirely on fruits.

**Flying Lemur,** a remarkable family of mammals, of which there are only two species, inhabiting Java, Sumatra and Borneo. They live on insects, fruit, and birds, and are provided with a parachute-like membrane which covers them from the neck to the tip of the tail, and is used in regulating their flight.

**Flying Lizard,** a kind of Asiatic lizard, possessing wing-like projections from each side, which enable it to make flying leaps through the air, though not sufficient for continuous flight.

**Flying Squirrel,** an animal of which there are several species in Europe and America. It possesses a parachute-like fold of skin by means of which it projects itself through the air. It is of the true squirrel type.

**Focus,** a word designating the point at which heat or light is concentrated by refraction or reflection. (See Pears' *Dictionary of Photography.*)

**Fodder,** food stall-fed to horses, cattle, etc., as distinguished from pasture feeding; also a weight

standard for lead, equivalent to 21 cwt. avoirdupois.

**Fog** is formed of aqueous vapour, or minute globules of water, near the earth's surface, caused by the cooling of the air below the dew-point. Huxley distinguishes fog from cloud thus: "A fog is a cloud resting on the earth; a cloud is a fog floating high in the air." Large towns, and especially London, are most susceptible to fogs.

**Fogey**, an eccentric or old-fashioned person.

**Foil**, an extremely thin layer of rolled metal, as gold, tin, or lead, according to the purpose for which it is intended. Jewellers use it as a background to increase the colour or lustre of inferior precious stones. Any thin substance used for similar purposes—throwing into relief other objects—is termed foil. Tin-foil, as its name implies, is tin rolled out into thin sheets in the flatting mill.

**Fold**, an enclosure or pen for sheltering sheep or cattle.

**Foliation**, a geological term applied to rocks whose component minerals are arranged in parallel layers as the result of strong metamorphic action.

**Folio**, a paper and printing term for paper which is only folded once, a half sheet constituting a leaf.

**Folk-Lore**, a term used to denote the beliefs, traditions, legends, customs, and superstitions of the people, and was first suggested by the late Mr. W. J. Thoms, F.S.A., editor of *Notes and Queries*, in 1846.

**Foot**, a lineal measure of 12 inches of almost universal use, and originally adopted from the average length of the human foot. In prosody a foot is a measure of syllables making rhythmical accent.

**Football** is one of the most ancient outdoor winter sports, and was in a crude form popular in England in the Middle Ages. For modern developments of the game see articles in Pears' *Dictionary of Sports and Pastimes*.

**Foot Guards** in the British Army include the Grenadiers, Coldstream, Scots, and Irish Guards, from which the garrisons of London and Windsor are formed.

**Foraminifera**, an order of animals belonging to the sub-kingdom Protozoa, carrying a porous shell divided into 2 cavities and having gelatinous bodies without definite organs.

**Forbesite**, a name given by Kenngott to a hydrous bibasic arseniate of cobalt and nickel, found and described by David Forbes, the chemist, in the desert of Atacama, in veins in a decomposed diorite.

**Force**, as a term in physics, signifies an influence or exertion which, when made to act upon a body, tends to move it if at rest, or to affect or stop its progress if it be already in motion. Gravity, traction, repulsive energy are all physical forces. Moral force is a mental principle.

**Foreign Legion** is a name used to-day for the "regiments étrangers" in the French service, and which consist of daring men of all nationalities.

**Forests in the British Empire.** The woodlands of Great Britain comprise 2¼ million acres, less than 4 per cent. of the total area. Of these, 115,293 acres are national woodland, only about 57,000 acres being under timber crops. There are some 99,000 square miles of forest under Government protection in India, and 120,000 square miles outside their protection, besides large private forests. The average net annual revenue of the Indian State forests is over 8 million rupees, and the total number of foresters employed, including the Imperial Service, provincial, executive, and protective, exceeds 10,000. The Government has already planted over 120,000 acres of forest in India. Next to India, Cape Colony has done best in forests, and yields fuel and building timber, and the Government has planted 30,000 acres. In the Orange River Colony planting has been commenced, and also in the Soudan. The forests of Australia have jarrah trees which grow to the height of 120 feet and kari trees to 200 feet. A Departmental Committee on British Forestry is doing practical work under Governmental auspices, and the Treasury has made grants for lectureships in forestry at various educational centres.

**Forgery**, the fraudulent imitation of a signature or writing whereby injury is done to another, or some deceit is practised. Forgery was punishable with death in England, until the passing of the Forgery Act, 1861. The law is now consolidated in the Act of 1913.

**Forme**, a body of letter-press type, composed and secured for printing from; or a stereotype in a similar condition of readiness.

**Formic Acid** can be obtained from a colourless fluid secreted by ants and other insects and plants. It is a strong irritant. It is also artificially obtained from oxalic acid.

**Formula**, a prescribed set or special form of words in which anything is stated or declared.

**Forte**, a musical term signifying "loud," and represented by the letter "f"; "ff" (fortissimo) indicating "very loud."

**Forth Bridge**, which spans the Forth at Queen's Ferry, near Edinburgh, was completed in 1890 at a cost of nearly £2,000,000. It is one and a half miles in length.

**Forum**, in ancient Rome, was a public meeting place, market or exchange. The Great Forum was reserved for banquets and gladiatorial contests.

**Fossils** are mineral substances of organic origin found in the strata of former ages. They are animal and vegetable and have been the means of disclosing a knowledge of prehistoric periods which would otherwise have been unknown.

**Fox**, a well-known carnivorous animal of the Vulpine family, found in considerable numbers in most parts of the world. The common fox of Europe is a burrowing animal of nocturnal habits, living upon birds, rabbits, and domestic poultry, in the capture of which it displays much cunning. The fox in Britain is preserved from extinction chiefly for hunting purposes. Among other notable species are the Arctic fox and the red fox of North America.

**Fox-Shark**, a large species of shark common in the Atlantic and in the Mediterranean. It is very destructive to small fish, but although it attains a length of fifteen feet it is not to be classed with the sharks that are dangerous to man.

**Franc**, the unit of French currency, and a silver coin equivalent to a hundred centimes. The value of the French franc was stabilised at 124·21 to the £ in 1928 and is now worth 2d. in English money.

**Franchise**, an incorporeal hereditament, analogous to the liberty of the subject, in the literal sense; usually interpreted to mean the right of voting in the election of a member of Parliament.

Franciscans. (*See* Friars.)

**Franco-German War** (1870–1871). It was opened by a declaration of war by Napoleon III., but the Germans, who were better prepared than the French, won victory after victory. In September Napoleon was made prisoner and after a surrender of 80,000 troops at Sedan, a Republic was then proclaimed, and Paris sustained a four-months' siege. In the end France ceded Alsace and part of Lorraine to Germany, who claimed a war indemnity of over £200,000,000.

**Francolin**, a genus of birds of the pheasant family living in the marshy woodlands of the Black Sea Coasts and in the Island of Cyprus. The Sanguine Francolin is a gorgeous Himalayan variety.

**Francs-Tireurs**, an irregular body of French troops prominent in the Franco-German War.

**Frankincense** is of two kinds, one being used as incense in certain religious services and obtained from olibanum, an Eastern shrub, the other is a resinous exudation derived from firs and pines, and largely used in pharmacy.

**Franklin**, the name given in feudal times to a country landowner who was independent of the territorial lord, and performed many of the minor functions of local government, serving as magistrate, and so forth.

**Free Church Federation**, established in 1892, is an association of British Nonconformist Churches, formed with the object of promoting the general cause of Nonconformity by combined action.

**Freehold**, a legal term signifying an estate in fee simple, or fee tail, or for life, and to which no service to a superior (as in copyhold) attaches.

**Freemasonry** dates back to mediæval times, if not to a more remote period. It is a secret organisation, having lodges for social enjoyment and mutual assistance. The Grand Lodge of Eng-

land was established in 1717; that of Ireland in 1730, and that of Scotland in 1736. Roman Catholics are prohibited by Papal ban from being Masons.

**Freestone**, any stone that can be easily worked with tools, the term being generally, however, specially applied to fine-grained sandstone.

**Fresco**, a painting executed upon plaster walls or ceilings, and much in favour for churches and public buildings in former times. The work is done with prepared pigments.

**Freshwater Shrimp**, a small crustacean abounding in British streams, and feeding on dead fish or other decomposing matters. Although of shrimp-like form, it does not belong to the shrimp order, but is classified as *Gammarus pulex*.

**Friars**, members of certain mendicant orders of the Roman Catholic Church. The four chief orders are the Franciscans or Grey Friars, the Dominicans or Black Friars, the Carmelites or White Friars, and the Augustinians (Austin Friars). In the 13th century a brotherhood of Crutched Friars existed in England, so called from the cross or *crouch* they wore.

**Friday**, the 6th day of the week, named after Frigga, the wife of Odin. It is the Mohammedan Sabbath, and is a general fast day of the Roman Catholic Church. According to popular superstition, Friday was an unlucky day.

**Friendly Societies** were established on a small scale towards the close of the 17th century. In 1896 an Act was passed consolidating all previous laws regarding them. The Registrar of Friendly Societies, to whom returns have to be made, issues an annual report. Since the passing of the Insurance Act of 1911 the F.S. were made Approved Societies, through which the benefits of the Act are administered. This has added approximately 6 million to the total membership which now stands at about 13½ millions. Including the kindred Societies such as Building Societies, Industrial Societies and Trade Unions, the membership is over 34 million, with funds amounting to over £400 million. There are many societies now in existence, the oldest of which is the Druids. The largest Societies are the Manchester Unity I.O. Oddfellows, with nearly 2 million members, the Foresters with 1¼ million, Hearts of Oak nearly 1 million, National Deposit Society, 1,400,000, I.O. Rechabites, 1,200,000, Sons of Temperance, 400,000 and about 30,000 members of smaller Societies.

**Friends.** (*See* Quakers.)

**Frigate**, a small, swift war-vessel, generally with two decks, and carrying a number of guns, usually from 30 to 60. Now superseded by the armoured cruiser.

**Frigate-Bird**, a web-footed bird widely distributed over tropical latitudes, and deriving its name from its great expanse of wing and forked tail, which seem to suggest the shape of a swift vessel. It feeds on flying fish mostly, being unable to dive.

**Fringillidæ**, the scientific family name of a large class of birds of the Passeres order, including finches, sparrows, linnets, grosbeaks, weaver-birds, etc.

**Frisians**, an old Teuton race formerly settled on lands now covered by the Zuyder Zee. Many of them joined in the Anglo-Saxon invasion of England, and occupied Mercian territory.

**Fritillary**, the name of a large class of British butterflys, all of them of beautiful colours and marking. There are seven species, the most prized of which is the "Queen of Spain" variety.

**Frog**, a familiar amphibian of interesting structure, breathing through gills in the earlier (tadpole) part of its existence, and through lungs later. It remains three months in the tadpole stage. The frog hibernates in winter at the bottom of the water.

**Frost** occurs when the temperature falls to, or below, 32° F., which is freezing-point.

**Froth-Hopper**, a family of insects related to the Cicadas, and possessing great leaping powers.

**Fruit-eating**: its healthfulness. Nearly all fruits unless eaten in excess, to the exclusion of other nourishment, are wholesome. Their value is primarily in providing mineral salts, vitamins and mildly laxative elements. Considerably more fruit is taken in late years in various forms of bottled and preserved fruits and as jam. These, however, are less valuable as diet than fresh or freshly cooked fruits. Certain acid fruits such as apples, rhubarb, etc., should be avoided by persons inclined to rheumatism. Grapes, peaches, apricots, oranges, bananas, etc., are generally wholesome even for the most delicate, provided they are ripe and clean. Unwashed fruit may often carry the germs of typhoid and other diseases, while many fruits, such as grapes, apples, etc., are often sprayed with poisonous fluids to prevent their destruction by parasites.

**Fucaceæ**, an order of seaweeds of a leathery structure, with dark spores underlying the fronds, and found both attached to rocks and floating. There is a gelatinous kind which is edible, and is commercially valuable as the source of iodine and as a manure.

**Fugue**, a kind of polyphonal musical composition of a contrapuntal form, in which a theme is enunciated, followed up, answered, and interwoven according to prescribed rules. Fugues are of several kinds, named in relation to the character of the theme, as diatonic, chromatic, doric, etc. Bach was perhaps the greatest of fugue composers; Handel was also highly effective in fugue writing.

**Fulahs**, a Mahommedan race inhabiting the Soudan, at one time possessing a kingdom in Nigeria, sometimes called the Sokoto Empire.

**Fuller's Earth**, a special kind of clay or marl possessing highly absorbent qualities, and used from ancient times in the "fulling"—that is, cleansing and felting—of cloth. It is common in certain parts of the south of England, and is valued as a skin emollient.

**Fur**—the hairy protective coating of numerous animals, especially those of the colder regions—has from time immemorial been utilised by mankind for winter clothing. The fur most prized is probably the sable, the best coming from Siberia. The sable is quite a small animal, about 18 inches long, and wearing a lustrous coat of amber-brown hair. In winter its fur becomes thicker, and the soles of its feet are also covered with hair. To avoid spoiling the fur, the hunters catch the sable in traps, and with nets thrown over its hole. Common skins will fetch from £2 in the rough, but good dark ones will bring £20 to £40, and a robe of real sable may easily cost £1000. The fur of Royalty is ermine. There are numerous other animals—the lynx, the beaver, the red fox, the squirrel, the seal, the bear, etc.—all of which contribute to our stock of furs. The north-western portion of the American continent is prolific in fur-bearing animals, and there the Hudson Bay Company, founded in 1670, has carried on a most profitable enterprise in pelt capture. The originator of the Vanderbilt fortune was a fur trader in the North-West. London, New York, Leipzig, and Nijni Novgorod are the chief fur marts of the world, the fairs at the two last-named places being very important. Fur trading has many hazards, not the least being that of fashion. It is an old saying that "furs when wanted are diamonds; when not wanted, charcoal."

**Furlough**, a term designating holiday-leave granted to non-commissioned officers and privates in the British Army, or home holiday-leave given to British officers serving abroad.

**Fusel Oil** is a resultant of alcohol, the residue left after the separation of ordinary alcohol from the raw spirit by fermentation. It has a strong odour and a fiery taste, and its consumption produces an injurious effect upon the brain.

**Fusible-Plug**, a safety-plug placed in the skin of a steam-boiler, so as to be melted and allow of the discharge of the contents when a dangerously high temperature is attained.

**Fusil**, the old fire-lock gun which superseded the match-lock in our army, and was fitted with a flint and steel; it was about the length and calibre of the musket, but of lighter construction.

**Fusiliers** were originally bodies of foot soldiers carrying fusils, at a time when archers and pikemen still formed the main part of an army. There is still a British regiment called the Royal Fusiliers.

**Fustian**, the name given at various times to different kinds of textile fabrics. Originally, fustian was made of linen and cotton; later, wool

was used; but in recent times the name has been mainly applied to a twilled cotton material with a nap surface.

**Fustic**, a kind of dyewood yielding various shades of yellow according to the mordants used. The tree grows in India, tropical America, and the West Indies.

**Futurism.** (*See* **Post Impressionism.**)

**Fuz-ball**, a genus of fungi, including the familiar puff-ball.

## G

**Gabardine**, a long, loose, coarse, over-garment, worn by men of the common class in the Middle Ages, and prescribed by law as the distinctive garment of the Jews.

**Gabbatha**, the Hebrew term for that part of a judgment-hall which was occupied by the governor or supreme authority, and from which he pronounced sentence. Used in John xix., 13, to designate the place where Pilate sat at Christ's trial.

**Gabbro**, a kind of euphotide diallage rock of many varieties, containing a good deal of felspar, and sometimes also serpentine or mica.

**Gabbronite**, a mineral of foliated structure, mostly of a greyish colour, and of the appearance of scapolite. It is found in Norway.

**Gaberlunzie**, the name given to an old-time class of beggar in Scotland, who had licence to ply his "profession" within a prescribed district.

**Gable**, the triangular end of a building, rising above the cornice to its apex. The end wall of a sloping roofed house is called the gable-end; and a gable-window is a window situated in the gable or constructed in gable form.

**Gabrielites**, a sect of Anabaptists, founded by Gabriel Schelling, in Pomerania.

**Gadfly**, a widely distributed family of flies with only one pair of wings (*diptera*), possessing great power of flight. The females are very voracious, being able to bite through the skin and suck the blood of animals. The males are harmless.

**Gadolinite**, a mineral named after Gadolin, a Finnish chemist, its discoverer. It is a silicate of the yttrium and cerium metals.

**Gaelic**, relating to the Gaels and their language, a term now applied only to the Celtic people inhabiting the Highlands of Scotland, but formerly also to the Celts of Ireland and the Isle of Man.

**Gag**, a word of modern stage slang referring to dialogue or expressions other than the author's words, introduced into a play by an actor, and usually indulged in by comedians for raising a laugh.

**Gahnite**, a dark mineral substance of the spinel group, an oxide of zinc and alumina, or an aluminate of zinc. Sometimes called zinc-spinel. Called after Gahn, a Swedish chemist.

**Gaine**, a sculptured figure, the upper part of which is in natural form and outline, and the lower part (except sometimes the feet) is some simple architectural feature seeming to envelop the body and legs. The gaine was often used in ancient Greek and Egyptian architecture.

**Galactite**, a stone found in Scotland, yielding, when moistened and rubbed, a milk-like juice.

**Galago**, a sort of lemur, native to Africa, large-eyed, in keeping with its nocturnal characteristics.

**Galatians, St. Paul's Epistle to the**, is supposed to have been written by the Apostle about A. D. 56. It was addressed to the Galatian Churches, and, in addition to supporting Paul's apostolic authority, advocated justification by faith.

**Galaxy**, the Milky Way, the part of the heavens which, in Milton's words, is "powdered with stars."

**Galena**, sulphide of lead, and one of the commonest of minerals. One variety carries silver.

**Galerites**, a genus of *echinoides*, or fossil sea-urchins found in the chalk formation.

**Galidia**, a kind of ichneumon (*G. elegans*) peculiar to Madagascar, valuable for its fur, which in some varieties is beautifully striped; it is easily tamed, and serviceable as a destroyer of vermin.

**Gall**, a vegetable growth, the result of an egg-deposit on leaves or bark by certain insects. When on oaks they are called oak-apples. They are nearly spherical in form, inodorous, bitter, and from blue to deep olive and black in colour. They yield an acid useful for dyeing, tanning, and other commercial purposes.

**Galleon**, the name given to the old three-decked Spanish treasure vessels employed in conveying the precious minerals from the American colonies to Spain.

**Galley**, an oar-propelled sea-boat used by the ancient Greeks and Romans for transport purposes, manned by slaves. Boats of a similar class were used by the French down to the middle of the 18th century, and manned by convicts.

**Gallic Acid**, obtained from gall nuts, sumach, tea, coffee, and the seeds of the mango, is used in the manufacture of inks and as an astringent in medicine. It is odourless, has a bitter taste, and is mostly of a pale yellow colour.

**Gallium**, a malleable metal of a greyish-white colour, discovered in 1875 by Lecoq de Boisbaudran in zinc-blende substances in the Pyrenees, but only obtained in minute quantities. It is classed between aluminium and zinc.

**Gall Moth**, a species of insect, the larvæ of which live in the stems of plants and produce gall-nodes.

**Galloperdix**, a kind of partridge, found in the hilly regions of India and Ceylon. There are three species.

**Gallows**, a wooden erection consisting of two posts surmounted by a cross-beam, suspended from which is a rope used for hanging criminals. Sometimes it takes the form of a single projecting wooden beam, which serves to carry the rope.

**Galvanised Iron** is iron coated with zinc and other substances.

**Galvanism** is the branch of electricity which deals with electric currents produced by chemical action, and named after its discoverer, Aloysius Galvani.

**Gambeson**, a protective garment of leather or padded material, reaching from the neck to the knees, worn by soldiers prior to the introduction of plate-armour, and also beneath the hauberk.

**Gamboge**, a resinous gum obtained from certain trees in Siam, Cochin-China, Ceylon, and other hot countries, and much used for producing a yellow pigment, as well as a strong medicinal purgative.

**Game** is the term applied to wild animals which are protected from indiscriminate slaughter by Game Laws. In the United Kingdom game comprehends deer, hares, pheasants, partridges, grouse, black game, moor game, woodcocks, bustards, and certain other birds and animals of the chase. Game can only be killed (with few exceptions) by persons holding game licenses, which cost £3 a year. Occupiers of land and one other person authorised by them in each case are allowed to kill hares and rabbits on their land without license. Game cannot be sold except by a person holding a proper license. There is a "close time" prescribed for the different classes of game, during which period they cannot be legally killed or sold, and it is not lawful to kill game on a Sunday or Christmas Day. Grouse cannot be shot between December 11th and August 11th; partridges between February 2nd and August 31st; pheasants between February 2nd and September 30th; and black game between December 11th and August 10th. In regard to foxes, stags, and otters, custom and not Parliament prescribes a certain law which sportsmen rigidly adhere to. The fox-hunting season is from November 1st to April 1st; stag-hunting, August 12th to October 12th; otter hunting, April to September.

**Gaming**, or **Gambling**—*i.e.*, staking money on the chances of a game—differs from betting in that it depends upon the result of a trial of skill or a turn of chance. Gambling has long since been illegal in Britain, and no public gaming houses have existed here since the early part of the 19th century. Gaming is carried on by the sanction of the law at Monte Carlo. A gambling debt cannot be recovered at law, but is simply "a debt of honour." The Gaming Act, 1854, repealed the old Statute of 33 Henry VIII. so far as the prohibition of tennis, bowling, and other games of skill is concerned.

**Gamut** is the musical scale of lines and spaces upon which are written the notes of music designated by the first seven letters of the alphabet.

**Ganga**, the pin-tailed sand-grouse, a handsome bird mostly found in North-Western Africa.

**Gangue**, a term applied to non-metalliferous minerals found in mineral veins and often

called vein-stone. Quartz is the most prevalent of these vein-stones.

**Gangway,** a narrow passage running across the House of Commons, and dividing the seats on each side into two parts. Above this gangway, and nearer towards the chair, sit the principal members, Ministers and ex-Ministers, the former on the Speaker's right, the latter to his left. Below the gangway sit independent members.

**Gannet,** the name of a genus of birds of the pelican family; is found in large numbers off the coast of Scotland, and having breeding stations in the Hebrides, St. Kilda, Ailsa Craig, and the Bass Rock. It is a bird of white plumage, and weighs about 7 lbs. Its common name is the Solan goose.

**Garancin** is a dye substance obtained from madder root by chemical treatment, but in recent times has been superseded by alizarin.

**Garden Cities** have been established in various parts of the country with considerable promise of success. The first and most extensive of these was formed at Letchworth, near Hitchin, in 1899. It comprises nearly 4,000 acres, and is controlled by a company with a capital of £300,000, and shows a prosperous working community living and labouring under morally and physically healthy conditions. The idea is an adaptation to modern ideas of the model villages of certain industrial philanthropists such as Salt, Richardson, Cadbury, Leverhulme, and others. The Hampstead Garden Suburb and Welwyn Garden City are successful experiments in the same direction.

**Gardener-Bird,** a bird possessing many of the characteristics of the bower-bird, and found only in New Guinea.

**Gargantua,** the giant hero of Rabelais' satire, of immense eating and drinking capacity, symbolical of an antagonistic ideal of the greed of the Church.

**Gargoyle,** a projecting spout for carrying off water from the roof gutter of a building. Gargoyles are only found in old structures, modern water-pipe systems having rendered them unnecessary. In Gothic architecture they were turned to architectural account and made to take all kinds of grotesque forms—grinning goblins, hideous monsters, dragons, and so forth.

**Garibaldi,** a kind of blouse-jacket formerly a good deal worn by women, and so styled because of its resemblance to the shirts worn by the Italian patriot and his soldiery.

**Garlic,** a bulbous plant of the onion tribe, and a favourite condiment among the people of Southern Europe. It possesses a very strong odour and is used largely for medicinal purposes.

**Garner,** a granary, or store-house for corn.

**Garnet** is the name of a precious stone varying in colour, but mostly red. The finest garnets are of a blood red and transparent.

**Garnishee,** a person who has received legal notice not to pay away sequestrated moneys owing by him to a third party.

**Garrison,** a body of soldiery stationed in a fortified place to defend it against a foe, or to keep the surrounding population in subjection; also such a fort, manned with troops, guns, etc.

**Garrot,** the name of a species of wild duck, widely distributed over the Arctic regions and a winter visitant to the northern parts of Britain. It is distinguished by having a large white spot in front of each eye on a dark ground.

**Garrotte,** a method of strangulation adapted as capital punishment in Spain, and consisting of a collar which is compressed by a screw that causes death by piercing the spinal marrow. Garroting was also applied to a system of highway robbery common in England some years ago, the assailants seizing their victims from behind and by a sudden compression of the windpipe disabling them until the robbery was completed.

**Garter, Order of the.** Was established by Edward III. in 1349 and is the premier order of knighthood in Great Britain, limited to the Sovereign, the Prince of Wales, such descendants of George I. as may be elected members, and twenty-five knight companions. Queen Alexandra was a Lady of the Order. The traditional story of the origin of this order is well known. Edward III. is said to have picked up a garter dropped by the Countess of Salisbury at a ball, when his Majesty put it round his own knee with the remark "Honi soit qui mal y pense." The insignia of the order are blue and gold worn on the left leg below the knee, and the vestments and badge, the latter are of great magnificence.

**Gas** is an elastic fluid substance, the molecules of which are in constant motion, and exerting pressure. Any gas can be reduced to the liquid form by increasing pressure and diminishing temperature. Hydrogen, oxygen, and nitrogen were formerly regarded as "fixed gases," but they have been liquefied. The definition of gases by Clerk Maxwell is as follows: "Gases are distinguished from other forms of matter, not only by their power of indefinite expansion so as to fill any vessel, however large, and by the great effect which heat has in dilating them, but by the uniformity and simplicity of the laws which regulate their changes."

**Gas from Coal** for lighting and heating purposes is obtained from bituminous coal, or from a mixture of such coal and cannel. Such a gas was produced and used for illuminating purposes by William Murdoch towards the end of the 18th century in Birmingham, and about 1807 the illuminant was introduced in London, one side of Pall Mall being lighted with it. It soon supplanted oil and candles for outdoor and indoor lighting, and is still, in spite of the advances of electric light, the most general illuminant, its power having been greatly increased in recent times by the incandescent burner.

**Gas-Engine,** invented in principle by a French workman over a hundred years ago, and greatly improved by Siemens, Crossley, and others, in more recent times. Its power is obtained by a mixture of gas and air, compressed, ignited, expanded and rejected successively. Heat is produced by gases of various kinds—coal gas, natural gas, petroleum, etc. At first, gas engines were only constructed of small size, but are now built of considerable magnitude and power, and effect a great saving of fuel.

**Gastropacha,** a genus of lepidopterous insects of the Bombycidæ family, including the lappet moth.

**Gastropoda,** a family of molluscs, which includes all such as possess a univalve shell—snails, whelks, limpets, etc.

**Gastrostomy,** the surgical operation of making an artificial opening into the stomach for the introduction of aliment in the case of obstruction or stricture.

**Gate House,** a structure built over and flanking a gateway, and common in ancient times at the more important entrances of a city, castle, monastery, abbey, or college. The only example left in London is St. John's Gateway, in Clerkenwell, but many still remain in the old continental cities, and some are of great architectural beauty.

**Gate of Justice,** in mediæval times, was the place where a king, feudal lord, or judge sat to redress grievances and deal out justice. It was situated sometimes at the city gate, in front of the temple or other public place, and where no actual gate existed, the judgment seat was enclosed in a structure that suggested gates.

**Gauchos** are South Americans of Spanish descent, and of a wild and fearless disposition. They are mostly employed in the management of cattle, and are noted for their skill in the saddle, and for their lasso throwing. Their numbers grow less from year to year, and as the Pampas comes more under modern European control their existence as a distinct class will gradually dwindle away.

**Gauge,** a standard dimension or measurement, applied in various branches of construction. Thus, in railways we have the standard distance of 4 feet 8½ inches between the rails, and this is the ordinary narrow gauge in most countries. In the United States the standard gauge is 6 feet. The old 7 feet gauge adopted by the Great Western Railway was abandoned some years ago. The gauge for Indian lines is 5 feet 6 inches. Narrow railway gauges of different standards are in use on very steep inclines in various countries. Other standard gauges are fixed in building, gun-boring, and other operations.

**Gauls** were inhabitants of ancient Gaul, the country which comprised what is now France, Belgium, and parts of the Netherlands, Switzerland and Germany.

**Gault, strata of blue clay and marl found in sand deposits.**

**Gauntlet, a glove of armour, worn in the 12th and 18th centuries as a sort of mitten, and attached to the sleeve of the hauberk.** In the 14th century gauntlets were made of mail, and later of hammered steel with separated and jointed fingers.

**Gautama,** one of the names of Buddha.

**Gauze,** a thin, transparent material made of silk combined with cotton, linen or hemp, and plain or figured. There are also gauzes of flannel, lace, ribbon, and wire.

**Gavel,** enough grain in the straw to form a sheaf, into which it is converted by binding.

**Gavelkind,** an old English custom of land tenure in Kent and other places in England, whereby on the death, intestate, of a property owner, his property is divided equally amongst his children and not according to the law of Primogeniture, abolished by S. 45 of Administration of Estates Act, 1925.

**Gavial,** the crocodile of the Ganges, feeding chiefly on fish, and not infrequently given to attack mankind; it reaches a great length when fully grown, exceeding 20 feet.

**Gayal,** a kind of wild ox about the size of an English bull. A native of Eastern India, and easily domesticated.

**Gaydiang,** a junk-like Annamese vessel, with two or three masts and triangular sails, carrying cargo from Cambodia to the Gulf of Tonkin.

**Gazelle,** an animal of the antelope family, of small and delicate shape, with large eyes and short cylindrical horns. It is of a fawn colour, a native of North Africa and easily domesticated.

**Gecko,** the name of a family of lurid-hued lizards common in or near the tropics. They are of nocturnal habits and feed on insects, and though by some accounted venomous, they are harmless.

**Geez,** a Semitic or Arabic dialect, or language-variant, surviving in the ecclesiastical literature and speech of Abyssinia, mostly superseded by the Amharic.

**Geissler's Tubes,** invented by Geissler, are used for producing light by an electric discharge through rarefied gases. The tube is sealed, and the electric spark is transmitted by means of platinum connections at each end.

**Gelada,** the name of an Abyssinian baboon, possessing a large mane and long tufted tail. It is of a dark brown colour, and is closely allied to Hamadryas.

**Gelalæan Era,** an era introduced by and named after Gelal-u-Din, Sultan of Khorassan, and commencing March 4th, 1079 A.D.

**Gelatine,** a transparent, tasteless, organic substance obtained from animal membranes, bones, tendons, etc., by boiling in water. It is of various kinds, according to the substances used in making it. Isinglass, the purest form of it, is made from air-bladders and other membranes of fish, while the coarser kind—glue—is made from hoofs, skin, hides, etc. Its constituents are carbon, hydrogen, oxygen, and nitrogen. Gelatine is of great utility, and applied to an immense variety of purposes, from the making of food jellies to substances for photography.

**Gelsemium,** a wild jasmine grown in the United States and bearing yellow flowers of convolvulus shape. A tincture prepared from the root of this plant is valuable medicine in small doses, but in overdoses produces paralysis of the respiratory muscles.

**Gemini,** one of the signs of the Zodiac lying east of Taurus and containing numerous stars, only two of which—Castor, the upper and brighter one, and Pollux the lower one—are visible to the naked eye. The stars are named after twin divinities of the classical mythology.

**Gemsbok,** a large South African antelope, with long straight horns and tufted tail. Light fawn in colour, it has a black streak across its face, and is very fleet of foot.

**Gems** are precious stones cut and polished for wearing as jewellery.

**Gender** is a sort of sexual distinction grammarians give to nouns or pronouns. Thus, in English, we have the masculine (male), feminine (female), and neuter (no sex) genders. The French language has only the masculine and feminine genders, rendering gender classification difficult and complicated. In modern Persian there is no gender distinction.

**Genealogy** is the science of family descent, treating of ancestors and their descendants in various branches in the natural order of succession. Pedigrees of the principal families in Great Britain are recorded at Heralds' College.

**General,** a military title next in rank to that of Field-Marshal, the highest officer in the army. Ranking below full General are Lieutenant-General, Major-General, and Brigadier-General.

**Generation,** the average lifetime of persons who live beyond infancy is reckoned at about thirty years. The average of all who are born does not amount to more than seventeen years.

**Generation, Spontaneous.** (*See* **Abiogenesis.**)

**Genesis,** the first book of the Pentateuch, which carries the Scriptural narrative from the Creation to the death of Joseph.

**Genet,** one of the smaller carnivorous animals about the size of a cat, but with longer tail, and spotted body. It is a native of Southern Europe, North Africa, and Western Asia, and is valued for its fine soft fur, and also for a perfume it produces.

**Geneva Convention** was a convention signed at the holding of a conference of representatives of the leading European powers in 1864, whereby the neutrality of ambulances, hospitals, sanitary officers, chaplains, and others engaged in succouring the sick and wounded was guaranteed. All persons employed in such service are required to wear a Geneva cross—red cross on a white ground—as a badge of office.

**Genii,** fabulous beings, regarded by the Arabs as between mankind and the angels, capable of becoming invisible at will, or assuming any shape.

**Genite,** an ancient sect of Jews spoken of by Purchas in his Pilgrimage as claiming to be of the pure stock of Abraham, by reason of their not having "taken strange wives."

**Genouilleres,** ancient metal caps for covering the knees of an armed man; an example may be seen on the Black Prince's monument in Canterbury Cathedral.

**Genre,** an art term used to describe a style of painting which deals with subjects of homely life, but also applied in France in connection with other kinds of paintings as genre du paysage (landscape painting), genre historique (historical painting), etc.

**Gens,** a group term used by the ancient Romans to designate the kindred or connections of any particular family, but only used in regard to the members of a noble family. The modern word clan most nearly corresponds with *gens*.

**Genthite,** a silicate of nickel and magnesium, found in stalactite formations in certain parts of Pennsylvania, and named after its discoverer, Dr. Genth.

**Gentian,** the name for a species of plants of the Gentiana genus. Gentian root is used in pharmacy.

**Gentian Root,** the dried root of the *Gentiana lutea*, much used in pharmacy as a tonic. The plant bears clusters of mostly blue flowers, and the most valuable species commercially are those of central and southern Europe.

**Gentile,** a term used in the Scriptures to designate any person who is not a Jew.

**Gentleman-at-Arms,** one of a company of military esquires forming the sovereign's bodyguard. They number in England some 40 gentlemen and 6 officers, and their duty is to attend the King on all special occasions. The Captain receives £1,200 a year, and each of the "gentlemen" £70 a year.

**Genus,** a term applied in biology to designate any kind, sort, or class of species.

**Geodesy,** the art of calculating the configuration and extent of the earth's surface, and determining exact geographical positions and directions, with variations of gravity, etc. In former times the term geodesy was applied to land-surveying in general.

**Geognosy,** the science of the origin and structure of the earth.

**Geography,** the science which describes the earth's surface, its physical peculiarities, and the distribution of the various animals and plants upon it. It is usual to divide the subject into two main branches—physical geography, which

deals with the composition of the earth's surface and the distribution of its living occupants, animate and inanimate; and political geography, which deals with the tribes, peoples, and governments of the earth.

**Geology,** the science which deals with the condition and structure of the earth, and the evidences afforded of ancient forms of life. The various periods and sub-periods of geological classification as at present defined are:—Primary, or Palæozoic: Secondary, or Mesozoic; Tertiary, or Cainozoic; and Post-tertiary.

**Geometrical Progression** is a term used to indicate numbers which increase or decrease at an equal ratio—as 3, 9, 27; or 27, 9, 3.

**Geometry** is the branch of mathematics which demonstrates the properties of figures, and the distances of points of space from each other by means of deductions. It is a science of reason from fundamental axioms, and was perfected by Euclid about 300 B.C. The books of Euclid contain a full elucidation of the science, though supplemented in modern times by Descartes, Newton, and Carnot.

**George-Noble,** a gold coin of the value of 6s. 8d., receiving its name from the St. George depicted on its obverse. First issued in the reign of Henry VIII.

**German Silver,** an alloy of copper, zinc, and nickel, and much used in the manufacture of table-ware, such as spoons, forks, etc.

**Germ Theory,** the biological doctrine which holds that living matter cannot be generated from non-living matter, but must spring from germs, or seeds. In medicine it demonstrates that zymotic diseases are due to the presence of bacterial germs.

**Gesta Romanorum,** a collection of stories published in the Middle Ages, and of unknown origin. It was greatly laid under contribution by our earlier writers, who found many romantic incidents and legends which they were able to turn to good account. The collection circulated over Europe, and is believed to have been written by a monk, Pierre Bercheur, of the convent of St. Eloi, Paris.

**Gestation,** the carrying of young in animals during pregnancy, varies considerably in its length. In the case of an elephant, the period is 21 months; a camel, 12 months; a cat, 8 weeks; a horse, 48 weeks; a dog, 9 weeks; and a pig, 16 weeks. Hens "sit" for 21 days; geese, 30; swans, 42; turkeys, 28. A pigeon only "sits" 14 days.

**Gethsemane** was at the foot of the Mount of Olives.

**Geysers,** hot springs of volcanic origination and action, are remarkable for the fact that they throw out huge streams of boiling water instead of lava as in the case of a volcano. The most famous geysers are those of Iceland which number over a hundred, the principal one having an opening 70 feet in diameter and discharging a column of water to a height of 200 feet. There are also geysers in the Yellowstone region of America, and some in New Zealand. Also a device now in common domestic use for heating running water quickly by gas or electricity.

**Ghat,** a river landing-place or stairway, in India: a passage, or gateway. "Ghaut," another form of the word, means a mountain pass in the Mahratta tongue.

**Ghee,** a kind of butter much used in the East Indies and made from coagulated milk. It will keep sweet for a long time when properly prepared.

**Ghetto,** the name given to the Jewish quarter in any city or town, but more especially applied to such quarters in Italy.

**Ghost-Moth,** an interesting nocturnal insect (*Hepialus humuli*), common in England, possessing in the male a white collar and known for its habit of hovering with a pendulum-like action in the twilight over a particular spot where the female is concealed.

**Ghurkas, or Goorkas,** are a native Indian military force of sturdy fighters forming a brave and useful force. They are natives of Nepaul.

**Giambeaux,** metal armour for the legs and shins, worn by the warriors of Richard II.'s reign.

**Giants,** men of abnormal stature and bulk, have been met with in all ages, but it may be doubted whether ever any actual race of giants has existed, except in mythological fable.

**Gibbet,** a kind of wooden gallows with a projecting arm from which in former times criminals were hung in chains and left to decay.

**Gibbon,** the name of a long-armed ape, inhabiting the East Indian Archipelago mainly. It is without tail, and possesses the power of very rapid movement among the trees of the forests.

**Gifford Lectures,** on natural Religion, are restricted to the four Scotch Universities, and were established by Lord Gifford with a grant of £80,000 for the lectureships. The lecturers are absolved from religious test of any kind.

**Gilbertines** were members of a religious order of monks and nuns founded by St. Gilbert in the 12th century, but did not spread beyond England. There were 25 Gilbertine monasteries at the time of the suppression of those institutions.

**Gimp,** a narrow trimming of worsted or silk cord, largely used for edging to gowns, draperies, etc.

**Gimp-Machine,** a narrow-warp loom designed to catch the woof and form loops or patterns, the gimp-cords of variant sizes being carried by independent needles or shuttles.

**Gin,** a well-known spirit distilled from malt or barley and flavoured with juniper-berries. The purest gin is that of the Hollands variety, produced mainly at Schiedam. English gin is less pure, often containing flavouring substances that detract from the quality of the spirit. Gin is frequently recommended as beneficial in urinary troubles.

**Ginger** is obtained from a reed-like perennial plant grown in tropical countries. There are two varieties, black ginger and grey ginger. The former is obtained by peeling and drying the root, the latter by scalding and drying. Ginger is largely used as a condiment.

**Gingham,** an ordinary kind of cotton fabric, dyed, plain, or figured, which received its name from being originally manufactured in Guingamp in Brittany.

**Ginseng,** a plant whose forked root is greatly valued as a tonic and stimulant by the Chinese. The Manchurian variety is considered the best, and fetches a high price; a plant of an allied species grows in America, and its root is exported to China and sold as ginseng. In spite of the almost miraculous virtues ascribed to it, it has little medicinal value.

**Gipsies** are a nomadic race, supposed to be descended from some East Indian tribe. Their language, Romany, is certainly a Hindu dialect mixed with other tongues. They are spread over many parts of the world, but are most common in Europe, having appeared in the Eastern portions of the Continent about the 14th century, finding their way to England at the beginning of the 16th century. They give evidence of their Eastern origin in their dark skins, large black eyes, black hair, and pearly white teeth. They are born wanderers, and pass from place to place following certain small occupations such as tinkering, basket-making, and the like, while some of the men are clever as horsedealers, and some of the women pose as fortune-tellers.

**Giraffe,** the tallest of existent animals, reaching a height of from 18 to 20 feet when full grown. Its sloping back and elongated neck seem to be the natural evolution of an animal that has to feed on the branches of trees. It is a native of Africa, is of a light fawn colour marked with darker spots, and has a prehensile tongue.

**Girandole,** a branching chandelier, or swing-armed candelabrum.

**Girasol,** a mineral of the opal variety. Of a bluish-white colour, with a red reflection under a bright light.

**Girl Guides,** an extension of the Boy Scout Movement, but a separate organisation. There are about 937,000 guides in the world (including Brownies, junior Girl Guides), which includes 560,654 Girl Guides in Great Britain (1931).

**Girondists,** one of the prominent parties of the early period of the first French Revolution. They were Moderates, and up to 1792 were a strong party. Their first leaders were from the department of Gironde, hence their name. With the Reign of Terror their influence came to an end, Robespierre and his party overthrew them, most of them being sent to the guillotine.

**Girton College,** founded at Hitchin in 1869, and

removed to Cambridge in 1873, is one of the leading English training colleges for women, accommodates about 150 students, whose educational course covers three years. The teaching includes nearly all the higher branches of education.

**Glacial Epoch** was the period when northern Europe, including part of Britain, was covered with ice, strong geological testimony of the epoch being found in the many fossil remains which have been discovered, in the Tertiary formation, of animals such as only exist to-day in Arctic regions.

**Glaciers** form in the higher Alpine ranges, and are immense consolidated masses of snow, which are gradually impelled by their own force down the mountain sides until they reach a point where the temperature causes them to melt, and they run off in streams. From such glaciers the five great rivers, the Rhine, the Po, the Rhone, the Inn, and the Adige have their source. The longest of the Swiss Glaciers is the Gross Aletsch, which sometimes extends over ten miles. Some of the glaciers of the Himalayas are four times as long. The Muir in Alaska is of enormous magnitude, and that of Justeldals Brae in Norway is the largest in Europe.

**Glacier-valley**, a vale, the essential factor in the formation of which has been glacial-action.

**Glacis**, a sloping bank of fortification forming a parapet to the covered way, and serving to expose besiegers to the line of fire.

**Glade**, an open space in a forest.

**Gladiators** were professional athletes and combatants in ancient Rome, contesting with each other or with wild beasts. At first they were drawn from the slave and prisoner classes exclusively, but so much were the successful gladiators held in esteem that men came to make a profession of athletics, and gladiatorial training schools were established. When a gladiator was vanquished without being killed in combat, it was left with the spectators to decide his fate, death being voted by their hands being held out with the thumb turned inward, and life by putting forth their hands with the thumb extended. Gladiatorial shows were the chief public displays in Rome from the 3rd to the 4th centuries A.D.

**Glands** are secretory organs whereby certain natural matters, such as urine, milk, bile, saliva, sweat, tears, etc., are drawn from or distributed over the system. Such of the matters as undergo rapid glandular expulsion, as urine, etc., are termed *excretions*, while such as are utilised in promoting the performance of the functions of digestion or milk-production are called *secretions*. Glands are composed of numberless minute secreting cells, arranged in simple or compound vesicles.

**Glasgow University**, founded by Pope Nicholas V in 1451, had a new charter granted to it in 1577 by James VI of Scotland, and in 1858 and 1889 was remodelled by the Universities (Scotland) Acts. It has usually over 2,000 students, including women.

**Glass**, a substance obtained from the fusion of a combination of silica with various bases, and is more or less transparent. There are numerous kinds of glass, but they group themselves under one or other of the following classifications:—Flint glass or crystal, whose components are potash, silica, and oxide of lead; window glass, made from soda, lime, and silica; Bohemian glass, containing potash, lime, and silica; and bottle glass, composed of soda, lime, alumina, silica, and oxide of iron. Glass was made by the Phœnicians, and was familiar in ancient Egypt. The Egyptians introduced it into Rome. In the Middle Ages Venice was famed for its glass manufactures, but after the 17th century Bohemia acquired pre-eminence in the same style of the industry. Window glass was not used in this country until about the 7th century.

**Glass-Snake.**—What is so called is really a lizard, with a long, sinuous tail, which has the faculty of regrowth if broken off. It is an inhabitant of the Southern States of the American Republic, attains a length of about 2 feet, and its main colouring is green, with black and yellow markings.

**Glaucus** is the curious kind of cray fish often called the Sea Lizard. It is without shell and has a soft body, with horny mouth and four tentacles. It is a native of the South Atlantic, and is not more than 1½ inches in length.

**Glee**, a musical composition for three or more voices without accompaniment. It is an essentially English composition and was much in vogue during the 18th and the first half of the 19th century. There are still numerous glee clubs, and many of the compositions of this class are of very high merit. The favourite glee writers have been Webbe, Boyce, Callcott, Bishop, Stevens, and Goss.

**Glencoe, Massacre of**, occurred on the 14th February, 1692. The victims were the Macdonald clan, who had been required to take the oath of allegiance to William III., but their papers having been treacherously kept back, gave the Government agent, Captain Campbell, of Glenlyon, the excuse to kill the Macdonalds. They were torn from their beds in the early morning and murdered in the Pass.

**Gliding** is a form of engineless flight which is being enthusiastically practised on the Continent, in America, Australia, and in this country. Two Germans, Kronfeld and Magersuppe, have brilliantly demonstrated the possibilities of the modern glider. An expert, Dinort, has recently succeeded in remaining in the air for 14 hours 45 mins. Soaring is possible by using the energy of the air currents, and experiments are now being pursued to discover how a glider may be kept in the air over flat land surfaces where there are no favourable air currents. Many gliding clubs have been established in Great Britain, and the sport is growing in popularity.

**Glisson's-Capsule**, a sheath of areolar tissue surrounding the branches of the portal vein and the hepatic duct and artery; first pointed out in the 17th century by Prof. Fras. Glisson.

**Globigerina**, an ocean unicellular animalcule with a perforated shell, and occurring in certain parts of the Atlantic in such vast numbers as to form a bed of chalk ooze with their empty shells. The English chalk cliffs are survivals of prehistoric beds of Globigerina ooze.

**Gloria in Excelsis** ("Glory to God in the highest"), is the opening of the Latin hymn adapted from Luke ii. 4, and the most prominent hymn of the ecclesiastical rites in the Christian liturgies.

**Gloria Patri**, the lesser Doxology, with which chants are generally concluded in the English Church service—"Glory be to the Father, and to the Son."

**Gloriosa**, a genus of gorgeous flowering climbers growing in the Himalayas and Senegambia, lanceolate of leaf, with clinging tendrils and large red or yellow bloom; is of the Tulipeæ family.

**Gloss**, an explanatory statement or marginal note, often found in ancient manuscripts, and is sometimes more valuable than the text to which it refers.

**Glossecollite**, a milk-white variety of halloysite, found in a siliceous Silurian rock in Georgia; translucent on fracture.

**Glossic**, the name given to a phonetic system of spelling introduced by Alexander J. Ellis, and based on rules of simple sound. It has not, however, been much used apart from printed matter contained in Pitman's phonographic publications.

**Glove-Money**, an extraordinary reward paid to officers of courts, and fees given to clerks of assize and judges' attendants by a County Sheriff when no offenders were left for execution; the white gloves presented to justices when there is a maiden session are a survival of this old legal usage.

**Gloves** are coverings for the hand with a separate sheath for each finger, and are made of a great variety of materials. They were not in general use in England before the 13th century, and were not manufactured in this country until the next century. There was a London Glovers' Company in 1464.

**Glow-Worm**, a kind of beetle, possessing in the female the power of emitting a phosphorescent light underneath the extremity of the body. The male has the same power, but to a very limited extent; and has wings, while the female is wingless. The light of the glow-worm can be given forth by the insect at will.

**Glucinium, or Beryllium**, is a white metal pre-

pared from beryl, and found also in the emerald and other rare minerals. Most of the salts of this metal have a sweet taste, hence the name.

**Glucose** is the name given to a group of sugars produced from cane sugar, dextrine, starch, cellulose, etc., by the action of reagents. It also occurs in many plants, fruits, and honey. For brewing purposes glucose is prepared by the conversion of starch into sugar by sulphuric acid.

**Glue**, a gelatinous substance obtained by boiling and chemically treating hides, hoofs, etc.

**Gluten**, the insoluble nitrogenous element in flour or wheat and other grains. It is a proteid substance and is a mixture of gluten casein, gluten fibrin, mucin, and gliadin.

**Glutton**, or Wolverine, the biggest animal of the weasel order, inhabits the northernmost parts of Europe and America. In build it resembles the bear, and is rather larger than a badger. Its fur is of a brown-black hue, but coarse; the animal has great strength, and is remarkable for its voracity.

**Glycerine** occurs in natural fats combined with fatty acids, and is obtained by decomposing those substances with alkalies or by superheated steam. It is colourless and oily and sweet, and is put to a variety of commercial uses, being widely utilised for medicaments, for lubricating purposes, and in the manufacture of nitro-glycerine.

**Glyptodon**, an extinct species of gigantic armadillo, fossil remains of which have been discovered in South America. It was some 9 feet long, carried a huge tortoise-like shell, and had fluted teeth.

**Gnat**, a two-winged insect of the Diptera order. The female possesses the power of biting and stinging. Its eggs are laid upon the surface of water, fastened together in boat form.

**Gneiss**, a metamorphic rock containing quartz, felspar, and mica, the same constituents as granite.

**Gnomes**, dwarf supernatural beings, popularly supposed to exercise protective powers over mines and minerals.

**Gnostics** were an early Christian sect prominent from the 1st to the 6th century. They held that Christ was of divine origin, but they rejected the literal interpretation of the Scriptures; contending that God was unknown and beyond man's comprehension, and that knowledge rather than faith was the passport to Heaven.

**Gnu**, an animal of the antelope family, combining the characteristics of the buffalo in its head and horns, the ass in its neck and mane, and the horse in its long and bushy tail. There are two species, the common and the brindled, and they are about the size of an ass. They abound in Africa and congregate in herds.

**Goa Ball**, a peculiar and powerful drug, scented with musk, and sold in India in egg-shaped masses. It is a favourite specific in cases of fever and certain skin diseases, but its precise composition is kept secret.

**Goat-Moth**, a large moth of the Zenzeridæ family, common in Britain, evil-smelling, and very destructive in the larval stage to trees of the poplar and willow genus, into the wood of which the caterpillar bores during its three years' period of development.

**Goats** are horned ruminant quadrupeds, indigenous to the Eastern Hemisphere, but now domesticated in all parts of the world. Though allied to the sheep, they are a much hardier and more active animal. The male has a tuft of hair under the chin. Many species, including those of Cashmere and Angora, are valuable for their hair, which is used for fine textile fabrics. The milk of the goat is nutritive and medicinal, and goat-skins are in good demand for leather for gloves, shoes, etc.

**Goatsucker** is the popular name of the night-jar, and the bird was so called from the now exploded tradition that it was in the habit of sucking goats. It is a regular summer visitor to this country, and lays its eggs on the ground.

**Gobelin Tapestry** was originated by a family of dyers named Gobelin in the 15th century in Paris. The Gobelin establishment, which produced this beautiful tapestry, made of silk and wool, or silk and cotton, and used for upholstery purposes, was taken over by the Government in 1662, and since then has been the French National factory for that class of fabric.

**Goby**, the name of a well-known and widely distributed fish, of many species, some of which are common along the British coasts. The ventral fins of the Black Goby form a hollow disc, whereby the fish can cling to the rocks or other external objects.

**God** is the term by which the idea of the one Supreme Being is expressed. The conceptions of God vary with different religions and different countries. Theism regards God as a personal being, and the author and ruler of the universe; Pantheism identifies God with the universe and not as a personal being.

**Gog and Magog**, two legendary British giants, supposed to be the last of the offspring of certain wicked daughters of the Emperor Diocletian and a band of demons. Gog and Magog, the story goes, were brought captive to the London palace of Brute, and there kept in chains. Effigies of these giants existed in the Guildhall prior to, and were destroyed in, the Great Fire. A fresh pair, 14 feet high, now in the Guildhall, were carved by Richard Saunders in 1708, and it was for a long time the custom to carry them round in the Lord Mayor's procession.

**Gold**, one of the precious metals, found more or less in all parts of the world. We have evidence of its existence from the days of the Phœnicians. It can be traced in the story of the fleets of Hiram, King of Tyre, laden with the gold of Ophir; in the splendours of the reign of Sardanapalus; in the days of the greatness of Carthage; through the exploits of Columbus, the barbaric marchings of Cortez, and the conquering magnificence of Pizarro. It has been to man the strongest of all allurements. It was for gold that Alexander the Great despoiled Asia, that Scipio descended upon Carthage and Spain, that Cæsar subdued Gaul, that Cortez robbed Mexico, that Pizarro pillaged Peru. The most remarkable discovery of gold was in California in 1848. The next in importance was the discovery of the Australian goldfields in 1851, Victoria alone in the first year of its gold-mining producing £16,000,000 worth. Among the more recently developed goldfields, are those of Colorado, the Klondyke and South Africa. The largest gold nugget was found in Australia. It weighed over 184 lbs. and was worth when melted about £10,000. In 1851 the value of the gold production of the world amounted to £17,200,000; in 1911 it was £97,000,000, gradually decreasing until in 1921 it was 66 millions, of which total the British Empire produced 46½ millions. The price of gold varied in 1921 from 115/11 per oz. in January to 97/7 in December. The normal price is 84/11½. The record price was 127/4 in February 1921. For coinage purposes gold requires to be associated with an alloy, usually copper or silver, the fineness of the gold being estimated by the number of carats of gold in 24 carats of the alloy. The gold coinage of England is a mixture of 22 parts of gold and 2 parts of copper.

**Gold Beaters' Skin** is the outside membrane of the large intestine of the ox, specially prepared and used by gold-beaters for placing between the leaves of gold while they beat them. This membrane is of great tenacity, and gets beaten to such extreme thinness that it is used to put on cuts and bruises.

**Golden Age** of the classical mythology was the age of peace and innocence and patriarchal years.

**Golden Legend**, the title of a famous history of the Saints, compiled by Jacobus de Voragine, a Dominican monk, in the 13th century, translated and published by Caxton in 1483.

**Golden Number**, the number of any year in the meteoric cycle of 19 years, deriving its name from the fact that in the old calendars it was always printed in gold. It is found by adding 1 to the number of the year A.D. and dividing by 19, the result being the Golden Number; or, if no remainder, the Golden Number is 19. Thus: 1910 + 1 = 1911. 1911 divided by 19 = 100, with 11 over, the Golden Number. The only use to which the Golden Number is put now is making ecclesiastical calculations for determining movable feasts.

**Golden Rose**, the Pope's rose of wrought gold blessed and sent from time to time to the church or community his Holiness selects to honour.

**Goldsmiths' Company**, one of the richest of the London City Companies, dating from 1130, and the official assayers of gold and silver, invested with the power of "hall-marking" the quality of objects made from these metals. Total income £58,000.

**Gondola**, the old regulation black boats so common on the canals of Venice, propelled by a gondolier with one oar who stands at the stern, his passengers being accommodated in a covered space in the centre.

**Gonfalon**, the pennon affixed to a lance, spear, or standard, consisting usually of two or three streamers, and made to turn like a weathercock.

**Good Templars**, a temperance organisation established in England in 1868, but existing some years earlier in America. It has a very extensive membership in this country, and its headquarters are at Birmingham.

**Gordon Riots** of 1780 were an anti-popery agitation fomented by Lord George Gordon, who with a mob of 50,000 marched to the House of Commons to present a petition, the people afterwards destroying much valuable property. The riots were suppressed.

**Gorilla**, the largest of the anthropoid apes, found in the forests of Equatorial Africa, and at maturity standing from 4 to 5 feet high.

**Goshawk**, or **Goose-Hawk**, a bird of prey of the falcon family. Being rather slow and weak in flight, it is trained by falconers for catching hares, rabbits, etc. It is only occasionally seen wild in Britain, but is common in Southern Europe and Asia.

**Gospels** are those portions of the New Testament which deal with the life, death, resurrection, and teachings of Christ. They are the gospels of Matthew, Mark, Luke, and John, and the first three are called the *synoptic gospels* because of their general unity of narrative. That of John is of somewhat wider scope, and gives in addition to the story of the Passion, an account of the ministry in Judea. Numerous other so-called Gospels were put forward, but they are regarded as apocryphal.

**Gothenburg System**, a method of controlling the sale of intoxicants originally adopted at Gothenburg, and since tried in Norway, Sweden, and other places with some success. It restricts the sale to houses appointed by the State, appoints companies to manage them at a fixed rate of interest, and applies the surplus profits to public objects.

**Goths**, a Teutonic people whose descent on Central Europe from Baltic regions and ultimate domination of a great part of the Continent had a widespread historic influence in the 4th and 5th centuries. Under the leadership of Alaric (and then known as the Visigoths) they conquered both Greece and Rome in 410, but by the 8th century they became merged in the Spanish race.

**Gowrie Conspiracy** was an unsuccessful project for securing the person of, or assassinating, James VI of Scotland, afterwards James I of England.

**Grail.** (*See* **Holy Grail.**)

**Gramme**, the unit of weight in the metric system, being formulated as the 1,000th part of a certain piece of platinum called the "Kilogramme des Archives" preserved in Paris. It is equal to about 15 1/9th grains Troy. The further division of the gramme gives the centigramme (100th part), decigramme (1/10th), decagramme (10 grammes), etc. (*See* **Metric System.**)

**Gramophone**, an apparatus on the disc principle for recording and reproducing vocal sounds, invented by E. Berliner, and one of the most popular of the talking machines.

**Grampus**, a cetacean of the Dolphin family frequent in temperate waters, and at maturity being over 20 feet long.

**Grand Prix**, the "French Derby," was established by Napoleon III in 1863. It is the chief French race and is an international competition of three-year olds.

**Graphite**, or **Plumbago**, commonly called black-lead, is a carbon substance occurring in foliated masses in limestone, granite, etc. It is soft, will make black marks on paper or other plain surfaces, and is mainly used for lead pencils. The best graphite comes from Siberia.

**Graphophone**, a disc sound-recording and reproducing machine, different in construction from the phonograph, but producing results of a like kind.

**Graphotype**, a kind of block for printing from, the drawings for which are made on a chalk surface with a silicious ink. The soft parts are brushed away after the surface is dry, and a block is made from what remains in relief.

**Grapnel**, a modified kind of boat's anchor, with flukes for holding by. Also an arrangement of hooks or clamps for fixing to and holding one ship to another while being boarded in an engagement.

**Grass-Cloth**, a fabric made from China grass, the fibre of certain plants of the nettle order.

**Grasses** form the general verduous covering or herbage of the fields, and include a wide variety of plants. Ordinarily the term is applied to pasturage plants on which cattle and other animals feed, but in its broader application also takes in the various cereal plants, such as wheat, barley, oats, rice, etc.

**Grasshopper**, a well-known insect, whose third or hind pair of legs are constructed to enable it to make progression by leaps. There are many species, most of which are of the locust order. The male grasshopper makes a shrill sound as he leaps.

**Gravitation** is the natural attraction of bodies of matter to the centre of the earth, the principle having been set forth by Newton in 1657.

**Gravity Railway** is a railway worked by the power of gravity alone. The road is constructed on inclined planes, usually so arranged that descending cars pull the cars from below to the higher level.

**Graylag**, the ordinary wild gray goose of Europe, and so called from the fact that at one time it did not migrate with the old wild geese, but lagged behind in the fens and marshes.

**Grayling**, a fresh-water fish of the salmon family, having a large dorsal fin, and averaging about 1 lb. in weight. It affords good sport to the angler.

**Grease**, animal fat in a soft condition, used partly for lubricating purposes and as an unguent. It assumes many forms, and is derived from many sources.

**Great Circle Sailing** is the art of steering a ship in a line with a straight diameter of the earth.

**"Great Eastern,"** the paddle steamship built by Scott Russell at Millwall, launched in 1858, then the largest vessel afloat, measuring 691 feet in length and 83 feet in breadth, and of 22,800 tonnage. It was used for some years in cable laying in the Atlantic and Mediterranean, and in 1888 was sold to be broken up.

**Great Powers.** The six European countries to which this term was long applied were Great Britain, France, Germany, Austria, Russia and Italy.

**Great War** (1914-18). Hostilities were precipitated in July 1914, by the Austrian ultimatum to Serbia, protesting on account of the assassination of the Archduke Ferdinand of Austria at Sarajevo, and demanding a large indemnity under conditions which it was impossible to accept, and being virtually a declaration of war. This involved the Russian Government, which was bound by promises to protect the interests of Serbia. In the meanwhile tension between France and Germany had become acute, and German troops occupied Belgium in August in defiance of the Treaty defending the neutrality of Belgium, signed by France, England, and Germany in 1830. War was declared on Germany by this country on Aug. 4th, 1914. The war involved Italy, Roumania, Japan and ultimately the United States as allies of Great Britain and France, while Turkey and Bulgaria participated on the Germano-Austrian side. The war areas included eastern France, Poland, Transylvania, the Balkans and Northern Italy. Other complications resulted in fighting in Mesopotamia, Syria, E. Africa and on the high seas, the chief naval theatre being the North Sea. The decisive engagements include: the Battles of the Marne (1914), which checked the advance of German troops on Paris; Neuve Chapelle, Ypres in the British offensive of 1915; German

offensive: Verdun, 1916; naval battle of Jutland, May, 1916. Franco-British offensive: Somme, in 1916, Vimy Ridge, Passchendaele Ridge, etc., 1917; German offensive on Western front, March, 1918: Rheims, Amiens, Cambrai, etc. A treaty was concluded between Germany and Russia in 1917 at Brest-Litovsk. Mutiny in the navy and the general breaking down of the moral of the German army, the exhaustion of the working masses and their political leaders culminated in a revolution and induced Germany to sign an armistice on Nov. 11, 1918.

**Grebe,** a diving bird of beautiful plumage, of which there are some 20 species. The two species familiar in this country are the Dabchick and the Great Crested Grebe, the latter having a feathery tuft on each side of the head. The breast feathers are of a downy softness and silver lustre.

**Greek Church** represents the churches in accord with the Greek patriarchal see of Constantinople, and marks the point of separation from the Roman Catholic Church which occurred in A.D. 1504 when Pope Leo IX. excommunicated the patriarch, and the countries comprised in Greek, Greco-Roman, Russian, and certain Oriental groups remained faithful to the Patriarchal cause. The Greek Church accepts the doctrine of transubstantiation, believes in the intercession of the Virgin and saints, and the power of priestly absolution; but rejects purgatory, Papal supremacy, the worship of images, and allows its priests to marry. It has over 144,000,000 adherents, nearly two-thirds being Russians.

**Greek Fire,** a combustible, supposed to have been composed of sulphur, nitre, naphtha and asphalt, used with destructive effect by the Greeks of the Eastern Empire in their wars. The secret of its composition was preserved for hundreds of years, but, when Constantinople was conquered, was discovered by the Mahomedans. The Saracens used it against the Christians during the Crusades; it would burn under water.

**Greek Kalends,** equivalent to never, as only the Romans, not the Greeks, had kalends.

**Greenovite,** a kind of titanite found at St. Marcel in Piedmont. It is of a manganesian variety, and is rose-red in colour. Its name is derived from its discoverer, Mr. C. B. Greenough, the geologist.

**Green Room,** the common assembling room for actors and actresses behind the stage, so called from the first room of the kind being decorated in green.

**Gregorian Song,** a name applied to the ritual music as established by Pope Gregory I. Gregorian music requires a more rigid harmony than can be given in the modern system, and is peculiarly appropriate for church use.

**Grenade,** an explosive shell which was thrown by hand or with a shovel. Grenades were made of various materials—wood, glass, gun-metal, bronze, etc.—and were in use in the 17th century. Modern grenades are of spherical shape, and usually cased in cast iron.

**Grenadier** was originally a picked soldier, employed in throwing hand grenades. The Grenadier Guards regiment perpetuates the now obsolete usage in connection with our own army.

**Gretna Green,** a village in Dumfriesshire, Scotland, just over the border of England; a celebrated place where runaway marriages were, and sometimes now are, performed. These irregular Gretna Green marriages in vogue for nearly 100 years were abolished by Act of Parliament in 1856.

**Greyhound,** one of the oldest known varieties of dog, bred for the chase, and of great fleetness. Used in the popular sport of coursing and for dog-racing. Among its sub-varieties are the Scotch deerhound, the Irish boar-hound, and the Russian wolf-hound.

**Griffe,** the name given to a claw-like architectural decoration common in mediæval buildings, and placed at the base of columns.

**Griffin,** an imaginary monster, half eagle, half lion, familiar in heraldry, legend, and architectural decoration.

**Grille,** a metal-work covering in the form of decorative bars, used to protect apertures in walls or doors.

**Grilse,** a young salmon, at that period of its development when the fish makes its first return to fresh water, usually in its second year.

**Grimmel,** a sub-order of apocarpus mosses; *Grimmia pulvinatum,* the Swan's Neck Bryum, is the typical genus.

**Grimm's Law,** formulated by Jacob Grimm, an eminent German philologist, lays down a principle of consonantal change in the Germanic languages, due to accent shift.

**Grindery,** the materials employed by shoemakers and other workers in leather in their craft.

**Grindstone,** a wheel of sandstone, employed in smoothing surfaces, and grinding and sharpening tools; it may be worked by treadle or machinery. The millstones used for grinding corn are also called grindstones.

**Grisette,** the name given in France to young women who serve in shops and elsewhere, and are not specially bound by domestic ties.

**Groat,** an old English silver coin of the value of 4d. It was first issued in the reign of Edward III, but after 1662 only coined as Maundy money. The fourpenny piece was resumed, though not under the old name, in 1836, but in recent years has dropped out of the coinage.

**Groats** (or **Grits**) are the grain of oats deprived of the husks; and, crushed, become whole meal.

**Grog,** the beverage served out to sailors, and compounded of spirit and water in prescribed proportions. The name, it is said, was derived from the fact that Admiral Vernon, who introduced it into the English navy in 1745, wore Grogram breeches. Now, any sort of mixed drink is called "grog."

**Grogram,** a kind of rough fabric made of wool and some other fibre, such as silk, mohair, or cotton, formerly much used for commoner kinds of wearing apparel.

**Groschen,** a silver coin introduced into the German currency about the 14th century and still in use. It is a thirtieth of a thaler, or about 1½ of a penny, English.

**Grotto,** a natural or artificial cave. Some grottoes are of great beauty, and are much frequented. The most famous are those of Capri, of del Cane, and of Antiparos. The latter is covered with stalactite formations of singular picturesqueness.

**Grouse,** a kind of game-bird common to the moors of England and Scotland. Of the same family are the ptarmigan of Scotland, the capercailzie, also found in Scotland, the Canada grouse, the American prairie-hen, and the common partridge. Grouse shooting begins in Britain on the 12th August.

**Grub Street,** the London city quarter of hack writers during the Georgian period, and frequently alluded to in the literature of those days. To-day it is called Milton Street.

**"Grundy, Mrs."** a sort of Mrs. Harris, introduced by Dame Ashfield, a character in Morton's comedy "Speed the Plough." The Dame considers every action from the point of view of Mrs. Grundy (a personification of British respectability), and is continually putting the question, "What will Mrs. Grundy say?" Thus the name became proverbial.

**Gruyère,** a special kind of cheese, first peculiar to the small town of that name in the canton of Freiburg, Switzerland, but now made in other parts of Switzerland and in France. It is of a pale yellow colour, and contains air passages and bubbles which give it a rather honeycombed appearance.

**Guanaco,** a large species of llama, common to South America, and utilised as a beast of burden.

**Guano,** the excrement of sea-birds, found in the largest quantities on the rocky islands of the western coasts of South America. It forms a useful fertilising agent, and first came into use in 1841, since which time Peruvian guano has been a recognised article of commerce. Beds of guano of from 50 to 60 feet in thickness are not uncommon. Fish guano and bat guano from caves in South America and the Bahamas are also among modern fertilisers.

**Guardian,** one who has the care of the person or property of another, or (as Guardian of the Poor) was one of a body entrusted with the administration of the old poor law system.

**Guards** in the British Army comprise three regiments of cavalry, and five foot regiments. The cavalry regiments are the 1st and 2nd Life Guards, and the Royal Horse Guards; there are

also seven regiments of Dragoon Guards; the infantry guards are the Grenadiers, the Coldstreams, the Scots Guards, the Irish Guards, and the Welch Guards.

**Gudgeon,** a small fresh-water fish of the carp family.

**Guelphs,** the name of a powerful German family of the Middle Ages, for a long time in conflict with the Ghibellines. The Guelphs were founders of the royal houses of Brunswick and Hanover. The present Royal Family of England assumed the name of Windsor during the war.

**Guereza,** a large African monkey, with long flowing masses of white hair and tufted tail.

**Guildhall,** the place of assembly of the members of a guild, and at one time, when guilds were in full strength, was practically the Town Hall. The London Guildhall is to-day the hall of meeting for the City of London Corporation.

**Guilds** for the fostering and protection of various trades have existed in England since Anglo-Saxon times, and from the 12th to the 16th centuries, during which period they greatly developed, exercised great influence and enjoyed many privileges. There were trades' guilds and craftsmen's guilds, and in all large cities and towns there was a guild hall. Their successes in the Middle Ages led to many monopolistic abuses, and in the end it became necessary to free the country from their restrictive power. Seventy-seven guilds, including the Mercers, Grocers, Drapers, still exist and enjoy considerable revenues, but they are now only private bodies and have little direct influence upon the course of trade.

**Guillemot,** a genus of sea-birds of the auk family, common in Northern Europe, two species—the Common Guillemot and the Black Guillemot—being natives of our own sea coasts, nesting and breeding on the cliffs.

**Guillotine,** the apparatus used in France for the punishment of death. It consists of an oblique-edged knife, fixed between two grooved posts, and being heavily weighted, falls forcibly on the neck of the victim, severing head from body. The machine, which is a modification of a beheading machine used in various countries in the Middle Ages, was named after Doctor Guillotine, on whose proposition, in the French National Assembly of 1789, such a method of execution was adopted. Dr. Guillotine was not the actual inventor of the machine, nor did he, himself, as is popularly supposed, suffer death by its agency.

**Guinea,** an English gold coin of the value of twenty-one shillings, current from 1663 to 1817, and deriving its name from the first guinea coinage being struck from gold obtained on the coast of Guinea.

**Guinea Pig,** a small animal of the cavy order, a native of South America, of various colours, and very prolific. It is often kept as a pet, but does not display much intelligence. How it got its popular name is a mystery, since it did not come from Guinea, nor is it a pig.

**Guitar,** a six-stringed musical instrument of the lute order. Spain seems to have been its country of origin, and it is still popular there, in Italy and France, and has also a certain vogue, and was once much heard in England in song accompaniments. It has a range of from 3 to 4 octaves.

**Gulden,** a former gold coin of Germany, the Low Countries, and a former silver coin of Austria, worth about 1s. 8d. English. The silver gulden is still current in Holland.

**Gules,** a heraldic term, denoting a rose or red tincture, indicated by vertical lines drawn or engraved without colour.

**Gulf Stream** is commonly supposed to have an important influence upon the climate of the British Isles and North-Western Europe generally, but in recent years scientific geographers have shown that the belief has no foundation in fact. The Gulf Stream cannot be distinguished from the rest of the Atlantic anywhere east of Newfoundland, so that it disappears long before it reaches our shores. The stream is, in fact, only an incidental part of a great system of circulation of the surface waters of the North Atlantic, and the drift of water from North America to Europe is caused entirely by prevailing winds. These moist south-westerly winds possibly derive some heat from the great mass of Atlantic water which they keep in circulation, but in the main the warmth is due to the fact that the wind itself comes from warmer regions. If the Gulf Stream were diverted at the Straits of Florida we should not experience the slightest change of climate, for the warm wet south-west winds would still ameliorate the temperature of our Islands.

**Gull,** a web-footed sea-bird of numerous species, inhabiting the sea coasts of all parts of the world. They are mostly of a soft greyish-white plumage, and are voracious feeders, living on fish, eggs, small birds, worms, etc. Eight or ten species are native to the British Isles.

**Gulliver,** the hero of Swift's satire, *Gulliver's Travels*, who, in Lilliput and Brobdingnag, passed through a series of adventures which were so contrived as to reflect the humours, follies, and shortcomings of Swift's day. Apart from its satire, it forms one of the best books ever written.

**Gums** are glutinous compounds obtained from vegetable sources, soluble in cold or hot water, but not in alcohol. There are innumerable varieties. Gum Arabic is exuded from a species of acacia grown in Senegal, the Sudan, Arabia, India and other countries, and is a valuable commercial product, used in dyeing, ink-making, as a mucilage, and in medicine. India-rubber is an elastic gum. Gums are also made from starch, potatoes, wheat, etc., from seeds, bark, roots, and weeds. Many so-called-gums are resins.

**Gun-Cotton,** a powerful explosive manufactured by subjecting a prepared cotton to the prolonged action of a mixture of three parts sulphuric acid and one part of nitric acid. It burns without explosion on ignition, but by percussion explodes with a force five times greater than that of gunpowder.

**Gun-Money,** the name given to the money coined by James II. as "sinews of war," on his attempts, in 1689 and 1690, to recover his lost kingdom. The coins were mostly made from brass cannon and kitchen utensils, and were of the nominal value of 6d., 1s., 2s. 6d. and 5s. respectively.

**Gunny,** a coarse cloth made in India from jute and hemp, used chiefly for bags and sacking, though sometimes also for clothing by the very poor. Gunny cloth is largely manufactured in Dundee.

**Gunpowder,** the oldest of explosive mixtures, is a compound of saltpetre, sulphur, and charcoal thoroughly amalgamated and reduced to fine powder. The proportion of the ingredients is varied according to the uses for which it is destined. In recent years a smokeless gunpowder has been employed, an oxidising agent being used to prevent the smoke. Cordite is a familiar example.

**Gunpowder Plot** was the conspiracy entered upon by a desperate band of Roman Catholics, in the reign of James I., to avenge the harsh treatment to which the Catholics were subjected in those days. Barrels of gunpowder were secreted in the vaults underneath the Houses of Parliament, and it was proposed to fire these when the King and his Ministers assembled on the 5th November, 1605. A letter of warning to Lord Monteagle led to the discovery of the plot, and Guy Fawkes and his co-conspirators were arrested, and executed.

**Guns** comprise muskets, carbines, rifles, cannons, etc., in a never-ending variety. In the 14th century they were simply tubes by means of which stones were thrown at an enemy. Then gunpowder came into use, and a metallic tube which could be carried in the hand was utilised for firing and directing the shot; and so from small arms the advance was made to cannon, and machines of immense power came to be adopted. Among the leading modern inventors of guns are Lord Armstrong, who in 1855 invented the wrought-iron, breech-loading gun; Major Palliser, who was responsible for the tube-lined gun, adopted in the British army about 1870; Krupp, with his powerful steel guns for the German Army; and Whitworth's rifled firearms. Of machine guns the Maxim, Vickers, Lewis, Hotchkiss, and Puteaux types are in most general use. The German machine gun is mostly of the Maxim type. The guns used in the Great War outclassed all previous guns.

The 15-in. gun of British battleships weighs 96 tons, fires a shell of 1720 or 1950 lbs., and has a muzzle energy of 84,510 ft.-tons. The Germans claim to have 16-in. and 18-in. guns. Their long-distance guns bombarded Paris at a range of 75 miles.

**Gunter's Chain,** a surveyor's chain invented by Edmund Gunter to facilitate the admeasurement of areas. It possesses 100 links, and is 22 yards long, each link representing 7·92 inches.

**Gurnard,** a sea-fish, with large, bony head and diminutive body, of which there are some forty species. They are plentiful in British waters.

**Gutta Percha,** the concrete juice of an evergreen tree common in the Peninsula and Islands of Malay. It possesses normally and naturally little elasticity, but becomes pliant under a rising temperature and has many commercial uses. In recent times it has become of considerable value as a covering for electric wires, being a non-conductor, while it is largely employed in making hose, belting, and other flexible goods. Combined with the more elastic caoutchouc it is easily vulcanised.

**Guy's Hospital,** founded by Thomas Guy in Southwark, London in 1725, is one of the most important institutions of the kind. It has an income from endowments of over £65,000; but its expenses are about three times that amount, and the hospital relies largely on voluntary subscriptions for its great work.

**Gybing,** in navigation, means the moving of any boom-sail from one side of a mast to the other.

**Gymnasium,** originally a Greek institution, and forming a part of the general education equipment. It was also adopted by the Romans to some extent, and in modern times, especially in England, has been imitated on a large scale. In ancient Greece the term Gymnasium came to be specially associated with higher teaching, as is now the case in Germany.

**Gymnastics,** the general term for athletic diversions when performed not as sports or games, but as disciplinary or health-promoting exercises.

**Gynæceum,** the nursery or apartments of the females in a house; a term in Greek architecture.

**Gypsoplast,** a cast taken in white lime or plaster of Paris.

**Gypsum,** a whitish mineral consisting of sulphate of calcium. Some varieties are of a brown-red tint. Ground to a powder, it forms a manure; heated to 400, it resolves itself into plaster of Paris. The finest gypsum is alabaster.

**Gyromancy,** divination by walking in circles, was one of the ancient superstitions. The person for whose benefit the art was invoked walked round and round in a circle (about which certain signs had previously been placed) until he fell from giddiness. From the manner of his fall in relation to the signs, the interpretation was formulated.

**Gyroscope,** an application of the principle of the spinning top to a single-rail railway, the steering of ships, and the steadying of torpedoes. (See **Brennan, Louis,** Pears' *Dictionary of Prominent People.*)

## H

**Habeas Corpus,** the name given to a writ ordering the body of a person under restraint or imprisonment to be brought into court for full inquiry into the legality of the restraint to be made. The first Habeas Corpus Act was passed in 1679, though nominally such a right had existed from Magna Charta, but some of the more despotic kings had disregarded it. In times of public peril the privilege of *habeas corpus* is sometimes temporarily suspended, many instances occurring in the recent history of Ireland.

**Habendum,** the name applied to the special clause of a deed of conveyance which specifically sets forth the estate or interest which the grantee is "to have and to hold."

**Habrocoma,** a genus of South American rodents, possessing four toes to each fore foot, having large ears, and a fine, soft chinchilla-like fur.

**Hackling-Machine,** an apparatus employed in removing burrs and other foreign substances from raw flax prior to spinning. It consists of a pair of rollers covered with brushes and hackles.

**Haddock,** one of the best-known fishes abounding in northern seas and averaging about 4 lbs. in weight. Largely used for curing, and sold as "finnan haddies."

**Hade** of veins, a mining term indicating the particular inclination that any vein, seam, or strata may have from the perpendicular; thus, in Weardale the veins mainly "hade" to the north.

**Hadji,** a title given to any Mussulman who has made the pilgrimage to Mecca. A green turban is the designating headgear of the Hadji.

**Hæmatite,** peroxide of iron, one of the principal iron ores, containing about 70 per cent. of the metal. It is usually found in kidney-shaped masses, and is specular, red or brown, in thin fragments, but greyish in bulk.

**Hafiz,** besides being the name of a famous Persian poet, is a title conferred upon any Mahomedan who has committed the whole of the Koran to memory.

**Hag-fish,** a parasite sea-fish with soft backbone and eel-like form; found within the bodies of other fish, and called sometimes the "borer," or "the glutinous hag-fish."

**Hagiarchy,** a form of government composed of priests.

**Hagiographa,** the "Holy Writings" of the Jewish Scriptures, and comprising the Chronicles, the Psalms, Proverbs, Song of Solomon, Ecclesiastes, Job, Ruth, Lamentations, Esther, Daniel, Ezra, and Nehemiah.

**Hagiology,** a branch of literature that is wholly given up to the history of the saints, and the setting forth of the stories and legends associated with their names.

**Hail,** frozen rain-drops or hailstones are composed of ice and snow, and vary in shape according to the producing conditions, although most commonly conical. It is on record that hailstones weighing over half a pound have occasionally fallen. Hail is often an accompaniment of a thunderstorm. Hail-storms do much damage to vines, fruits and agricultural produce, and many societies exist on the Continent for hail protection, the method of procedure being to keep up discharges of artillery at threatening periods, which usually has the effect of dispersing or warding off the hail.

**Haileybury College,** in Hertfordshire, originally established in 1809 for the education of boys for service under the East India Company. Since 1862 it has been a public school, receiving its charter in 1864.

**Hair,** a more or less fine capillary covering forming on the skin of animals generally, in many instances covering the entire body, but in human beings having its chief development on the head. Human hair grows longest on the heads of women. Ordinarily, the structure of a hair comprises a root, a stem or shaft, and a point. The root, which is bulbous, is enclosed in a skin follicle, connected with which are sebaceous glands whose secretion feeds and imparts gloss to the hair. Hair bears a colouring pigment, black, brown, flaxen, or red, and when the pigment begins to fail in its supply the hair loses its colour and turns grey. Males have usually a distinctive hair formation, as in man the beard.

**Hake,** a fish of the cod family, found in large numbers in the seas of Europe, but not in high favour for the table with fastidious feeders.

**Halberd,** a kind of spear much used as a military weapon in feudal times. Its blade was sharp-edged, and it bore an axe or projecting knife a few inches from the point. Halberdiers often formed the body-guard of kings and notables.

**Halcyon,** a term associated in olden times with the kingfisher and days of soothing calm, "halcyon days" being a frequently used expression. The legend was that the kingfisher laid its eggs on the sea at a time of perfect stillness.

**Haldanites,** a small religious sect established about a century ago by James and Robert Haldane in many parts of Scotland, but the divergence of doctrine from the orthodox Christian teaching was so small that the Haldanites in time became affiliated with other denominations.

**Half-pay,** pay allowed to naval or military officers retired from active service, but liable to be called upon for active duties in an emer

**Halibut,** one of the largest of the flat

averaging when full grown from 4 to 6 feet in length, and highly esteemed for the table. Specimens of still larger size occasionally occur. It is plentifully distributed. Its two eyes are on the right side of the head.

**Haliotidæ**, a genus of sea-shells to which the term ear-shells is commonly applied by reason of their shape; largely used as ornaments and for inlaying. Some species are found on the British coasts, but the best kinds are tropical. The inmates of these shells are edible.

**Hallowe'en** (October 31st), the eve of All Saints' Day, a time associated, especially in Scotland, with certain pleasing superstitions attractively set forth in Burns's famous poem "Hallowe'en." It is the night when young men and maidens are supposed, by observing certain rites, to have their future wives and husbands disclosed to them.

**Halo**, a lustrous circle surrounding the sun or moon, and due to the refraction of the light by ice-crystals in the higher atmosphere. Small halos are termed coronæ. Solar halos are rainbow-hued, lunar halos are mostly colourless.

**Halogens** is a general scientific term applied to the four combinable non-metallic elements, chlorine, bromine, iodine, and fluorine.

**Haltica**, a family of flea-beetles, which include the turnip flea, the cucumber flea, and the cabbage flea. They are very small but destructive.

**Halvans**, a Cornish mining term for refuse ore.

**Hammock**, a hanging bed, net, or canvas for resting or sleeping upon. In tropical countries hammocks are in general use, also in summer time in colder countries, while on shipboard they are very largely resorted to, especially in hot climates.

**Hampton Court Conference**, called together and presided over at Hampton Court Palace by James I. in 1604, had an important bearing on the religious differences of the time. Prominent representatives of both the Church and the Puritanical parties were present, and amongst other things that this Conference brought about was King James's authorised translation of the Bible.

**Hamster**, a kind of burrowing rodent, about the size of a rat, an inhabitant of Northern Europe and Asia. Remarkable for its cheek pouches, in which it stores food. Its fur is of considerable commercial value.

**Hanaper Office**, a former Chancery office, deriving its name from the fact that such of its writs as referred to public matters were kept in a hanaper (hamper), while those relating to the Crown were kept in a small bag. The custodian was named Clerk of the Hanaper. The office was abolished in 1842.

**Hand**, a measure of four inches, the average size of the palm; a term used in reckoning height of horses.

**Handfasting**, an informal marriage custom once prevalent in Scotland, whereby a man and woman bound themselves to cohabit for a year and a day, and at the end of that period either confirmed their contract by a regular marriage or separated.

**Hand Grenade**, an iron shell charged with gunpowder, fired by means of a fuse, and thrown by hand. In the early days of explosive warfare the hand grenade was greatly used. The "Mills" grenade was very largely used in the war of 1914–18. Filled with certain chemicals, the grenade is provided for use in fire-extinguishing.

**Handicap**, in horse-racing or other contests, is an equalising of the chances of the contestants by putting extra weight on to proved superior horses or men, or by conceding privileges, in shortened distances, or otherwise, to inferiors. The aim is to give all competitors an even chance.

**Handkerchiefs** of one kind or another have existed since the dawn of civilisation. The Bible has references to them; and even in the earliest literature we find mention of handkerchiefs of special value and ornamentation. Handkerchiefs of silk and gold lace were in use in Queen Elizabeth's days.

**Handspike**, a lever of wood or metal used on shipboard for raising weights, moving guns, and other heavy work; now to a large extent superseded by more useful labour-saving contrivances.

U

**Hansard**, the title formerly given to the official reports of the proceedings of Parliament, so named after Luke Hansard, who printed the reports from 1798. The Hansard firm continued the publication down to 1889.

**Hanseatic League** was a formidable trading confederation established in 1241 for purposes of mutual protection in carrying on international commerce. The Hanse towns numbered over 100 when the League was at the height of its power, and exercised great influence, concluding treaties and exercising almost supreme authority within its own limits. The League safeguarded the seas from pirates, the land from robbers, and coerced opposing governments. A branch of the League was established in London, and had its guildhall in Cannon Street for hundreds of years. The League existed down to the middle of the 17th century. Hamburg, Lubeck, and Bremen are to-day the only cities which, as free ports, still by commercial courtesy retain the name of Hanse towns.

**Hansom**, a two-wheeled one-horse cab, invented by Joseph A. Hansom in 1843. It was, until the recent introduction of the motor-cab, the cab in most ordinary use in London, and many other cities and towns in the United Kingdom. Lord Beaconsfield styled it the "gondola of London." It is constructed to seat two persons, and the driver sits on a "dickey" behind, level with the roof of the cab.

**Hara-kiri**, the custom of suicide by compulsion, or "happy despatch," once common in Japan, but no longer permitted. The condemned person gave himself the first cut, and if his courage then failed him, the fatal blow was dealt by a friend.

**Hare**, the leading member of the *Lepus* family, and common in Northern Europe. Noted for having four upper front teeth, one pair behind the other, long ears, short tufted tail, and a cleft upper lip. It is a very swift animal, and intelligent in eluding pursuit, therefore much hunted, greyhounds being used to chase it, the sport being called "coursing." The hare makes a nest of grass, called a "form."

**Harem**, the portion of a Mahomedan's dwelling set apart for the female members of his family, and forbidden ground to visitors. In India the harem is called the *Zenana*.

**Harlaw, Battle of**, the famous fight in 1411 between the Highlanders, under Donald, Lord of the Isles, and the Lowlanders, led by the Earl of Mar, when the latter were completely victorious.

**Harleian MSS.** comprise some thousands of volumes of MSS. and documents, collected by the first Earl of Oxford and his son Edward. After the death of the latter, his widow handed the MSS. over to the nation for £10,000, a sum that did not represent a quarter of their value, and they are deposited in the British Museum.

**Harlequin**, the buffoon of ancient Italian comedy. As adapted to the British stage, however, harlequin is a pantomime character only, in love with Columbine, appearing in parti-coloured garments and carrying a wand, by which he exercises a magic influence in thwarting the fantastic tricks of the clown and pantaloon.

**Harmattan**, the Arabic name of a warm, dry wind that from January to March blows across the Sahara to the Gulf of Guinea and gives rise to nose and mouth ailments, though a deterrent to fever.

**Harmonics**, the science of musical sounds; the term is also specially applied to the class of sounds which can be given on a musical instrument in addition to the primary sounds, and are produced by a certain skilled manipulation that causes the string played upon to emit its higher octaves—thirds, fifths, and so on.

**Harmonium**, a keyed musical wind instrument, invented by Debain in 1840, the air being supplied from bellows operated by the feet, and driven through metallic reeds. The American organ is an improved variety of harmonium.

**Harp**, one of the most ancient of stringed instruments, and in its simpler form much used in England and Wales in early times. The modern harp, however, is a greatly improved instrument, the present double-action harp being capable of producing music in any key with very fine effect. It forms a part of most large or-

chestras, and for song accompaniments is much appreciated.

**Harpoon,** a kind of barb-headed spear used for attacking whales. These used to be thrown by hand, but the modern harpoon is an instrument of ingenious mechanism, with shaft, slot, and ring, and is fired from a gun.

**Harp-seal,** the ordinary Greenland seal, with a dark harp-shaped marking on its back, hence its name. It abounds in Newfoundland waters and further northward towards the Arctic.

**Harpsichord,** the prototype of the pianoforte, was a valued musical instrument from the 16th to the end of the 18th century. Its keyboard was from 4 to 6½ octaves, and the notes, which were thin, were produced by a plucking operation, not by striking.

**Harpy Eagle,** a native of South America, one of the most powerful birds of prey in existence. It is of grey plumage, and has a large crest. It attacks sheep, calves, and deer, and is very destructive.

**Harrier,** a bird of prey of the falcon family, three species of which are found in the North of England and Scotland. A dog used in hunting the hare.

**Harrow,** an agricultural implement with a series of strong teeth underneath which, when pulled over it, the ground is broken up. Iron is now largely used both for teeth and frame.

**Harrow School,** founded 1571, is a famous boys' school with great traditions.

**Hartebeest,** a species of common African antelope, of a grey-brown colour, with knotted horns bending backward and tapering to sharp points; it is gregarious, of large size, and capable of domestication. Its flesh is not unlike beef in flavour.

**Hart's Tongue,** the common name for ferns of the *Scolopendrium* genus, only one variety of which is found in England in the wild state.

**Harvard University,** the first American University established at Cambridge, Massachusetts, in 1638, by John Harvard, a settler from Cambridge, England. It has about 3,000 students.

**Harvest Bug,** a very small insect, of a dark red colour, which appears in large numbers in the fields in autumn, and is peculiarly irritating to animals and man by the tenacity with which it attaches itself to the skin, and burrows underneath.

**Harvest Moon,** the full moon that occurs nearest to the autumn equinox, in September. The fact that it rises for several nights running about the same time, and yields an unusually brilliant series of moonlight nights, constitutes its striking phenomenon.

**Hashish,** a narcotic drug prepared from the gum extracted from Indian hemp, and largely used for smoking by the Arabs, and made into a beverage called *bhang* in India, in both cases having much the same effect as opium.

**Hatchment,** in heraldry, is a square board, in vertical diagonal position, placed outside a house or on the tomb at the death of a member of a family and so arranged that it indicates the sex and condition of the deceased.

**Hatchways,** places or openings in the centre of a ship's decks, through which goods are lowered to or lifted from the hold.

**Hauberk,** a name first given to a portion of mail armour worn over the neck and shoulders, but later applied to a coat of mail extending below the knees.

**Hausas,** an energetic West African people occupying a tract of country between Lake Tchad and the Niger, and reputed to be of an enterprising spirit, with strong trading instincts.

**Hawfinch,** a well-known European bird of the finch family, having a variegated plumage, a sturdy bill, and black and white tail. In England it is seldom found away from the Midland and Eastern Counties.

**Haw-haw,** a fosse or ditch sunk between slopes for defensive purposes, and not perceptible until closely approached.

**Hawk,** a name applied to a diurnal bird of prey of many species; including buzzards, falcons, kites, ospreys, kestrels, etc.; but only rightly belonging to the smaller kinds, such as the goshawks and sparrowhawks, which swoop down on their prey from a height. There are only these two species in England; in America hawks are numerous.

**Hawk-moth,** the sphinx moth, is a large species, thick of body and strong of wing, and flies with rapid swooping motion, hence its name. There are numerous handsome varieties in Britain.

**Haymarket Theatre,** "the little theatre in the Haymarket in London," has existed in one form or another since 1702, and has witnessed many memorable histrionic triumphs. It was here that the famous comedy company got together by J. B. Buckstone played for so long; here Charles Matthews, Mrs. Kendal, Amy Sedgwick, Adelaide Neilson, Sir Squire and Lady Bancroft, Sir Herbert Beerbohm Tree, and many other "bright particular stars" of the footlights have appeared.

**Heart,** the fount and centre of the circulation of the blood in human beings and other animals, is the organ of the reception and distribution of the circulating fluid, dilating, contracting, and pulsating with the regular action of a force-pump. Its position is behind the breast bone, between the two lungs, and its beating is most apparent below the left nipple, between the fifth and sixth ribs. The male heart weighs 10 to 12 ounces, the female 8 to 10 ounces. Its average size is about 5 inches long, 3½ inches wide, and 2 inches in greatest depth.

**Hearth-Money** was an impost put upon every hearth or fireplace in the country. Charles II. was responsible for its introduction, in 1662: it existed for over a quarter of a century, and yielded £200,000 a year; William III. abolished it, because of "having been informed" that it was "very grievous to the people."

**Heat,** according to the modern scientific definition, is not a material substance, but molecular energy. This molecular motion consists, in the case of a liquid, of the irregular movement of its molecules; in a solid the movements are oscillatory; and with gas the motions are rectilinear with swift alterations of velocity and direction as the molecules come near enough to each other. Cessation of motion results only at zero point. As to the transmission of heat, Lord Kelvin lays it down that "in the strictest modern scientific language, the word *heat* is used to denote something communicable from one body or piece of matter to another." The transmission of heat may be effected in three ways: by convection, by conduction or by radiation.

**Heath,** a plant of the Erica order, very widely distributed over the uncultivated spaces of Europe and Africa. In this country thousands of acres of waste lands yield it, it being especially abundant on the northern moors, and known as heather and ling. Some of the African or Cape heaths are very beautiful, and are much cultivated by the florists.

**Hebrews, Epistle to the,** one of the books of the New Testament, to which no direct authorship can be assigned. Its chief mission was to proclaim Christianity as the continuation and fulfilment of the older Jewish faith.

**Hecatomb,** the name given to the public sacrifice of a hundred oxen in ancient Greece. In later times the word has been used to express any wholesale sacrifice of human beings or animals.

**Hedgehog,** a common insectivorous animal covered with sharp spines which it can, when on its defence, project in every direction by rolling itself up into a ball. It is a hibernating animal.

**Hegira,** an Arab term signifying departure or flight, and used more particularly in reference to Mahomed's departure from Mecca for Medina, A. D. 622, from which date the Mahomedan era is reckoned.

**Heliograph,** an apparatus, used for sun-signalling, consisting of a movable mirror fixed on a tripod, which mirror flashes light reflections to a distant station according to a pre-arranged code, on the dot and dash system, forming an effective means of communication. Heliograph signalling can be carried on at very long distances —up to 50 miles in ordinary weather—without the aid of field glasses.

**Heliometer,** an astronomical instrument for investigating the parallax of the fixed stars, and consisting of a telescope which has had its objective cut through the optical axis, admitting of both halves being conjointly utilised, one directed on one star while the other brings another into coincidence.

**Heliostat,** an instrument comprising a mirror (operated by clockwork) which reflects the sun's rays continuously in the same direction.

**Heliotherapy,** an ancient method of healing by the sun known to the Egyptians and the Greeks, as shown in various papyri and documents; rediscovered by continental medical men in the 19th century, and now used mainly in the treatment of surgical tuberculosis, skin diseases and war wounds. Artificial sunlight is also used with the same object. Arc-lamps and mercury vapour lamps are installed in many hospitals and other institutions.

**Heliotrope,** a favourite sweet-scented flowering plant, common in tropical and sub-tropical countries; the Peruvian heliotrope is the "cherry pie" of our summer garden borders.

**Heliotype,** a method of printing from photograph negatives by the use of a chemically treated gelatine surface as from a lithographic stone.

**Helium,** a gaseous substance discovered in 1895 by Sir William Ramsay in cleveite, uranite and other kindred minerals associated with argon and nitrogen. It is also found in the gas given off by radium.

**Hell,** according to the teaching of the earlier Christian fathers, is a place of eternal torment, to which the spirits of the wicked are doomed after mortal death. The Inferno, as imagined by Dante, is even now believed in by many; but in the general broadening of philosophic inquiry in modern times, the idea of this material hell has been greatly modified. The most orthodox of preachers in these days would hesitate to proclaim his belief in the hell of burning fires as accepted so generally a few generations ago.

**Hellebore,** a plant of the Ranunculaceæ order. The best known British examples are the green and stinking varieties. There is also a garden kind, which flowers in December. It is called the Christmas Rose. Hellebore yields a bitter substance which forms a drastic purgative, but is now little used.

**Hellenism** is the pursuit of the Greek ideal of physical and intellectual culture. Matthew Arnold's doctrine of "sweetness and light" had its foundation in Hellenism.

**Helmet,** originally a soldier's protective head covering, now a term applied to defensive headgear generally. In mediæval times helmets were for the most part of metal, and varied in shape from reign to reign. Roman gladiators wore helmets that covered the face entirely, and the helmets worn at tournaments in the 15th and 16th centuries were so closed in that the wearers could only see through the perforations of the visor. The stiff hats worn by soldiers, policemen, and firemen generally are now styled helmets.

**Helots,** bondmen of ancient Sparta upon whom devolved the most menial occupations without other recompense than food and lodging.

**Helvetii,** an ancient Celtic race who inhabited the part of Switzerland of which the capital was Aventicum.

**Helvin,** a mineral substance found in Saxony and Virginia. It is a silicate of beryllium, manganese, and iron, and contains a small proportion of sulphur, which gives it a yellowish hue.

**Hemiptera,** an order of insects most of which are known by the general term of "bugs." Their wing structure is in most species incomplete, hence the term hemiptera. There are supposed to be some half million species, including plant lice, cicadas, etc. They feed on plant juices, insect and animal blood, sap, etc. The order has two main divisions, Heteroptera, indicating true bugs, and Homoptera, the lice classes.

**Hemisphere,** half of the terrestrial or celestial globe. Thus, taking the equator as the dividing line, we have the Northern Hemisphere above that line, and the Southern Hemisphere below it. Again, there is the geographical division of the Eastern and Western Hemispheres, the former comprising Europe, Asia, Africa, and their outlying islands; the latter including North and South America.

**Hemlock,** a plant of the Umbelliferæ family, growing in all parts of Britain, and containing a strong alkaline poison. Used medicinally, this alkaline substance is of considerable service, being a powerful sedative. According to **Pliny,** hemlock was the poison used by the Athenians in putting criminals to death.

**Hemp,** a plant of the nettle family, growing abundantly in tropical countries, and cultivated for a valuable fibre contained in its bark. This fibre, which is obtained by maceration, is tough and strong, and is largely used for rope-making and in manufacturing coarse fabrics. It contains a resinous substance from which the hashish smoked by the Arabs is made. The seed yields a valuable oil, and is also largely used as bird food.

**Henbane,** a plant common in Britain and other parts of Europe and Northern Asia. It belongs to the Solanaceæ order, grows mostly on waste ground, and bears yellow-brown flowers veined with purple. The leaves yield a poisonous alkaloid substance which, medicinally prepared and administered, is of great use. Tincture of henbane is often preferred to laudanum.

**Henna,** an Egyptian plant bearing small white flowers. Mahomed's "chief of flowers," and the "camphire" mentioned in the Bible. The leaves yield a dye with which it is the practice of Eastern women to stain their nails, eyelids, and hair.

**Heptameron,** a book of stories, written or compiled by Queen Margaret of Navarre in imitation of Boccaccio's *Decameron,* and supposed to have covered seven days in the telling.

**Heptarchy,** the name applied to the seven kingdoms into which England was divided after the Anglo-Saxon invasion, and lasting, with occasional variations, from 457 to 827—from Hengist to Egbert, the latter assuming the sole sovereignty in 827. The seven kingdoms were *Kent; Sussex* (including Surrey); *Wessex* (Hants, Wilts, Somerset, Dorset and Devon); *Essex* (with Middlesex thrown in); *Northumbria* (all the country from the Humber to the Forth; *East Anglia* (Norfolk, Suffolk, and Cambridge); and *Mercia* (the Midland counties).

**Heracleum,** a plant of the Umbelliferæ order, common in Southern and Central Europe, though only one species, the cow parsnip, grows in England. It has a bitter root, and from the juice of the stem an intoxicating liquor is occasionally prepared.

**Herald,** an officer of state empowered to make formal proclamations and deliver messages from the sovereign or other high personage whom he served. In the developments which took place in armorial bearings, the herald was the functionary charged with the duty of their proper depiction.

**Heraldry,** the art or science of genealogy and armorial bearings, was mainly the outcome of the love of outward distinction which prevailed in mediæval times. "Heraldry," says Stubbs, "became a handmaid of chivalry, and the marshalling of badges, crests, coat-armour, pennons, helmets, and other devices of distinction, grew into an important branch of knowledge." The *shield,* or *escutcheon,* is the ground upon which armorial signs are traced, the colour of the shield being called the *tincture,* the signs recorded the *charges.* There are seven *tinctures—or* (gold), *argent* (silver), *gules* (red), *azure* (blue), *vert* (green), *purpure* (purple), and *sable* (black). The *charges* are classed as "Honourable" and "Sub-ordinate" ordinaries, comprising lines and geometrical forms; and "Common" ordinaries, which latter includes all representations of natural objects. There is also a system of external signs, such as crowns, coronets, mitres, helmets, mantlings, wreaths, and crests, each having its distinctive significance. For other distinguishing marks see *Supporters, Hatchments, Badges,* etc.

**Heralds' College,** or **College of Arms,** was incorporated by Richard III., in 1483. Its head is the Earl Marshal (an office hereditary in the family of the Dukes of Norfolk), and there are three Kings-of-Arms, six Heralds, an extra Herald, and four Pursuivants. The business transacted is wholly connected with the tracing of genealogies and the granting of armorial bearings. In Scotland the Heraldic functions are performed by the Lord Lyon King-of-Arms, and in Ireland by the Ulster King-of-Arms.

**Herbarium,** a systematically classified collection of preserved plants.

**Herbivora**, animals, especially mammals, subsisting upon grass, herbs, or other plants.

**Herbs**, all plants with succulent, non-wood producing stems, whose leaves or flowers, and sometimes also the root, die down on the approach of winter.

**Heredity**, the transmission of physical or mental characteristics from parent to offspring in successive generations. Thus, we have families of musicians, families of financiers, families of artists, families of actors, families of soldiers, and so on, members of which, as a rule, may show the ancestral characteristics in a certain degree, although the striking genius may not appear except at wide intervals.

**Hereford Cattle**, a breed having a dark-red body, with a white face and breast, and sometimes a long line of white upon the back. They are hardy, good grazing animals, excellent for the butcher, but not useful for dairying purposes.

**Heretics**, a term applied to those who adopt a religious belief opposed to that of the Christian Church in general, or to that imposed for the time being by a state. In the past heretics were severely dealt with, hundreds being burned at the stake.

**Heriot**, a fine or acknowledgment of service due to a manorial lord and paid on the decease of the tenant. This form of tribute is still retained in connection with some copyhold ownings. Copyhold was abolished by Law of Property Act, 1925. Heriots were originally arms and habiliments of war.

**Hermaphrodite**, human beings, animals, or plants possessing both male and female generative characteristics. True hermaphrodites very rarely occur.

**Hermetic Philosophy**, the doctrine or system propounded by Hermes Trismegistus, an Egyptian of the 2nd century, who was supposed to have written forty-two books devoted to religion and the occult sciences, which books were always kept under secret guard, hence the term "hermetically sealed." These Hermetic Books were presumed to be copied from the ancient sacred books of Egypt.

**Hermit**, one who retires into seclusion for the purpose of religious contemplation and a desire to live apart from the world. Hermits were regarded with reverence in mediæval times and were free to wander about. Peter the Hermit instigated the first Crusade.

**Hermit Crab**, a kind of crab having a soft fleshy body, without shell-protection. It possesses itself of the empty shell of some mollusc, into which it backs itself, and this usurped shell it carries about with it thenceforward, or until it has outgrown its dimensions, when it seeks a larger one. The common Hermit Crab of Britain usually resorts to a whelk shell.

**Heron**, a large wading bird with long curved neck and pointed bill, is a member of the Ardeidæ family, of which there are many species. Egrets and bitterns are included as herons. Herons are to be met with in marsh lands and near rivers and lakes, where they feed on fish and frogs. They nest in trees in large numbers, these colonies being called heronries. The common heron is native to England, and other species from the Continent are frequent visitors.

**Herring**, a common sea-fish abounding in northern seas and always to be found in large numbers round the British coasts. The herring fishing is the most important fish industry in this country, a very numerous fleet being engaged in it. The fishing season proper lasts from May to October, the enormous shoals being followed as they move from place to place. The spawning season is about the end of August. One female herring will yield as many as 70,000 eggs. The annual value of the British herring fishery is nearly £3,000,000, over a half million barrels being cured in Scotland alone every year.

**Heterogenesis**, a term first used by Huxley to indicate the production of offspring, plant or animal, differing permanently in structure and habit from its parent, and representing to a certain extent spontaneous generation. In instances cited, however, there is a return to the original form after one or two generations.

**Heteromys**, a species of "spiny pocket" rodents, possessing cheek pouches, belonging to the family Saccomyina, and indigenous to Trinidad.

**Hexagon**, a figure consisting of six sides and six angles, called a regular hexagon when all the sides and angles are equal.

**Hexahedron**, a solid body having six sides, particularly exemplified in the cube, or regular hexahedron.

**Hexameter**, a measure of verse consisting of six feet, the first four of which may be either spondees or dactyls, and while the fifth is normally a dactyl, the sixth *must* be a spondee.

**Hexapla**, a 3rd century edition of the Old Testament in parallel Hebrew and Greek characters, by Origen.

**Hexateuch**, the title given to the first six books of the Old Testament, comprising the Book of Joshua in addition to the five books of the Pentateuch.

**"Hiawatha,"** the title of one of Longfellow's best-known poems. The hero is a being supposed by the Red Indians to be a spirit sent from realms of space to lead them to a higher existence.

**Hibbert Lectures**, on theology by eminent authorities, founded in 1878 by the bequest of John Hibbert, a West Indian merchant.

**Hibernation**, expresses the dormant condition in which numerous animals, reptiles, amphibians, insects, plants, etc., pass the winter. In the case of animals it is a deep sleep that they undergo, and is due probably more to the winter being the period when natural food is unobtainable than to the cold. Before hibernation sets in, the animals fatten themselves up, but in spite of this there is considerable loss of weight sustained. Animals of the torrid regions pass through an analogous period during the hot season, when the sources of food are dried up.

**Hickory**, an American tree of the walnut family, remarkable for its very hard, solid, heavy white wood, and bearing an edible, four-lobed nut.

**Hickory-shirt**, an American term signifying a shirt made from checked cotton stuff.

**Hicksites** were a small community of American Quakers, who separated themselves from the parent church, under Elias Hicks, in 1827.

**Hierarchy**, a term applied to ecclesiastical or Church government, and involving a graded organisation with a supreme head.

**Hieroglyphics** are the earliest form of pictured symbolic expressions, and are supposed to have been introduced by the ancient Egyptians. They consist of rude depictions of animals, plants, signs, and objects, and in their later examples express, in abridged form, ideas and records from which significant historical information has been gleaned. The deciphering of Egyptian hieroglyphics long formed an ardent study, but gradually the key to the riddle was discovered, and most of the ancient records can now be understood. But the Mexican and Maian picture writings are still largely unsolved. (*See* Rosetta Stone.)

**Hieronymites** were hermits of the order of St. Jerome, established in the 14th century on the Peninsula. The order survives now only in America.

**Hindus** are the native race of Hindustan, the Brahmins and the Rajputs being regarded as the purest types. They are mostly of Aryan descent, and their religion—Hinduism—is a faith evolved from a combination of Brahminism and Buddhism.

**Hippodrome**, in ancient Greece, was a building set apart for horse and chariot races, and was often the scene of great spectacular performances.

**Hippogriff**, a fabulous animal, like a horse in body, but with the head, wings, and front legs and claws of an eagle. The monster frequently appears in the romances of the Middle Ages.

**Hippophagi**, eaters of horseflesh, applied specifically to certain nomadic tribes of Scythia and the north of the Caspian.

**Hippopotamus**, the largest living representative of the hog family, and widely distributed over Africa, where it is known as the "river-horse." It is of immense bulk, attaining a length of from 12 to 14 feet, and stands about 5 feet high. Its skin is hairless and about 2 inches thick, and it has a pair of tusks often weighing as much as 6lb. In Britain fossil remains of a larger species of hippopotamus than any now existing have been found.

**Hippuric Acid**, an acid soluble in warm water and forming into hippurates in association with

metals. It is obtained chiefly from the urine of herbivorous animals, and when heated with a powerful acid resolves into benzoic acid and glycocoll.

**Hippuris**, a genus of plants growing in marshy places. It has an erect stem, bears polygamous flowers, and has its leaves in whorl form. Its astringent qualities render it of use in medicine. The common Mare's-tail is a well-known variety.

**Hisingerite**, a hydrous iron silicate found in certain parts of Scandinavia, and named after Hisinger, the Swedish mineralogist.

**Histology** is that part of anatomical science which deals with those details of the human structure that can only be investigated with the aid of the microscope.

**Historiography**, the art or avocation of the historian.

**Hittites**, an ancient race of northern Syria, referred to in the Old Testament, and rendered subject to Solomon, to whom they paid tribute.

**Hobby**, a bird of the falcon family, about 12 inches long, seen in England in the summer, and formerly flown at small birds, which are its chief food.

**Hobson's Choice**, a term meaning the compulsory acceptance of the thing offered, is an English proverbial phrase which had its origin in the circumstance of the letting of horses by a Cambridge innkeeper named Hobson, who compelled each customer to take the horse which stood nearest to the stable door; "that or none."

**Hocco**, the common name of the curassow and other birds of that family of which there are twelve species, all natives of South America.

**Hochheimer**, a Rhine wine of high repute, made from the yield of the vineyards of Hochheim, near Mayence, Germany.

**Hog**, the common name of animals of the Suina family, including the wild boar, pig, and sow. The wild boar, *Sus scrofa*, is the common ancestor. The skin of the hog is covered with bristles, the snout truncated, and each foot has four hoofed toes. Hogs are omnivorous feeders and eat almost anything that is given them.

**Hogmanay**, the Scottish New Year's Eve festival and a national holiday of the country. The custom of demanding Hogmanay bread is still upheld in many parts of Scotland.

**Hogshead**, a cask of varying capacity, also a specific measure. In the old English measure a hogshead was 52½ imperial gallons, or 63 old gallons of wine. Of beer 54 old gallons make a hogshead.

**Holland**, the name given to a fine kind of cloth made from flax, originally manufactured only in Holland. Brown Holland is the kind not fully bleached.

**Hollands, Schiedam**, or **Schnapps**, a kind of gin made mostly in Holland from rye and malt, with a flavouring of juniper berries.

**Holly**, a hardy evergreen shrub, largely grown in England. Its bright dark green prickly curved leaves and its clusters of red berries are familiar in all parts of the country, and used as house decoration between Christmas Eve and Twelfth Night. Its wood is white and hard, valued for carved work, while its bark yields a gummy substance which is converted into birdlime.

**Holograph**, a letter, manuscript, or document written throughout by its author.

**Holothuridæ**, the class of marine animals commonly called sea-cucumbers, a variety of which—the trepang—is highly prized as a food in China.

**Holy Alliance**, the league entered into after Waterloo by Russia, Austria, Prussia, and other powers, except England, for mutual protection of their dynasties and the prevention of any member of the Bonaparte family from occupying a European throne. The alliance only existed down to 1830.

**Holy Coat of Treves**, a garment preserved in the Cathedral of Treves and said to have been worn by Christ. It was brought from Jerusalem by the Empress Helena in the fourth century.

**Holy Grail**, the cup from which Christ drank at the Last Supper, and supposed to have been preserved by Joseph of Arimathea. Many poets and romancers have made the "Quest of the Holy Grail" the subject of their imaginings, Tennyson making fine use of it in his "Idylls of the King."

**Holy Rood**, an annual Roman Catholic festival, on September 14th, to celebrate the recovery by the Emperor Heraclius in 615 of a portion of the original Cross, after it had been lost for nearly 300 years and had fallen into the hands of the Persians. Also included in the Church of England calendar.

**Holyrood**, the ancient royal palace at Edinburgh, dating from the 15th century, and inhabited by many Scottish sovereigns, notably Mary Stuart, the rooms occupied by her (including the one in which Rizzio was murdered) being still shown. It has not been used as a royal residence for 300 years.

**Holy Water**, water blessed by a priest and kept in small fonts at the entrance to Roman Catholic churches, and used by worshippers going in, and out, or by priests in sprinkling.

**Holy Week**, or **Passion Week**, is the week preceding Easter Sunday, and includes the days of the Sufferings of Christ, ending on Good Friday.

**Homage**, an act of fealty whereby a person acknowledges his service of inferiority to another.

**Home Rule**, the term applied to a separate Irish Parliament, which was the object of two Bills introduced by Mr. Gladstone in 1886 and 1893, respectively, both of which were rejected, and led to the establishment of a Liberal Unionist party of seceding Liberals. Mr. Asquith introduced a new Home Rule Bill on February 12, 1912. In September strong counter demonstrations, headed by Sir Edward Carson, took place in Ulster; on January 16, 1913, the Bill was passed through the Commons by a majority of 110, on the 30th of the same month being rejected by the Lords by 326 to 69. It was reintroduced by Mr. Asquith in the new session of 1913, again repassed by the Commons, and again rejected by the Lords. In 1914 the conflict between the opposing parties became more acute, but the Bill passed its third reading in the Commons on May 25 by a majority of 77. On the outbreak of war party politics was set aside, and ultimately the Bill was allowed to pass and the Royal assent was given to it, its operation to be delayed until after the war. In 1920 another Bill was passed in lieu of that of 1914, providing for a Northern Ireland Parliament sitting at Belfast, and a Southern Parliament sitting at Dublin. In 1921 a Bill establishing the Irish Free State was passed.

**Homer**, a Hebrew dry measure containing 10 ephahs.

**Homicide** (the killing of a human being) has three classifications—*justifiable*, as when the killing is an act of necessity, or performed in the execution of justice; *excusable*, when done in self-defence or by misadventure; and *felonious*, when done of deliberate intent, as murder, manslaughter and suicide.

**Homily**, something between a discourse and a sermon; not so discursive as the one, or so elucidatory as the other.

**Homœopathy**, a medical system introduced by Hahnemann, the German physician, early in the last century, and founded on the principle that "like cures like." The homœopathic theory is that diseased conditions are curable by the administration of such drugs as would, if the conditions were healthy, produce symptoms similar to the disease itself. Homœopathic medicines are given in infinitesimal doses with the idea that the minute subdivision of a drug adds to its power. Homœopathy has still many professors and adherents, but it can hardly be said to have realised the expectations of its earlier exponents.

**Homoousians**, religionists who, in the 4th century, in the contentions then raging regarding the nature of Christ, maintained that the Son and the Father were the same in essence, as against the Homoiousians, who held that while being similar the natures were not the same. The Homoousians are sometimes styled Athanasians from their leader.

**Honey**, the sweet substance gathered by the honey-bee, and some other insects, from flowers, and deposited by them in honeycombed cells as food storage. It is of a yellow-white colour, and is largely composed of water, dextrose, and lævulose. Ferments when exposed to the air. (*See* Bee.)

**Honey Bearers**, the name given to honey-ants

which receive from the workers the honey they have gathered, swallowing it and storing it in their bodies for the after-use of the workers as required.

**Honeydew**, a viscid secretion, from plants or plant lice, found on leaves, chiefly in hot weather, and looking like dew.

**Honeysucker**, an Australian bird (of which there are many species) provided with a long curved bill, and tufted tongue. It lives by sucking the "nectar" from the flowers which abound in rural parts of Australia and New Zealand.

**Honours of War**, a privilege sometimes conceded to a defeated force of marching out of the place surrendered with colours flying and drums beating.

**Hookah**, an Oriental pipe or apparatus for tobacco smoking, the smoke being drawn through the water of a glass goblet by means of a long flexible tube.

**Hook-money**, an old silver currency of Ceylon, in use in the 17th century, consisting not of coinage, but of hooked pieces of actual silver.

**Hoopoe**, a peculiar bird, with a movable semi-circular crest on the top of its head, and a long, slightly curved bill. It is a native of Africa, and one of the six known species migrates to Europe, occasionally visiting Britain.

**Hop**, a familiar twining plant largely cultivated in the southern, south-eastern, and south-western counties of England for its female flowers, used mainly for flavouring malt liquors. Hop-plants are trained upon poles, and in the autumn the flowers are picked by hand, an immense number of persons being engaged in the harvesting of them. The Flemings are said to have introduced the hop plant to England, about the time of the Reformation.

**Hop-fly**, the name of an insect of the Hemiptera order, which preys upon the hop and certain other plants, and sucks the juice from them, acting like a blight when the visitation is numerous.

**Hoplite**, the name given to a heavily armed foot soldier in ancient Greece, carrying a shield and javelin, and wearing a helmet and armour.

**Horary**, a term used of the arc which a celestial body describes in an hour, or the angle which that arc subtends, the eye of the onlooker being supposed to be at the angular point.

**Horizon**, the limit of vision, the apparent line where sea and sky, or land and sky, meet. This is termed the *sensible* or visible horizon. The astronomical horizon is a plane which, perpendicular to gravity at any point, divides the celestial sphere into two equal portions, upper and lower halves. There is also an artificial horizon, consisting of a surface of mercury or other fluid, whereby the altitude of any particular star can be reckoned. An ordinary person at the height of 5 feet can see for 3 miles, at 20 feet 6 miles, at 50 feet 9¼ miles, and at 1,000 feet 42 miles. The figures are approximate.

**Horn**, a wind musical instrument, usually of brass and of varying sizes, shapes, and musical power, ranging from the long coaching-horn to the small hunting-horn. The French horn is formed of a continuous twisted tube, and furnished with a movable mouthpiece.

**Hornbill**, a large bird, remarkable for its having an immense horned upward curved helmet, growing over its downward curved beak. It inhabits tropical regions, and feeds on fruits. When the female has laid her eggs in the hollow of a tree, the male bird stops up the entrance, and keeps her imprisoned until the hatching is completed and the young ones are able to fly.

**Hornblende**, a hard common mineral, a silicate of calcium, magnesium, iron and aluminium, of a dark green colour. It is a constituent of numerous rocks, including diorite, syenite, and hornblende schist.

**Horn Book**, a children's alphabet and primer which had a cover of thin horn; hence its name. It was in use until about a hundred years ago.

**Horned Viper**, a curious African genus of Viperidæ, with a small pointed bone over each eyebrow; a venomous species, found in Egypt, is thought by some to be identical with the "adder" mentioned in Genesis xlix. 17.

**Hornets** are well-known insects of the wasp family, and live in communities, generally nesting in hollows of trees. The hornet's sting is very painful.

**Hornpipe**, an old English single-step dance, which used to be executed to the music of an ancient hornpipe, hence its name.

**Hornstone**, a dark flint used for flint mills in potteries.

**Hornywink**, a popular name for the lapwing.

**Horology**, the science of time-measurement, including the construction and management of clocks, watches, etc. Instruments of this kind are not known to have existed before the 12th century, and until the introduction of the pendulum in the 17th century, clocks were ill-regulated and inaccurate. The time-recording mechanisms of the present day include (*a*) the *clock*, which shows the hours and minutes by hands, and strikes the hours, and sometimes quarters; (*b*) the *timepiece*, which is not generally a fixture and shows the time, but does not strike; (*c*) the *watch*, which is a pocket time-keeper; and (*d*) the *chronometer*, which indicates the minutest portions of time.

**Horoscope**, an astrological term, indicating the reading of the signs of the planetary bodies, according to the methods of the astrologers, at the date of a personal nativity, or other given date. In ancient times there were astrologers attached to the various courts, and their "castings" and predictions had many believers.

**Horse**, in its domesticated form, one of the most familiar of quadrupeds. How, when, or where its first domestication took place is unknown. The wild horses of the present day can be traced to have descended from domestic breeds which have broken from restraint, such as the wild horses of the South American pampas, and of Tartary. The two leading types are the Arabian, whose strain is apparent in the race-horse and other animals in which speed is the pronounced characteristic, and the powerful Flemish horse which has contributed the elements of strength and endurance to the various breeds of draught horses. The anatomical features of the horse are too well known to need description.

**Horse Chestnut**, one of the large forest trees, with ample branches and full foliage, and much esteemed for parks and ornamental grounds. The bark and fruit seeds yield substances of commercial value, but the timber is not worth much. The tree came originally from Asia about the 16th century.

**Horse Guards**, the building in Whitehall which until 1872 was the headquarters of the Commander-in-Chief of the British Army. The archway is still sentinelled by mounted guards.

**Horse, Master of the**, the Court official having charge of the royal stables. It is a party appointment and carries with it a salary of £2,000 a year.

**Hospice**, a place of refuge and rest for travellers and pilgrims. The most famous is that of the St. Bernard Pass, where dogs are kept for the succour and help of belated wayfarers.

**Hospitallers, Knights**, were of the order of St. John of Jerusalem, at first devoted to the aid of the sick, but afterwards military monks, who became prominent figures in the Crusades of the 12th century; in the 16th century they had the island of Malta given to them and continued there until dislodged by Napoleon in 1798. There has been some attempt to revive the order, and the modern English institution of Knights of St. John commemorates the old name and continues something of the original service.

**Hospitals**. The earliest hospital is supposed to have been at Cæsarea in the 4th century. In the 7th century the Hôtel Dieu was founded in Paris; in the 9th century there were 24 hospitals in Rome. Some of the earliest hospitals of Great Britain are in London: St. Bartholomew's 1546, Bethlehem 1547, St. Thomas's 1553, Westminster 1719, Guy's 1725, London 1740. The British hospitals are largely dependent on voluntary contributions, on sums allocated by the King Edward Hospital Fund, and on paying patients who are now received in many hospitals. There are excellently equipped medical schools attached to most general hospitals, and expert research workers are engaged on the investigation of diseases. The best physicians

and surgeons give their services free to the hospitals.

**Hôtel des Invalides,** the famous military hospital and soldiers' home in Paris, founded in 1670, and one of the attractions of the city in later years, from the fact of its containing the tomb of Napoleon.

**Hottentots,** an African native race of considerable intelligence, mostly following the pursuits of herdsmen and hunters, and numbering some 200,000.

**Hounds** are dogs that were originally bred and trained for hunting, such as the greyhound, fox-hound, bloodhound, wolfhound, deerhound, beagle, harrier, etc., but now often kept also as domestic dogs. The greyhound, deerhound, and wolfhound hunt by sight, the others, with the bloodhound first in order, track by scent.

**Hour-glass,** a glass instrument tapering to the middle to a narrow orifice, through which a sufficient quantity of fine sand gravitates to mark an hour of time. When the sand has run through from one end, it can be reversed and made to count the hour in the opposite direction. The same kind of glass with smaller supplies of sand will indicate shorter periods, as an egg-glass which runs its course in three minutes—time to boil an egg by.

**Houris,** according to the Koran, are beautiful nymphs of paradise set apart to attend upon the "faithful" Mahomedans as they enter the celestial abode.

**House-boat,** a boat fitted up with living, sleeping, and cooking apartments, and serving for temporary occupation by families or pleasure parties in making river excursions. In England such boats are mainly confined to the Upper Thames. In Eastern countries house-boats that are permanent habitations are common on the big rivers.

**Household Brigade,** a body of soldiers retained for the special service of guarding the king and garrisoning the capital; consisting of the three cavalry regiments of the Royal Horse Guards and the 1st and 2nd Life Guards, and five foot regiments—the Grenadier, the Scots Fusilier, the Coldstream, the Irish Guards and the Welch Guards.

**House Flies** abound in all countries and are exceedingly prolific. Their eggs are hatched within 24 hours of being deposited, and full maturity is attained in a month. They feed mainly on decayed animal and vegetable matter.

**Hovas,** the dominant tribe in Madagascar until the French took possession of the island in 1895.

**Hovite,** the name of a white earthy mineral of somewhat uncertain composition, but generally described as a hydrous carbonate of aluminium and calcium. It derives its name from being found at Hove.

**Howdah,** a railed, canopied seat fitted on to the back of an elephant for conveying people in. The name is also given to a somewhat similar contrivance for the backs of camels.

**Howitzer,** a cannon, short and light in proportion to its bore, used for throwing shells and case-shot, and requiring a comparatively small charge.

**Howling Monkey,** a species of South American monkey noted for a laryngeal conformation which enables it to emit a loud reverberant noise something between a yell and a howl; hence its name. The peculiarity is developed most strongly in the males, which are the largest American species.

**Hoy,** a small sloop-rigged vessel usually engaged in light traffic, such as conveying passengers and goods from the shore to steamers, or *vice versa*.

**Huanuco-bark,** a medicinal bark, brought from the Peruvian town of that name, and derived from the *Cinchona micrantha* tree.

**Huckaback,** a kind of strong linen cloth, with one side rough; generally used for towellings.

**Huguenots,** a name applied to the French Protestant communities of the 16th and 17th centuries. Under Francis I. and later monarchs they were subjected to many persecutions, and at times were in active conflict with the Catholics. Henry of Navarre, by the Edict of Nantes in 1598, granted them religious freedom, but more than a quarter of a century before—August 24th 1572—10,000 of them had been put to death in the massacre of St. Bartholomew. In 1685 they were further persecuted by the revocation of the Edict of Nantes by Louis XIV., when hundreds of thousands left the country never to return, a large proportion of them taking refuge in England, where they greatly helped in the development of many industries.

**Hulsean Lectures,** a series of from four to six lectures delivered annually by a selected preacher before the University of Cambridge on Scriptural subjects, under the provision of the will of John Hulse, who died in 1790. There is also a Hulsean professorship of divinity at the same university, established in 1860 in substitution for the office of "Christian Advocate" originally founded by Hulse.

**Humane Society, Royal,** instituted 1774. Supported by voluntary contributions. Patron, His Most Gracious Majesty the King. To collect and circulate the most approved and effectual methods for recovering persons apparently drowned or dead; to provide suitable apparatus in and around the Metropolis for rescuing persons from drowning; to bestow rewards for the preservation and restoration of life; and to encourage swimming exercises at public schools and training-ships with reference to saving life from drowning.

**Humanitarian,** one who holds the belief that Christ was only human, that the whole duty of man is summed up in the performance of good deeds, and that Divine aid is not necessary to a perfect existence.

**Humble-bee,** the common name of the insects of the genus *Bombus*, of the Hymenoptera order. They live in small communities comprising males, females, and neuters, their habitations being underground. They do not have one queen bee only like the hive bee, but several females occupy the same nest, and these alone live through the winter, breeding and forming new colonies in the spring.

**Humite,** a mineral of the Chondrodite variety, crystalline and translucent, brownish-yellow to white in colour, composed of magnesia, silica, fluorine, and protoxide of iron.

**Humming Birds** are so called because of the humming noise made by the vibration of their wings in flying. They are of radiant plumage, bright crimson mingling with lustrous green, with other iridescent colours flashing and shining, and in size they are among the smallest birds. There are from four to five hundred species, and they are confined wholly to North and South America, being most numerous in the tropical latitudes.

**Hummum,** the original name for what is now called the Turkish Bath in this country. One of the first of these baths to be established in London was the Hummums in Covent Garden.

**Hundred,** the ancient divisional name given to a portion of a county for administration or military purposes. It is supposed to imply the territory occupied by a hundred families; or the space of a hundred hides of land, or the cappacity of providing 100 soldiers. Each hundred had its hundred court, with powers similar to those of a manor court, but this was abolished in 1867 by County Court Act.

**Hundred Days,** the period that derives this title from the fact that it covers the time within which Napoleon I. entered Paris after his escape from Elba and was finally overthrown at Waterloo, March 20 to June 29, 1815.

**Hundredweight** in Great Britain is 112 lb. avoirdupois; in the United States it is an even 100 lb. The English cwt. is divided into four quarters of 28 lb. each.

**Hundred Years' War,** a term applied to the almost incessant contest between England and France, lasting from 1338 to 1453, including such famous battles as Crécy, Poitiers, and Agincourt, and engaging successively Edward III., Henry V., and Henry VI., among English kings.

**Huns,** a fierce Asiatic race which swept over Eastern Europe in the 4th century, and took possession of the country between the Volga and the Don, Attila being their formidable leader. They defeated the Goths and forced the Romans to pay tribute. When they lost their chief, however, in 454, they were soon driven back, and it is doubtful whether any of the present races of Eastern Europe are their direct descendants.

**Hunterian Museum**, a celebrated collection of anatomical specimens originated by John Hunter, the distinguished surgeon and physiologist, towards the end of the 18th century in London, and now in the possession of the Royal College of Surgeons. Dr. William Hunter, the brother, founded a Hunterian Museum at the University of Glasgow.

**Hurdy-Gurdy**, an Italian rustic so-called musical stringed instrument of the lute order, the sounds of which are produced by the action of a rosined wheel turned by the left hand, the notes being made by the fingering of the right hand.

**Hureaulite**, a transparent, almost colourless mineral, found in granite measures at Limoges, near Hureau.

**Hurricane**, a tempest or violent storm, such as prevails with frequency in the China seas and the East and West Indies, often occasioning great havoc.

**Hussars**, are represented in the British Army by twelve regiments. The distinguishing portion of the uniform consists of a fur busby with a cloth ornamentation hanging over the right side. They are armed with carbine and sabre.

**Hussites**, followers of John Huss, the Bohemian reformer, who was burned at the stake in 1415. After their leader's death, the Hussites became a formidable body, and took up arms on behalf of their faith, their religion being strongly imbued with political feeling. They were subdued in 1434, and later were absorbed by other Protestant sects.

**Hyæna**, a carnivorous quadruped of which there are three species: the striped, or laughing hyæna common to North Africa, India, Syria, and Persia, and noted for the peculiar cry from which its name is derived; the brown hyæna, with long shaggy hair, a native of Southern Africa; and the spotted hyæna, also confined to Africa. They have great jaw-power, and are of nocturnal habits.

**Hyalograph**, an instrument designed for tracing upon transparent surfaces.

**Hybrid**, an animal or plant produced by the union of two distinct species.

**Hydra**, a peculiar aquatic animal of simple structure, whose body is in the form of a cylindrical tube, with a disc-shaped base by which it attaches itself to any shifting substance. Its mouth is surrounded by tentacles by which it catches its food. The Hydra has the power of reproducing lost parts.

**Hydrates** are compounds formed by the combination of metallic oxides with water, or the union of water with salts. The most ordinary forms of hydrates are caustic soda, caustic potash, and slaked lime.

**Hydraulic Press**, perfected by Joseph Braman, the inventor, in 1796, is a useful apparatus, the pressing power of which is obtained by the action of water. Two plates, the upper one movable and attached to a large piston, the lower one fixed, are contained within two uprights. The movable piston works in a cylinder of water in connection with a small force-pump, and the pressure is applied by moving a lever which brings a well-known hydrostatic law into operation, and presses the material between the two plates to the required degree. The hydraulic press is largely used for compressing articles for packing, and for extracting purposes.

**Hydraulic Ram**, a form of automatic pump, used to raise water to a height by the action of its own falling velocity.

**Hydraulics**, the science of applied hydrodynamics, or water-machine engineering, ranging from pumps to marine engines.

**Hydrocarbons** are compounds of carbon and hydrogen, forming one of the principal groups of compounds and with their derivatives constituting the main concern and source of organic chemistry. They are classed as gaseous, liquid, and solid, according to the proportions of hydrogen or carbon.

**o Acid**, a colourless gas, consisting of and chlorine, and resulting in con- quantities as a bye-product of the soda-ash or salt-cake manufacture. Its solution forms the common hydrochloric or muriatic acid of commerce, and is largely utilised in dyeing, calico-printing, bleaching, and in the production of chlorine. It has a suffocating odour, and is one of the elements of digestion.

**Hydrocyanic Acid**, cyanide of hydrogen or prussic acid; very poisonous, and of the odour of bitter almonds. Discovered by Scheele in 1782.

**Hydrodynamics**, the science of the application of the laws of dynamics to fluids and covering both fluids in rest and fluids in motion.

**Hydrofluoric Acid** is obtained from a distillation of fluorspar with sulphuric acid, and is a compound of fluorine and hydrogen. Its action is highly corrosive, it is a valuable agent in etching on glass, and is a rapid decomposer of animal matter.

**Hydrogen**, a colourless elementary matter and the lightest of all substances, on that account being accepted as the standard unit of the specific gravity of gases. It is 14 4 times as light as air, and is found in a free state in volcanic regions and in the emanations of oil wells. It can be obtained by the action of metals on acids, and when burned out the air combines with oxygen to form water. It is a necessary element of life.

**Hydrography**, the science of water measurement, as applied to seas, rivers, lakes, currents, rocks, reefs, etc., and embracing the whole art of navigation.

**Hydrometer**, an instrument for measuring the specific gravity of water and fluids generally, and especially for ascertaining the strength of spirituous liquors and solutions. It is usually in the form of a glass bulb, to the lower end of which a smaller bulb, containing mercury, is attached, which forces the instrument to sink into the liquid which it is to test. The larger bulb has a scale fixed to it and the indication on this scale of the sinking point shows the specific gravity. There are many varieties: Twaddell's —a pear-shaped bulb containing mercury; Beaume's, of similar construction, but applicable to liquids both heavier and lighter than water; Sykes's, largely employed for determining the strength of alcohol; and Nicholson's, used for taking the specific gravities of both solids and liquids.

**Hydropathy**, the method of treating disease with water, either by bathing or drinking. Natural springs of special chemical and therapeutic properties, such as sulphur springs, and other mineral sources, have been used since prehistoric times for this purpose. It is probably one of the most ancient methods of cure. Recently the beneficial effects of pure water treatment have been advocated. Hydropathic establishments have been set up in many health resorts.

**Hydrophilus**, the largest genus of water beetles, including the giant water beetle, which is of a shiny black and measures 1½ inches in length, and is common in N. America. There is also a European species (*H. piccus*), which is not quite so large.

**Hydrophobia**, rabies resulting usually from the bite of a mad dog; a dreadful contagious disease, the result of a specific poison, for which it is claimed Pasteur's method of inoculation is an antidote.

**Hydrostatics**, the science of the pressure and equilibrium of liquids that are non-elastic.

**Hydrozoa** are, zoologically, a low order of water animals of the *Cœlenterata* sub-kingdom, and in structure similar to the hydra. There is a sac with a mouth at one end, and at the other a disc by which the animal fixes itself to some other body. The body comprises an outer and inner membrane, with stomach cavity, and prehensile tentacles. It is a widely distributed and endlessly varied genus.

**Hydrus**, a constellation of the southern celestial hemisphere commonly called the Southern Snake.

**Hygiene**, the science of health in its broad significance, the study of sanitary conditions, and the application of the laws of health generally. The progress made in hygienic science during the last hundred years has been highly important, and has led to many legislative enactments and preventive measures which have resulted in a great improvement in the general standard of public health.

**Hygrometer**, an instrument for measuring the moisture of the atmosphere. That of Daniell is the best known, and consists of a bent glass tube, with two bulbous ends, one of which is

enclosed in a muslin covering, while the other is of black glass, with a thermometer and a quantity of ether inside. By the dropping of ether on the muslin bulb a connecting evaporation is set up which enables the measurement to be taken. A very simple kind of hygrometer is composed of a wet and dry bulb each supported by a thermometer affixed to a frame on which a scale drawing appears. The two mercury columns act upon a movable index point which indicates the degree of humidity.

**Hymenoptera**, the order of insects of which bees, wasps, hornets, ants, and sand-flies are the most familiar examples. They are notable for having four wings, the hind pair smaller than the front pair, to which they are attached. They have mouths and tongues which enable them to bite and suck, and the females possess an ovipositor used both for depositing eggs and stinging. Nearly a quarter of all known insects are of this order.

**Hyopotamus**, the name given by Sir Richard Owen to a genus of fossil animals of the hippopotamus order, remains of which have been found in England and other parts of Europe in the Tertiary strata.

**Hyperbole**, a rhetorical term implying extreme exaggeration for the sake of effect, and often indulged in by emotional orators, as well as in ordinary speech.

**Hyperboreans**, a fabled people which the ancients believed existed beyond the region of the north wind, and later the term has been applied to the actual people of remote Northern lands.

**Hypersthene**, a crystalline mineral of a grey-green colour, found foliated and massed in igneous and metamorphic rocks. It was at one time regarded as hornblende, and was called Labrador hornblende. It is a silicate of iron and magnesium, and has been met with in Cornwall, Northern Europe, the Tyrol, and North America.

**Hypnotism**, a somnambulistic condition of the body, induced by mesmeric influence, and involving temporary loss of taste, touch, sight, and feeling. The operator controls the will of the hypnotic subject to a large extent, but the power of producing the hypnotic state, as well as the peculiar nervous condition necessary to its being induced, is not common. Hypnotism, however, has been surrounded by so much exaggeration and imposture that it is still far from being accurately defined or understood. There have been instances of surgical operations performed while patients have been hypnotised, and many cases of hypnotic power being exercised for evil ends have been cited, but in these matters there is generally more mystery than reality.

**Hypocaust**, an arched fire vault or chamber through which heat is distributed to rooms above. Used in the baths of ancient Rome.

**Hypostyle**, an architectural term, designating a colonnade or pillared hall, such as in the famous hall of Karnak.

**Hyposulphite**, the "hypo" of the photographer, is the sodium salt of hyposulphurous acid.

**Hypothec**, a Scottish legal term implying a landlord's lien on his tenant's cattle, sheep, and produce for rent. No right of hypothec has existed since 1880, where the land exceeds 2 acres.

**Hypothenuse**, the name given in geometry to that side of a right-angled triangle which is opposite to, or subtends, the right angle.

**Hypothesis**, an imaginary theory set forth in such a manner as to illustrate by parallel the force of some other theory which it is sought to demonstrate.

**Hyrax**, a peculiar animal of the Hyracidæ family, possessing a cleft upper lip like the hare, molar teeth shaped similar to those of the rhinoceros, and in other respects showing ordinary rodent characteristics. It has a brown fur, and is confined to Africa, Syria, and Arabia.

**Hyssop**, a labiate plant, with blue flowers, growing wild in Southern Europe, and yielding a kind of camphor; at one time largely used medicinally as an anti-spasmodic and carminative.

**Iambic Verse** dates from the time of the classic poets, and has been a favourite form of verse of succeeding times and many countries. Its characteristic is alternate short and long syllables. It is the ordinary heroic measure when it rhymes in couplets, and unrhymed is blank verse. Each line must consist of five feet, a foot being a short and long syllable.

**Ibex**, a wild goat found in the mountain regions of Europe, Asia, and Africa. It is of a reddish-brown colour, and has exceedingly large curved ridged horns.

**Ibis**, an Egyptian bird found mostly in lakes and swamps. It has white and black curved plumage and a long curved beak. One species is the sacred Ibis of Egypt, which is held in great veneration by the people. There are 20 species.

**Ibycter**, a South American Gallinaceous eagle, mostly black in plumage, and belonging to the Falconidæ family, genus Aquilinæ. Its head is almost bare of feathers, and it has circular nostrils.

**Ice** is water frozen to a solid condition, but lighter than water. It is brittle and transparent, and has a specific gravity of nearly 0·92. Ordinarily ice is produced naturally in cold seasons, freezing beginning at 32 deg. F., but it is also obtained in enormous quantities artificially by means of electric and other ice machines for domestic, commercial, and other purposes, such as skating.

**Icebergs** are detached masses of glacier which subside into the sea and float as wind or current may take them. The North Atlantic is the chief home of icebergs, which reach the ocean from the ice-clad plateaux of Greenland. Some of these floating masses of ice are of enormous proportions, and constitute in the spring and early summer seasons a great menace to the safety of ships, as was disastrously shown in the *Titanic* catastrophe of 1912.

**Iceboat**, a boat used either for breaking a passage through ice, in which case it is usually steam propelled; or a boat with masts and sails and mounted on runners for sailing on the surface of the ice.

**Ice-breakers** are heavy bow-plated boats used for breaking up ice on navigable rivers, and, on the Baltic and on the St. Lawrence in Canada especially, have the effect of considerably shortening the ice-bound period each winter.

**Ice-floe**, a small ice-field or sheet of floating ice, liable to be frozen to other ice-floes, imprisoning any ship enveloped.

**Iceland Dog**, a kind of white shaggy dog which was in former times a great domestic favourite, but is now little seen in this country.

**Icelandic Literature**, the Old Norse, which includes numerous works of poetry, mythology, and history of interest and importance.

**Iceland Moss**, a kind of lichen grown in great quantities in the mountain regions of Iceland and other Northern countries. It possesses certain nutritive qualities and is of some value in medicine.

**Iceland Spar**, a colourless form of calc spar, frequently found in association with metallic ores; it is called also double-refracting spar, and its prisms are used for the polarisation of light.

**Iceni**, an ancient British race who in early times lived in Norfolk and other parts of Eastern England. Their most famous ruler was Queen Boadicea, who led her people against the Romans.

**Ice Plant**, also called "dew plant" and "diamond plant," is a native of Greece, the Canaries and some parts of Africa. It derives its name from the fact that it is covered with watery pustules that look like ice.

**Ice-sheet**, a term designating an extended glacier, occupying large territories, such as the Antarctic Continent of Greenland. Ice-sheets are of immense power and in their onward course assume a mighty force. The term also refers to the geological glacial formation of a former period.

**Ichabod**, signifying "the glory is departed," was the name of the son of Phineas, born after the latter was killed in fighting against the Philistines.

**Ichneumon**, a carnivorous animal of the civet family, abounding in Egypt, where it is popularly known as "Pharaoh's Rat," and is of great use in checking the multiplication of reptiles. It is frequently domesticated, and performs use-

ful service in keeping down pests. It is supposed to be a hermaphrodite.

**Ichneumon Fly**, a numerous order of hymenopterous insects abounding in many lands, and all having the one peculiarity of depositing their eggs in the bodies of other insects. It destroys swarms of caterpillars, which become the unwilling hosts of its progeny.

**Ichnography**, the art of drawing plans of everything connected with the ground floor of a building or site.

**Ichthyol**, a liquid used for rubbing on the skin in certain diseases, and obtained by distillation of a mineral in which fossil fish is found.

**Ichthyology**, the department of zoological science which concerns itself with the structure and variation of fishes, their habits and distribution.

**Ichthyornis**, a fossil bird discovered in the cretaceous strata of Kansas, and supposed to afford evidence of the evolution of birds from vertebrates, having had teeth though otherwise of bird form.

**Ichthyosaurus** was a gigantic lizard of the mesozoic age. The fossils are mostly found in the lias formation. Some were not less than 30 feet in length, and are shown to have been amphibian.

**Iconoclasts** were originally an Eastern sect of the 8th and 9th centuries, whose object was to prevent the worship of, and to destroy, images used in religious rites. The term has been applied in modern times to enemies of religious beliefs generally. Charles Bradlaugh was for a long time known as "Iconoclast."

**Idea**, in its platonic significance, had reference to what a thing seemed rather than the actuality, but in later philosophies an idea is, as Locke expresses it, "whatsoever the mind perceives in itself."

**Idealism** is the theory, according to Kant and other philosophers, that "objects are not there till they are thought." Idealism, however, takes many shapes—the transcendental, as with Kant; the subjective, as with Fichte; and the absolute, as set forth by Hegel.

**Ides** were distinctive periods in the ancient Roman Calendar, being the eighth day after the nones in each month.

**Idioelectric**, substances which manifest electricity in their natural state.

**Idiograph**, a mark, signature, or flourish peculiar to any individual; a trade mark is an idiograph.

**Idiom**, an expression characteristic of a country, district, dialect or language, which usually gives strength and force to a phrase or sentence. The idioms of a language are its distinctive marks, and the best writers are the most idiomatic.

**Idiothalameæ**, a tribe of lichens, having shields first closed, then open, with the nucleus made up of gelatinous naked spores.

**Idolatry**, the worship of idols, images, inanimate objects, animals or symbols. A kind of idolatry existed in all primitive modes of existence, and instances are numerous in the earliest records. Idolatry, however, as we now understand the word, is mainly applied to the worship of idols among the Indian, Chinese and other races where ancient superstitions and practices survive. In their most symbolised form images have a considerable part in the rites of the Roman Catholic Church.

**Idols** are images or effigies which are made objects of worship and are usually of wood or stone, but sometimes of ivory or more precious materials, and attain their symbolic significance after being put in the places destined to receive them, when they are made objects of veneration by some religious dedication.

**Idris**, a famous giant belonging to the myths of Wales, commemorated by a chair of rock on the top of the Cader Idris mountain.

**Idyll**, a poem or story of a simple or pastoral kind dealing with rural characters and events for the most part, but sometimes used in a broader sense, notably in Tennyson's "Idylls of the King," which are of a distinctly imaginative form.

**Ignatian Epistles** bear the name of St. Ignatius, and in their several forms exercised great influence in mediæval times, but fierce controversy raged around them in the 17th century, because of their strong support of episcopacy, and a good deal of doubt was thrown upon their genuineness.

**Igneous Rocks** are such as have been caused by the action of great heat, or volcanic disturbance, and include two main groups—volcanic or eruptive, and plutonic or irruptive.

**Ignis Fatuus**, or "Will-o'-the-wisp," a phosphorescent light which may often be seen on summer and autumn evenings hovering over marshy ground. Its nature is hardly understood, though it is generally believed to be the result of the spontaneous combustion of decomposed matter. In olden times when marshy grounds were more common than now, this "dancing light" was very frequently visible and was regarded with superstition.

**Ignorantines**, a Roman Catholic Order founded in 1679 by the Abbé de la Salle, Canon of Rheims, and intended for special ministration among the children of the poor. The name "Ignorantine" was given to them because of their being prohibited from learning or teaching Latin.

**Iguana**, a large South American lizard of very peculiar structure, with a long tail, a scaly back and head, a thick fleshy tongue and a prominent dewlap in the throat. It averages from four to five feet in length, lives mostly in trees, and its flesh is good eating.

**Iguanodon**, an animal of the iguano family long extinct, whose fossils are found in the cretaceous rocks. It must have been an immense creature. A skeleton unearthed in Belgium stands 14 feet high and is 28 feet long. They are supposed to have walked on their hind legs.

**Ilex**, an evergreen oak that flourishes best in Italy, though thriving well in England and other countries.

**Iliad**, the great epic-poem of ancient Greece, supposed to have been written by Homer, though, according to some modern critics, the poem represents the conjoint work of many authors. The story it deals with is that of the "Siege of Troy," which had its origin at the attempt to recapture Helen, who had been carried off from Sparta by Paris. It is a wonderful gallery of portraits of heroes and warriors and gods and goddesses, and maintains the true epic level throughout.

**Illuminated MSS.** of great value and beauty of decoration exist in most public museums and in many private collections, some of them being of great antiquity, especially those of ancient Egypt executed on papyri. Greek and Latin specimens are also numerous, and the British Museum contains fine examples of all these kinds and also an extensive collection of mediæval English MSS.

**Illuminati**, the name by which certain religionists of the 16th, 17th and 18th centuries were known. They claimed the possession of superlative knowledge in everything pertaining to religious doctrines, rites and ceremonies, but were not at any time a very numerous body. An Order of the Illuminati was formed at Ingolstadt which was a secret society, and professed to free religion and politics from superstition and despotism. It had some similarity to Freemasonry.

**Illusion** may take the form of a mental image of something non-existent, or be produced by a juggler's handling of objects so as to deceive the eye.

**"Illustrated London News,"** the first of the weekly pictorial papers to be published in England. It was originated by Mr. Herbert Ingram, a Boston printer and newsagent, in 1842, and was a pronounced success from its foundation. The idea occurred to Mr. Ingram after he had noticed what an immense "run" there had been on a few crude pictures which one of the ordinary weekly papers had given of incidents connected with the Greenacre murder.

**Ilvaite**, a mineral substance found in the island of Elba and other places on the Mediterranean in black prismatic crystals, being a silicate of iron and calcium, sometimes called "lievrite."

**Ilyanthidæ**, a family classed in zoology as *Zoantharia malacodermata*, having polypes single and free, with a rounded or tapering base, and destitute of corallum.

**Ilybius**, a water beetle of which there are many species in Europe and America. The peculiarity of this genus is a convex form of body and a labial palp whose penultimate joint equals the last joint in length.

**Images**, in the form of carved, sculptured, or

painted objects, have been regarded as aids to worship, by primitive races, and also in various Christian Churches from early times, but since the Reformation have been prohibited in the Church of England.

**Imagination** is the creative power and faculty enabling the mind to picture to itself scenes, events, and persons of which a person may hear or read, and in its more intense form constitutes the genius by which the poet, the novelist, the historian, the painter, and the musician attain their idealisations.

**Imaum,** a Mahomedan religious title borne only by princes or leaders of the faith.

**Immaculate Conception,** the dogma that the Virgin Mary was absolutely pure and sinless from the womb, after being a fierce subject of controversy for many centuries, was on December 8th, 1854, expressly proclaimed by Pope Pius IX., to be an established doctrine of the Roman Catholic Church. The 8th December is the festival day of the Immaculate Conception in the Roman Church, and the 9th December in the Greek Church.

**Immolation,** the act of sacrificing a living object or objects for the propitiation of the Almighty, or, in classic days, the gods.

**Immortality,** the theory of the eternal existence of the human soul.

**Immortelles** are wreaths, crosses, or other designs made from what are called everlasting flowers, which are obtained from certain plants of the Composite order, and retain their colours and compactness for a long time. Immortelles are largely used as mementoes for decorating graves, especially in France.

**Impact,** the impingement of two bodies one against the other, a subject generally considered in relation to the resulting after-motion which comes under the cognisance of kinetics. Direct impact is the opposition of objects moving in the same direction, oblique impact is the collision of bodies moving in opposite directions.

**Impeachment,** a special arraignment, usually before Parliament or other high tribunal, of a person charged with some offence against the State. The custom in England is for the impeachment to be made in the House of Commons, and the trial to be before the House of Lords. Bacon, Warren Hastings, and Lord Melville are conspicuous instances of men impeached in this country.

**Impennes,** the scientific name of a family of swimming birds, of which the penguin is the leading representative. They are all short-winged and unable to fly. The divers and the auks belong to the tribe.

**Imperial Federation** was inaugurated as a public movement in 1884 by the formation of an Imperial Federation League under the presidency of the late Right Hon. W. E. Forster, and after preparing a practical scheme for promoting its objects, dissolved itself at the end of 1893, leaving to other organisations the carrying forward of the idea. Among these are the United Empire Trade League, the British Empire League, and the Federal Union Committee, all having offices in London, with branches in the Colonies and the provinces.

**Imperial Institute,** founded in 1887 as a memorial of Queen Victoria's Jubilee, and formally opened by her Majesty in 1893. Its object is to bring together into one permanent exhibition the products of the various British Colonies and dependencies, and generally to collect material, statistics, and general information relating to the condition of the various places. Since 1902 it has been under the control of the Board of Trade.

**Imperial War Museum** is a collection connected with the Great War, and consists of war trophies, relics, arms, ship and other models, pictures, photographs, maps, etc., and a library of over 60,000 books. It was opened in 1920 at the Crystal Palace, and transferred to Kensington, London, in 1924.

**Impluvium,** a basin or tank in the hall or atrium of an ancient Roman house, serving the purpose of receiving the rain that dropped through the open space in the roof.

**Impressionist,** an artist or author who attempts in his work to convey by broad effects of colour or treatment the impressions which a subject has stamped on his own imagination, apart from detail or form. (*See* **Post Impressionism.**)

**Impressment,** the forced seizure of persons for service on board British war-ships, sanctioned by laws still unrepealed, but not resorted to in this country since the Napoleonic wars.

**Imprimatur,** originally an official licence to print, and an important formula in the early days of printing. The term is now used in the wider significance of authority, stamp, or endorsement.

**Impromptu,** a speech, writing, or musical composition produced on the spur of the moment, without study or preparation. The word covers a wide field, however, and especially in musical works includes much that is intricate and elaborate.

**Impropriation,** a legal term signifying the surrender of a benefice and its revenues into the hands of a layman or lay corporation, carrying with it the obligation to provide for the continuance of the ecclesiastical duties.

**Incandescent,** glowing white with intense heat.

**Incandescent Light** is produced in electric lighting lamps by a thin metal filament, which, acted upon by the electric current, attains an intense white illuminating force; in gas-lighting the incandescent illumination is obtained by a cone-like "mantle," made of inconsumable earthy substances, which is placed over the part where the flame plays.

**Incarnation,** in Theology, designates the doctrine that the Divine Spirit, incarnated in human form in the person of Jesus Christ, has had actual existence on earth, subject to human limitations, yet without losing the Divine essence.

**Incas,** the title borne by the ancient rulers and princes of Peru.

**Incense,** an aromatic resinous substance which, under combustion, exhales a pungent odour, and is used, mixed with certain fragrant perfumes, in the celebration of Mass in Roman Catholic churches. Olibanum or frankincense is ordinarily the leading ingredient. It is not used in the orthodox service of the English Church except by the more pronounced Ritualists.

**Incognito,** the dropping of name, identity, or distinctive mark, so as to pass unknown. A term generally used in cases of persons of rank who conventionally take an assumed name or inferior title in order to escape ceremony and formality.

**Increment, Unearned,** the term applied to the increase which arises in the value of land or buildings from causes other than the efforts or exertions of the owners, and in the Lloyd George Budget of 1909 first brought within the range of taxation.

**Incubation,** ordinarily the artificial hatching of eggs by means of an apparatus called an incubator (see **Incubator** article in Pears' *Dictionary of Poultry and Cage Birds*); a term also applied to conditions of heating and feeding by which children prematurely born or exceptionally feeble are nurtured and brought forward.

**Index Expurgatorius** is an index, prepared under the authority of the Roman Catholic Church, of such books as may not be read by the faithful at all, and such as can only be read in part: that is, with what are considered objectionable passages expunged. The first Expurgatorial List was issued by Pope Paul IV. in 1557, and all later lists have been under direct papal authority.

**India Office Library.** (*See* **Library of the India Office.**)

**India Rubber,** or **Caoutchouc,** is made from the juice extracted from certain tropical plants, and is the most elastic substance known. It is treated and undergoes coagulation in moulds, after which it is dried and sent to market. Its commercial utility is considerable, being presented in many different forms, as ebonite or vulcanite, and for waterproofings. The use of rubber for motor tyres has greatly increased the demand for this article. The consumption has been increased more than tenfold within the last few years. The uses to which rubber is put are being extended year by year; meanwhile plantations of rubber-yielding trees are being started in all regions favourable to their growth. There are large rubber estates in Ceylon, Java, and the

Straits Settlements, but the native forests of South America still yield the largest quantities of the raw material.

**Indian Corn**, the American name for maize (*Zea mais*).

**Indian Cress**, the genus Tropæolum, an ornamental climbing or creeping garden and greenhouse plant.

**Indian File**, marching forward in single formation, as Indians progress through the woods.

**Indian Ink**, a pigment made from lampblack and gum or glue, originally prepared in China and Japan. It is dried and is marketed in small sticks. It is used mainly by artists for shading and lettering.

**Indian Mutiny.** This turning-point in the history of modern India occurred in 1857–8. The ostensible cause was the serving out to the native troops of cartridges greased with animal fat, contact with which was fordidden both by the Hindu and by the Mahomedan faith; but underlying this a rebellious feeling had long been secretly developing, fanned by Nana Sahib and others, and when the Sepoys at Meerut, in May, 1857, not only refused to obey the English officers but overpowered and put them to death, the Mutiny spread like wildfire, the rebels took Delhi and Lucknow, and during a period of many months the most terrible massacres and atrocities were committed, men, women, and children being slain in thousands. The English General heroes of the Mutiny were Sir Colin Campbell, Sir John Lawrence, and Sir Henry Havelock, but heroism was shown by British soldiers and civilians everywhere during that terrible time. Order was re-established in the autumn of 1858 when the governing power was transferred from the East India Company to the Crown.

**Indictment**, a formal document of accusation setting forth the criminal charge or charges upon which a person has to be tried before a proper tribunal. It represents the "finding" of the grand jury, and is framed on the "true bill" returned by that body.

**Indigo**, the substance obtained from certain plants of the *Indigofera* order, inhabitants of the tropical regions of Asia, Africa, and America, India being the chief producing country. The colouring matter is the result of the decomposition and fermentation of a glucoside contained in the plant. This is afterwards dried and becomes the caked indigo of commerce. There are numerous varieties of indigo formed by the admixture of other colouring substances. The discovery of *Indigotin*, obtained from coal tar, has in late years largely superseded the use of vegetable indigo in dyeing and is more uniform in strength.

**Individualism**, a principle of government diametrically opposed to Socialism, and favouring freedom of action on the part of individuals without the interference of the State.

**Indium**, a scarce lead-coloured metal found in zinc blende in Saxony, and remarkable for presenting a blue line in the spectrum.

**Indo-European**, a term used to designate the Aryan family of languages, which embraces Indian, Iranian, Celtic, Greek, Italic, Slavonic, and Teutonic.

**Indra**, an ancient Hindu god, personifying the sky; the supreme object of worship in Vedic

, in Logic, is an argumentative inference in regard to an entire class of facts, based on actual demonstration as to individual facts comprised in that class. In Natural Philosophy it is a term applied to the action or effect produced by an electrical or magnetic body upon a non-electrical substance near to it but not in actual contact.

**Induction Coil**, a machine for producing electric currents by induction. It consists of a soft iron cylinder, or a mass of straight iron wires, around which is wound a primary coil of silk-covered copper-wire, whose ends are attached to a galvanic cell, while around the primary coil, still another, the secondary coil, of finer copper wire and of considerably greater length, is coiled. One coil is carefully insulated from the other, and the different parts of the secondary coil are also insulated from each other. The current is generated in the secondary coil by induction every time the current starts or stops in the primary coil. A rapid series of alternating currents is thus set up of a very high tension. Sparks many inches long and of great brilliance are obtained by large induction coils.

**Indulgence**, a remission of penances or punishment for sins, formerly granted by the Pope in return for contributions in aid of religious purposes. The indiscriminate sale of Indulgences by Tetzel and other Papal agents in the 16th century was one of the grievances which led to the Reformation.

**Indulgence, Declaration of**, was the proclamation by which James II. suspended the penal laws against Roman Catholics and Dissenters. It was first issued in 1687 and again in 1688, but the clergy as a body refused to obey and the prosecution of the Seven Bishops followed, as did James's abdication.

**Induline**, a general name for a class of coal-tar dyes used for various fabrics, all giving forth dark blue shades.

**Industrialism**, the pursuit and practice of commerce and industry until these branches become the dominating factors in the economic life of the country.

**Inertia**, matter, mass, or body which has not within itself the power of motion, or which moves only with uniform action in a rectilinear line. Force only can transform inertia into energy.

**Inescutcheon**, a small 'scutcheon borne heraldically within the shield of ordinary dimensions.

**Infallibility**, the Roman Catholic doctrine that accords the Pope divine immunity from error, in the execution of all that pertains to his pontifical functions. It was first proclaimed as dogma of the Church by the Vatican Council in 1870.

**Infante**, the title of any son but the eldest of the king or queen of Spain or Portugal. *Infanta* is similarly the title of any daughter except one that might be heiress to the throne.

**Infantry**, the portion of an army which consists of foot soldiers equipped with "small arms."

**Inflection**, the change or deviation experienced by light as it moves over the edges of an opaque body, causing the scattering of coloured rays.

**Inflorescence**, the arrangement of flowers upon a branch or stem; it may be terminal or axillary.

**Infula**, a sacred fillet, of woollen material, worn on the head by priests anciently, and by magistrates and rulers on solemn occasions, also by persons fleeing for protection to sanctuary. The infula later became a pendant to the mitre of bishops.

**Infusoria**, a class of infinitesimal animalculæ of aquatic habits, possessing a mouth and some sort of digestive organism, but for the most part only observable under the microscope. They are the most highly developed form of Protozoa.

**Ingoldsby Legends**, a series of ingenious fantastical stories, mostly in racy verse, written by the Rev. R. H. Barham, and first published in *Bentley's Miscellany* about the middle of the 19th century.

**Ink**, a liquid pigment ordinarily made from an infusion of nut-galls, copperas and gum arabic. Shumac is substituted for nut-galls for inferior inks. An acid is sometimes added to prevent oxidation, and for the blue-black inks a small quantity of solution of indigo serves for colouring. Copying ink contains glycerine or sugar, which keeps the ink moist. Lampblack is the leading ingredient in printer's ink. Marking ink is composed of a solution of nitrate of silver, gum, ammonia, and carbonate of soda. For red, blue, and other coloured inks, colouring solutions are used.

**Inlaying** is the introduction of one class of substance into another in some artistic or other design, such as silver let into zinc, copper, or lead, and called *bidri*; the insertion of gold and silver into iron or steel, which is *damascening*; the mingling of brass with tortoiseshell, *buhl work*; the inlaying of woods, *marquetry*; of stones, *pietra dura*; and of the arrangement of small pieces of stone, for floors, walls, etc., *mosaic*.

**Innocents' Day**, a festival day in Roman, Greek, and Anglican Churches in commemoration of the killing of the children of Bethlehem by Herod, December 28th.

**Inns of Court**, the four bodies in London which

enjoy the privilege of calling candidates to the bar after they have studied for a certain number of terms and passed certain examinations. The Inns are: the Inner Temple, the Middle Temple, Lincoln's Inn, and Gray's Inn.

**Inquisition**, a Roman Catholic ecclesiastical court which became a formidable weapon of the Church in the 13th century under Pope Innocent III. in dealing with charges of heresy. It was effectively set up in the various Catholic countries of the Continent, obtaining its fullest and most sweeping organisation in Spain in the days of Ferdinand and Isabella, when Torquemada was made Grand Inquisitor, and used its powers with terrible severity. (*See* Auto-da-fé.) In the 18th century its influence began to wane, and although the Congregation of the Holy Office still exists at Rome, its jurisdiction is limited to the suppression of heretical literature. Not less than 30,000 persons are supposed to have suffered death in Spain alone in pursuance of the sentences of the Inquisition. The institution ceased to exist in France in 1772, in Portugal in 1820, and in Spain in 1834.

**Insectivora** are animals which live almost exclusively on insects and worms, and comprise hedgehogs, moles, shrews, etc.

**Insectivorous Plants** are of various orders, and are found in all parts of the world, the *Common Sundew* and the *Common Butterwort* being the best known British species. These plants are provided with a leaf (or flower) arrangement by which insects are attracted. A gummy secretion spreads over the surface, and when an insect gets entangled the glandular hairs close over the victim, and escape is difficult; whereupon the plants absorb the life essence of the captured insects by a process of digestion.

**Insects**, a term applied to an extensive class of invertebrate creatures abounding in all parts of the world. Their bodies are usually segmented, they possess wings, and have commonly four or more legs, in addition to a pair of antennæ and a pair of mandibles. Flies of all kinds, fleas, bugs, butterflies, moths, bees, wasps, grasshoppers, crickets, beetles, lice, and thousands of other species make up this wonderful order.

**Insessores**, a bird classification which included all perching and climbing birds, but which are now included in the Passeres and Picariæ orders, comprising some two-thirds of all existing bird species.

**Insignia**, marks or badges of office or honour, such as stars, ribbons, crosses, medallions or other designating objects, worn by members of special Orders or holders of prominent offices.

**Insolvency**, the condition which marks a man's or a firm's inability to meet their full monetary obligations. When a person is in this strait, he can either call his creditors together and endeavour to come to some private arrangement with them, according to the nature of his assets, or he can place himself in the hands of the Bankruptcy Court, which will administer the estate and distribute the assets for the benefit of the creditors.

**Inspector General**, a chief army officer who in the British Army system filled the place formerly occupied by the Commander-in-Chief until 1904, but now itself changed to Chief of Imperial General Staff.

**Inspiration**, in Theology, means the direct influence of the Supreme Being in the writing of the Scriptures, and like all other matters of religion, has been subjected to many definitions. Thus, we find endless discussion regarding *verbal inspiration*; as to *plenary*, all in all, inspiration; the *moral inspiration*; the *dynamical* inspiration, meaning in its action on the natural faculties; and *mechanical*, which only regards human agency as an instrument.

**Instinct**, a mental quality possessed by all organised beings in a more or less degree, but more especially revealed in the lower animals, and consisting of an intuitive prompting which induces the adoption of certain actions which conduce both to individual and racial preservation.

**Institute of France** was formed in 1795, and after various modifications was in 1832 organised on its present basis. Its five divisions are—French Language and Literature, Belles Lettres, Science, Fine Arts, Ethics and Politics. It is restricted to 40 members.

**Insulation**, the condition in which an electrified body is prevented from communicating electricity to contiguous bodies, by the interposition of a non-conducting material. Glass, shellac, ebonite, and gutta-percha are all non-conductors, and wires obtain insulation by wrappings of cotton or silk.

**Insurance Act.** The provisions of this Act are set forth in the *Office Compendium* section, which see.

**Insurrection**, a rising against constituted authority by a body of persons aiming at the removal of a grievance or the upsetting of Civil power. Less serious than a rebellion, it is more widespread than a mutiny and often develops into revolt or revolution.

**Intaglio**, engraving or carving on a sunken ground, a method frequently adopted in the ornamentation of stones and rings.

**Interdict**, a Roman Catholic ecclesiastical prohibition, directed either against a country, community or Church, or against persons. It is a weapon that is now rarely used, but in former times was often exercised with great power and severity.

**Interest**, in its commercial sense, is payment made for the loan or use of money, and is calculated according to a specified rate. Interest is either *simple* or *compound*. When simple interest is paid the principal sum remains the same; in the case of compound interest, each year's interest is added to the principal, and succeeding interest calculations are on the increased amounts.

**Interlude**, any short stage piece, or brief musical composition, for performance between more important pieces. In the strict musical sense an interlude is an *instrumental* composition played between the acts.

**Interval**, in Music, indicates the distance between two sounds, and may be *melodic*, as when sounded successively, or *harmonic*, as when sounded together.

**Intransigeants**, an ultra-republican party whose chief members were very active and aggressive in France, Italy, and Spain, at the end of the 19th century. Henri Rochefort was a leading representative.

**Introit**, the processional psalm or hymn formerly sung as the clergy entered the church to commence divine service.

**Invention of the Cross**, a Roman Catholic festival, held on May 3rd to celebrate the finding of the Cross at Jerusalem by Heraclius in 615. Also included in the Church of England calendar. (*See* Holy Rood.)

**Inventions in Demand.** Among the simple inventions that are awaiting evolution, and any one of which would bring a fortune to its inventor, the following may be considered worth noting:—A bottle which cannot be re-filled; a nut for bolts which will not shake loose; a substitute for india-rubber; a non-leaky tap; a smoke-consuming appliance; a simple rangefinder; a non-explosive lamp for low-flash oil; a good pencil sharpener; an efficient stopper or easy means of drawing corks. Do not send your ideas to Messrs. Pears, but consult the Patent Office. Recent inventions include the Drummur Electric Battery, an airship on rails, an automatic egg-packing machine, an electric violin, an apparatus for the transmission of heart-beats by telephone, a photo-electric cell for controlling a motor by voice, an ice telemeter, etc.

**Invertebrata**, the zoological term used to designate all such animals as are without backbone or other internal bony framework.

**Investiture**, the ceremony of conferring honour, office, or possession—the investment of the recipient with badge, token, or public recognition.

**Invultuation**, a form of magic or witchcraft that prevailed in olden times, consisting of pricking a wax or clay image of a person whose death was desired, invoking simultaneously the aid of evil spirits, the belief being that the spell would have a fatal effect.

**Iodine**, a substance formerly exclusively obtained from the extract of seaweed. After the salts have been removed by crystallisation, there is left in solution iodide and bromide of potassium, and magnesium.

with chemical agents yield iodine. Nearly all iodine now in use is derived from Chili saltpetre (sodium nitrate). Many combinations are effected with iodine, some of which are of considerable commercial value and of use in medicine.

**Ionic Order** of architecture is one of the five classic orders, its leading characteristics being the volute of its capital, which has on each side distinctive curved or scrolled ends.

**I O U,** an informal written and signed acknowledgment of indebtedness, requiring no stamp, and, though not a promissory note, can be sued upon.

**Ipecacuanha,** a flowering plant of the Cinchonaceæ order, a native of the Brazilian forests. Its root is of great utility in medicine.

**Irade,** a decree promulgated by the Sultan of Turkey.

**Iridescence,** a glittering, rapidly changing glow of colours, showing different hues in different lights and having the constantly shifting sheen and lustre of shot silk. Glass, metals, and fabrics are rendered iridescent by chemical treatment.

**Iridium,** one of the heaviest known metals, found in alliance with platinum. It is silver-white in colour, is of considerable commercial value as an alloy, and is in general use for the making of standard weights on account of its durability.

**Iris,** the typical genus of the botanical order Iridaceæ, an order of herbs or under-shrubs of the Endogen family, with tuberous or fibrous roots and flag-like leaves, many of the family having beautiful flowers.

**Irish Moss,** a kind of seaweed found on certain parts of the Irish coast, and collected, dried, and bleached for use as cattle food or for making a nutritious jelly.

**Irish Parliaments** of a non-elective character existed in Tudor times and earlier, but they had no independent power until 1782, when Grattan succeeded in securing some measure of freedom from English parliamentary control. But no Roman Catholics were allowed to sit, the King refusing to assent to an Act for admitting them, and, finally, after the rebellion of 1798, and the winning over of the Irish members by money and otherwise, the Act of Union of 1801 abolished the Irish Parliament. Under the Irish Free State (Agreement) Act, 1922, two legislative chambers, the Dail Eireann and the Senate, were set up. The 58 senators are elected by all voters over 30 years of age.

**Iron** is extracted by smelting from different ores, hæmatite, magnetic iron, and spathic iron, coal or coke being now universally used for smelting purposes. The kinds of iron produced are cast iron, wrought iron, and steel. The total amount of pig iron produced throughout the world in 1930 amounted to about 79,670,000 tons, contributed chiefly by the United States, Germany, and Great Britain, about 77 per cent. of the total being the product of these three countries.

**Iron Age,** the period when primitive man made and used weapons and implements made from iron. It came after the Stone and the Bronze Ages.

**Ironclads,** ships of war cased in iron or steel plates of sufficient thickness to resist projectiles. They were first introduced (1858) in the French Navy, and in 1860 the first British ironclad, the *Warrior*, was launched. (*See* **Navy.**)

**Iron Crown,** the crown of the ancient kings of Lombardy and emperors of Germany, and noted for its iron band, said to have been forged from one of the nails of Christ's cross. Napoleon I insisted on being crowned with this famous crown, which is now preserved in the cathedral of Monza.

**Ironsides** were Cromwell's special troopers, so called because of their solidity and firmness in battle.

**Ironwood,** the intensely hard and heavy timber of certain kinds of trees, natives of the warmer regions of Asia and Africa, and mostly of the Sapoteæ order.

**Irony,** a sarcastic form of speech or writing by which blame appears in the guise of praise, and generally where the real meaning is contradictory to the expression.

**Iroquois,** the name of one of the tribes of North American Indians formerly constituting the Five Nations.

**Irredentists,** a political party organised in Italy in 1878 with the object of bringing under one government the various islands and places racially and geographically connected with Italy.

**Irrigation,** an artificial method of providing water for the growth of plants on lands where the natural supply of water is deficient. The science has made immense progress during the last fifty years, and has been the means of bringing into profitable cultivation vast tracts of territory in India and Western America which had previously been arid wastes. The systems are various and are utilised according to the special conditions of the land to be irrigated, but the success which has attended these experiments has been very gratifying. In fact, irrigated lands are often more productive than lands which receive a fair amount of moisture from the elements; the irrigation supply can be distributed and regulated exactly according to requirements.

**Isinglass,** a gelatinous substance manufactured from the sounds or air bladders of certain fish, the best kinds coming from Russia and Brazil. Some of the coarser sorts of isinglass are made from hides.

**Islam,** the Mahomedan religion, the word signifying devotion to God.

**Isoamylene,** a colourless, mobile oil, of peculiar odour, obtained by distilling isoamylic alcohol with zinc chloride.

**Isobaric Lines** are the lines on maps which link together places of equal barometric pressure.

**Isomerism,** a chemical term indicating two compounds having the same formulæ and the same molecular weight, but differing in chemical or physical properties. This arises from the difference in the arrangement of the atoms in the molecule.

**Isothermal Lines** are lines appearing on maps showing the points on the earth's surface possessing an equal mean temperature.

**Isthmian Games** were held in alternate years by the ancient Greeks on the Isthmus of Corinth, in honour of Neptune, and were of the same class as the Olympian Games. Wreaths were the only prizes.

**Istle,** a kind of fibre yielded by the *Bromelia sylvestris*, a Mexican tree that grows immense leaves, from which the fibrous material is obtained. For carpets, cordage, sacking, belting, nets, etc., this fibre is very extensively used.

**Itaka-wood,** often called tiger-wood because of its markings, is a hard and beautiful wood furnished by the *Macherium Schomburgkii* of British Guiana. For ornamental cabinet work it is highly prized.

**Itch-Mite,** a minute insect which burrows beneath the skin and produces the itch. It is covered with short hairs, and two pairs of its four pairs of legs are provided with suckers at the ends. It belongs to the spider family, and is named *Sarcoptes scabiei*.

**Iulus,** the name of a group of animals of the centipede family with cylindrical bodies and two pairs of legs to each segment, the latter being 40 to 50 in number. In South America specimens 5 or 6 inches long are frequent, but those found in England are very small.

**Ivory,** the dentine substance of which the tusks of the elephant, hippopotamus, walrus, etc., are composed. The tusks of the African elephant sometimes weigh as much as 100 lb., and reach a length of 8 or 9 feet.

**Ivory Black,** a species of bone-black, made by the calcination of ivory scraps and turnings, used as a pigment in the manufacture of printer's ink, paint, etc.

**Ivory-Gull,** a small, beautifully-shaped, entirely white gull confined exclusively to the Arctic regions.

**Ivy,** the well-known climbing shrub, chiefly evergreen; furnishing a sudorific, the berries having also emetic properties.

**Ixia,** a genus of Cape Iridaceæ, with beautiful flowers produced in considerable variety of coloration under culture.

**Izar,** a fixed star in the constellation Bootes.

## J

**Jaal Goat,** the Abyssinian ibex, found also in Upper Egypt and in parts of Persia.

**Jabiru,** a wading bird of the stork family, white of plumage, but having a black neck and head, with a red band round the bottom part of the neck. Is a native of the tropical regions of South America, and almost equals the adjutant, which it resembles, in size.

**Jaborandi,** a Brazilian plant, the leaves and bark of which yield a powerful sudorific drug, and an alkaloid called jaborine; the South American Indians make great use of a decoction of the leaves in fever cases.

**Jabuti,** a Brazilian plant (*Psidium albidum*), furnishing an excellent dessert fruit.

**Jacamar,** a South American bird with long bill and brilliant plumage, of arboreal habits and similar in its general characteristics to the kingfisher.

**Jacana,** a tropical bird (the water-hen of Brazil and the warmer parts of America) of wide range, beautiful of plumage, with slim body and narrow wings, and long pointed beak. It feeds on seeds and insects, inhabits marshy lands, and is of the crake and coot family.

**Jack,** a small schooner-rigged vessel, used in the Newfoundland fisheries; a pike; an oscillating lever; an apparatus for roasting meat.

**Jackal,** a kind of wild dog or wolf, plentiful in warm countries, of nocturnal habits, a carrion feeder, and of strong odour. Jackals hunt in packs, and make the night hideous with their discordant yells.

**Jackboot,** a leathern boot reaching above the knee; in common use during the 17th and 18th centuries, but in modern days surviving only as foot and leg gear for fishermen, ostlers, etc.

**Jackdaw,** a small, blue-black plumaged kind of crow, common in all parts of Europe, and nesting frequently in steeples, old ruins, and hollows of trees. It makes an amusing pet, can be taught to utter words, and is famed for its mischievous propensities.

**Jack Ketch,** a by-name for the common hangman, and said to have been the real name of the public executioner of the time of James II.

**Jack-tree,** a familiar tree of the Indian archipelago, yielding a fruit called jack-fruit, much larger than the bread-fruit, but coarser.

**Jacobins,** a French revolutionary club or party, formed in 1789, and accustomed to meet at a Jacobin convent, hence the name. It became a controlling force in the Revolution, especially in the movement which led to the Terror, Robespierre being its chief spokesman.

**Jacobites,** adherents of the Stuart cause after the abdication of James II. First James himself, then his son (the Old Pretender), and later his grandson (the Young Pretender) tried to fan the flame of rebellion in Scotland and Ireland, but after the defeat at Culloden in 1745 the cause was lost.

**Jaconet,** a kind of muslin at one time much in vogue as dress material, light, pliant and soft-textured.

**Jacquerie,** a band of French peasants who in 1358 rose against the tyranny of the French nobles. Much desperate fighting occurred before the insurrection was put down.

**Jade,** a hard, transparent mineral found in China, America, and New Zealand, and used for making vases, bracelets, and other ornamental articles. There are many varieties, and there is evidence that the stone was in common use in prehistoric times for weapons and utensils.

**Jaggernaut,** or **Juggernaut,** the name of the great Indian idol at Puri, which once a year is brought forth from its temple, placed on an enormous car, and conveyed at the head of a mighty procession through the streets. Multitudes of pilgrims assemble on these occasions, and it used to be the practice for many fanatics to throw themselves beneath the wheels of the car and allow themselves to be crushed to death.

**Jaguar,** an American carnivorous animal of the leopard family, but much larger and more powerful. It is the most formidable beast of prey on the American continent, and haunts the shores of the large rivers and lakes of Central and South America.

**Jail,** or **Gaol,** a place of confinement for persons charged with or convicted of criminal offences.

**Jalap,** a drug made from the roots of certain herbaceous plants of the Mexican Andes, growing at an elevation of from 6,000 to 8,000 feet. The drug is one of the swiftest of known purgatives.

**Jalpaite,** a cupriferous Mexican sulphite of silver, malleable, blackish-grey, with isometric cleavage.

**Jam,** the popular name for boiled, sweetened and preserved fruit, in which during the last half-century there has sprung up an important industry in London and different parts of the country.

**Jamb,** the upright sides of a door, window, fireplace, or other aperture, supporting the lintel, entablature or mantel and shelf.

**Jangada,** a rude sort of boat or catamaran carrying a large sail, used off the coasts of South America.

**Janis,** an Indian religious sect, dating from 700 B.C. who reject the Vedas and are in many points in accord with the Buddhists. They are a fairly numerous body, and are as renowned for their austere morality as for their wealth.

**Janissaries,** a former band of Turkish foot soldiers who acted as the Sultan's body-guard, and were noted for their turbulence and cruelty. They existed from the 14th century to 1826, when they were finally disbanded after the people had risen against them and massacred many thousands.

**Jansenists** were followers of Jansen, Bishop of Ypres, who denied "the freedom of the will and the possibility of resisting Divine grace." They did not exist as an organised body after 1740.

**Janthina,** the "Ocean snail," is common to the Atlantic, and of peculiar formation. It has a violet shell, and possesses a sort of foot which it uses for propulsion.

**Jantu,** a water-raising contrivance, balanced on a bar. It is of considerable antiquity, still used in India and the East in irrigation operations.

**January,** the first month of the year, named after Janus, the two-faced god of the Romans. It was the *Wolf monath* and *Aefter Yule* of the Saxons.

**Japanese Art** is one of the many characteristic developments of a wonderful people. It is original, distinctive, of marked decorative sense, and shows a freedom and delicacy of handling almost beyond praise. Although in certain technical details it falls short of the best European standards, it has in its general realisations had a decided influence upon the decorative art of the world at large.

**Japanning,** the process of coating metal, wood, and other surfaces with the varnish called Japan, which produces a lacquered effect and is capable of receiving a high polish.

**Jarrah Wood,** the wood of the mahogany gum tree of Western Australia (*Eucalyptus rostrata*), one of the hardest of all woods.

**Jasmine,** a graceful climber, with odoriferous blossom, originally a Persian plant, but now acclimatised in many varieties in almost all parts of the world.

**Jasper,** a precious stone of the quartz variety, opaque, and coloured red, brown, yellow and sometimes green. It was greatly esteemed by the ancients, the Bible having numerous allusions to it.

**Jaunting Car,** a two-wheeled vehicle peculiar to Ireland, containing a lengthwise seat on each side and a seat in front for the driver.

**Javelin,** a spear thrown by hand and one of the common weapons of war from the days of ancient Rome to the Middle Ages. A rude form of javelin is still used by many savage tribes.

**Jay,** a well-known bird of the crow family, of many species, and having a wide distribution, ranging from Europe, where there are six species, to South and North America, where the varieties are numerous. The Common Jay is the only British species. The Blue Jay of North America is a more handsome bird, though smaller.

**Jazerine,** an antique military or protective jacket, strengthened by small overlapping pieces of steel or other metal internally, worn generally by the Italian nobility and those of neighbouring nations during the Middle Ages.

**Jazz,** a syncopated music which probably originated in negro spirituals (*q.v.*). Jazz bands came into prominence during the Great War. Jazz has had a great influence on serious music.

**"Jeames,"** a name brought into familiar use by

Thackeray in his "Yellowplush Papers," and since largely adopted in referring to footmen and flunkeys.

**Jean,** a stout kind of twilled cotton cloth much worn in olden times, and resembling fustian. Among modern varieties of jean there is a satin jean of a shiny surface, also "jeannette" used for linings.

**Jebusites,** are often referred to in the Old Testament. They were a Canaanite nation, who held Mount Zion, and were in frequent conflict with the Israelites, until finally defeated by David.

**Jehovah,** one of the Hebrew names of the Deity, the etymology of which is obscure. The English translators of the Old Testament rendered it "the Lord." The Jews, however, regard the word as too sacred for speech, and use the equivalents *Adonai* or *Elohim* instead of it.

**Jelly-fish,** the common name for a wide variety of fishes of gelatinous structure, such as acalephs, sea-bubblers, medusas, etc.

**Jemidar,** a native Indian officer of the British Army, or head servant of a large house in the Orient.

**Jenny,** the name given by James Hargreaves to the spinning frame invented by him in 1766, which greatly improved and extended cotton-spinning operations.

**Jeofail,** a law term, referring to the correction of some error in legal process.

**Jerboa,** an interesting rodent known sometimes as the "leaping hare," and sometimes as the "jumping mouse." It has very long hind legs and a long tufted tail. It is a native of the desert regions of Africa and lives in communities in underground passages. Its jumping power is extraordinary.

**Jereed,** a wooden javelin, used in Turkey and Persia in tourneys and marksmanship competitions. It is about five feet long, and great skill may be attained in flinging it at a moving object or fixed target.

**Jeremiad,** any utterance or writing in which sorrow or complaint is the chief characteristic, so named as recalling the style of the "Lamentations of Jeremiah," in the Old Testament.

**Jerkin,** a short upper garment or jacket, made of leather or cloth, in common wear by men in the 16th and 17th centuries.

**Jersey,** the name given to a close-fitting garment of fine woollen yarn worn by men and women, and a common garment of athletes, cricketers, etc.

**Jerusalem Chamber,** a room in Westminster Abbey, deriving its name from the circumstance of its having originally been decorated with a view of Jerusalem. Henry IV died in this chamber, and the Committee for the Revision of the Bible met there in 1870 and later.

**Jesuits,** members of the famous Roman Catholic order founded by Ignatius Loyola in 1534, have borne an influential part in the working out of the religious policy with which they have been identified. They were long regarded as "the power behind the Papal Chair," and in spite of their piety, devotion, and learning, the suspicion has rested upon them of having put their political aims before their religious practices. They have been described as having no scruples, and as employing every possible art, device, or deception to attain their objects. The members of the society are composed of two classes, laymen and priests, and a long and vigorous course of study is prescribed before they are admitted into the privileges of full membership. They are required to take the vows of voluntary poverty, perfect chastity, perfect obedience, and complete submission to the Pope. For their supposed political intriguing they have been several times expelled from France, Spain, Russia, Holland, and other countries, but the order still survives, it being estimated that it has still over 10,000 devoted members.

**Jet,** a deep black fossil substance admitting of a high polish and much used for jewellery, ornaments, and trimming. The substance belongs to the Tertiary and Secondary rocks, the most important deposit being found near Whitby, where jet manufacture has been an established industry for a long period.

**Jetsam,** a term in navigation law, signifying cargo thrown into the sea or thrown on shore after shipwreck. Such goods belong to the Crown in default of other claimants within a year and a day under Merchant Shipping Acts 1894–1920. (*See* **Flotsam,** in Pears' *Dictionary of Business.*)

**Jetton,** a kind of metal counter formerly used in card-playing. Monarchs, nobles, and abbeys had their distinctive jettons, which were often as carefully devised and inscribed as if they had been pieces of coin. Examples survive in many museums.

**Jetty,** a construction of wood, masonry, or iron-work projecting into the sea, and serving as a wharf for shipping and merchandise, or as a mole for harbour protection.

**Jeunesse dorée,** gilded youth, a term applied to young men "about town" remarkable for their luxurious habits. The name was originally given to a fashionable political party of the French Revolution.

**Jewfish,** a large fish of the Serranidæ family, plentiful round the coast of America.

**Jewish Calendar** is supposed to date from the Creation, which is reckoned to have been anterior to the Christian era by 3,760 years and 3 months. 1931 is Annus Mundi 5691–92 in the Jewish Calendar.

**Jews,** descendants of the ancient Hebrews or Israelites, exist to the number of considerably more than fourteen millions in all parts of the world. There are over 150,000 in London alone, and in other parts of the United Kingdom upwards of 150,000 more. In Europe there are nearly 10,000,000, more than half the number living within the boundaries of Russia, despite persecutions and migrations. Austria-Hungary contained over 2,000,000; Germany has over half a million; Turkey, 106,977; Roumania, 215,900; Holland, 103,900; France, 100,000; Italy, 44,000, Switzerland, 12,000. In the *Jewish Year Book* it is estimated that in North and South America there are some two millions and a half Jews; in Asia, 459,746; in Africa, 354,500; and in Australia, 17,000. A movement is on foot for restoring poor Jews to Palestine, where to-day some 80,000 are living on the soil. The Zionist movement, which has for its object the founding of Jewish colonies in favourable countries, has also been warmly taken up. In this country the Jews have been practically freed from all disabilities, but in many lands they continue to be oppressed.

**Jew's Ear,** a fungus that grows in the shape of an ear and is common in England. At one time it was accounted of medicinal value, and in China is esteemed both as a medicine and as an article of diet.

**Jew's Harp,** a small musical instrument, the sounds from which are produced by the vibrations of a metal tongue which extends through its centre. The harp is pressed against the teeth of the performer, who twangs the metallic tongue with his finger, simultaneously breathing the required variations of tone upon it. Handled by an expert player, it is capable of producing very pleasing music.

**Jewstone,** a pale grey egg-shaped fossil stone that was once highly prized.

**Jhoom,** the name of a method of cultivation adopted in the jungle parts of India, but only followed for a year or two after the forest has been cleared by burning.

**Jib,** the front triangular sail of a ship, resting on a stay, and in large vessels projecting from the end of the jib-boom. There is also a flying jib outside this.

**Jig,** a rapid dance for one or more persons, much indulged in in Ireland and the English and Scotch provinces, a survival of old English days.

**Jigger,** a kind of flea or mite common in the West Indies and some of the warmer parts of the United States. It pierces the skin like a mosquito and causes great irritation.

**Jihad,** a holy war, proclaimed by the Mussulmans against Christians. Fanatics attempted to set one on foot in India in 1877, and simultaneously another was proclaimed at Constantinople against the Russians, but it came to naught.

**Jingal,** the name of a swivel-musket largely used by the Chinese for shooting water-fowl and other birds.

**Jingos,** an English political term which came into vogue in the "seventies" and "eighties," when Russia seemed to be threatening an advance on Constantinople. A music-hall song of the day,

sung by Macdermott, the refrain of which was "We don't want to fight, but by *jingo* if we do," etc., emphasised the feeling of the party and gave the cue for their being called "Jingos."

**Jinns** are supposed to be spirits of evil, assuming various shapes, human and animal, and exercising good or evil influence, according to their origin or mission. In the *Arabian Nights* and other Eastern literature Jinns or genii are numerous.

**Jinrikisha**, a hooded, two-wheeled vehicle drawn by one or two men, and used in Japan, India, and other Eastern countries.

**Joachimites** were adherents of the Italian religionist, Joachim, who was abbot of Floris at the beginning of the 13th century, and maintained that three reigns would complete the history of the earth; the first was the reign of the Father, from the Creation to the birth of Christ; the second that of the Son, from the birth of Christ to 1260; and the third that of the Holy Spirit, from 1260 to the end of the world.

**Joannites** were followers of St. John Chrysostom, Archbishop of Constantinople, in the 4th and 5th centuries, and were noted for their austerity.

**Jockey Club**, the governing body that, although possessing no legal status, frames rules and laws by which horse-racing and turf matters generally are regulated. The club-house is at Newmarket.

**Johannes**, a Portuguese gold coin of the 17th and 18th centuries, worth nearly £2 English.

**Johannisberger**, a famous white wine produced from grapes grown in the Rheingau district near Wiesbaden.

**Johannite**, a green mineral, scientifically described as "a hydrous sulphate of the protaxid of uranium."

**John Bull**, the typical figure of an Englishman, bluff, big, and burly. Arbuthnot's *History of John Bull* is supposed to have originated the character.

**John Company**, a familiar appellation of the East India Company, in the days before the Mutiny.

**John Dory**, a well-known sea-fish of which there are six species. It is of a golden yellow colour (*jaune doré*), has a high dorsal fin with long filaments projecting from the spines, and is much valued as a table fish. It is sometimes found in British waters, but the Mediterranean is its chief habitat.

**John o' Groat's House**, inhabited by a farmer of that name and his brothers in the 15th century, stood on Duncansby Head, the northernmost point of Scotland. The site is marked and an inn was erected near it in 1876.

**Joiner**, a workman whose occupation is to construct articles in house-building by joining woodwork with framings, glue, screws, nails, etc.; a specific branch of the craft of carpentry.

**Joist**, a horizontal timber employed in the support of floors and ceilings in house-building; latterly iron joists have also been used in the construction of many important edifices.

**Jongleurs** were originally minstrels and jesters who wandered from town to town singing songs and giving entertainments. In Norman days they were popular both in France and England and were favoured by the kings. In latter times they degenerated into conjurers, and so gave rise to the term jugglers.

**Jordanite**, the name given to a native sulphide of arsenic and lead, found in orthorhombic crystals in the dolomite of the Binnenthal, in Switzerland.

**Joss**, the popular name of a Chinese idol, the place where it is kept being called a joss-house.

**Jougs**, an ancient Scottish instrument of punishment, in the form of an iron collar, which was fitted to the neck and held to the wall or to a tree by a chain; a variety of pillory of a barbarous character, employed at times in the repression of female recalcitrants.

**Joule**, the electrical unit adopted by Siemens and representing the work accomplished in one second, "in maintaining a current of one ampere against a resistance of one ohm." The name commemorates that of Prof. J. P. Joule, the eminent scientist.

**Jousts** were military tiltings in the nature of tournaments, where the contestants strove against each other on horseback with blunted lances. It was the sport of nobles in feudal times.

**Jove**, a classical name for Jupiter, the chief of the Roman divinities.

**Jovinianists**, a sect founded in the 4th century by a Milanese monk named Jovinian, who contended for the equality of sins, rewards, and punishments, and denounced celibacy and other prevalent features of Church doctrine.

**Jowter**, a Cornish and West of England term for a fish-hawker who plies his trade on horseback.

**Jube**, in church architecture, the rood-loft over the entrance to the choir from the chancel.

**Jubilee** (or Jubile), the year following the seventh seven-year period. A year of perfect rest (Lev. xxv). In the Roman Catholic Church the Jubilee Year is every 25th year from Christmas to Christmas (originally 100 years) during which time plenary indulgence is obtainable. Introduced by Boniface VIII February 22, 1300. In recent years the word Jubilee has been applied to any form of 50th year celebration.

**Judge Advocate General** is an officer whose duty it is to advise the Crown on Courts Martial and on subjects connected with military law.

**Jugoslavia.** The State of Jugoslavia, whose official name until 1929 was the Kingdom of the Serbs, Croats and Slovenes, was constituted in Dec. 1918, and incorporated under an hereditary king the former kingdoms of Serbia and Montenegro, and the Austro-Hungarian provinces of Bosnia and Herzegovina, Croatia, Slavonia, Dalmatia, Slovenia, part of Southern Hungary and Macedonia. It has an area of 248,987 sq. kms. and a population of 11,984,911, 76 per cent. of whom are engaged in agriculture. The chief exports are timber, cereals, fruit and live-stock, but the country has also valuable minerals such as coal, iron, lead, copper, manganese, etc., as well as gold and silver mines. It imports manufactured goods, chiefly textiles and machinery. The value of exports in 1929 amounted to over 700,000,000 gold dinars. The total national debt in 1930 was 3,976,000,000 gold francs.

**Julian Calendar**, named after Julius Cæsar, who in B.C. 46, finding the Roman year 90 days in advance of the real time, was the first to adopt the calculation of time by the solar year, the average length being fixed at 365¼ days. There was still an overplus of a few minutes every year, and this was rectified by the Gregorian Calendar, introduced in Italy in 1582 and adopted in England in 1752, from which date what is called the "New Style" begins.

**Julianists**, a sect of Copts who believed the body of Christ to be incorruptible, in contravention of the doctrine of the Severians.

**Julio**, an old Italian coin, worth about 6*d*. English.

**July**, the seventh month of the year, named after Julius Cæsar. It was the *Maed monath* (Meadmonth) of the Saxons.

**July Revolution**, the French revolution of 1830 whereby Charles X. was deposed and Louis Philippe made Citizen King, the latter being himself deprived of kingship by the revolution of 1848.

**Jumart**, a fabulous monster which often cropped up in early English literature, supposed to be the offspring of a bull and a mare, or of a horse and a cow.

**Jumpers**, religious sects or bodies who make jumping or dancing a part of their ceremony of worship. Certain Methodists of Wales, some Irvingites, the Shakers of America, and a Russian sect have adopted the practice more or less.

**Junco**, the name given to a genus of snowbirds, confined to the American continent.

**June**, the sixth month of the year, containing 30 days and deriving its name from Juno. It was the *Sear* (Dry) *monath* of the Saxons.

**Jungle**, the Indian name for a forest or dense tract of undergrowth or desert land.

**Jungle-Fowl**, a gallinaceous bird of the pheasant family, having four varieties. It abounds in the forest regions of India, Ceylon, and Java; and there is an Australian bird of the megapod order to which the term Jungle Fowl is applied. They are all birds of brilliant plumage.

**Juniper**, the Nova Scotian name of the American larch; also all the trees of the *Juniperus* genus: from the unripe fruit of some species of which is distilled the stimulant and diuretic oil of juniper.

**Junk**, a flat-bottomed Chinese sea-going boat,

carrying large masts, and employed on the coasts and seas of China and Japan.

**Junkers,** a German political party name, referring to a class of young nobles of military spirit, who, prior to the Franco-Prussian War, supported Bismarck.

**Junket,** a sort of sweetmeat, consisting sometimes (as in Devonshire) of curds and cream, sweetened and flavoured at will, made with rennet.

**Junta,** a Spanish word designating a legislative or other distinguished assembly entrusted with the passing of laws or the deciding of policy. A grand council of state.

**Jupiter,** the largest body of the planetary system except the sun, from which orb it is distant 483,000,000 miles. Its mass is over 300 times as heavy as the earth, while in bulk it is 1,300 times as large. It has five satellites. Also the supreme deity of the Romans, identified with the Greek Zeus.

**Jurassic Formation,** a series of rocks (the evidences of which are most marked in the Jura Mountains) coming between the Cretaceous and Triassic groups and including the Oolite and the Lias. It is a formation rich in fauna, and extends through a great part of Europe and to America.

**Jury,** a body of men chosen and sworn to hear and pass verdict upon evidence brought forward at a trial, inquest or inquiry. Its origin is obscure, but it was in existence in the 13th century. There are three classes of juries: the Grand Jury of 23 freeholders summoned for criminal courts, upon whom devolves the duty of deciding whether there is a *prima facie* case against a person accused; Common Jury, consisting of 12 members, who have to pronounce their verdict upon the evidence; and the Special Jury, which is simply a jury of men of higher social standing or specific experience. There are also certain other juries called together for particular purposes, such as the *Coroner's Jury*, the *Jury of Matrons*, and so on. Women now serve on ordinary juries.

**Jurymast,** a word of doubtful origin, the application of the term "jury" being difficult in this connection to define, but indicating an improvised mast put up in place of one lost or broken.

**Justice,** is defined as "a written or prescribed law, to which one is bound to conform and make it the rule of one's decisions."

**Jute,** the name given to the fibre of a plant largely grown in India and used for the manufacture of coarse cloths, cordage, etc. Dundee is the chief centre of this industry.

**Jutes,** a Low German race who in the 5th century invaded the south-eastern part of England, establishing themselves in Kent and making Canterbury their capital.

**Juvenalia,** games of young people instituted in Rome's imperial days by Nero.

**Juzail,** a heavy description of rifle used by the Afghans.

## K

**Kaaba,** the inner shrine of the Great Mosque at Mecca, only thrown open to the faithful three times a year. It contains in its south-eastern corner the famous sacred "black stone," said to have fallen from heaven with Adam.

**Kaffirs,** a native race of South Africans, which includes the Zulus and other of the more powerful tribes. They were originally called Kaffirs (meaning "infidels") because of their refusal to adopt the Mahommedan religion.

**Kageneikia,** a genus of the Roseworts, confined naturally to Chili; a tall-growing ornamental tree, white flowered, and propagated successfully under glass in this country.

**Kago,** a rude Japanese palanquin suspended from a pole borne on the shoulders of two carriers, the person carried resting in a sort of bamboo hammock.

**Kagu,** a grey crested bird, the only member of the *Rhinochetinæ* family, and an inhabitant of New Caledonia. In its general characteristics it has some resemblance to the heron, though it is, properly speaking, a crane.

**Kaha,** the Dyak name for the Proboscis monkey of Borneo (*Semnopithecus nasalis*).

**Kain,** a tribute or duty formerly taken—in kind, as poultry, etc.—by landlords in Scotland and elsewhere as part of the rents due to them from their tenants.

**Kainite,** a mineral found in the Stassfurth salt mines, Magdeburg, Prussia, forming a source of potassium compounds, and consisting of magnesium sulphate and potassium chloride.

**Kaiser,** the German form of the word Cæsar, emperor, borne up to 1918 by the then sovereigns of Germany and Austria. Charlemagne was the first prince to assume the title of Kaiser.

**Kakapo,** the New Zealand owl-parrot, a peculiar and interesting species, possessing wings but not able to use them for flight, of brown mottled plumage, nocturnal in its habits, and nesting in burrows. The bird is rapidly becoming extinct.

**Kalan,** a local name for the sea-otter which is only found in the seas of Kamchatka and North-West America. It is larger than the beaver, and weighs from 70 to 80 lbs. Its proper zoological name is *Enhydra lutris*.

**Kalanchoe,** the genus of Crassulaceæ, the leaves of varieties of which are applied to medicinal uses in China, India, and South America.

**Kale,** strictly a kind of cabbage with curly leaves; but also applied to cabbages in general; also the name of a broth made from kale and other ingredients.

**Kaleidoscope,** an optical instrument, the invention of Sir David Brewster, and consisting of a cylindrical tube containing two mirrors inclined to each other at an angle, which produce a symmetrical reflection of any transparent coloured substances placed between. An endless variety of beautiful patterns is obtained by turning the toy round.

**Kalends.** (*See* **Calends.**)

**Kalmucks,** a branch of the Tartar or Mongol race who, in the 17th century, were expelled from Tibet and China and settled on the banks of the Volga, but many of whom returned to China in 1771. Since then they have wandered over many lands. They are skilled in metal working, and their religion is a modified Buddhism.

**Kalpis,** an ancient three-handled Grecian water vase of large size, decorated with classical figures in red on a dark ground.

**Kalsomine,** a mixture of Paris white, clear glue, and water, forming a serviceable whitewash.

**Kami,** a Japanese title applied to gods and celestials and their descendants, the emperor and members of the imperial family, and daimios and governors.

**Kamila,** a dye substance, giving a deep orange colour, obtained from the pods of the *Mallotus Philippmiensis*, a tropical and sub-tropical tree.

**Kamptulicon,** a floor covering composed of a mixture of india-rubber, gutta-percha and cork. It was invented by Elijah Galloway in 1843, and though at first only made in grey shades, is now produced in a variety of bright-coloured patterns.

**Kangaroo,** a large marsupial or pouch-bearing animal confined entirely to Australasia. Captain Cook was the first European to observe the animal in 1770. There are 56 species. A male kangaroo stands from 6 to 7 feet high; the female, which carries her young in her abdominal pouch, is considerably less. These animals can move at an exceedingly rapid pace, progressing by tremendous leaps of from 10 to 20 feet.

**Kantianism,** the philosophical principles propounded by Immanuel Kant, the 18th century German metaphysician, which sought to restrict human knowledge to objects of possible experience, while admitting religious ideas as modifying influences.

**Kaolin,** a fine clay much used in the manufacture of Oriental, Sèvres, and other high-class pottery. It results from the decomposition of felspar, and is found in China, Japan, Devon, Cornwall, at Limoges, and in certain parts of the United States.

**Karaites,** a Jewish sect founded in the 8th century by Ananben David, who adhered strictly to the Scriptural word and rejected the Rabbinical traditions and the Talmud. Remnants of the sect still exist in parts of Eastern Europe.

**Karma,** the Buddhist theory that a man's actions control his destiny after death, as the natural effect of a natural cause. The idea of successive existences is bound up with the doctrine, and forms a fruitful subject of ethical speculation.

**Katydid,** a large green-winged insect of arboreal habits, common in the central and eastern portions of the United States, and noted for its

shrill note, which sounds like its name, and is produced by stridulation.

**Kauri Pine**, the tree which yields Kauri gum, so largely used in varnish making, and exclusive to New Zealand. It exists in a fossil found in the sites of ancient Kauri woods.

**Keble College**, an Oxford college founded and endowed in 1870 in memory of the Rev. John Keble, author of *The Christian Year*.

**Keep**, the central tower or chief stronghold of an ancient castle, sometimes called the donjon.

**"Keepsake," The**, a form of gift-book issued annually in the early part of the last century; much patronised by society for the sake of its contributions by titled and other personages, and for its pictures, but of small literary or artistic value.

**Kelp**, the ash of burned seaweed, which yields carbonate of soda and sulphates and chlorides of soda, as well as small proportions of iodine and bromine in conjunction with sodium and magnesium. Formerly used in the manufacture of soap and glass extensively, but superseded largely for such purposes by barilla and other substances.

**Kelpie**, a water-sprite of Scottish fairy-lore, whose appearance assumed various forms, and foreboded drowning to the person who saw it.

**Kentish Fire**, a noisy long-continued kind of cheering and clapping of hands which originated in Kent at the Protestant meetings held in 1828–9 to oppose the Roman Catholic Relief Bill.

**Kentish Rag**, a kind of fossiliferous clayey limestone found in Kent. Used largely in building, for rubble and other walls, generally dressed roughly, if at all.

**Kenya Colony**, a new Colony formed in East Africa, south of Abyssinia, 1888–1918, with an area of about 200,000 square miles and an estimated population of 2¼ millions. Nairobi is the capital.

**Kermes**, a crimson dyestuff, less brilliant than cochineal, but more lasting. It is made from the bodies of the females of a small oak-inhabiting insect (Coccus) found in immense numbers on the coasts of the Mediterranean. It was discovered before cochineal.

**Kermesite**, a somewhat scarce mineral, being a combination of oxide and sulphide of antimony, and of a red colour. Often called red antimony.

**Kerosene**, an illuminating oil distilled from petroleum and shale, and practically the same as paraffin.

**Kersanite**, a micaceous description of dolomite found at Visembach in the Vosges, consisting mainly of oligoclase.

**Kersey**, a coarse kind of woollen cloth, originally made at Kersey, in Suffolk, and much used in the Middle Ages for ordinary men's clothing.

**Kerseymere**, a fine twilled all-wool cloth greatly in vogue in the last century as a dress fabric. The word is a corruption of Cashmere.

**Kestrel**, a rather small kind of falcon of varicoloured plumage, common in most parts of Europe, and also found in Africa and Asia. It feeds on mice, small birds, beetles, etc. The Common Kestrel is the most familiar of British hawks.

**Ketch**, a sailing vessel formerly in considerable vogue, with two tall masts fore and aft, and clear amidships.

**Kew Gardens** are amongst the most celebrated botanical gardens in the world. They were established in 1760 by order of George III. and it was here that the valuable collections of Captain Cook and Sir Joseph Banks were accommodated. Since 1840 the gardens have been open to the public, and form one of the most attractive resorts near London. The Kew Observatory stands at the south end of the gardens.

**Kex**, the old English name for hemlock; so-called because of the hollow stems of the plant.

**Key**, a musical term indicating the central dominating note that gives the melodic order in which the tones of a tune or composition are arranged. It is the starting-point, and different starting-points demand different scales. The Natural Key of C, for instance, requires no flats or sharps; all other keys require the use of sharps or flats to bring the notes of their scales into proper relation.

**Keys, House of**, is the Manx representative assembly—the local House of Commons—and consists of 24 members, elected by popular vote since 1866. Prior to that date the members elected each other. The Governor presides at their deliberations.

**Keyser's Pill**, a medicine of which the active principle is acetate of mercury.

**Keystone**, the stone which occupies the centre and highest point of an arch and is usually the last to be inserted.

**Khair Tree**, a small prickly tree of the Acacia family, bearing white flowers on long axillary spikes, and common in Western India.

**Khaki**, a clay-coloured cloth adopted for uniforms in the British Army in the time of the war with the Boers, and used in the Great War. First used by Indian regiments.

**Khan**, a title formerly of importance in Eastern countries, and given to princes and governors of states, but now of too common use to be much more than a mere courtesy designation. Also the name of a caravanserai.

**Khedive**, the title borne by the Viceroys of Egypt from 1867, after Ismail Pasha's arrangements with the Sultan establishing hereditary succession in his family. The ruler is now King.

**Khelat**, a dress or robe conferred as a mark of distinction by the Hindoos and Arabs.

**Khonds**, a race of aboriginal East Indians occupying the jungles and lower regions of Orissa, and formerly noted for their frequent human sacrifices, which, however, have been prohibited since 1842.

**Kibitka**, a light Russian passenger vehicle, mounted on two wheels in summer, but used sledge-wise on long runners in snowy weather.

**Kilderkin**, once a common liquid measure in England, representing 18 gallons.

**Kilt**, a short pleated plaid skirt-like garment forming part of the Highland costume, and reaching from the waist to the knees. In olden times it was simply the lower part of the belted plaid.

**Kilting**, a dressmaking term denoting an arrangement of flat single pleats, placed side by side.

**Kimmeridge Shale**, the name given to a peculiar geological formation most prominent at Kimmeridge in Dorsetshire, abounding in saurian fossils, and forming the base of the Portland oolite group. Much of the shale is bituminous and is burned as fuel, though very impure.

**Kindergarten**, a system of children's schools ("garden of children") introduced by Friedrich Fröebel about the middle of the last century, and intended to inculcate instruction by means of toys, games, and singing—things in which children take delight naturally. The system is now well established in nearly all countries, having been developed on very successful lines in connection with the primary schools of England.

**Kindred Table** was compiled in 1563, and is printed in the *Book of Common Prayer* of the Established Church.

**Kinematics**, the science of pure motion, admitting conceptions of velocity and time, but not of force. All the properties of a curve may be deduced from the kinematics of a point.

**Kinematograph**, an adaptation of the magic lantern, consisting of a rapid succession of photographs of a moving scene, which when thrown on to a screen exhibit a picture with all the figures in actual motion. The photographs are attached to a ribbon and as this unrolls panorama-like the scene is depicted in detailed movement. Edison was the first inventor of this kinematograph principle. In Great Britain there is a duty of from ½d. to 5d. per linear foot on imported kinematograph films. The film industry has developed at an enormous rate in recent years. In the U.S.A., after food-stuffs and motor-cars, this industry comes third. Half the entire capital of about 800 million pounds invested in the cinema industry belongs to the U.S.A. Britain's investment (1930) is about £70 million pounds. There are over 4,000 cinema theatres in England, and about 70,000 people are employed in the industry in Britain.

**King Crab**, a remarkable crustacean inhabiting the sea coasts of America and the Moluccas, carrying a shield-shaped shell, and having a long pointed spine projecting from its posterior. The body comprises three separate sections articulated together. These crabs—in America known commonly as the horseshoe crab because of their shape—are from 18 inches to 2 feet in length.

**Kingfisher**, a well-known and widely distributed family of brilliant-plumaged birds, comprising 20 genera and some 130 species. The larger species are fish eaters, the smaller insect eaters. The British Kingfisher, *Alcedo ispida*, haunts the rivers and streams, and is one of the most beautiful of native birds. All kingfishers have long bills. In the Malay archipelago, New Guinea, the Moluccas, and Australia the varieties are very numerous, but Europe and North America have each only two species. The quaint *Laughing Jackass* of Australia is the largest of the kingfisher family.

**King-of-Arms**, the name of the chief officials of the Heralds' College. There are several in England—the principal being those of the Garter, Norroy, and Clarencieux. (*See* **Heralds' College.**)

**King Solomon's Mines.**—Mr. R. N. Hall, F.R.G.S., as the result of several years' excavations at Zimbabwe, in Rhodesia, came to the conclusion that here were the mines whence Solomon obtained gold for the Temple. The ancient monuments of Rhodesia contain the oldest and most extensive gold mines known to the world, and from these, it is believed, gold to the value of some £75,000,000 sterling was extracted during the time covering the Ophir period of the Scriptures. The older portions of Zimbabwe ruins, it is assumed, represent the monuments of a colony of the ancient empire of Sheba in South Arabia. The discoveries of Zimbabwe are in two divisions, one a temple in the valley, and the other a fortress on the hill. The masonry throughout is of granite without mortar or cement, though cement was known to the builders, for there are large platforms and floors made of that material. The date has been fixed at about 1,200 B.C.

**King's Speech** is the speech prepared by the Premier or other responsible Ministers in consultation with the King, and delivered by his Majesty in person, or by the Lord Chancellor in his absence, at the opening or closing of a Parliamentary session. The first King's speech was delivered by Henry I. in 1107.

**Kinkajou**, a carnivorous animal of the raccoon family, having a brown fur. It is common in the forests of Central and South America, lives mostly in the trees, feeding on birds, fruit, insects, etc.

**Kino**, a gum extracted from several tropical trees, and of considerable value as a drug because of its astringent properties. It contains a large proportion of tannic acid. It is used for dyeing purposes in India, yielding the colour called nankeen.

**Kiosk**, a small open pavilion of light construction much used in Eastern countries as places of shade and rest. Similar structures are common in the streets of Paris as news and advertisement stands, and in London as telephone offices.

**Kirimon**, one of the two Japanese imperial crests, comprising the design of the flowers, leaves and stems of three pawlonia plants. The *kikumon* is the other imperial crest.

**Kirk**, the Church of Scotland. Kirk-Session is a "court" of the Presbyterian churches, consisting of the ministers and elders.

**Kirke's Lambs**, a regiment commanded by Captain Kirke, and of ill repute for their cruelties in hunting down persons suspected of sympathy with Monmouth in the rebellion of 1685. The paschal lamb was the emblem borne on their flag.

**Kirschwasser**, a spirituous beverage distilled from the wild cherry, made chiefly in the Vosges and Black Forest.

**Kirtle**, the name given in the 16th and 17th centuries to a woman's garment, but not always to the same kind of garment. At one time it was an under-garment or petticoat, at another a gown or a cloak, and sometimes referred to men's garments. More generally a kirtle was a woman's outer skirt.

**Kirwanite**, a hydrated silicate of aluminia, protoxide of iron and lime, occurring in the basalt of County Antrim.

**Kish**, the impurities which float to the surface of molten lead in smelting.

**Kismet**, a word signifying fate, destiny, or doom, frequently employed (or its equivalent) in most Oriental countries, and also in considerable use in European literature and speech.

**Kit-Cat Club**, a famous club formed in the early part of the 18th century, and having among its members many notable people, including Addison and Steele. It derived its name from the pastrycook who served it with pies—Christopher Cat—and has had its existence commemorated in a special size of portrait called a "Kit-Cat," because of the fact that the portraits of the members of the club were all done (by Sir Godfrey Kneller) to this size—36 inches long, by 28 inches wide. Its summer meetings were held at the Upper Flask Inn, Hampstead.

**Kitchen Middens**, the name designating certain large mounds, presumably the sites of prehistoric villages, distinctive features of which are stone-hearths. These mounds contain large quantities of fossil remains of edible molluscs, bones of birds, animals, and fishes, fragments of implements, etc. They exist in the largest numbers on the east coast of Denmark, and here and there on the coasts of Scotland, Ireland, England and N. America, and belong, it is supposed, to the early Neolithic Age.

**Kite**, a bird of prey once very common but now scarce in Britain. It is one of the Falconidæ family, of a dark brown colour, and feeds on rabbits, frogs, moles, and offal. In Eastern countries where kites are numerous they are valuable scavengers. There are several known species in America.

**Kittiwake**, a beautiful white and pearl-blue gull inhabiting the rocky coasts of the North Atlantic. It has a yellow bill with a downward curved point.

**"Kladderadatsch,"** the title of the leading German humorous journal—often called the German *Punch*—founded by Albert Hoffmann.

**Kleptomania**, a species of moral insanity, manifesting itself in an irresistible impulse to theft.

**Klipspringer**, a small South African antelope standing little more than two feet high. It has long bristly hair, and short slight horns. Its habitat is the rocky regions of the Cape.

**Klipsteinite**, a hydrated silicate of manganese and iron, compact and dull, dark-hued, and akin to rhodonite in an impure state.

**Knapsack**, a bag containing necessary articles which a soldier carries strapped to his shoulder. Formerly its contents consisted of food, but in recent times it has been utilised mainly as the receptacle of articles of clothing. Tourists' knapsacks are a convenient adaptation of the idea.

**Knighthood** is a degree of honour or title common in Europe since the Middle Ages, and was at first exclusively a military order. In Great Britain the four main orders of knighthood are those of the Garter, the Bath, the Thistle, and St. Patrick; in addition to which there are several other orders, such as the Order of St. Michael and St. George, the Star of India, etc. There are also Knights Bachelors, such as are not associated with any special order. The title is not hereditary, and therefore ranks below that of a baronet, though both are entitled to the prefix "Sir."

**Knobstick**, a term of opprobrium much in use among the working-classes in England in the middle part of the last century, and applied to workmen who dissociate themselves from the majority, and either accept work while others are on strike, or otherwise decline to abide by the rules of trade unions or associations.

**Knot**, a nautical mile equal to about 1¼ of a statute mile, and measured by a log-line, which is divided by knots at equal distances—$\frac{1}{120}$ of a geographical mile. The number of knots travelled by the ship in half a minute correspond to the number of nautical miles it travels per hour.

**Knout**, a Russian instrument of punishment, consisting of a whip of many thongs, used upon Russian criminals since the 15th century. A hundred and twenty strokes were considered equivalent to a sentence of death; half that number sufficing to kill in many instances. Czar Nicholas I. however, changed the form of the knout, and made it a much milder instrument.

**"Know-nothing,"** a member of a secret political society in the United States of America, organised for the purpose of obtaining a repeal of

the Nationalisation Law; it lasted for two or three years only, from 1853 onwards.

**Knurr and Spell.** An obsolete game played with a trap, bat and ball.

**Knuckle-duster,** a formidable apparatus contrived for the purpose of protecting the knuckles and to add force to their use; frequently employed by garotters and other lawless ruffians.

**Koala,** an Australian arboreal marsupial mammal, with ashy-grey fur, bushy ears, and rudimentary tail. It feeds on leaves and roots, and is not more than 2 ft. in length.

**Koh-i-Noor.** (*See* Diamonds.)

**Kohl-rabi,** the turnip-rooted cabbage, the edible protuberance upon the stem of which, just above the ground line, is its most esteemed part.

**Kohol,** a powder prepared from antimony or burnt almond shells, and in common use by the women of the East for darkening the eyelids.

**Kongsbergite,** an amalgam of mercury and silver, occurring in crystals in the mines of Kongsberg, in Norway.

**Koodoo,** a beautiful African antelope, the males being noted for spiral horns which when full grown are 4ft. long. The animal is about 5 ft. high at the shoulder, and its grey-brown coat has white stripes. It affords good sport to the hunter, being one of the fleetest animals on the African continent.

**Kopeh,** a Polynesian aroid, cultivated by the natives of the South Sea Islands, for its large edible yam-like roots.

**Koran,** the Bible of the Mohammedans, written by Mohammed in the 7th century, and supposed to be a transcript of a series of messages delivered to the prophet by the Angel Gabriel during a period of 23 years. It constitutes the law of life, civil, military, religious, and legal, to Mohammedans. It recognises Christ and Moses as prophets of God, but gives the chief place to Mohammed. It was not until 1734 that an English translation of the Koran appeared, by George Sale.

**Koreish,** an ancient Arab tribe whose members kept guard over the sacred stone of Mecca before the rise of Mohammed. When he appeared on the scene they opposed his claim, but were ultimately defeated by him and his followers.

**Kos,** a Jewish measure of capacity, equivalent to about four cubic inches.

**Kots,** a musical instrument in general use in Japan, consisting of a series of 13 silken strings stretched across a curved wooden surface, and played with the fingers. Each string is 5 feet long, and has a separate bridge so fixed as to give the vibration necessary for the note it has to produce. It is a sort of horizontal harp, and in the hands of an expert player is capable of giving forth excellent music.

**Koumiss,** a beverage made from mare's milk fermented, and often served up with cooked grain; a common refreshment of the Arabs of Africa and some of the tribes of Asia, particularly the Tartars.

**Kraal,** a hut or collection of huts in an African village.

**Kraken,** a fabled Scandinavian sea monster, around which many legends and superstitions have been formed in Norway. It is generally described as a sort of sea-serpent, and was so large and weird of form as to be mistaken, so the tradition runs, by fishermen for an island.

**Kremlin,** a large fortified citadel in Moscow, containing the cathedral in which the Czars were crowned, an imperial palace, and important garrisons and arsenals. At the foot of the Ivan Tower rests, in a cracked condition, the famous great Ivan Bell, weighing 200 tons. The Kremlin is now the headquarters of the Russian U.S.S.R. Government.

**Kreutzer,** an ancient German, and a modern Austrian, coin, the hundredth part of a florin or something like the equivalent of our farthing. It derives its name from the cross stamped upon it.

**Krishna,** one of the Hindu deities, and a chief character in the Mahabharata epic.

**Krone,** a Scandinavian and Austrian silver coin (Krona in Sweden); the Scandinavian coin being of the value in English of 1s. 1½d., the Austrian about 10d. There are also gold coins of 10 and 20 kroner. During 1922 the Austrian krone exchange dropped to over 34,000 to the English sovereign.

**Krypton,** an atmospheric gas belonging to the helium group and of a greater density than nitrogen.

**Kurang,** a peculiar tailless Javanese lemur, remarkable for its habitual inactivity, ungainly structure, and slow motion; better known as the Slow-paced loris.

**Ku-Klux-Klan,** the title of a secret American association whose members were sworn to continue active sympathy with the secession principle after the conclusion of the Civil War in 1865. The organisation was wholly confined to the Southern States, but gave rise to many cruel outrages on Southerners and others who had been supporters of the North.

**Kulin,** a Brahmin of high sacerdotal position, to whom the privilege of plurality of wives is permitted, with whom he gets liberal dowries, while each wife is maintained in the parental home.

**Kummel,** a German cordial, flavoured with cumin, carraway seeds, or fennel.

**Kunkir-zeed,** the gum of the artichoke root, used by the Arabs as an emetic.

**Kunzite** is a recently discovered gem which is peach-pink in colour, highly dichroic in quality, and possessing wonderful fluorescence. Upon exposure to the action of the X-rays or radium bromide, the gem-stone becomes phosphorescent and remains so for some appreciable time after removal. After exposure to the X-rays it will, if placed in the dark, photograph itself upon a piece of sensitive paper. In respect to this phenomenon of fluorescence, Kunzite is unique among gem-stones. It was discovered by Professor George F. Kunz, President of the New York Mineralogical Club, and has been given the name of its sponsor. So far it is found only in San Diego, California.

**Kurds,** a native race inhabiting Kurdistan, a wandering people professing the Mohammedan faith and speaking an Iranic dialect.

**Kussier,** a Turkish musical instrument consisting of five strings stretched over a sort of kettledrum.

**Kusti,** a woollen band of 72 threads—the number of the chapters of the Izashue—and two branches, each branch containing six knots, together standing for the 12 months of the year.

**Kutch,** the packet of vellum leaves in which gold is placed for the first beating; the gold-beaters' skin packet into which the leaf is placed for the second beating is known as the "shoder."

**Kutia,** a special Russian dish eaten after a funeral ceremony at a church or cemetery, and composed of boiled rice or other cereal mixed with honey and raisins, the ingredients being supposed to possess some symbolical significance.

**Kuttar,** a form of Indian dagger with a handle of parallel bars and cross-piece.

**Kuwazoku,** the title given to the Japanese court nobles, kuges, and daimios.

**Kvass,** a common Russian fermented beverage made from an infusion of flour or meal or dough of rye, wheat or malt. A superior kind is made from fruits.

**Kylix,** the name given in ancient Greece to a graceful double-handled drinking cup, in general shape something like a modern champagne glass.

**Kymograph,** an instrument for measuring the pressure of fluids, especially the blood in living beings, and consisting of a revolving cylinder containing a smoked paper on which the pressure is recorded.

**Kyrie Eleison,** "Lord, have mercy," the name of a common form of prayer in the Roman Catholic and Greek Churches; also applied to the English Church responses after the recital of the commandments.

**Kyriolexy,** a term indicating the use of literal as contradistinguished from figurative expressions.

**Kyrle Society,** named after Pope's "Man of Ross," John Kyrle, founded by Miss Miranda and Miss Octavia Hill in 1875, and having for its object the decoration of workmen's clubs, hospitals, etc., and the promotion among the poor of a taste for literature, music, and out-door recreation.

**Kyrosite,** an impure form of marcasite, known to the Germans since 1725 as white copper ore.

**Kyste,** a chest or coffin for the burial of the dead.

# L

**Labadists** were a sect of Christian communists instituted by Jean de Labadie in France in the 17th century. They did not distinguish Sunday from other days, holding that life was all Sabbath.

**Labarum,** the standard of Constantine the Great, adopted after his conversion to Christianity, marked with his seal, and represented upon the coinage.

**Laboratory,** a department or room, fitted with apparatus for prosecuting scientific investigations.

**Labour Exchanges,** now called Employment Exchanges, established in 1909, collect and supply information as to employers wanting workpeople, and workpeople requiring employment. The country is divided into eleven divisions, each with a divisional clearing-house and chief, and all co-ordinated with a central clearing-house in London. The number of applicants at these exchanges in 1916 was 2,845,247. Statistics of the Employment Exchanges are constantly varying. Over two million unemployed men and women were receiving unemployment relief at the beginning of 1931, to which all employees other than domestics in private service and agricultural labourers are entitled. The unemployed insurance system not being found adequate to meet the needs of relief, the Government has found it necessary to make ever-increasing loans for this purpose.

**Labourers, Statute of,** was passed in 1349, and again in 1357, with the object of compelling labourers to accept a certain rate of wages and not leave their employers' service, the Plague having rendered labourers so scarce that they were in great demand and had been insisting on higher pay. These enactments were bitterly opposed and led to the "Peasants' Revolt," headed by Wat Tyler.

**Labour Party** has a total membership of over 3,000,000. Affiliated with the party are 135 Trade Unions; 83 Trades Councils; 66 Local Labour parties: 28,000 of the Independent Labour Party; and 3,237 members of the Fabian Society. In 1914 there were 39 members of the Labour Party in Parliament; in 1921, 74. In January 1924, on the defeat of Mr. Baldwin's Govt., Mr. Ramsay MacDonald, with a following of 191, formed the first Labour Govt. of this country. In 1929 Mr. MacDonald was again Premier, with his party increased to 289.

**Labradorite,** a mineral of a pearly lustre on cleavage, found in masses in igneous rocks, the best samples of which come from Labrador.

**Labyrinth,** or **Maze,** a combination of roads and passages so constructed as to render it difficult for anyone ignorant of the clue to trace the way to the central part. The Egyptian labyrinth on Lake Mœris had 3,000 rooms, half of them subterranean, and the remainder above ground. The Cretan labyrinth of the mythology was said to have been constructed by Dædalus. There was one at Lemnos, renowned for its stalactite columns; and another at Clusium constructed by Porsenna, King of Etruria, about 520 B.C. The labyrinth in which Fair Rosamond was concealed was at Woodstock. Hampton Court maze dates from the 16th century.

**Labyrinthodon,** a gigantic fossil amphibian, which gets its name from the curious labyrinthine structure of its teeth. It occurs in the Red Sandstone formation, and remains have been found in Britain and other parts of Europe. Its head was several feet long, and its footprints, by which it was discovered, closely resemble the prints of the human hand.

**Lac,** a resinous matter deposited on the branches of a number of tropical trees by the females of the lac insect, the exudation including eggs and a viscous covering. At the gathering time the twigs are broken off and dried in the sun, when the insects die, and the lac that remains is termed *stick-lac.* From this, by the removal of extraneous accretions and dissolving, *seed-lac* is produced. *Shell-lac* is seed-lac after it has been melted and otherwise prepared, and this is the best known of the lacs, being used in the manufacture of varnishes and sealing-wax, and for other commercial purposes.

**Lac** (or **Lakh**), a Sanskrit word, meaning a mark, used in India to indicate a lac (or 100,000) rupees.

**Lace,** a delicate fabric of linen, silk, or cotton threads, made by hand or machinery, and worked in various ornamental designs. The kinds of lace are many, deriving their distinctive names either from the method employed in production or from the place where any special variety was originally made. The best known makes are pillow or bobbin-lace, woven and plaited by hand; needle-point lace, worked by the needle over a traced design; and machine lace, which practically dates from Heathcote's invention of the early part of the 19th century. Some of the most famed laces are the following: *Alençon,* a needle-point lace; *Brussels,* a very fine kind, with needle-point sprigs and flowers; *Chantilly,* a silk variety with flowers and open-work; *Cluny,* a netlace with darned stitch; *Honiton,* a delicate kind with dainty sprigs and figures; *Mechlin,* generally made in one piece and very varied in design; and *Valenciennes,* or bobbin lace, of great durability, the pattern and ground of which are made at the same time, being one of the best and most costly of laces, now manufactured mainly in Belgium.

**Lacerta,** the name of a group of long-tailed lizards inhabiting the warmer parts of Europe and Asia. Also the name of a constellation, lying south of Cepheus, its most important star being only of the fourth magnitude.

**Lachesis,** a genus of venomous snakes of the rattlesnake family confined to tropical countries, and including the "deadly bushmaster," of Surinam, and several Crotalidæ pit-vipers of Guiana and Brazil.

**Lacquer,** a varnish made from shellac and certain colouring matters, and utilised for imparting lustre to various surfaces of metal or wood. In China and Japan the production of lacquer ware of a decorative character has long been an important industry, bringing into use gold, coral, vermilion, sprinkled, and other lacquers, with pleasing effect.

**Lacrimoso,** a musical term denoting a mournful method of playing; sadly, with feeling.

**Lacrosse,** a ball game largely played in Canada, but of Indian origin. (See Pears' *Dictionary of Sports and Pastimes.*)

**Lacrymatory,** tube-like vessels of glass found in graves of the ancients of the urn-burial period, and supposed by some to have been the receptacles of the consecrated tears of lamenting friends, but really used for holding ointments or perfumes.

**Lacs-d'Amour,** a cord of running knots worn on the arm at one time by widows and unmarried women to denote their condition.

**Lactic Acid** is revealed in its commonest form in sour milk, but is found also in the fermentation of certain vegetable juices and putrefying animal matters.

**Lactic Ethers,** three different ethers, containing the same monatomic radical, derivable from lactic acid, viz., ethylic lactate, diethylic lactate, and monoethylic lactate.

**Lactometer,** a tube or instrument for ascertaining the proportion of cream in a quantity of milk. Called also a galactometer.

**Lacustrine Deposits,** a geological term referring to the strata deposits at the bottom of lakes which by the regularity of their occurrence afford favourable opportunities for scientific study.

**Ladder,** a framework of portable steps, made of wood or metal. There are innumerable varieties, according to their uses. Thus: the standing-ladder, the step-ladder, scaling ladder, companion ladder, collapsible ladder, etc.

**Ladybird,** the common name of a numerous class of beetles—the Coccinella. The insect is usually of a red or yellow colour with small black spots. It can fly easily, but as it crawls over leaves or walls its progress is but slow. Ladybirds are of good service to the gardener by reason of their destruction of plant lice, amongst which they lay their eggs; and as the larvæ come to life they feed on the lice.

**Lady-Day,** the day of the festival of the Annunciation of the Virgin Mary, March 25th. One of the four English quarter days.

**Lagoon,** a stretch of shallow water opening out upon the sea. The most familiar example is that of Venice, which is built on lagoons.

**Lake Dwellings,** certain prehistoric habitations originally built above the waters of lakes or rivers, evidences of which have been found in Switzerland, Britain, and other parts of the old and new worlds. They were erected on platforms supported by piles, the stumps of many of which still remain. The most valuable evidences in this connection, however, are the recovered fragments of pottery, bone, flint, bronze and iron implements, as well as some few human skeletons, affording interesting testimony to the primitive existence led by the lake dwellers.

**Lakes** are bodies of water collected in depressions of the earth's surface. The most notable lakes are the Great Lake series of North America, including Lakes Superior, Michigan, Huron, Erie, and Ontario, all discharging into the St. Lawrence River. Africa has an enormous area of lakes, including the Albert Nyanza and the Victoria Nyanza, forming the sources of the White Nile, lakes Tanganyika, Nyassa, Tchad, etc. Smaller lakes are numerous in other countries—Switzerland, Germany, Italy, England, Ireland, Scotland, all having their lake regions, where the scenery is invariably beautiful and romantic.

**Lake School,** the name given, at first in ridicule, to a distinguished trio of poets—Wordsworth, Coleridge and Southey—who made their homes in the English Lake District.

**Lalo,** the leaves of the Baobab, dried and powdered; a favourite food of certain African tribes.

**Lama,** the high priest of the Tibetan Buddhists, usually styled the Grand Lama, and supposed to be the incarnation of Adibuddha, lives in a palace at Lhasa. A British mission, sent out to compel the removal of certain trade restrictions, took possession of Lhasa in 1904, from which the Lama had previously fled. The result was the election of a new Lama and the signing of a better trading treaty. In 1910, Chinese action compelled the Dalai Lama to seek refuge in India, when he was deposed by the Chinese government; but in 1912 he returned to Tibet, and, although he was still opposed by China, British intervention prevailed and he was allowed to remain. However, although a conference was held in 1913 to settle the differences between the British, Chinese and Tibetan governments, China still continues to exercise considerable influence in the last named.

**Lamaism,** the form of Buddhism prevalent in Tibet, with a very exclusive sacerdotal organisation, of which the Grand Lama is the head.

**Lamellibranchiata,** a class of molluscs, apparently headless, with lamelliform gills. The body is enclosed in a pair of lateral valves divided across the back and held together by a hinge.

**Lamellicornia,** a class of insects of the Coleoptera order, remarkable for their lamelliferous antennæ with club-like terminations. They are herbivorous and number several thousand species, the best-known representatives being the stag-beetles and cockchafers.

**Lamination,** a geological term designating a class of rocks with thin cleavages, such as slate or shale.

**Lammas Day** is one of the oldest of the Church festivals, probably derived from the loaf-mass (Hlafmœsse) of the Anglo-Saxons. It occurs on August 1. In the olden times it was the day when loaves were given in place of first-fruit offerings.

**Lammergeier,** the bearded vulture of Alpine regions, and the largest of European birds of prey. It has a white head with black tufts at the base of the bill, and its general plumage is dark brown, nearly black. It mainly inhabits the mountain ranges of Southern Europe and Northern Africa, and extends to China.

**Lampblack,** a carboniferous pigment obtained from flame-smoke, and now produced in specially constructed furnaces in which bodies rich in carbon, such as tar, resin, petroleum, etc., are burned. The smoke or soot resulting is collected from the sides of the furnace, and forms lampblack, which is largely used in ink and paint manufacture.

**Lamprey,** an eel-like fish found in the rivers and on the sea-coasts of Britain and other temperate regions. It has a circular suctorial mouth and teeth, and lives on other fishes. There are three British species, the River Lamprey, the Small Lamprey, and the Sea Lamprey, which attains a length of 3 feet. Some lampreys spawn in the higher reaches of rivers.

**Lamps** are vessels for holding an illuminating agent, and in modern times are of many kinds. In Anglo-Saxon times they were made of horn. The first public street lamps were oil lamps, London being lighted in this manner in 1681. Gas lamps were introduced in 1814. A great advance was made in domestic lamp illumination by Argand, a Frenchman, in 1787, a lamp invented by him having a circular burner or wick, and by the admission of a current of air oxygenised the flame. This greatly increased the brilliance of the light. Among the more distinctive lamps of later times are the various electric lamps, the incandescent gas lamps, the paraffin oil and naphtha spirit lamps, the submarine lamp for burning under water, and the Davy safety lamp for colliery use.

**Lance,** a military weapon carried by cavalry regiments, and consisting of a long spear for hurling at or charging an enemy with. The war lance of the Middle Ages was about 16 feet long; the present-day lance rarely exceeds 11 feet.

**Lancelet,** a sea-fish of slight development, without skull or brain, and having for backbone a gelatinous rod devoid of ribs. It is not uncommon around the British coasts, living mostly in the sand.

**Lancers,** light cavalry soldiers armed with lances. Most European armies contain regiments of Lancers—the Russian Cossacks, the German Uhlans, etc.—but there were no regiments of Lancers in England before 1816.

**"Lancet,"** the name of the chief English medical journal, established in 1823 by Dr. Wakley.

**Lancewood,** a hard, durable, and elastic kind of wood obtained from certain West Indian trees of the *Anonaceæ* order, and much used in coach-building; in Guiana, the wood is called Yari Yari.

**Land** is the earth's surface, or, more strictly, that portion of it which is unsubmerged. The total land area of Great Britain is 56,201,000 acres. In 1851 the land and houses of the United Kingdom yielded an aggregate rental of £595,000. In 1882 there were nearly a million land-owners in England and Wales (exclusive of the metropolis), 703,000 of whom owned less than one acre. It is estimated that more than one half of the land of the kingdom is now possessed by about 7,000 persons.

**Landau,** a kind of carriage, originally made at Landau in Germany, its distinguishing feature being that the covered top is in two parts and can be let down or put up as required.

**Land Crab,** a family of crabs which live mainly on land, though as a rule migrating to the sea to deposit their eggs. When their offspring attain full development in the water, the old crabs return to their inland quarters, taking their young ones with them.

**Land League,** an *association* formed in 1879 by Parnell and others for compelling a reduction in the rents of land in Ireland, and in case of non-compliance refusing to pay rent. For a time this League exercised great political influence and was an important aid to the Home Rule agitation.

**Landrail,** popularly known as the Corncrake, is a regular summer visitor to Britain, and is well known by its harsh and piercing note, so familiar in cornlands in the night time.

**Landslip,** a breakage of a mass of soil or rock away from a mountain, hill, or cliff, due to a variety of natural causes, such as the saturation of the earth by water or the decay or slipping of portions of rock. Many serious landslips have occurred from time to time. In 1618, an earth-fall happened at Plurs, on Lake Como, involving the destruction of many buildings and the loss of numerous lives. In 1806 a portion of Rossberg mountain in Switzerland slipped from its position, and falling into the valley below buried many villages and hamlets and over 800 people. A chalk cliff from 100 to 150 feet high and three-quarters of a mile long fell at Lyme Regis, in Dorsetshire, in 1839, doing terrible damage. Over 200 people were killed by a landslip in Nynee Tal, in India, in 1880; and at Quebec, in 1889, a rocky eminence called Cape

Diamond gave way, many buildings being destroyed and lives lost. It has now been shown that many changes in the level of the surface are due to land oscillations.

**Language**, words by which thoughts are uttered or expressed, is divisible into many groups. The languages spoken in Europe include those of the Indo-Germanic group, such as Germanic, Slavic, and Romance languages; Finno-ugrian languages, such as Finnish, Hungarian and Turkish. Of the Indo-Germanic languages, Lithuanian with its cognates has retained most "primitive" features. There are over 3,000 languages or dialects spoken throughout the world. Of the "civilised" languages English is spoken by approximately 180 millions, Russian by 140 millions, German by 80 millions, French by 70 millions, and Spanish by 50 millions.

**Langue d'Oc**, an ancient French dialect—the language of the Troubadours—confined to the country south of the Loire. It derived its name from the fact that it used *oc* instead of *oui* for the affirmative.

**Langue d'Oui**, the old Northern French dialect, distinguished by the use of *oui* for the affirmative.

**Languria**, a beautiful kind of small arboreal beetles of metallic sheen, inhabiting most parts of the world, and peculiar because of their short antennæ. The *Languriinæ* sub-family include the "Ladybirds."

**Laniidæ** constitute the shrike family of birds. There are about 200 widely distributed species.

**Lantern**, a case for enclosing, holding, or carrying a light. In its earliest form it was made of horn, and called a lanthorn, but the name now covers a variety of forms, from the large stationary lantern of a lighthouse to a Chinese collapsible paper lantern. (*See* **Magic Lantern**, etc.)

**Lantern Fly**, the name of a class of insects of the *Fulgora* genus, with muzzle-shaped heads which are said to emit a light like that given forth by fireflies in the dark. They occur in China, Brazil, and other hot countries, but recent naturalists dispute the actual luminosity of the insect.

**"Lantern of England."**—Bath Abbey possesses so many windows that it is called sometimes the "Lantern of England." It was a "Popish service" held at Bath Abbey by James II that induced Bishop Ken to sign the invitation to William of Orange, though he afterwards repented and became a Non-Juror. Among numerous interesting monuments Bath Abbey contains that of Malthus, whose *Essay on Population* gave the first inspiration to Darwin.

**Lanthanum**, a scarce metal discovered by Mosander, in 1841, found in association with didymium in the oxide of cerium.

**Lapidary**, a cutter of, or dealer in, precious stones; also used in adjective form in regard to the working, engraving, or setting of stones.

**Lapis Lazuli**, an azure blue mineral found in limestone and granite, from which the ultramarine pigment is obtained. The best comes from China and Persia.

**Lapwing** or **Plover**, is a familiar bird on the moors and marshy places of Britain. It is often called the "peewit," from its cry. Its back and wings show green, violet, and purple tints, and the under parts are white. It carries a black crest. Plovers' eggs are a table luxury.

**Larboard** is the old nautical term indicating the left-hand side of a ship, now more commonly called the port side. Starboard is the right-hand side.

**Larch**, a familiar coniferous tree in the mountain regions of northern Europe, and though not native to Britain, the Common Larch is successfully cultivated in various parts of the kingdom. It is one of the best of all turpentine yielding trees, and the bark is valued for tanning.

**Larceny** in its broad significance means the fraudulent taking away and appropriation of the personal goods of another. Larceny is of two kinds: *simple larceny*, which is theft apart from accompanying aggravation; and *compound larceny*, that which is rendered more serious by being combined with assault, or forced entrance into an enclosed place, such as a house or shop.

**Lard** is the clarified fat of swine. Originally it was almost exclusively used in cooking, but now it is also utilised for a variety of commercial purposes, such as the making of lubricating oil, the manufacture of candles, etc.

**Lares** were tutelary deities of the ancient Romans, and of two classes, *Lares domestici*, the household gods, and *Lares publici*, the gods of public places. Both classes were represented by images or statues.

**Laridæ**, a family of web-footed swimming gulls, white and pearly blue in colour, very widely distributed over the sea coasts of the world and feeding mainly on fish.

**Lark**, a family of birds (Alaudidæ) of which there are about 100 species, some of which—notably the skylark—are famed for their marvellous singing and soaring qualities. They build their nests on the ground in the open country. Britain has six species, of which the skylark and the woodlark are the best known. Africa has the greatest number of larks; America has only one species, the horned lark, but it is not a true Alaudid æ.

**Larkspur**, the common name of the genus Delphinium, a favourite flower introduced into British gardens from Switzerland in 1573.

**Larva**, the undeveloped form of any animal which, before maturity, undergoes metamorphosis. The term was formerly used only to designate insects in the caterpillar stage, but now takes in the larval forms of the frog (the tadpole) and numerous other early stages of animal existence.

**Lascar**, commonly an East Indian sailor engaged in British or foreign service. The name is also given to East Indian camp followers and regimental servants.

**Lastage**, a shipping term referring to the lading of a ship, and also formerly a duty for the right of conveying goods by ships.

**Lateen**, a triangular sail affixed to a tapering yard, used on light cargo vessels of the Mediterranean.

**Latent Heat** is a term expressing a condition in which, when a solid is converted into a liquid, or a liquid into a gas, a certain amount of heat is absorbed, and, having no effect on the thermometer, is described as latent.

**Lateran Councils** were the eleven religious conventions held in the Lateran basilica at Rome for deciding important questions of Church doctrine. The first was held in 649 to deal with the Monothelites, three were held in the 12th century, one in the 13th, and the rest in the 16th. That of 1179 formulated the laws for the election of Popes; and that of 1215 pronounced in favour of the Crusade.

**Laterite**, a peculiar ferruginous kind of rock, extensive beds of which are found in India and Ceylon. Much of it belongs to the Tertiary period.

**Lateroflexion**, a scientific and pathological term signifying "a bending aside."

**Lates**, a genus of fishes of the perch family. There are only three species, two of which are found in the Nile and in Queensland, while the third is confined to Australian rivers only. It attains the length of from 2 to 3 feet.

**Latitude** is the extent of the earth or the heavens reckoned from the equator to the pole, and was first determined by Hipparchus, of Nice, about 162 B.C.

**Latitudinarians**, a body of theologians whose object was to enlarge the scope of the Anglican Church so as to bring the Nonconformists within its fold, and included such eminent 17th-century divines as Burnet, Tillotson, Hales, and Chillingworth.

**Latvia**, a new Baltic republic, formerly part of Russia. The capital is Riga.

**Laughing Gas** is nitrous oxide, and received its name from the fact that on being inhaled its first effect was to produce exhilaration. It was one of the earliest anæsthetics, and is much used in dentistry and for minor surgical operations.

**Laughing Jackass.** (*See* **Kingfisher.**)

**Laughing-stock**, a butt for ridicule, a person or an object provoking scornful hilarity.

**Laughter**, a convulsive action of the respiratory muscles, accompanied by a succession of short vocal sounds, induced by sudden joy or mirth.

**Launce**, a family of eel-like sea fishes found in large numbers on the coasts of North America and Europe. There are two species common to British waters. These fishes are of a bright silvery hue, and live much in the sand under-

neath the water. They are much prized as bait.

**Laundry**, any room or building in which the work of washing and ironing of clothes is carried on. Steam laundries have become common in recent times, and in many ways—the introduction of improved washing soaps, and of electrical and other labour-saving contrivances generally—laundry operations have been greatly simplified.

**Laureate.** (*See* Poet Laureate.)

**Laurentian System** refers to a group of rocks in the region of the Upper Lakes of Canada, representing at some points a thickness of 30,000 feet. No fossils are found in this group, and the inference is that it is the most ancient known.

**Lauric Acid**, a monobasic acid obtained from the oleaginous principle of pichurim beans, and from butter, cocoanut oil, etc.

**Lava**, the molten fluid rock which is ejected from a volcano while in eruption.

**Laver**, the popular name of certain varieties of seaweed, *Paphyra*, which attach themselves to rocks and are used as food or condiment.

**Lawn**, very fine sun-bleached linen, in olden times called "cloth of Rheims."

**Lead**, a soft malleable metal, occurring in numerous ores, which are easily smelted. It is found in its native form in small quantities in Sweden. Lead is largely used in the making of service pipes on account of its pliability, and as an alloy element it combines in the formation of type metal, stereo metal, shot metal, pewter, and many other compounds. Lead mining is carried on in several of the northern counties of England and in Wales. Our chief imports of lead are from Spain. The lead output of the world now averages over 1,000,000 tons per annum, of which about one-fourth is raised within the British Empire, Australia being the chief British lead-producing region. Great Britain produces over £230,000 worth of lead per annum.

**Leaf-insect**, a peculiar class of insect which in colour and form closely resembles a leaf.

**Leagues**, or combinations of kings, countries, communities, have been frequent since the kings of Canaan united against the Israelites. Among the most famous leagues may be mentioned the Holy League which prevented the accession of Henry IV of France until he became a Roman Catholic; the Solemn League and Covenant of Scotland in 1638; and the League of Augsburg against France in 1686.

**League of Nations**, formed to promote International Peace and Security in 1920. The original members were the signatories of the Treaty of Peace at Versailles. The membership of the League comprises 54 nations, the objects being international co-operation for world peace, just and honourable relations between nations, not to resort to war until disputes have been first submitted to the League, to wait six months for a decision, and then allow three months to elapse. The Assembly meets at Geneva annually. The Council meets four times a year. The permanent Court of International Justice sits at the Hague. The League has done much good work for the benefit of the world since its inception in 1920.

**Leap Year** (or Bissextile) was fixed by Julius Cæsar, 45 B.C., the addition of one day in every four years bringing the measure of the calendar year even with the astronomical year, with three minutes per year over; this again is levelled up by dropping leap year at stated intervals. Thus 1700, 1800, and 1900 were not leap years, but it will be some centuries now before another rectification will be required.

**Leather** was made in ancient Egypt, Greece, and Rome, and has through succeeding centuries played an important part in the service of man. It consists of the dressed hides or skins of animals, after the process of tanning has been gone through. Untanned skins are known as pelts. Leather is classed either according to the skins from which it is made or the system of preparation employed. The best-known kinds are morocco, kid, Russia, chamois, Cordovan, grained, patent, russet, tan, calf, Hungarian, etc.

**Leaven**, a mixture of flour and sour milk, formerly used in fermenting large quantities of fresh dough a preparation now superseded by yeast.

**Leech**, an aquatic blood-sucking worm, mostly found in fresh-water ponds. Each end of the body is provided with a sucker, but that at the head end has jaws and teeth. The medicinal leech has three jaws. The leech attaches itself with avidity to animal bodies and sucks until glutted.

**Leeward**, a nautical term, meaning the sheltered side of a vessel—that is, the opposite side to that from which the wind is blowing.

**Legal Tender** of gold is good in this country to any amount; silver is legal tender up to 40s., bronze up to 1s., farthings up to 6d. Bank of England notes for £1 and 10s. are legal tender for the payment of any amount.

**Legend**, a story in which the marvellous, supernatural or mythical is a leading feature.

**Legerdemain**, sleight of hand, conjuring, juggling, a kind of performance in which trick and dexterity of hand deceive the eye and give the impression of feats that are naturally impossible.

**Legion**, a body of Roman troops, varying in numbers at different periods. Under Marius a legion consisted of 6,200 soldiers, besides 700 horse. Augustus's army was composed of 45 legions, with the addition of 25,000 horse and 37,000 light armed troops. A legion was divided into 10 cohorts, and every cohort into three companies, each containing two centurions. Three legions composed the Roman army of occupation in Britain.

**Legion of Honour**, the French order for distinguished services, military or civil, was instituted by Napoleon I. in 1802, and confirmed and modified under later rulers. There are five grades—Grands Croix, Grands Officiers, Commandeurs, Officiers, and Chevaliers.

**Legitimists**, supporters of the claims of the elder branch of the Bourbon family to the throne of France. The death of the Comte de Chambord in 1883 childless transferred the right of claim to the Comte de Paris, head of the younger Bourbon branch.

**Legumin**, a nitrogenous proteid substance obtained from peas, beans, and similar plants. It is also called "vegetable casein."

**Leipoa**, a kind of pheasant native to Australia, nesting in mounds. It has a crested head and dark plumage.

**Lema**, the North American potato beetle, a voracious little insect, with yellow head and body marked with three longitudinal deep black stripes. The famous Colorado potato beetle belongs to the Phytophaga tribe, as does also the "Turnip-jack," the larvæ of which are the plague of the British farmer.

**Lemming**, a small light-brown rodent with dark spots, abounding in Scandinavian countries and in Siberia. There is an American species found in the Hudson Bay region. The lemming is about 5 inches long, with a short stump of a tail.

**Lemur**, a group of mammals nearly allied to monkeys, noted for having strong pliant toes enabling them to use their feet as hands, and also well-developed thumbs on the hands. They have long squirrel-like tails and fox-shaped heads, and are distributed over the tropical parts of the Old World.

**Lenses** are, broadly speaking, either *convex*, having the thickest part in the centre and magnifying objects, or *concave*, with the thinnest part in the centre and reducing the objects. Each kind has several varieties, peculiar from their proportions, arrangements, and specific effects. (See Pears' *Dictionary of Photography*.)

**Lent**, the 40 days period of fasting that precedes Easter.

**Leo**, one of the 12 signs of the Zodiac, bounded on the west by Cancer, and on the east by the Virgin. The constellation consists of 75 stars, one of which is Regulus.

**Leopard**, a well-known carnivorous spotted mammal, an inhabitant of Africa and Asia. Its skin has a light tawny ground, which is covered with dark brown spots.

**Lepidodendron**, a fossil plant of gigantic height (nearly 100 feet) bearing a cone-like fruit, frequently met with in the coal strata.

**Lepidoganoid**, the second sub-order of the ganoid fishes in Owen's classification, their bodies being covered with scales of moderate size.

**Lepidoptera**, an order of insects embracing the various species of butterflies and moths.

**Lepidosiren,** a genus of ganoid fishes, whose sole surviving representative is the Mud-fish, confined almost exclusively to the Amazon.

**Leporidæ,** the scientific name of all animals of the hare and rabbit family.

**Lepus,** the constellation of the Hare, situated under the Orion group, and one of the constellations with which the ancients were familiar.

**Lernæa,** a parasitic crustacean which is more fully developed in its young than in its adult existence. After entering upon its parasitic stage it has no use for external organs and loses them. Its presence is believed injuriously to affect the vision of the fishes upon which it is parasitic.

**Lettres de Cachet,** sealed letters which the kings of France issued to their agents to secure the imprisonment of distrusted or disliked persons without trial. Abolished in 1789.

**Leucine,** a crystalline, pulverulent substance produced by the decomposition of nitrogenous matter, otherwise known as amido-caproic acid, and called leucine because of its whiteness.

**Leuciscus,** a genus of fishes of the Carp family, distributed over the waters of all temperate regions, and comprising some 90 species. The roach, chub, and dace are of this family, also the white mullet and the minnow.

**Levée,** a State reception by the King attended only by gentlemen.

**Levellers,** an English military-political party prominent about 1647 in the Parliamentary army, and advocated the levelling of social distinctions.

**Lever,** a rod-like bar of metal or wood used for raising heavy bodies, and worked by means of a support called the fulcrum placed at a given distance underneath the lever.

**Lewis,** a contrivance of stone-lifting, the principle of which was known to the ancient Romans; it consists of two dovetail tenons of iron or other metal, expanded by an intervening key in a dovetail-shaped mortice in the stone, and shackled by a ringed bolt to the hoisting chain.

**Leyden Jar,** an apparatus for accumulating electricity, invented by Cuneus of Leyden in 1746, and consisting of a jar coated inside and out with tinfoil for about two-thirds of its height and having its inner coating connected with the top by a brass knob and chain. Thus an electric charge is set up, and a number of jars will constitute a battery.

**Li,** a Chinese distance measure, about the third of an English mile. Also a Chinese weight, the thousandth part of an ounce, or liang.

**Lias,** a geological term referring to the lower section of the Jurassic group, and mainly comprising shales and limestones.

**Libel,** any writing, printed matter, picture or illustration put forth with malicious intent for the purpose of bringing a person into public ridicule and contempt. An aggrieved person may proceed either by civil action or criminal indictment. A good defence is that the words complained of are true and to the public advantage to be made known. Since 1881 no newspaper proprietor can be criminally prosecuted for libel without the fiat of the Public Prosecutor. A spoken libel is *slander*.

**Libra,** the Scales, one of the twelve Signs of the Zodiac, lying east of the Scorpion.

**Liberals,** a political party name that came into vogue about 1828 to designate the advanced Reformers.

**Liberal Unionists,** the portion of the Liberal party which separated from Mr. Gladstone on the Home Rule question in 1886, and afterwards became allied with the Conservatives. On the introduction of Mr. Chamberlain's Tariff Reform policy many Liberal Unionists withdrew from the alliance, and continued to support Free Trade. Apart from this, Liberal Unionists have acted with the Conservatives, and now the term Unionists covers all sections of the Conservative party.

**Libraries,** before the invention of printing, were few, and only got together at enormous cost. At Nineveh remains of libraries, consisting of tablets of baked clay, have been discovered. A public library existed in Athens in 540 B.C. The library at Alexandria, destroyed when Julius Cæsar set fire to the city, 47 B.C., contained 400,000 valuable MS. books. Among the great libraries of later times may be mentioned the Vatican Library at Rome, founded in 1588; the Royal Library at Paris (1350), now containing over 2,000,000 vols.; the Astor Library, New York; and in England, the Bodleian Library, Oxford, and the invaluable British Museum Library at Bloomsbury, the latter containing over 50 miles of books. Since 1850 Free Libraries have been established in all the chief cities and towns of the kingdom, and Mr. Andrew Carnegie has devoted several millions sterling to the building and endowment of such institutions in America and the United Kingdom.

**Library of the India Office.** This interesting library contains some 12,000 manuscripts, including over a thousand volumes of Arabic documents in a general collection, and nearly 3,000 taken from the Mogul archives upon the fall of Delhi, when some 2,600 Persian manuscripts were also taken. There are 3,000 Persian manuscripts in a general collection. The library also comprises Pali, Burmese, Singhalese, Malay, and Javanese paper and palm-leaf writings. Of printed books there are 14,000 vols. in Eastern languages or subjects and 42,000 vols. on the European side, which may be referred to by reputable literary workers.

**Libration,** an astronomical term referring to an apparent irregularity in the moon's course, which may be libration in longitude or latitude, or diurnal, and due to a variety of causes.

**Libyan,** a group of languages spoken by tribes inhabiting the mountain districts of Barbary.

**License,** special permission to do or sell certain specified things, usually such as are liable to excise duty. Licenses are required for keeping motor vehicles, carriages, dogs, for shooting game, for hawking and peddling, for selling beer, ale, wines and spirits, tobacco, patent medicines, etc. Excise duties in the United Kingdom produce over 123 millions sterling.

**Lictor,** a public functionary of ancient Rome whose duty was to carry out the orders of the magistrates, punish offenders, and attend upon his superiors on all public occasions.

**Lien,** the right by which a person holding personal property of another can retain possession of it until some claim that he has against the owner is satisfied.

**Lieutenant,** a title implying the holding of an office under or for a superior. Thus, a Lieutenant-General is next under the full General and takes his place in his absence, and so also with regard to Lieutenant-Colonels. When the title is held alone it ranks in the army next to the Captain, and in the navy next to a Commander.

**Life-boat,** was invented in 1785 by Lionel Lukin, and in 1790 a greatly improved boat was introduced by Henry Greathead, who received a parliamentary grant of £1,200 for his invention. Later boats are a great advance upon Greathead's. The Royal National Life-boat Institution, founded in 1824, has the lifeboat service of the United Kingdom under its control. Over 62,500 lives have since been saved by the lifeboat service (including 363 in 1929) and considerably over a quarter of a million sterling has been paid in pecuniary rewards. The Institution maintains 198 life-boats, including 90 motor-boats. A type of life-boat has been introduced at Hythe by the R.N.L. Institution which if capsized can recover in a few seconds. She can be stopped, set at full speed and manipulated much more quickly and easily than the older types. The one built in 1930 has a 35 h.p. engine and a maximum speed of 7½ knots.

**Life Guards.** (*See* **Guards.**)

**Light** has a velocity of 186,000 miles a second, eight minutes sufficing for light to travel from the sun to the earth, a distance of 92,750,000 miles.

**Lighthouse,** to warn ships of dangerous places and indicate coasts, points, harbours, etc., have existed since the building of the first Pharos, at Alexandria, 285 B.C. In early lighthouses, the lights were simple fires. A coal fire light was shown at Tynemouth Castle Lighthouse in 1638. There was no great advance made in lighthouse building until the first Eddystone erection was put up in 1758–60 (*see* **Eddystone**). The whole problem of lighthouse building and lighting, invested though it has been with tremendous difficulties, may be said to have been mastered within the last century; not only are the present structures impregnable to storm and tempest,

but the light that they are supplied with is a thousand times more brilliant than under the older systems.' The introduction of parabolic mirrors was a great improvement, providing a reflecting medium that carried to a great distance. Further improvements were made by Fresnel, Stevenson, and others, and now the electric light has been adopted to a large extent with ample success. The whole of the lighthouses of England are under the control of Trinity House; Commissioners of Northern Lighthouses control those of Scotland; and the Irish lighthouses are controlled by the Dublin Ballast Board.

**Lightning** is an electric discharge from the clouds, and is usually *forked* or *sheet*. The former is the more dangerous.

**Lightning Conductor**, a metal rod, the upper part of which is of copper with a conical point, the lower portion being iron, which extends into the earth. Its effect is to gather to itself the surrounding electricity and discharge it into the earth, thus preventing its falling upon the protected building. In ships, lightning conductors are fixed to the masts and carried down through the ship's keel-sheathing.

**Lignin**, a substance found in the cell walls of plants, and present in all woody fibres.

**Lignite**, an intermediate substance between peat and coal; it is, in fact, undeveloped coal, and known as brown coal.

**Liliputian Armies.**—The smallest army in the world is that of Monaco, with 75 guards, 75 carabineers, and 20 firemen. Next comes that of Luxemburg, with 135 gendarmes, 170 volunteers, and 30 musicians. In case of war, says the law, "the number of volunteers may be temporarily raised to 250." In the Republic of San Marino they have universal compulsory service, with the result that they can put in the field nine companies, comprising 950 men and 38 officers, commanded by a marshal. This, however, is the war strength of the forces. On a peace footing the Republic can only put one company of 60 men on the parade ground. In the Republic of Liberia the proportion of officers to privates is 800 of the former and only 700 of the latter.

**Lillibullero**, a famous political song of which it was said it "sang James II. out of three kingdoms." The words are by Wharton, the music is by Purcell.

**Limburger**, a specially strong kind of cheese made at Limburg, a province partly in Holland and partly in Belgium.

**Lime**, an alkaline earth obtained from kiln-heated limestone, and used in making mortars and cements, also as manure for difficult soils, and in tanning.

**Limelight** is produced by directing an oxy-hydrogen flame upon a piece of quick-lime, which reflects a brilliant white light. This stream of light gathered in a lantern is used for illuminating objects—on the theatre stage, for instance—with an intense brilliance, and for signalling and other purposes.

**Limestone** is carbonate of calcium. It is found in every geological formation, and is highly fossiliferous. Marble is limestone of a specially hard kind.

**Limpet**, a well-known marine mollusc with a single-valved shell, generally found sticking close to sea-washed rocks.

**Linen**, a textile fabric manufactured from flax fibre, known to the ancient Egyptians, and first manufactured in England under Henry III. by Flemish weavers. The chief seat of the manufacture is the North of Ireland, with Belfast as the centre. Dundee and Leeds are also large linen-producing towns.

**Ling**, a sea-fish common on the coasts of Britain, and abounding in more northern waters. It averages from 3 to 4 feet in length, and is a voracious feeder, living chiefly on small fish.

**Linseed**, the seed of the flax plant, containing, apart from its fibrous substance, certain oily and nitrogenous matter of considerable commercial value. This yields linseed oil, and what is left is converted into cattle food.

**Lion**, the chief representative of the Felidæ and Carnivora, now chiefly found on the African continent, though at one time it must have roamed over Europe, fossil lions having been discovered in Britain. Its large square head, its flowing mane (in the males only), and its tufted tail distinguish it from other animals.

**Lion and Unicorn**, the supporting figures of the royal arms of Great Britain, date from the union of Scotland with England at the accession of James I. (James VI. of Scotland), the lion representing England, and the unicorn Scotland.

**Liqueurs** are essences combined with alcoholic liquid, and are of many kinds, named according to their flavourings or place of production, and include Maraschino, Chartreuse, Curacoa, Benedictine, Noyau, Kummel, etc.

**Liquid**, the name popularly given to any flowing substance. The line of demarcation between the most flexible solid and the thickest liquid is almost imperceptible.

**Liquorice**, a juicy substance obtained from the root of the *Glycyrrhiza glabra*, and used in the making of sweetmeats, and as a throat remedy.

**Lira**, an Italian silver coin, equal to 100 *centesimi*, and worth in exchange about 8¾d. English. The exchange value, nominally about 25¼, fell during 1921 to 109 to the £.

**Litanies** were first used in church processions in the 5th century. The first English litany was commanded to be recited in the Reformed churches by Henry VIII. in 1544.

**Lithium**, obtained from an alkaline substance named lithia, was discovered in 1817 by a Swede, Mr. Arfwedson, and is the lightest metal known.

**Lithography**, the art of drawing on stone and printing therefrom, was discovered by Alois Senefelder about 1799, and was introduced into England a few years later. Many improvements in the art have been made in recent years, especially in chromo-lithography.

**Lithoscope**, an instrument invented by Sir David Brewster in 1864 for distinguishing precious stones.

**Lithuania**, a new Baltic Republic, formerly part of Russia. Area 20,000 sq. miles; pop. 2,000,000; cap. Kovno.

**Litmus**, a special kind of colouring matter produced from certain lichens by fermentation and ammoniacal treatment. The resulting colour is violet, which can be converted into various blues and reds. It is turned red by acids and blue by alkalies.

**Litre**, a French measure both for liquids and dry articles. In the former measure it is equal to 1·76 imperial pints; in the latter to a cubic decimetre.

**Liturgy**, the name given to the Church ritual, though strictly applying only to the portion used in the celebration of the Eucharist. The present English liturgy dates from 1547–8, when it received the approval of Parliament.

**Livre**, an old French coin, the equivalent of the present franc. Not current since the 17th century.

**Lizard**, the name given to a diversified family of reptiles, of which there are about 1,600 species. (See the different class names.)

**Llama**, a South American ruminant animal nearly allied to the alpaca, and of the same structure as the camel, except for the hump. It is domesticated and utilised as a beast of burden, as well as for its wool, though the latter is not so long as that of the alpaca.

**Loach**, a fresh-water fish, a common habitant of British rivers and streams. It has several barbels around its mouth, and is of a darkish-green colour on the back, with darker stripes and spots.

**Loadstone**, an oxide of iron, is found chiefly in Sweden and Norway. Its scientific name is magnetite. It has the power of attracting pieces of iron and possesses polarity.

**Loam**, soil composed of clay and sand in such proportions as to keep the ground porous.

**Lobsters** are marine crustacean animals existing in enormous numbers in the northern seas of Europe and America, and in fair proportion on some parts of the British coasts, especially in the neighbourhood of the Channel Islands.

**Local Government Board** (now the **Ministry of Health**), a department instituted by Act of Parliament in 1871 to supervise local authorities and safeguard the public health.

**Local Option**, a proposal which has several times been before Parliament for giving a majority—usually placed at two-thirds—of the ratepayers of a parish power to prohibit the sale of intoxicants in that parish. The principle is in force in Scotland, and was in some parts of the United States, where, however, prohibition is now in force.

**Lock-out**, a term used where work is stopped by the employers locking the doors against workers in order to force them to a settlement, or to force those out on strike to accept the employers' terms. The best-known lock-outs in Great Britain have been in the engineering industry in 1922, boilermakers in 1923, shipyards in 1924, and the Rossendale slipper factory in 1927. Strikes outnumber lock-outs.

**Locust**, an insect of the grasshopper family, but much more powerful. They are inhabitants of hot countries, and often make their appearance in untold millions, like clouds, devastating all the vegetation that comes within their course. Some species exist in Britain, but they are small and not very troublesome. The locust-tree (*Ceratonia siliqua*) is supposed to have furnished food to St. John the Baptist in the wilderness, and its "beans" have accordingly been styled "St. John's Bread."

**Log**, a line used for reckoning the speed at which a ship is travelling. It was first used in the 16th century. The line is divided into spaces of 50 feet marked off by knots and measured by a half-minute sand glass, bearing the same proportion to an hour as 50 feet bear to a mile.

**Logarithms**, a system of calculation invented by Baron Napier in 1614, and developed by Henry Briggs a few years later. It may be briefly described as "the indexes of the ratio of numbers one to another," and represents a great saving of time.

**Logic**, the science of reasoning, setting forth the principles on which argument can be most effectively conducted and proper conclusions deduced. Aristotle, Bacon, Locke, Whately, Sir William Hamilton, John Stuart Mill, and Herbert Spencer have all been expounders of logic; Earl Stanhope invented a logical machine in the latter part of the 18th century.

**Logogram**, a phonogram or sign, briefly representing a syllable, word, or phrase; logographic printing was introduced in 1783 by Henry Johnson and Mr. Walter of *The Times*.

**Logwood**, a familiar dye-wood, obtained from a tree abundant in the West Indies and some parts of South America. It is red in colour, and is used for producing a variety of shades, from red to black.

**Lollards** were a body of Reformers who, under the leadership of Wycliff, were subjected to cruel persecution in the reign of Richard II. Sir John Oldcastle was a prominent Lollard, and was burned at the stake.

**Lombards**, the name given to a community of Italian merchants who settled in England in the 13th century and first became prominent as moneylenders and later as bankers. Lombard Street derives its name from them.

**Lombardy Poplar**, the common name of the graceful *Populus fastigiata*.

**London Clay**, a peculiar formation which crops up in various parts of London, notably at Highgate, and is rich in fossils of many kinds—birds, quadrupeds, reptiles, fruits and fish, indicating a much warmer climate when they flourished than exists to-day.

**Londonderry, Siege of**, by James II.'s army in 1689, lasted 105 days. The garrison and inhabitants were driven to famine, but held on until the siege was raised, and James retired with the loss of 9,000 men.

**London Land Values.** The price of land in London has increased by leaps and bounds of late years. In the suburbs in recent times land in Fitzjohn's Avenue, Hampstead, realised £9,600 an acre, the agricultural value of which would probably not exceed £50 an acre, the balance of £9,550 representing the unearned increment. The highest prices for the freehold of sites are in the centre of the City, a price at the rate of over £8,250,000 an acre being attained; that is, £75 per square foot. From the centre the price diminishes, rising again in the Strand to from £12 to £20 a square foot, or from £500,000 to £870,000 per acre. In Bond Street £35 per square foot, or more than £1,500,000 per acre has been reached. Since the War, however, land values have gone up considerably.

**London Museum**, estab. at Kensington Palace in 1912 for the conservation of antiquities and other objects relating to London. Transferred to Stafford House (now Lancaster House), the lease of which was presented to the nation by Sir W. H. Lever, the late Lord Leverhulme. The museum was opened by the King in 1914.

**Longicornia**, a family of large horned beetles found only in warm countries, remarkable for their wood-boring capacity when in the larval state.

**Longitude**, the distance of any place east or west of the first meridian, which in English maps passes through Greenwich. In French maps the first meridian passes through Paris. In German maps Berlin, in American maps Washington. France has now adopted Greenwich longitude for its time standard, Germany being 1 hour fast.

**Lord**, a title of honour held by such as are peers of the realm, and bestowed on persons who have achieved distinction or inherited by descent. It is also borne as a courtesy title by the eldest sons of dukes, marquises, and earls, and by the younger sons of dukes and marquises.

**Lords, House of**, comprises the Lords Spiritual and Temporal, that is, the Archbishops and Bishops, and all the adult Temporal peers from the rank of baron upwards, of Great Britain, as also the Scottish and Irish representative peers.

**Loris**, a genus of small Lemurs found only in Ceylon, Madras, and Malabar, and comprising now but one surviving species.

**Lory**, a handsome family of parrots with deep scarlet plumage, green wing covers, purple head, and yellow breast line. They belong to the Malay Archipelago and live mainly on fruit juices.

**Loud-speaker**, an instrument which transforms electric energy into sound energy; the sound can be heard at a distance. The loud-speaker is much used in wireless, obviating the wearing of earphones and allowing several people to hear at once.

**Louis d'Or**, a French gold coin of the value of 24 francs, first issued by Louis XIII. in 1640, but superseded by the Napoleon, or 20-franc piece.

**Louse**, a parasitic wingless insect of the Anoplura order, genus Pediculus, exceedingly prolific, and constituting a distressing pest to humans, mammals and birds infested by them. Plant lice are aphides.

**Louvre**, one of the old royal palaces of Paris, was built in its present form partly by Francis I., and added to by later monarchs, Louis XIV. completing the edifice. Napoleon I. turned it into a museum and enriched it with the plunder of many foreign art galleries. Much injury was done to the building by the Communists in 1871. The great extension to the Louvre building begun by Napoleon I. was completed under Napoleon III. in 1857. Amongst other famous treasures it houses the Venus de Milo, "La Gioconda," Leonardo da Vinci's masterpiece, disappeared from the Louvre Gallery in Aug., 1911.

**Love Birds** are small parrots, mainly of a delicate green plumage with pink, red, and black markings at the neck, belonging to the genus Agapornis, and indigenous to Melanesia and the Australian provinces.

**Loyalty Loans** were emergency loans raised by direct appeal to public patriotism. In 1796 such a loan was asked for by the British Government, and within 15 hours £18,000,000 was subscribed.

**Lucifer Matches**—that is, matches tipped with an explosive substance that bursts into flame on being struck—were first used about 1834. Many improvements have been made in matches since then, the most important of which was the invention of the safety match, striking on the box only.

**Luddites**, a secret association of working people formed in 1811, at a period of great distress, with the object of destroying the new textile machinery then being largely adopted, which they regarded as the cause of their troubles. Their first outbreak was at Nottingham, and was stated to have been started by an imbecile

named Ned Lud. Afterwards, serious Luddite riots occurred in various parts of the country, especially in the West Riding of Yorkshire, where many people were killed, mills were destroyed, and numbers of rioters were tried and executed. Charlotte Brontë in her novel, *Shirley*, makes effective use of this period.

**Ludlow Formation**, a geological term designating the upper division of the Silurian group, which consists of sandstone, grit, limestone and shale, deriving its name from the fact that Ludlow is built on these beds.

**Lugworm**, a species of worm living on the seashores and burrowing in tunnels which it makes in the sand. It is much used for bait by fishermen.

**Lumpfish**, a carnivorous sea-fish which attaches itself to rocks and other firm substances, and lives on small fish and marine worms. It is mainly an inhabitant of northern seas, and has three species, one of which is found on our own coasts.

**Lunacy**, insanity, madness, mental illness, unsoundness of mind, has been studied scientifically since the close of the 18th century. Jung, Freud, Adler and others have revolutionised our ideas on psychopathology; also shell-shock and war-madness cases taught us much. The causes of insanity are either predisposing or exciting. Insanity can be classified according to psychical symptoms, defects in the mental functions, and diseases of the brain accompanied with mental symptoms. In the Middle Ages lunacy was explained by the effect of the moon, and insanity by demoniacal possession. No curative methods were applied but methods of torture. Lunatics were frequently imprisoned, sent to monasteries, or cruelly treated. Bedlam was founded in 1676. Since the 19th century asylums, from being places of detention, have become hospitals where humane and scientific treatment is yielding good results. The Maudsley Hospital, a school of the University of London, is an important centre for the study of insanity on modern lines. All the patients are voluntary and uncertified. The Local Government expenditure in England and Wales on lunatics and asylums is about ten million pounds per annum.

**Lunar Caustic**, or **Nitrate of Silver**, is obtained by dissolving silver in diluted nitric acid.

**Lunar Month**, the period in which the moon makes its revolution around the earth—about 29½ days.

**Lupercalia**, yearly festivals held in ancient Rome in honour of Pan.

**Lupinus**, a genus of papilionaceous plants, common in the north temperate zone of both hemispheres, and so called because the roots penetrate the soil with wolfish eagerness and exhausting effect.

**Lupus**, the constellation of the Wolf in the southern heavens, at the east side of the Centaur. It contains no star of more than the third magnitude. Lupus, or King's Evil, in pathology is a spreading inflammation caused by tuberculosis of the skin. Recently ultra-violet rays have been applied in treatment.

**Lurcher**, a domestic dog formed by interbreeding between the greyhound, the terrier, and the spaniel, and a silent pursuer of hares and rabbits.

**Lusiad**, a famous Portuguese epic poem by Camoens, celebrating the establishment of Portuguese sway in India; first published in 1571.

**Lustrum**, a sacrificial celebration occurring every five years in ancient Rome after the taking of the census. From this each period of five years was called a lustrum.

**Lute**, an ancient stringed instrument, introduced into Europe in the 6th century, and at one time popular, but now superseded by more elaborate instruments.

**Luzonite**, a massive mineral, black, brittle, and metallic of lustre, largely composed of copper and sulphur, and closely related to enargite; found near Luzon in the Philippines.

**Lydian Stone**, a dark coloured rock, composed of quartz mixed with oxide of iron and clay, and often used as a touchstone for testing gold alloys.

**Lye**, the chemical term for a solution of an alkali, used in making soaps and other purposes.

**Lynch Law** is the dealing out of summary punishment on offenders by private individuals without appeal to the law. It gets its name from one Charles Lynch, a Virginian planter, who in the latter part of the 18th century was accustomed to take into his own hands the punishment of offenders. Instances of lynch-law are still frequent in the United States, and generally result in the carrying out of a rough and ready death sentence, negroes being mostly the victims.

**Lynx**, a carnivorous mammal of sturdy build, with tufted ears and spotted fur, inhabiting many parts of the world, including Northern and Central Europe. It commits serious ravages among sheep and goats and is very fierce.

**Lyon King of Arms**, the President of the Scottish Lyon Court, and head of the heraldic organisation for Scotland.

**Lyra**, the constellation of the Harp, situated between Hercules and Cygnus, comprising twenty visible stars, the principal of which is Vega, one of the most brilliant of all the stars.

**Lyre**, an upright stringed instrument held in the hand, and famous in ancient Greece and Rome.

**Lyre-Bird**, a remarkable genus of Australian birds, the males of which possess a beautiful lyre-shaped tail. The bird is not more than 15 inches long, but its tail, which it carries erect, is 23 inches in length.

**Lytta**, a genus of beetles, found in Southern Europe and Asia, of the sub-tribe *Trachelia*; the most familiar example is *L. vesicatoria*, commonly called the "Blister-fly."

## M

**Macaco**, Buffon's name for the ring-tailed or cat-like lemur, indigenous to Madagascar.

**Macadamising**, the system of road-making invented by John Macadam in 1819. The road bed is laid with hard broken stones, of a nearly uniform size, which by the weight of the traffic alone soon assume firmness. Nearly all the main country roads are macadamised.

**Macaque Monkey**, a long-tailed, large-shouldered, olive-brown, black-spotted genus of the Catarrhine monkey, common in the Malay Archipelago.

**Macaroni**, a name applied to a class of society fops whose extravagant dress and manners were much ridiculed in the 18th century.

**Macaw**, a genus of large parrots with brilliant scarlet and sky-blue plumage, with interminglings of green. Native to South America and Cuba.

**Maccabees**, a patriotic Jewish family whose achievements in early history were very notable. The revolt of the Maccabeans in the 2nd century B.C., in which Judas captured Jerusalem and purified the Temple, is the most famous exploit connected with this historic name. The feast of the Maccabees is celebrated with rejoicing in December.

**Mace**, an ensign of authority borne before officers of state and other dignitaries. The more particular maces of the present day are those of the Lord Chancellor, the Speaker of the House of Commons, the Lord Mayor of London, and other mayors. In ancient times there was a cavalry weapon consisting of a spike-club which was called a mace. The mace-bearer is the functionary who carries on ceremonious occasions the symbol of authority before judges and civic or state officials.

**Macedonians**, a sect formed by Macedonius, bishop of Constantinople, in the 4th century, who denied the existence of the Holy Ghost. The Papal Council expelled the bishop and his followers from the Church in 360.

**Machinæ Organa**, defined in the 10th book of Vitruvius as "contrivances for the concentration and application of force," and known by the names of instruments, engines, and machines.

**Machine Guns** are the deadliest of lethal weapons, and are of two classes—those firing small-arm ammunition, and those firing shot and shell. Some of these guns have a firing power of over 500 shots a minute, with a range of from 1,000 to 2,000 yds. They are now largely used in the aeroplane service as well as in the field. The best-known guns of this class are the Maxim, the Lewis, the Vickers, the Hotchkiss, the Krupp, and the Puteaux. (*See* Guns.)

**Mackerel,** a familiar sea-fish existing in large numbers in the northern waters of both hemispheres. In May and June immense shoals are to be found round the British coasts.

**Mactra,** a genus of molluscs of extensive distribution, found in considerable numbers in British waters, especially in Scotland. The shell valves are of equal size and triangular shape.

**Madder,** until a few years ago one of the most important of dye-stuffs, largely used in producing Turkey-red dye, but now superseded by artificially prepared alizarin. Natural madder is the root of the *Rubia tinctorum*.

**Mad Parliament,** held in 1258 at Oxford when the barons compelled Henry III. to appoint a council pledged to carry out certain reforms.

**Madrepore,** a white coral-like substance consisting of carbonate of lime, formed by the gradual growth of polyp deposits, and abounding in tropical seas.

**Madrier,** a term in military engineering denoting a beam laid in a ditch to support a wall, or in a mine to hold up the sides or roof; also an armoured plank affording protection against hostile fire, or fitted to receive the mouth of a petard in attacks upon obstacles.

**Madrigal,** a style of unaccompanied musical composition for three or more voices, originally introduced in the Netherlands, and developed in Italy, in the 13th century. Many old English composers achieved great success as madrigal writers, and numerous Madrigal Societies are still in existence.

**Madwort,** a common name of the botanical genus alyssum.

**Maelstrom,** a great whirlpool. The most famous is that off the coast of Norway, between the islands of Moskenēs and Mosken, of the Lofoten group, the power of which has been much exaggerated, it being only dangerous at certain seasons.

**Maestricht Beds,** a dense calcareous formation in the upper division of the *Cretaceous* group of rocks existing in the Maestricht region of Holland; containing fossils furnishing the connecting link between the Secondary and Tertiary systems.

**Mafia,** a secret Sicilian society formed for purposes of vengeance, private and public, prominent about 1860, and responsible for many crimes.

**Magenta,** an aniline dye discovered in 1859 by Sir W. H. Perkin, and named after the great battle of that year between the French and Austrians.

**Maggot,** the larva of an insect, a term usually applied to that of the common fly, which feeds upon putrid matters, animal and vegetable.

**Magi,** priests of the Persian fire-worshippers. Their sacred fires blazed in the open air, and around them they performed their mystic rites. Zoroaster, their great reformer, flourished about 550 B.C. In the following century their religion was superseded by Mohammedanism, and the only representatives of the old worship now left are the Parsees of India.

**Magic,** a term applied to the pretended art of influencing supernatural things. According to some a primitive stage of belief in magic precedes the establishment of religion. Magic was practised in all countries and in all ages. The priesthood of ancient Egypt was notably proficient in these arts, and much early ritual seems to have been magical in intent, including the rite of sacrifice. The powers of the gods themselves are often attributed to magic in Egyptian, Babylonian, Vedic and other mythologies. The practice of magic as a serious study was continued in Europe during the Middle Ages in spite of the efforts of the Church to uproot every trace of superstition. Magic took various forms—the cure of disease, predictions, and the gratification of personal desires. Thus, there was *black magic*, which communed with evil spirits; *white magic*, dealing with good spirits; and *natural magic*, the science of the occult; while *astrology* and *alchemy* were the advanced outcome of these superstitions. In more recent times there have been many professors of magical powers, but to-day even the palmist finds himself under the ban of the law.

**Magic Lantern,** an apparatus for throwing pictures or images on a screen, invented by Kircher in the 17th century, and consisting of a lantern, behind the light of which is a reflector, while in front is a tube carrying a condensing lens, this being supplemented by a double convex lens which enlarges the object to be shown. Many improvements in magic lanterns have been made in recent years, by which dissolving views can be shown and photographs reproduced. The kinematograph (otherwise cinematograph or bioscope) is perhaps the most marvellous use to which the magic lantern has been put.

**Magilus,** a gastropod which has a spiral shell when young, but gradually develops from that a shelly tube of bent form with an opening at the bottom, older portions of the shell cavity becoming filled with a coral growth as the tube expands. Found on the coasts of the Red Sea, Java, and Mauritius.

**Magistrate,** a word describing a high executive officer, and of wide application. The first magistrate of a kingdom is the king, of a republic the president. In the more general meaning, a magistrate is a justice of the peace for a county or borough. Stipendiary magistrates exist in the various metropolitan districts and in the chief boroughs who are barristers of standing and devote their entire attention to the arduous duties of their position.

**Magna Charta** was sealed by King John at Runnymede on the 15th June, 1215, in obedience to the insistent demands of the barons, and has since been confirmed over 30 times by later monarchs. Its main provisions were that no free man should be imprisoned or proceeded against except by the judgment of his peers in accordance with the law of the land; that there should be one system of weights and measures throughout the kingdom; that foreign merchants should have freedom of commerce; that no scutage or aid should be imposed except by consent of the council; and that ancient liberties generally should be preserved. Many copies were made, two of which are in the British Museum, one in Salisbury, another in Lincoln Cathedral.

**Magna Graecia** were independent States established by Greek colonists in South Italy between 1034 and 774 B.C. They included Syracuse, Leontinum, and Thorium. They allied themselves with Hannibal when he invaded Italy, 216 B.C., and his defeat involved their collapse as free States.

**Magnesia** is the oxide of the metal magnesium, and is in the form of a white powder.

**Magnesium,** a metallic element first found at Magnesia in Asia Minor, and as a constituent of dolomite and other mineral substances has a very wide distribution. It is obtained by electrolysis, and gives forth a brilliant white flame when heated to the proper point. The magnesium light is so rich in chemical rays that it is frequently used in photographing objects by night, or in caverns or other dark places where photography would otherwise be impracticable. Magnesium lamps have been utilised for lighting up tunnels during construction.

**Magnetism,** the quality of attraction possessed by the loadstone or magnet-stone, was known to the ancient Greeks, Chinese, and Arabians. Roger Bacon knew of its attraction to the north, and it was this property that led to the invention of the magnetic needle and of the mariner's compass.

**Magnets** are usually magnetised bars of steel. One of a single bar is called a simple magnet; several bars fastened together furnish a compound magnet. Electro magnets are wonderfully powerful, some being capable of sustaining weights of over a ton.

**Magnificat,** the hymn of the Virgin Mary, given in Luke i. 46, beginning in the Vulgate with the words "Magnificat anima mea Dominum" (My soul doth magnify the Lord), and used in the services of all Christian Churches.

**Magnolia,** the type of the botanical tribe *Magnoliceæ*, comprising many beautiful trees and shrubs with large and fragrant flowers, and chiefly native to North America and Asia.

**Magpie,** a well-known bird of the crow family, of glossy black and white plumage, famed for its mischievous propensities.

**Magyars,** the Hungarian race, of Finno-Ugrian stock, settled in Hungary from the 10th century.

**Mahdi,** an Arab leader of great influence, invested with powers akin to those of a Messiah in the Mohammedan mind. Several individuals, claim-

ing to be the Mahdi, gave trouble in the Soudan, but British military organisation proved too much for them in the end.

**Mahogany,** a fine hard wood susceptible of a very high polish, and distinguished for the beauty of its colour and markings. The tree which produces this wood (the *Swietenia mahogani*) is a native of the West Indies and tropical America. Mahogany is said to have been first brought to England by Raleigh in 1595.

**Mahrattas,** a warlike people strongly opposed to the East India Company in the 18th and early part of the 19th centuries, but subdued in 1818.

**Maids of Honour.**—Queen Victoria had eight Maids of Honour, who succeeded each other in pairs with unfailing regularity. Their duties were to read the newspapers aloud to the Queen, drive out of an afternoon, and play to her in the evenings. The salary attached to the office was £300 a year, all of which was required for their tollettes, as Her Majesty, although she encouraged simplicity of attire in her ladies, had a curious objection to their appearing often in the same dress. Each received a dowry of £1,000 on her marriage. The departing Maid also carried away her badge of office, a brooch consisting of a miniature of her Royal mistress set in diamonds. During the sixty-three years of Queen Victoria's reign only thirty-nine Maids of Honour were appointed. Of these, nineteen married while in office. Her present Majesty has only one Maid of Honour.

**Maigre,** a sea-fish of the Sciænid e genus, mostly inhabiting the Mediterranean, though occasionally met with in British waters. It is a large fish, and makes a buzzing sound as it swims.

**Mail-Coaches,** which are usually regarded as things of a very distant past, did not come into existence till 1784, when Mr. John Palmer, of Bath, put the first mail-coach on the road between Bath and Bristol. They were soon afterwards adopted in other parts of the kingdom, and were employed in carrying the mails, until superseded, in great part, by railways. The present mail vans carry no passengers.

**Maintenance,** a legal term signifying the interference in a suit by someone having no direct interest in it, and constituting a punishable offence.

**Maize,** an important cereal largely grown in South-eastern Europe and America, commonly known as Indian corn in the latter country.

**Majolica,** a kind of pottery carrying a highly coloured glaze or enamel, supposed to have been introduced into Europe by the Moors from Majorca, in the 15th century, and brought to a high degree of artistic beauty in those days, Raphael and other great artists having made designs for the ware. After the 16th century majolica production practically ceased, though in recent times some clever imitations of the old ware have been manufactured.

**Major,** in the British Army, ranks next below a Lieutenant-Colonel. A Major-General ranks beneath a Lieutenant-General.

**Malachite,** a green variety of copper ore, abounding in Australia, Russia, and South America, and, in its finer examples, can be worked up as a gem.

**Malays,** a race of people with oblique eyes, high cheek bones, and brown skin, whose native countries are the Malay Archipelago, Polynesia, the Philippines, and Madagascar.

**Malic Acid,** a substance obtained from unripe fruit, and present in the largest quantities in rhubarb and mountain-ash berries; it is used with bases for producing the salts called *malates*.

**Malmaison** derives its name from having been inhabited in the 11th century by the Norman brigand Odon, and afterwards, according to the tradition, by evil spirits, exorcised by the monks of St. Denis. Little was known of it, however, until its purchase, for 160,000 fr., by the Empress Josephine, who died there in 1814 as the result of a chill caught while showing the Russian Emperor round the grounds. After the Second Restoration, Prince Eugene sold Malmaison, removing its gallery of pictures to Munich. In later years it was for some time the residence of ex-Queen Christina of Spain. It is now converted into a museum.

**Malmsey,** a favourite wine originally made at the Greek port of Malvasia, but now made chiefly in Madeira, Sardinia, and Sicily.

**Malt** is barley grain which has gone through a steeping and preparing process to render it suitable for brewing purposes. It was for a couple of centuries subjected to a fluctuating duty, producing in 1863 a sum of £6,273,727. The tax was abolished in 1880.

**Malta, Order of,** was founded in the time of the Crusades, and the chief function of its members was to protect the Christians in the East against the Infidels. Their seat was originally at Jerusalem, whence they retired successively to Saint Jean D'Acre, to Rhodes, and to Cyprus, pursued everywhere by the rising tide of Mohammedanism. Finally they settled at Malta, which the Emperor, King Charles V., ceded to them; and there they remained for three centuries until Napoleon, on his way to Egypt, dispersed them. The Emperor Paul of Russia then protected them; but the office of Grand Master was in abeyance until 1879. The Austrian Baron Hardegg succeeded to that office in 1905.

**Maltese Dog,** one of the smallest of dogs, with long, silky white hair and pendulous ears; much appreciated as a drawing-room pet.

**Mamelukes** were originally—in the 13th century—a bodyguard of Turkish and Circassian slaves in the service of the Sultan of Egypt, and attained such influence that in 1250 they were strong enough to appoint one of their own body to the throne of Egypt. After that a succession of Mameluke Sultans reigned down to 1517. Then the Turks annexed Egypt, and the Mamelukes were taken into the service of the Beys. They again came to the front after Napoleon's conquest of Egypt, and for a time resumed governmental sway; but in 1811 they were decoyed into the citadel of Cairo and massacred by order of Mehemet Ali.

**Mammalia,** a zoological term covering all that portion of the animal kingdom the females of which are provided with mammary glands for suckling their young. A further characteristic is the double articulation of the skull with the vertebral column.

**Mammoth,** an extinct species of elephant of gigantic size. In 1799 an entire skeleton of the animal was found in Siberia in a block of ice. It was anciently an inhabitant of Britain and other parts of Europe, as well as of Asia and America.

**Mammoth Cave of Kentucky,** about 10 miles long, is one of a series of spacious caverns formed in the limestone rock formation, and is from 40 to 300 feet wide and at one point 300 feet high. Stalactites and stalagmites abound. (*See* **Caves.**)

**Mammoth Tree of California,** the giant of the famous coniferous grove at Calaveras, 327 feet high by 90 feet in circumference, and believed to be from 3,000 to 4,000 years old.

**Manatee,** an aquatic mammal of the Manatus genus averaging when full grown from 10 to 12 feet in length, with shovel-shaped tail, and four limbs and nails which almost give the appearance of arms and hands. In spite of their ungainly aspect, these creatures are believed to have given rise to the idea of mermaids in the olden time.

**Manchus,** the original nomadic race inhabiting Manchuria; of the Mongolian stock, and chiefly engaged in cattle rearing.

**Mandamus,** a writ of command issued from the King's Bench Division of the High Court addressed to any person, corporation or inferior court requiring them to do something which appertains to their office.

**Mandarin,** the name given to a powerful Chinese official, civil or military, whose rank is shown by the wearing of a button. In Chinese the name is Kwan.

**Mandible,** the inferior maxilla (in the lower jaw) in human anatomy; the upper and lower rostra of the beak in birds; and the upper and outer pair of jaws in insects.

**Mandillion,** a form of upper garment, worn by soldiers and servants in the 17th century, confined mostly to France.

**Mandoline,** an Italian fretted guitar, so called from its almond conformation.

**Manes,** the ancient Roman name for the shades of the dead, who were regarded as tutelary divinities, and worshipped.

**Manganese,** formerly included among the ores of iron. Its distinctive character was established

in the 18th century. It is hard and brittle, and oxidises rapidly when exposed to the air. It is found in combination in many minerals. As a commercial product, in its numerous oxides, it is of great value.

**Manichæans,** a sect founded by the philosopher Manes in Persia about A.D. 261, and spreading into Egypt and Arabia. Manes called himself "the Envoy of Christ," rejecting the Old Testament, and propounding a system of his own based partly on Christianity and partly on the dogmas of the ancient fire-worshippers.

**Manikin,** a dwarf or pigmy; an artificial figure employed in anatomical demonstrations, made sometimes of papier-mâché.

**Manna,** a tree of the ash genus growing in the South of Europe and in the East, and exuding a sweet substance which is gathered, boiled, and eaten.

**Manors** were estates originally granted in Anglo-Saxon times as rewards for knight service, and included the privilege of a special court with jurisdiction, criminal and civil, within the manorial territory. In recent times the ancient privileges of the manorial system have almost passed out of existence. Such copyhold property as is yet unenfranchised is generally set forth as being held by the tenant "at the will of the lord according to the custom of the manor." By the Law of Property Act 1925, manors will eventually be abolished.

**Mansfield College,** Oxford, for the education of students for the Nonconformist ministry, was established in 1886, and opened in 1889.

**Mansion House,** the official residence of the Lord Mayor of London, stands on the site of the ancient Stocks market, and was erected in 1739–53 from the designs of George Dance.

**Manslaughter** is the unlawful killing of another without malice or premeditation, and is classed as voluntary, as when done under a sudden provocation, or involuntary, when it is the result of some unlawful act. Culpable homicide also comes within the term of manslaughter.

**Manures** are natural or chemical substances put upon land in order to aid cultivation. Natural manures comprise what is generally known as farm-yard manure, sewage, leaves, etc., and chemical manures include bones, nitrate of sodium, guano, soot, limes, and other kindred matters.

**Manx,** the original Celtic inhabitants of the Isle of Man, where a Celtic dialect still lingers.

**Maories,** one of the native races of New Zealand, but not in the strict sense of the word aborigines, having migrated to the island originally from one of the Polynesian group. They number about 50,000, and are adapting themselves with considerable success to the conditions of civilised life. Until 1870 they were frequently in arms against the Government, but since then have accepted their position with loyalty. The race is fast dying out.

**Maple,** a tree that is native to the northern hemisphere, and has at least fifty species. The sycamore and plane tree are the best known British varieties. The sugar maple abounds in Canada and the eastern parts of the United States. The maple-leaf is the Canadian national emblem.

**Marabouts,** a class of Berbers adopting a religious life, and regarded with much reverence by the people of North Africa.

**Maraschino,** a liqueur distilled from cherries, and mainly produced in Dalmatia and Corsica.

**Marble** is limestone in its hardest and most crystalline form. There are many varieties—33 were used in the building of the Paris Opera House—but white is the purest and rarest. From about 568 B.C., white marble was used by the Grecian sculptors for their statues. Rome was rich in marble buildings and monuments, and Palmyra was mainly built of white marble. Devonshire and Derbyshire yield the best English marbles, and several localities in Ireland furnish particular kinds. Vermont, Massachusetts, and Tennessee are the chief marble-producing States of America. The American marbles are mostly light grey. The Marble Arch, at the northern entrance to Hyde Park, was originally built for the front of Buckingham Palace.

**March,** the third month of the year, and the first of the old Roman calendar. It was named after the god Mars, and was the *Hlyd* (storm) *monath* of the Anglo-Saxons.

**Mardi Gras,** the last day of the Carnival in France, Shrove Tuesday.

**Margarine,** a butter substitute made from beef suet, vegetable oils, butter and milk.

**Mariner's Compass.** (*See* **Magnetism.**)

**Marines,** soldiers for sea service, were established in 1664, when 1,200 men were enlisted as the first marine regiment. By 1741 there were 10 marine regiments, of 1,000 men each. Over 30,000 British marines were engaged in the French wars of the early part of the 19th century. The present strength of the Royal Marines is over 20,000.

**Mariolatry,** a term applied by non-Catholics to the honour or worship (hyperdalia) of the Virgin Mary, begun in the 4th century, and still a prominent part of Roman Catholic religious observances.

**Marionettes** are puppets moved by strings. They originated in the *Fantoccini* of the 15th century, which had such vogue in Italy and are still popular, being adopted in Germany and England later. Our *Punch and Judy* is a version of Punchinello.

**Mark,** a modern silver German coin, about equal in normal value to an English shilling, and in former times the name of a variety of coins, including the Scotch coin of Charles II.'s time, worth 13*s.* 4*d.* The German mark fell in exchange value during 1921 to 1275 to the £, the ordinary par value being about 20½, but during November 1923 it was of no value, being quoted at the quite grotesque price of 50,000 milliards to the £. It has now nearly the value of one shilling sterling.

**Marl,** a rock composed partly of clay and partly of carbonate of lime.

**Marlinspike,** a small iron instrument used in rope splicing for separating the strands.

**Marmoset,** a very small kind of monkey confined to the New World. Very squirrel-like in appearance, with long bushy tails, and thick woolly fur, they are pretty little animals and the smallest of all monkeys.

**Maronites,** a sect founded by a monk named John Maro in the 7th century, in Syria, and still existing in the Lebanon regions. They differ from the Roman Catholics (to whose Church they are allied and report themselves) in certain points of doctrine concerning Christ. In 1860 they suffered severe persecution at the hands of the Druses, some 1,300 being massacred and 100,000 driven from their homes.

**Maroons,** the name applied to a body of fugitive slaves which in the 18th century took up arms against the whites of Jamaica. For eight years they kept up a troublesome warfare, but surrendered in 1730, being permitted to retain their free settlements. There are also maroons in Dutch Guiana.

**Mar-Prelate Tracts,** seditious pamphlets written with great maliciousness about 1586, and intended to discredit the episcopacy, caused a great sensation in their time, and led to the execution of their supposed author, John Penry.

**Marquetry,** a kind of inlaying in which thin layers of coloured woods are wrought into a design, and mainly used in ornamental floors.

**Marquis,** the title next in precedence below that of a duke. The first English marquess was Robert de Vere, Earl of Oxford, who had the honour conferred upon him by Richard II. in 1385.

**Mars,** the planet coming next after the earth in the order of distance from the sun, Mercury being first and Venus second. It is the planet that has been most closely studied because of its comparative nearness. It has two satellites.

**Marseillaise,** the French national hymn, written and composed by Rouget de L'Isle, a French engineer officer, who was inspired to write it in 1792 to encourage the Strasburg conscripts. It immediately became popular, and received its name from the fact that it was sung by the Marseillaise troops while marching into Paris.

**Marshalsea Prison,** a once well-known house of detention in Southwark. It stood near St. George's Church, and was originally a prison for royal servants convicted of offences, but from 1849 was for many years a debtors' prison. Dickens described it in *Little Dorrit.*

**Marsh Tortoise**, an amphibious animal of the order Chelonia, spread over many countries and inhabiting ponds and small rivers. There are 42 species, and they are all carnivorous.

**Marston Moor**, near York, was the scene of the famous battle between Prince Rupert and his forces against Cromwell and his troops on July 2nd, 1644, Cromwell being victorious.

**Marsupialia**, animals—mainly Australasian—having a marsupium or pouch; the young are born of comparatively small size and imperfectly developed, but are transferred to the maternal pouch.

**Martello Towers**, circular forts erected on the coasts of England early in the 19th century as defences against foreign attacks, but now abandoned as insufficient in the changed conditions of modern warfare. So called from the circular fort at Martello (Corsica).

**Marten**, a carnivorous animal of the weasel family, a variety of which was once common in Britain, but now seldom met with. It feeds on birds and small mammals, and is clothed with a handsome dark brown fur which is much valued.

**Martial Law**, which is sometimes instituted in a time of outbreak or rebellion, is often confounded with military law. The Duke of Wellington said that "martial law means no law at all, but the will of the general till the ordinary law can be either established or restored." Sir David Dundas described it as "the substitute for a civil jurisdiction for the moment during which the functions of the latter are paralysed." The district in which martial law is proclaimed comes entirely under the control of the military power both in civil and criminal matters.

**Martin**, a well-known bird-visitor to Britain. It belongs to the swallow family, and the two species that spend their summers here are the house-martin, which makes its nest of mud under the eaves of houses, and the sand martin, which builds in sandy banks.

**Martingale**, a long strap or thong of leather, one end of which is fastened to the girth of a horse, between the fore legs, and the other to the bit, or to a thin mouthpiece of its own.

**Martinmas, or St. Martin's Day**, falls on November 11th, and is one of the Scottish quarter days. St. Martin was a popular Saint with our ancestors, and Martinmas was a busy time for the mediæval housewife. It was the date when "Martlemas Beef" was dried in the chimney, and enough bacon and mutton cured to last until the spring, because, owing to the scarcity of winter fodder, fresh meat could seldom be obtained. This diet of dried meat without vegetables caused scurvy, King's evil, leprosy, and other maladies. Originally the goose belonged to Martinmas, not to Michaelmas, the legend being that when Martin was elected Bishop of Tours he hid himself, but was betrayed by the cackling of geese. He died in the 4th cent.

**Martyrs**, in the Christian Church, have been many. Stephen was the first Christian martyr in 39. The first English martyr was St. Alban, 286, and in Tudor times many eminent churchmen went to the stake at West Smithfield, in London, and at Oxford, where now exists the "Martyrs' Memorial." There is a Martyrs' Memorial Church in St. John St., Clerkenwell, not far away from the scene of the Smithfield fires.

**Mason and Dixon's Line** is the boundary line separating the old Slave States of America from the Free State of Pennsylvania. It was drawn by two English surveyors, Charles Mason and Jeremiah Dixon, between 1763 and 1767.

**Masquerades** are balls or dances at which those who take part appear masked or in character. They were in vogue in the 14th century, and attained their height during the reign of Charles II. In 1724 they were abolished, but not for long, being renewed towards the end of the century at the various public gardens, with increased show, becoming again very fashionable. They have had a more continued popularity in France and Italy. Fancy dress balls have in recent years been given at the present Royal Opera, Covent Garden. The former building on this site was burned down after a masked ball given on March 5, 1856.

**Masques** were light dramatic compositions set to music and performed on special occasions. One of the best known examples is Milton's "Comus," which was given at Ludlow Castle in 1634.

**Mass**, the portion of service in the Roman Church consisting of the consecration and elevation of the Host. It is high or low, *i.e.*, performed with full choral service, or merely by the rehearsal of prayers without singing. Mass was first celebrated in Latin in the 4th century, and was introduced into England in the 7th century.

**Massorah**, a collection of criticisms on the Hebrew text of the Scriptures, and rules for its correct interpretation.

**Mast**, a tall, round piece of timber, steel or iron, elevated vertically from the keel of a ship, and to which are attached the various parts constituting the rigging. The lower part of a mast, however, in the case of the larger ships, is only called the mast, the next higher section being the top-mast, while above that come the top-gallant-mast and the royal mast. There are also fore-masts, mizzen masts, and trysail or spanker-masts, and jigger-masts.

**Master of the Revels** was an important Court official in ancient times, upon whom devolved the arrangement of Court festivities. The last master in England was Solomon Davrolle.

**Master of the Rolls**, one of the English judges, formerly a judge of Chancery, but since 1881 a judge of the Court of Appeal only. In addition he is the nominal custodian of the rolls or records preserved in the Record Office.

**Mastic**, a resinous substance obtained principally from the bark of a tree which flourishes in the Greek Archipelago, *Pistacia lentiscus*, and is mainly used in the manufacture of varnish.

**Mastiff**, a domestic dog said to be an original British breed. A large massive animal with pendulous ears, it is a formidable watch dog.

**Mastodon**, an extinct order of quadruped closely resembling the elephant in structure, but much larger. Their remains have been found mostly in America.

**Matches.** (*See* Lucifer Matches.)

**Materialism**, the doctrine that man's soul is not a spiritual substance, but results from the organisation of matter in the body. To the materialist everything that exists is either matter or energy.

**Materia Medica** treats upon the different substances used in the practice of medicine, giving details of their constituents and effect.

**Mathematics** is the science of computation and measurement, and is defined as "pure" when treating of quantity in the abstract, and "mixed" when dealing with material bodies and facts.

**Matins**, an early morning church service. The service includes, in the Roman communion, the Lord's Prayer, the Angelic Salutation, the Creed, and certain Psalms. The name was also given to the early morning massacres (*a*) of St. Bartholomew, August 24th, 1572, called the "French Matins," and (*b*) the massacre of Prince Demetrius and his Polish adherents, May 27th, 1606, the "Matins of Moscow."

**Matriarchate**, an ancient theory that the mother was the source of authority and not the father, and that in the "golden age" women exercised supreme control.

**Maundy Thursday**, the day before Good Friday, was, in olden times, a day of almsgiving, upon which the sovereigns of England, through their almoners, gave money, food, and clothing to as many poor persons as the kings were years old. The custom is still observed with some ceremony.

**Mausoleum**, a special place of sepulture, generally for the reception of the remains of members of a royal or other family of distinction. The name is derived from the tomb of King Mausolus at Halicarnassus, erected about 350 B.C., and forming one of the seven wonders of the world. The royal mausoleum at Frogmore was founded by Queen Victoria, where she was buried, together with the Prince Consort and other members of the Royal Family since deceased.

**Mauve**, a colouring matter produced from lichens by Dr. Stenhouse in 1848, but in 1856 obtained from aniline by Perkins, and forming the first of the aniline dyes to be prepared on a large scale. The term mauve, however, was used to designate a purple shade of colour in the 18th century in France.

**May**, the fifth month of the year, but the third of the ancient Roman calendar. Supposed to be

named after Maia, the mother of Mercury, to whom sacrifices were offered on the first day of this month. In England in former days May Day was made the occasion of many festivities, including the crowning of the May Queen, dancing round the Maypole, etc.

**"May Flower,"** the name of the ship which in 1621 conveyed the Pilgrim Fathers, 102 in number, from England to America.

**Maynooth College,** near Dublin, was founded by Parliament in 1795, and possesses a large permanent endowment. It accommodates 500 students, who are trained for the Roman Catholic priesthood.

**Mayors** were appointed by Henry II. The first Mayor of London was Henry Fitz-Alwyn, who was appointed in 1189 and held the office for 24 years. In those days the Mayors were chosen for life. In recent times, however, the Mayor is the Chief Officer of a Municipal Council, and is elected annually either from the members of the Council or from outside. The Chief Magistrates of London and York have long been dignified by the title of Lord Mayor, a distinction which has of late years been extended to several other great English cities including Birmingham, Sheffield, Leeds, Bradford, Bristol, Cardiff, Liverpool, Manchester, Norwich, and Newcastle-upon-Tyne. In Scotland the Chief Magistrates are Provosts.

**Mayors of the Palace** were functionaries of great influence under the later Merovingian kings; indeed, they exercised so much power that they ruled while the kings were mere puppets.

**Mazarine Bible,** an edition of the Latin Vulgate discovered in the library of Cardinal Mazarin; from which Gutenberg between 1450 and 1455 printed the first book for which the metal types were used.

**Mazdeism,** pertaining to the religion of the ancient Persians, another name for Zoroastrianism.

**Meal-Tub Plot** was a pretended conspiracy in 1679 against the Duke of York, afterwards James II., concocted by an informer named Dangerfield who sought to incriminate the Earls of Halifax, Essex and Shaftesbury. Evidence of the fictitious nature of the plot was subsequently discovered in a meal-tub belonging to a woman with whom he had lived, and he was publicly whipped and put in the pillory. A man named Francis struck him a blow which caused his death, for which the assailant was hanged.

**Meal-Worm** is the larva of a beetle—the *Tenebrio molitor*—and is found in corn mills, granaries and bakeries, where it does considerable damage.

**Measurements of Celestial Bodies.**—The accurate measurement of the distances and sizes of all the heavenly bodies depends on the measurement of the sun's distance from the earth, and observations on certain of the minor planets afford the surest means yet obtained for calculating this unit. The diameter of a star is calculated from its spectrum when we know its distance, or directly by means of an instrument called an interferometer. "Absolute Magnitude" refers to a star's luminosity, without reference to distance, *i.e.* its luminosity at a hypothetical distance of 10 parsecs. Eros, a minor planet discovered in 1898, under certain conditions is nearer the earth than any other heavenly body, the moon excepted; and at its opposition, in 1900, observations were made to ascertain its parallax at forty observatories all over the world. Since then the work of measuring the many photographs taken and reducing and comparing the results of the observations has occupied the astronomers concerned. The results so far are almost in complete accordance with the present accepted mean distance of the sun, 92,900,000 miles. The size of some of the stars makes our sun look very small.

**Mechanics,** the general name for the science which includes Kinematics and Dynamics, and deals with force and its influence upon matter.

**Mechanics' Institutes** for providing education, libraries, reading rooms, lectures, etc., for the working classes were founded by Dr. Birkbeck in London in 1823, the Birkbeck Institute still remaining to commemorate the foundation. Similar institutions were formed in all parts of the country, and have achieved, and are still achieving, a great educational purpose.

**Medals,** as decorations for military service, were first issued in this country by Charles I., who ordered medals for gallantry to be distributed to certain soldiers in 1643. Medals were also issued to officers and men who were victorious against the Dutch fleet in 1653. After Lord Howe's victory in 1794 a Naval medal was instituted. Medals were also struck for the victory of Waterloo, and since that time special medals have been issued in connection with all our wars. The Victoria Cross, a special reward for personal gallantry in the Army and Navy, was instituted in 1856. The Military Cross (M.C.) was instituted in 1915, ranks next after the Victoria Cross, and is awarded to Captains, Lieutenants, and Warrant Officers in the Army and Indian and Colonial Forces.

**Meerschaum,** a white or yellow-white earthy mineral, found in beds in Asia Minor, Greece, and other places, is a silicate of magnesium allied with water. Its chief use is in making pipe-bowls, though in Spain it is used for building purposes.

**Megalichthys,** an extinct fish, fossil remains of which have been found in the Devonian and Carboniferous formations.

**Megalosaurus,** an extinct reptile of enormous proportions, having a length of from 30 to 40 feet. Fossil remains of this monster have been found in Oolithic Slate and Weald Clay.

**Megaphone,** a conical tube for carrying the sound of the voice to a distance.

**Megatherium,** an extinct animal of the sloth order which attained a height of 5 feet, and measured 18 feet in length, including the tail. The post-Tertiary deposits of South America have yielded several specimens of this animal.

**Mélinite,** a crystalline solid explosive of tremendous power, whose chief ingredient is picric acid.

**Melon,** a well-known tropical fruit, of which there are numerous varieties, nearly all being used as food.

**Mendelian Law.** The first statistical rules of inheritance, determining the ratio of variation of characteristics in the offspring of differing individuals, and the classification of characters discontinuously inherited, were first formulated by Fr. Johann Gregor Mendel, a monk of Brunn. The results of his most important experiments in the crossing of peas were published in 1866, and showed that when two races are crossed, the resultant hybrids will exhibit the dominant features of one parent, but the offspring of the second generation will show those of both grandparents. This is explained by the transmission of germ cells, or gametes, bearing certain characters which may lie dormant in one generation but which that generation can transmit to the next. Since the work of Mendel many later discoveries have suggested new explanations of variation, and that of Weismann, which regards the nucleus' chromosomes of the germ cell to be the bearers of inherited characters, is the most favoured.

**Mendicant Friars,** certain religious orders which spread over Europe in the 13th century, and comprised the Franciscans, Dominicans, Augustines and Carmelites. Originally they depended entirely on alms.

**Mendicity Society,** est. in London in 1818 for the suppression of systematic begging. It has done much to protect the public against impostors.

**Mennonites,** so called from having adopted the doctrines of Menno Simons, a priest of the 16th century, who led the Baptists, not Anabaptists. There are several communities still existing.

**Mercator's Projection,** a method of indicating meridians of parallels of latitudes on maps, introduced by Mercator in the 16th century, and still universally used in navigators' charts.

**Mercers' Company,** the wealthiest and one of the oldest of the London Livery Companies, with a present income of £111,000.

**Merchant Adventurers' Company,** first established in England in 1406 by Henry IV., and specially chartered by Edward III. It continued trading and colonising down to the time of Charles I.

**Merciless Parliament,** the name given to the parliament of 1388 summoned by Richard II., which decreed the execution of several of the king's ministers and the outlawry of the Duke of Suffolk.

**Mercury,** one of the smaller planets and the nearest

to the sun, though 35½ million miles distant. It has no satellite. The transit of the planet over the sun's disc occurs only at wide intervals. The last time was in 1868.

**Mercury, or Quicksilver,** is one of the oldest known metals, whose chief ore is the sulphide cinnabar, found in certain parts of Spain, China, Japan, Mexico, and South America. It is the only metal which is liquid at ordinary temperature, and does not alter by exposure to air when pure. It is largely used in the construction of barometers and thermometers, and is an adaptable alloy. It is also of great value in medicine.

**Meridian,** an imaginary circle extending through the North and South Poles and any given place. When the sun is at its midday height at any place it is "on the meridian"; hence the terms ante-meridian (a.m.) and post-meridian (p.m.).

**Merino Sheep** were imported into England from Spain in 1788, and had great influence in improving native breeds, especially in regard to the quality of the wool.

**Merit, Order of,** instituted 26th June, 1902, for persons signally distinguished in the service of the State. The order is limited in numbers to 24. The original members included Lord Roberts, Lord Wolseley, Lord Kitchener, Lord Fisher, Lord Rayleigh, Lord Kelvin, Lord Lister, Sir William Huggins, Lord Morley, Sir Lawrence Alma-Tadema, Mr. G. F. Watts, Mr. Holman Hunt, Earl Cromer, and Mr. George Meredith. Among the more recent additions to this roll of honour are the names of Thomas Hardy, Sir Edward Elgar, Viscount Bryce, Sir G. Otto Trevelyan, Bart., Sir Joseph J. Thompson, Professor Henry Jackson, Sir William Crookes, Sir Archibald Geikie, Lord French, Sir A. J. Balfour, and Viscount Haldane. Admirals Seymour, Jellicoe, and Beatty and Lord Haig. The Marquis Yamagata, Marquis Oyama, and Admiral Togo, Marshal Foch and Marshal Joffre are honorary members. In 1919, the O.M. was granted to Mr. Lloyd George, and in 1922 to Sir J. M. Barrie. Later members of the order are: Mr. John Galsworthy, Mr. George Macaulay Trevelyan, Dr. S. Alexander, Sir William Bragg, etc.

**Merlin,** a bird of the falcon family, and the smallest of the hawk species. It is not infrequent on British grouse-moors, and in the hawking days of the olden time was favoured by the ladies.

**Mermaid,** the reputed woman-fish of the ancients, and doubtless originating in the manatee occasionally seen by sailors. The manatee suckles its young.

**Merovingians,** the first race of French kings, beginning with Clovis, 467, and ending with Chilperic, 753.

**Merry-Andrew,** the name given to performing clowns in olden times, derived from Andrew Borde, a facetious physician of the reign of Henry VIII.

**Mesmerism,** the so-called science of animal magnetism first introduced by Dr. Mesmer, in 1766, but since exposed as a fallacy. (*See* **Hypnotism.**)

**Messageries Maritimes,** the principal French steamship company, whose chief port is Marseilles. Trades mainly with South America and the East.

**Messuage,** the old legal term for a dwelling-house and its immediate out-buildings and adjoining land.

**Metallurgy,** the science of obtaining metals from their ores and applying them to the uses of man. (See the different Metals.)

**Metamorphic Rocks** are such geological deposits as have undergone alterations of structure and composition which seem to place them apart from what must have been their original stratification. The most active agents in producing these metamorphic changes are heat, water, and pressure.

**Metaphor,** an analogous substitution of word or meaning for poetic effect, differing from a simile in that it is a figurative expression and not one of mere similarity.

**Metaphysics,** Aristotle's term for defining the philosophy of supernatural science.

**Metayer System,** a land cultivation method prevalent in Italy and France, whereby the landlord provides the land and materials and the tenant the labour, the produce being evenly divided between them.

**Metempsychosis,** the Pythagorean theory of the transmigration of the soul from one body to another.

**Meteorites** are solid bodies, or metallic masses which fall from the sky to the earth. Iron is the predominating element in association with nickel. Meteoric stones, in addition to iron, contain silliceous substances, as well as gaseous mixtures. At L'Aigle, France, in 1803, from 2,000 to 3,000 meteoric stones fell; the largest meteorite stone actually known to have fallen to earth is one which descended in Emmott county, Iowa, in 1879, weighing 437 pounds.

**Meteorology,** the science which treats of the various atmospheric phenomena included in the term weather and studied with highly beneficial results in recent times. The Meteorological Department of the Board of Trade was started in 1855. The system of storm-warnings was established in 1861. Weather bureaux are in operation in many chief cities, and at prominent points of observation, all over the world, and weather forecasts form a portion of every day's newspaper intelligence. To-day the Meteorological Office is controlled by the Air Council. It maintains a number of stations and observatories from which are obtained weather reports and other information necessary for the safety of air-craft. The Chairman is the Under-Secretary of State for Air.

**Meteors** are luminous bodies moving through celestial space, such as shooting stars.

**Meter,** an instrument or apparatus for measuring anything, as gas, water, electric light consumption, etc.

**Methodists,** a term designating the religious organisation founded by John Wesley in 1739, after a long course of successful preaching by him in all parts of the kingdom, as well as in America. Macaulay has said of him that his genius for government was not inferior to that of Richelieu, and the constitution of the Wesleyan Methodists, as their founder formulated it, showed a remarkable genius for administration. Wesley's two leading doctrines were those of instantaneousness of conversion and Christian perfection, or deliverance from sin. The itinerant system of the Conference is a prominent feature of his organisation. There are in the United Kingdom alone between 2,000 and 3,000 Wesleyan Methodist ministers, about 20,000 lay preachers, over 500,000 Church members, nearly a million Sunday school teachers and scholars, and from 8,000 to 9,000 chapels. Among the other Methodist organisations, off-shoots of the Wesleyans, there are the Methodist New Connexion, the United Methodist Free Church, and the Primitive Methodists. In the United States the Methodists have a membership of over three millions, and throughout the world 18 million persons receive Methodist instruction. The Wesleyans raise nearly £200,000 a year for their extensive missionary operations, and in 1907 the body got together a Twentieth Century Fund of one million guineas for evangelistic, educational and philanthropic work. The Wesleyan Central Hall at Westminster was opened in Oct. 1912.

**Methuen Treaty,** a treaty of commerce between Great Britain and Portugal, concluded by Paul Methuen, the British Ambassador at Lisbon, in 1703. It provided for the importation of port wine at reduced rates, and led to the popularising of the beverage in this country.

**Methylated Spirit,** a combination of pure alcohol with 10 per cent. of pure wood spirit, largely used as a solvent, and obtaining its name from methyl-alcohol, which is the chief element of wood spirit.

**Metre,** the standard French measure of length, equivalent to 39·370432 English inches, and computed to represent the ten-millionth part of the distance from the equator to the North Pole.

**Metric System** is the decimal method of calculation. It came into force in France in 1780, and has since been adopted in most of the continental countries and by the United States and Canada. There have been many attempts to get the system adopted in this country, but without success. (*See* **Metric and English Measures** in *Office Compendium Section.*)

**Metrochrome,** an instrument for the measurement of colour, consisting of three hollow wedges of glass of identical capacity and angle, and so arranged between two screens that any portion of their tapering sides may be presented at will to an aperture through which a ray of light may be thrown.

**Metronome,** an instrument for beating time during the performance of a musical composition. It has a double pendulum, and is wound up like a clock.

**Metropolitan Water Board,** a body constituted by special Act in 1902, consisting of 66 members, and controlling the water supply of London. £42,000,000 was paid as compensation to the water companies absorbed.

**Mezzotint,** an engraving from copper or steel produced by instruments which burnish and scrape away portions of the surface, and yield an impression effectually graded in light and shade.

**Mica,** a nearly transparent mineral, which has great heat-resisting power, and can be split into thin plates.

**Michael, St., and George, St.,** an order of knighthood originally founded for the Ionian Isles and Malta in 1818, and reorganised in 1869, so as to admit Crown servants connected with the Colonies. The Earl of Derby, Earl Russell, and Earl Grey were the first of the new knights.

**Michaelmas Day,** the festival day of St. Michael and All Angels, September 29, one of the English quarter days.

**Microbe,** a term proposed by Sédillot in 1878 (and since very generally adopted) to denote any minute organism, vegetable or animal, or found on the borderland between the two great natural kingdoms.

**Micrometer,** an instrument for measuring minute distances; usually attached to the eye-pieces of a microscope or telescope, and consisting of two very fine hairs or wires stretched across the field of view, one fixed, the other movable. It was invented by William Gascoigne in the 17th century and improved by later inventors. Sir Joseph Whitworth made one in 1858 to measure the millionth of an inch.

**Microphone,** an instrument invented by Prof. Hughes, in 1878, for giving audibility to sounds which are otherwise imperceptible to the ear. By this apparatus, which establishes an electric current between two sensitised conducting bodies, and aided by the telephone, the sound of the tread of a fly may be magnified to seem as loud as the tramp of a horse. It is used for telephone communications, in broadcasting, and in gramophone recording.

**Microscope,** invented about 1590 by Jansen, and improved by Galileo, Fontana, and others, is an instrument which by a combination of lenses magnifies minute objects, making visible animalculæ and other living substances which cannot be seen by the naked eye. Microscopes are simple, compound, and binocular. The more powerful instruments have a magnifying capacity of as much as 10,000 diameters.

**Middle Ages,** a period of about 1,000 years, during which Europe was in the grasp of feudalism. Hallam reckons the period from 486 to 1495.

**Midge,** the common name of a small two-winged fly or gnat (*Culex pipens*), clouds of which appear on summer nights in country places.

**Midrash,** the explanation of the Jewish Scriptures, dating from the interpretation originated by Ezra after the Captivity and continued by later Rabbis.

**Midshipmen,** junior officers in the Royal Navy, who must have been through four years' training at the Royal Naval College, and have passed a certain examination. After three years' service as midshipmen they are promoted to the rank of sub-lieutenant if their examinations are satisfactory.

**Mikado,** the hereditary male ruler of Japan. Since 1868 the real sovereign of the country; previously, the Mikado was only the nominal spiritual head, the Tycoon (or Shogun) possessing the governing responsibility.

**Milan Decree,** the proclamation issued by Napoleon in 1801 from Milan, prohibiting continental nations from trading with England.

**Milky Way (Galaxy),** the name of a long track of small stars which almost encircles the heavens. The ancients regarded it as a luminous streak, and the name commemorates the mythological legend that Juno when suckling Mercury or Hercules scattered milk across the sky.

**Millenarians,** a sect that interprets the Millennium period referred to in Revelations as beginning from the close of the seven-thousandth year from the Creation.

**Millenary Petition** was presented to James I. in 1603 on behalf of nearly 1,000 Puritan Ministers against certain of the rites and ceremonies of the Church of England. The Hampton Court Conference was the outcome of this petition.

**Miller's Thumb,** a small fresh-water fish deriving its name from its supposed similarity of head to the thumb of a miller, which assumes a compressed shape by frequent sampling of meal. The fish is the Eagle-ray, *Maliobatis aquila.*

**Millet,** a nutritious cereal cultivated in nearly all warm climates; native to the East Indies.

**Millimetre,** a French lineal measure, equivalent to a thousandth of a metre, or 0·03937 of an English inch.

**Millstone-grit,** a bed or rock of the Carboniferous group underlying the Coal-measures, and attaining in England a thickness in parts of 5,000 feet. It is from this rock that millstones have been made from time immemorial.

**Mimicry,** the power of many animals and insects so to adapt themselves in colour and shape to their surroundings as to escape detection.

**Mineralogy,** the science of minerals. The British Mineralogical Society was established in 1800.

**Minié Rifle,** invented by Capt. Minié, a Frenchman, in 1833, and for a time the best rifle in Europe, but has long been superseded.

**Minim,** a musical term denoting a note equal to two crochets, or half the value of the semi-breve.

**Minimisers,** the name applied to certain writers who, in the latter half of the 19th century, advocated the limitation of life and property. The writers included John Stuart Mill, Herbert Spencer, and W. von Humboldt.

**Minnesingers** were minstrel poets of Germany who, during the 12th and 13th centuries, composed and sang love ballads to amuse the knights and barons of the time.

**Minnow,** a small fresh-water fish of the carp family, abounding in all the waters of Europe; it has a mottled back and silvery belly, and forms a popular bait for trout.

**Minor,** a musical term referring to intervals and scales; thus, a minor interval is a semi-tone less than the corresponding major interval.

**Minstrels** were originally specially appointed instrumentalists and singers—pipers, harpers, and gleemen—engaged by barons and manorial lords to amuse their tenants. John of Gaunt had a court of minstrels at Tutbury in 1380. Later, minstrels assumed nomadic habits, made their way into the houses of the great, and were generally welcome. By Elizabeth's time, however, they were too many, and they were classed as "rogues and vagabonds," along with actors.

**Miracle Plays** were a rude kind of sacred drama constructed by the monks in feudal times, and mostly representing certain miraculous incidents of the Bible.

**Mirage,** an optical illusion often observed in desert regions when the objects on the surface of the earth appear as if reflected in a surface of water. Mirage is due to the unequal heating of the different parts of the atmosphere, which bends the light rays, and so produces distorted images.

**Mirrors** were made of burnished metal in ancient times, brass usually. Silver mirrors were introduced by Praxiteles, 328 B.C. The Venetians made the first mirrors of glass, in the 14th century, but they were not made in England until the 17th century.

**Mishna,** the first part of the Talmud, setting forth the "Oral Law" of the Jews.

**Misprision,** a legal term, signifying an offence which may border on a capital charge. Misprision of treason indicates a knowledge of treason without participation in the treasonable act.

**Missal,** the name of the mass-book of the Roman Church compiled 492–6 by Pope Gelasius I., and revised by Gregory I., 590–604. The present Roman Missal was sanctioned by the Council of Trent 1545–63. In the Anglican Church the Book of Common Prayer superseded the Missal in 1549.

**Missel-Thrush**, receives its name from its partiality to the mistletoe-berry. A common bird in England and larger than the song-thrush.

**Mistletoe**, a parasitic plant found growing on many trees, particularly the apple-tree. The Druids made it an object of reverence, and it is especially associated with Christmas as a decoration.

**Mistral**, a cold, dry wind peculiar to the French coast of the Mediterranean.

**Mitrailleuse**, a breech-loading machine gun adopted by the French army previous to the Franco-German war of 1870.

**Mitre**, an ecclesiastical head-covering worn by the Jewish high priest, afterwards adopted by the Christian Church and worn by Cardinals (before 1245) and also by Bishops, etc. The Bishops of the Church of England wore mitres down to the reign of George III. The Council of Lyons enjoined the wearing of the "Red Hat" upon cardinals from the middle of the 13th century.

**Mnemonics**, a method of developing the memory, which has been practised more or less since 477 B.C., when Simonides the younger invented the first known system. Among the more eminent professors of this art may be mentioned Feinagle, Aime, Paris, Willis, and Grey. Numerous teachers of the art advertise their systems at the present time.

**Moa**, a now extinct genus of birds of the ostrich family, wingless and standing 12 to 14 feet high, natives of New Zealand and Australia.

**Moabites**, a race of Judæa, descendants of Lot. They were often in conflict with the Israelites, but were finally subdued by Jehoshaphat, 895 B.C.

**Moabite Stone**, a stone of the 9th century B.C. containing the earliest known inscription in Phœnician characters, and discovered in the Land of Moab in 1868.

**Mocking Bird**, an American bird of the thrush family, widely distributed over the north and south of the Western Hemisphere. Its gift of imitation is wonderful and exercised chiefly in imitating the voices and cries of animals.

**Modoc Indians** were a warlike tribe occupying American lands south of Oregon. They were allotted other lands by the United States Government, but being dissatisfied with their new quarters, returned to Oregon and defied the troops sent to expel them. Severe fighting followed, but after a few months the Modocs surrendered in 1873.

**Moguls.** (*See* Mongols.)

**Mohair** is the wool of the Angora goat and used very largely in the worsted trade for the manufacture of dress fabrics.

**Mohammedanism**, the Moslem religion set forth by Mohammed and embodied in the Koran (*q.v.*). The doctrine includes the unity of God, the immortality of the soul, predestination, a last judgment, and a sensual paradise. It is professed by over 209 million people, mainly in India, Persia and the Near East. There are 5 million in Europe. Since the reforms of Kemal Pasha the Mohammedans of Turkey are no longer orthodox, and polygamy and the segregation of women has been forbidden.

**Mohocks**, a lawless band which infested London in the early part of the 18th century, committing many outrages upon men and women under cover of the night. The word is a corruption of Mohawk, the name of a tribe of Red Indians.

**Moiré, or Watered Silk**, so-called because of the finishing process it undergoes, the "water" marks being produced by wetting and extreme pressing.

**Molasses**, sugar-cane juice in its uncrystallised form after boiling. The crystallised part is the raw sugar.

**Mole**, a small burrowing animal about the size of a small rat, with short legs and fore feet armed with strong claws for digging in the earth. Their subterranean dwellings are of curiously ingenious construction, and they do not often leave them except to make raids on mice, frogs, snails, etc. The earth-worm, however, is the mole's chief item of food.

**Molecule**, the smallest mass of any substance, whether an element or a compound, capable of independent existence, and still retaining the properties of the substance. There are 27 by $10^{18}$ molecules in a cubic centimetre of a gas.

**Mollusca** designates the soft-bodied invertebrated animals, most of which are protected by a shell. These shells are univalve—that is, of one piece—as in the case of snails; bivalve as the oyster; or multivalve, though this kind is seldom met with. The shell is wanting in some cases of mollusca, such as the polyzoa.

**"Molly Maguires,"** the name of a secret society organised in Ireland in 1843 for revolutionary purposes; also of an American association formed in Pennsylvania about 1876–7 against mine-owners and their agents. The members of these bands wore women's clothes.

**Molybdenum**, a metal found in combination with sulphur, and forming an acid which combines with metals producing salts called molybdates. It is formed in granite and is very similar to graphite in appearance though totally different in its properties.

**Mongols**, a yellow race of Central Asia, largely nomadic. In the 13th century, they conquered large portions of Asia, including China, Persia, and India. They founded the Mogul dynasty in India in 1525, and ruled up to the end of the 18th century, when their empire came under British control.

**Mongoose**, an Indian species of ichneumon, feeding on vermin and reptiles, and a deadly foe to the snake.

**Monitor**, a genus of water-lizards noted for their great size, their long beards, long tails, and scaly covering. They are supposed to signal the approach of the crocodile to their neighbours by a curious hissing sound. There are 18 species, inhabiting Southern Asia, Australia, New Guinea, and Africa.

**Monkey**, a quadrumanous mammal of the order Primates, and including all members of that order excepting man and the lemurs. Monkeys with short tails are usually called apes; those with long dog-like faces, baboons; small bushy-tailed monkeys, marmosets. (See the various class names.)

**Monmouth's Rebellion** was headed by James, Duke of Monmouth, a natural son of Charles II. (b. 1640, d. 1685). He was sent to Scotland to quell the Covenanters in 1679, and succeeded in winning the Battle of Bothwell Bridge; but was banished for aspiring to the throne to the exclusion of the Duke of York, afterwards James II. In 1685 he landed at Lyme Regis, and assumed the title of King, but was defeated at Sedgmoor, and executed on Tower Hill. Judge Jeffreys stamped out the remnant of the Rebellion in the "Bloody Assize."

**Monolith**, a column or shaft comprising a single stone. "Cleopatra's Needle," now on the Thames Embankment in London, is an example.

**Monophysites**, an ancient sect who held that Christ was of one nature only, a blending of the divine and human.

**Monotheism**, the doctrine that there exists but one God. The chief monotheistic religion is Christianity.

**Monotremata**, the name of the order or sub-class of mammalia comprising the duck-billed animals, of which only three species exist, restricted to Australasia. The Echidna, or Porcupine Ant-eater, belongs to the order.

**Monroe Doctrine** refers to a formal declaration made by President James Monroe that no European Power should be permitted to interfere with the concerns of government of any of the Independent States of North or South America. It also set forth that the American States would not interfere in European affairs.

**Monsoons** are certain winds which at regular seasons sweep over warm latitudes, especially India, where they prevail more or less from April to October.

**Monstrance**, an ornamental receptacle in which sacred relics of the Roman Catholic Church are held up for inspection.

**Montanists**, a sect founded in the 2nd century by Montanus, who expounded the doctrine of the continuation of the miraculous influence of the Holy Spirit. They are also called Phrygians, because of their leader being a Phrygian.

**Montessori System** of education was worked out by Dr. Maria Montessori in the early 20th century. She first experimented on defective children (aged 3–6) in the slum districts of Rome. Her results were so amazing that she began work on normal children. The Case dei Bambini

(rooms set apart for children in the courtyard of a tenement block) became world famous. Her system is based on free discipline and free movement and not on the annihilation of a child's individuality and its immobility on a bench in a classroom. Dr. Montessori has invented apparatus for her pupils which stimulates interest and creates attention. Children in her schools can learn to read, write, count, and do simple arithmetic before the age of six. Her method has revolutionised infant education, and it is being used in many countries.

**Month**, the 12th part of the calendar year. A lunar month is the period of one revolution of the moon; mean length, 29 days, 12 hours, 44 minutes, 2·87 seconds. A sidereal month represents the time of the moon's revolution from a given star back to the same again, 27 days, 7 hours, 43 minutes, 11·5 seconds. A solar month covers the time the sun passes through one sign of the Zodiac, 30 days, 10 hours, 29 minutes, 4·1 seconds.

**Monton**, a heap of ore, varying in quantity in different mining districts, but representing technically a batch under amalgamation.

**Monts-de-Piété**, Government institutions for advancing money for goods left in pledge, were first established in Italy in 1462. Similar institutions in France in 1777 were suppressed by the Revolution, but restored by Napoleon, and have since been expressly regulated by law.

**Monument of London**, erected in 1671–7 by Wren in commemoration of the Great Fire, is 200 feet high, and cost £14,500. The original inscription upon it ascribed the fire to "the treachery and malice of the popish faction," which stood down to 1831, when the words were erased as objectionable. The black marble staircase consists of 345 steps.

**Moon**, the earth's satellite, is distant from us about 238,000 miles. It is a globe 2,160 miles in diameter and the period from one full moon to another is 29 days, 12 hours, and 44 4 minutes.

**Moor-hen**, a bird of the crake family, familiar on the borders of British ponds, rivers, and lakes. It is of dark-grey plumage, with olive-brown wings edged with white.

**Moors**, the name applied in modern times to the natives of Morocco. They were as a race at one time very powerful, and from 1237 to 1492 held possession of the kingdom of Granada. They were expelled from Spain in the 17th century and established themselves in Northern Africa.

**Moose.** (*See* Elk.)

**Moplahs**, a race of Mohammedan fanatics, settled principally in Malabar, and descended from Arabs. They showed for a time a rebellious spirit against the British, and were guilty of serious outbreaks. They were, however, subdued in 1873, since which time they gave no further trouble until 1921, when they joined the boycott of the Government which was led by Mr. Gandhi and the Ali brothers.

**Moravian Brethren**, a sect of Hussites which arose in the 15th century, originally in Moravia. In 1722 they had a community of 500 persons, settled on the estate of Count Zinzendorf. The Count was a zealous preacher, and established Moravianism in England in 1738. The Moravians have at present a membership of about 210,000 on the Continent of Europe, and own some 50 chapels and preaching places in England, with about 3,000 church members in all. They have been specially successful in mission work, and have considerable settlements in America.

**Mordants** are substances used for making colouring matters "bite" or adhere firmly to articles being dyed. They are mostly of a metallic nature, and combine with the dye-liquid in which the fabrics are dipped. In addition to the metallic mordants there are some vegetable mordants, the chief of which are argol, sumac, nut-galls, etc., but these are not regarded as true mordants.

**Morganatic Marriages** are unions of males of royal or noble rank with women of inferior rank. In such marriages the left hand is given instead of the right, and it is stipulated that the children of the marriage are not to enjoy the rank or inherit the possessions of the husband, though such children are legitimate. Many morganatic marriages have occurred in our own royal family.

**Morgue**, a repository for dead bodies awaiting identification, the best known morgue being that of Paris which until recently was open to the general public. Others exist in the chief French towns.

**Mormons**, or **Latter Day Saints**, a religious sect founded by Joseph Smith, who, in 1827, gave it forth that he had discovered the *Book of Mormon* written on gold plates in Egyptian characters. This book, it afterwards was discovered, was written as a religious romance by a clergyman. A pretended English translation was published in America in 1830, and in England in 1841. Smith made it serve as the foundation of his new faith, and he began to preach Mormonism and to organise churches. He was shot in the attack by the mob at Nauvoo, in Illinois, in 1844, when Brigham Young was chosen prophet in his place. The Mormons settled at Great Salt Lake in 1847, and from that time considerable success attended their settlement They have 82 churches in England. At the present time the Mormons are still recruiting converts, but the original doctrines have been much modified and a plurality of wives is no longer a recognised practice.

"**Morning Post**," established as a London daily newspaper on the 2nd November, 1772, in support of the Whig political cause. It became a Conservative organ in 1874, and in 1881 its price was reduced from 3d. to 1d.

**Morphology**, the science which deals with the form, structure, and position of the different parts of animals and plants, and their development.

**Morpunkee**, an Indian pleasure-boat, long and narrow, of considerable capacity, with a high peacock-shape decoration at the stern.

**Morris Dance**, an old English country dance of the reel order.

**Morse Alphabet**, a system of dots and dashes, intended to be used in combination with the indicator in telegraphy; but usually read by sound, the receiving operator writing down the words in the system as transmitted. Professor Morse, of Massachusetts, was the inventor (See Pears' *Office Compendium*).

**Mortars** are short guns with a large bore and close chamber for throwing bombs. They are said to have been first used in the 15th century at Naples, but were not introduced into England until a century later. The mortars made at the present time are so powerful that they can throw shells of nearly 2,000 lb. weight a distance of over five miles.

**Mosaic**, a joining together of small pieces of coloured glass, marble, or other materials in designs to imitate painting. The ancient Greeks and Romans were skilled in this art; it was revived in Italy in the Middle Ages with considerable success, many eminent painters designing subjects for mosaic. It still flourishes, and notable examples occur in some of the principal modern buildings.

**Moscow, the Retreat from**, was one of the most disastrous events in the career of Napoleon I. He entered Moscow on the 14th September, 1812, and the next day the Russians set fire to the city, practically burning it down. The French were forced to evacuate, and in the retreat to France Napoleon lost the greater part of his army.

**Moslems**, the European term for Mohammedans.

**Mosque**, a Mohammedan church, the greatest being that of St. Sophia at Constantinople.

**Mosquito**, a species of gnat highly developed in hot climates. It is provided with a suctorial apparatus and a skin-piercing proboscis. Mosquitos eagerly attack human beings for the purpose of sucking blood. Many mosquitos have found their way to this country.

**Moss**, the name of numerous flowerless, close-growing plants, common to moist hilly lands.

**Moss-agate**, a kind of agate characterised by minute grains of oxide of iron or chlorite, forming a moss-like pattern which is very ornamental.

**Moss-troopers** were bands of Scottish marauders who used the mossy regions of the Scotch and English borders as hiding places, and thence made frequent plundering expeditions, keeping that part of the country in constant unrest. They were put down in the 18th cent.

**Motetts**, short choral compositions, of which many fine examples survive. They were mostly

written in the 15th century, and are generally settings of sacred writings or paraphrases.

**Moth**, a division of insects of the butterfly family, but differing from the latter in having antennæ tapering to a point. They are of nocturnal habit, and comprise a wonderful variety, some of those of tropical countries being of extraordinary brilliance.

**Motor Vehicles** are being produced in ever increasing numbers year by year, the result being to greatly strengthen the industry in the United Kingdom, with an accompanying improvement in the class of vehicles manufactured and a general cheapening of price. The placing of large numbers of motor omnibuses in service has had the effect of dislocating street traffic somewhat, and some exploitations have come to grief from various causes; but with a better type of vehicle this kind of service has become successful. The London General Omnibus Company's services are now wholly operated by motor vehicles. During 1912, 182 persons were killed in London by motor 'buses; in 1914 the number was 658; and in 1915, 867. Since then there has been a considerable decrease in such fatalities. Motor cabs have proved a great boon. There has also been a remarkable increase in the number of motor vehicles used for general purposes. Over two million vehicles were licensed in 1931, producing a revenue of over £26,500,000. The most notable development in motor vehicles was in those used with so much effect for war purposes, and a larger proportion of these vehicles (especially lorries) has now been incorporated in the general civic traffic and transport.

**Mouse**, a species of small rodent abounding in all countries, and forming, in conjunction with rats, a most extensive genus. The British species include the common house mouse, the harvest mouse, and the long-tailed field mouse.

**Muggletonians**, a curious sect founded by a tailor named Ludwic Muggleton—son of a London farrier—in the 17th century. Muggleton and his associate—also a tailor—John Reeve, proclaimed themselves the two last witnesses of God to appear before the end of the world, as mentioned in Revelation, xi. 3.

**Mule**, the name of the spinning machine invented by Crompton in 1779, and so called from its combining the principle of Hargreaves' spinning jenny with the machine invented by Arkwright.

**Mullet**, a species of well-known fishes, including the red, grey and striped mullets.

**Mullions** are projecting windows with vertical divisions—forming a highly decorative feature in Gothic architecture. The horizontal stones forming the crossing divisions between the lights of this class of window of the Elizabethan or Tudor period of Gothic are styled transoms.

**Mummies** are enbalmed bodies, found mostly in Egypt; supposed to be those of distinguished people who lived thousands of years ago. Mummies have also been found in Peru, Mexico, and Persia. The embalming process which has enabled the bodies to be preserved can only be conjectured, though it is known that various aromatic substances were used after the viscera and other vital organs had been removed, the cavities being filled with absorbent dust, chippings, and cedar wood. A splendidly preserved and magnificently decorated mummy of the Pharaoh Tutankhamen (B.C. 1350) was found and minutely described in 1925.

**Murder** is the unlawful killing of a human being, "with malice aforethought." During the Heptarchy the crime was punished by fine only, and to Henry VIII's time could frequently be compounded for. Then followed a period of severe enactments, and down to 1836 murderers were executed on the next day but one after conviction. In most civilised countries at the present time murder is punished with death, and can only be reduced by the "prerogative of mercy."

**Murrain**, a general term applied to infectious diseases in cattle.

**Musk Deer**, a small and interesting ruminant, which inhabits the mountain regions of Central Asia. It is grey in colour, slightly brindled, and carries a small pouch in the abdominal region, containing what is commercially known as musk, an article which is of great value in the manufacture of various perfumes.

**Musk Ox**, an animal partaking of the characteristics of both the sheep and the ox, and having a musk odour. It is a native of Northern Canada.

**Muslin**, a fine cotton fabric first made at Mosul, in Mesopotamia, and introduced into England about the middle of the 17th century. In recent times muslins have been largely manufactured in England.

**Mussel**, a well-known bivalve found in great abundance on the rocks of the sea-shores. There is also a fresh-water species plentiful in streams and ponds.

**Mustang**, the American wild horse, descended from the stock first introduced by the Spaniards.

**Mute**, an old legal term signifying that a prisoner on being asked to plead remains mute, that is, makes no answer to the charge, or some answer that is irrelevant. Up to 1741 prisoners who "stood mute" were put to the torture. Since 1827, when a prisoner declines to plead, the court directs a plea of "Not Guilty" to be entered, and the trial proceeds.

**Mutiny Act**, which provides for the discipline, regulation, and payment of the Army, was passed in 1689, and has since been re-enacted annually.

**Myriapoda**, the class of invertebrated animals including centipedes, millipedes, and many others. They are widely distributed, but the largest species are found in the Tropics.

**Myrrh**, a resinous substance obtained from a tree of the natural order Amyridaceæ, growing plentifully in Abyssinia and Arabia. Its use for embalming, medical and aromatic purposes may be traced back to the most remote times.

**Mysteries** were theatrical performances given by ecclesiastics in the Middle Ages, with the object of conveying moral lessons and presenting Scripture stories in more or less realistic form. The Ober-Ammergau Passion Play is a survival of one of these ancient mysteries.

**Mythology**, the name given to any collection of traditions and fables concerning gods and goddesses.

## N

**Nabob**, a term usually applied nowadays to a wealthy East Indian, though formerly given only to Governors, commanders, and other dignified persons who had resided in the Orient and returned to England with a competence and an irascibility of disposition.

**Nadir**, the point in the heavens at the opposite pole from the place on which a person stands.

**Nagyagite**, a rare mineral, found, usually in crystals, in Transylvania or the United States of America; it is a sulpho-telluride of lead and gold, with occasional traces of copper and antimony.

**Nahum Festival**, in commemoration of Nahum, the 7th of the 12 minor Hebrew prophets. It is held on December 24th. Nahum flourished about 713 B.C., during the reign of Hezekiah, and wrote his prophecies a short time after Sennacherib's invasion.

**Naiad**, a water-nymph of classic mythology, beautiful and mystic; celebrated by Virgil, Ovid, Homer, and other ancient writers.

**Names of Places** not only introduce us to many of the striking local characters of bygone ages, but from them it is often possible to locate the earthworks and other primitive fortifications of our early progenitors, and also to ascertain which of the great races have peopled a particular district. The effect of local tendencies is seen all over England. The North retains *burgh*, as in Banburgh or Edinburgh; in the Danish district it has become *borough*, as in Gainsborough, Scarborough, and Peterborough; while in the Saxon South we have *bury*, as in Banbury and Canterbury. So also the Anglo-Saxon *ceaster*, formerly used to designate any Roman town, now has a special significance, based upon the way in which it has been adapted. In the old Mercian Kingdom it takes the form of *cester*, as in Worcester, Gloucester, Leicester, etc.; in the Scandinavian districts it becomes *caster*, as Lancaster, Doncaster, etc.; while the *chester* of such names as Manchester, Chesterfield, etc., indicates Saxon settlements.

**Nankeen**, a kind of yellow cotton fabric originally

made at Nankin in China, but now mainly manufactured in England, which actually exports the cloth to China.

**Nantes, Edict of,** was a decree promulgated by Henry IV. of France in 1598, giving full freedom of worship to the Protestants of the country. It was the revocation of this famous Edict in 1685 by Louis XIV. that drove hundreds of thousands of French Huguenots to this country.

**Naphtha,** a well-known liquid combustible believed to have been one of the ingredients of "Greek fire," and called by the Greeks "oil of Media." Mineral naphtha consists chiefly of mixtures of the hydrocarbons paraffin and olefine. Other kinds are obtained from coal tar and from wood by distillation.

**Naphthalene** is procured from coal tar, and its derivatives are much used in the manufacture of colours for dyers and printers.

**Narcotics** are substances which induce languor, and if taken in large doses produce insensibility or death. The best-known narcotics are opium, alcohol, coca, tobacco, hops, etc.

**Narcotine,** an alkaloid obtained from opium, and in its action less powerful than morphine.

**Nardus,** a coarse genus of grasses, growing on bleak upland heaths and hill slopes. *Nardus stricta,* known as "mat-weed," is a British species.

**Narghile,** an oriental tobacco pipe so constructed that the smoke passes through water and up a long flexible tube before reaching the lips of the smoker.

**Narwhal,** a kind of dolphin, the male possesses a spiral rod of ivory projecting from its head several feet in length. The animal itself is some 16 feet long and of whale-like form, with spotted skin. Found only in Northern seas.

**Nasalis,** a peculiar type of monkey, with a long prominent nose. The leading example is the "Proboscis monkey" of Borneo.

**Naseby, Battle of,** was fought on June 14th, 1645, between the Royalists under the command of Prince Rupert and the King, and the Parliamentarians under Fairfax and Cromwell. It resulted in a complete defeat for Charles.

**National Anthem** ("God Save the King") has been the national hymn of England since about the middle of the 18th century. There is some doubt as to its origin, but Dr. John Bull is generally believed to have been its composer.

**National Assembly** of France was constituted on June 17th, 1789. Three days later the King ordered it to be closed, but the Assembly afterwards met at the church of St. Louis and proceeded to perform acts of legislation. In 1792 it became "The National Convention."

**National Convention** of France was formed on September 21st, 1792, constituting the government of the first French Republic.

**National Covenant,** an oath and declaration subscribed to by the Scottish Presbyterians in 1580, to maintain their religion in all circumstances, and effectively brought to bear in opposition to Charles I.'s Episcopalianising designs in 1638.

**National Debt** of this country became important in 1684 when £1,000,000 was raised by William III. on the security of the public revenue. Four years later the debt had increased to over £16,000,000. After Waterloo, in 1815, it stood at £885,000,000. The low-water mark of £628,930,653 was reached in 1899–1900, but the Boer War sent it up again to £745,015,650 in 1902–3. In 1903–4 it was £770,778,762 and for the year ending 1913–14 it was £661,473,765. Then came the Great War, which sent up the debt by leaps and bounds, the amount at the end of March, 1915, standing at £1,161,951,702, and on March 31st, 1918, to £4,063,644,981. In 1919 it amounted to £7,800,000,000. In 1930 the External Debt was £1,074,155,463, the Internal being £6,499,288,988, with other liabilities giving a total of £7,586,210,000. The total cost of the Debt for 1929–30 was £355,000,000.

**National Gallery,** established in 1834 at Pall Mall, London, with the Angerstein Collection of 38 pictures, purchased for £57,000 as a nucleus. The existing building was opened in 1838. It has been enlarged several times and was added to and repaired in 1930. The National Gallery at Millbank, known as the Tate Gallery, was given to the nation by Sir Henry Tate in 1897. Over £35,483 are spent annually on their upkeep.

**National Guard** of France, a body of citizen soldiers first instituted on the day before the destruction of the Bastille in 1789, and ceased under the Consulate and Empire. The National Guard was revived later, and proved sometimes very powerful in keeping order in the capital, but in 1871 its inefficiency was so manifest that its abolition was decreed. It was under municipal control, despite its sounding national name.

**National Portrait Gallery,** established in 1856, and now located in a building in St. Martin's Lane adjoining the National Gallery. Contains portraits of eminent people in history, literature, art, etc., and a valuable collection of medals and autographs.

**National Rifle Association,** founded in 1860 for the improvement of rifle shooting. The annual meetings formerly held at Wimbledon, but now at Bisley, attract large numbers of competitors, amongst whom valuable prizes are distributed. The King's Prize was won in 1929 for Canada by Lt.-Col. Blair, and in 1930 for Scotland by the first woman Bisley champion, Miss M. Foster.

**National Service League,** established in 1902, for promoting the movement for compulsory military service in Great Britain.

**National Trust,** established to preserve properties of national importance from decay or demolition. Recent acquirements include Runnymede, Stonehenge, acres of magnificent scenery in the Lake District and in many of the Home Counties. These have been handed over to the Trust by public-spirited individuals, and as a consequence the beauties of landscape, historic monuments and ancient buildings will be held intact and unspoiled for future generations.

**Nativity.**—There are three Nativity Festivals in the Christian Churches, those of the Nativity of Christ, on December 25th, of the Virgin Mary, on 8th Sept., and of John the Baptist, 28th Aug. The first is the only one specially observed by Protestants.

**Natrix,** a water-snake, the typical genus of the Colubrine sub-family, widely distributed.

**Natron,** the old scientific name for native carbonate of sodium or mineral alkali, obtained from the ashes of marine plants.

**Natterjack,** a curious warty, prominent-eyed, brown toad (*Bufo calamita*), having a bright yellow line down the middle of its back. It utters a muttering sort of croak, hence its name.

**Natural,** a musical term signifying the production of sounds without flats or sharps. A composition is in the "natural" key when in the normal scale of C.

**Naturalisation** is the act of admitting an alien or foreigner to the privileges of citizenship in his adopted country. As early as 1347 a Naturalisation Act was passed in England. This is now regulated by the British Nationality and Status of Aliens Act, 1914–19. Before a certificate of naturalisation is granted, the applicant must have, during the 8 years preceding his application, resided for not less than 5 years in his Majesty's dominions (of which not less than 1 year immediately preceding the application must have been spent in the United Kingdom), or have been in the service of the Crown for 5 years; that he is of good character, and has an adequate knowledge of English language and intends to reside in his Majesty's dominions or service of the Crown. The fee to the Home Office for the certificate of naturalisation is £10.

**Natural Selection,** the term employed by Darwin to describe that development of species which resulted in the survival of the fittest, and the gradual extinction of the feeblest.

**Nautch Girl,** a native East Indian dancing girl of the professional class.

**Nautical Almanac,** published under the authority of the Admiralty, is always issued four years in advance, and contains information specially prepared for the use of navigators and astronomers. It first appeared in 1767.

**Nautilus,** a term now applied only to the Pearly-shelled nautilus, the sole surviving example of the four-gilled section of the Cephalopoda, remarkable for its peculiar compartmented shell, and its power of instant sinking. It is only found in the open seas.

**Naval Reserve (The)** comprises the Royal Naval Reserve, established in 1859; the Royal Fleet Reserve, organised in 1901; and the Royal Naval

Volunteer Reserve, dating from 1902, the latter including landsmen with a taste for sea life. The total *personnel* for 1912–13 was 51,861.

**Nave** is the body or main open portion of a cathedral or church, and extends from the chief entrance to the choir, or chancel, and is usually flanked by aisles. A nave, in mechanics, indicates the "hub" or central part of a wheel.

**Navigation Laws,** for the protection and encouragement of native shipping, have been frequently passed in England. The first English navigation law of any note was enacted in the reign of Richard II., its leading provision being that merchandise should not be imported into or exported from England, except in English ships. This law fell into desuetude, and in 1651 fresh navigation Acts were passed in favour of English ships, the carrying trade having fallen into the hands of the Dutch. The old navigation laws, however, were totally repealed in 1849.

**Navy,** a country's fleet of vessels of war, in England called the Royal Navy. From the time of Alfred the Great ships were maintained for war service, but the establishment of the Cinque Ports in the reign of the Conqueror coincided with the first comprehensive attempt to constitute a reliable fleet. Edward III., Henry V., and Henry VIII. all devoted considerable attention to the Navy. The *Henry Grâce de Dieu*, of the last-named King, 1,200 tons, was the largest vessel that had been built up to that time. In Nelson's time the British Fleet comprised about 900 ships of the "wooden walls" type; and in 1814 the numbers were 177 ships of the line, 621 smaller armed vessels, and 150 employed on home and foreign service. In 1856 it possessed 258 steam vessels carrying 6,582 guns, 271 sailing ships carrying 9,594 guns, 155 gunboats, and 111 vessels on harbour service. In August, 1914, Great Britain possessed a margin over Germany of 60 per cent. in ships, and 100 per cent. in men. Comparing the total of war vessels at that time, we get the following figures; Britain, 679; France, 382; Russia, 249; Japan, 161—a total of 1,471, of which 235 were being built; while on the other side the figures were: Germany, 369; Austria-Hungary, 157; Turkey, 22—a total of 548, of which over 80 were in course of construction; Britain had 34 ships of the Dreadnought class as against 21 owned by Germany; 74 of the pre-Dreadnought class as against Germany's 29; 83 cruisers to Germany's 43. In naval *personnel* Britain stood at 216,000 on August 3, 1914; and for the year 1915–16 the total was 350,000. As the war proceeded the main German battle-fleet remained hidden away beyond strong coast fortifications and protected by a vast barrier of mines. In the early days of the war German cruisers were open to prey upon British ships on all the oceans, and won considerable success; but it was not long before these enemy cruisers were disposed of. In the lawless use of submarines Germany proved tremendously destructive to British and Allied shipping. They constituted the most serious menace of the war, but means were found towards the end to greatly minimise the evil. When, as in the Heligoland Bight engagement and the Battle of Jutland, German warships ventured out, it was only to meet signal defeat. To-day Germany is without a fleet practically, while the British, French, and American Navies are undergoing a ruthless cutting down. In May 1926 the first meeting of the League of Nations to discuss disarmament was held at Geneva, but it was not until Mr. Coolidge invited the Five Powers to a Conference that any response was made. A further conference was held April 1929, and in January 1930 it met again at London and signed a Naval Treaty, which bore also the signatures of the delegates from the Dominions and India, limiting the number and tonnage of war craft. British Empire tonnage is to be 541,700; U.S.A. 526,200, and Japan 367,050.

**Nazarenes,** a sect of Jewish Christians who accepted the divinity of Christ and flourished in the 1st century.

**Nearctic Region** comprises the whole of North America and Greenland up to a latitude averaging about the tropic of Cancer.

**Nebulæ,** luminous celestial masses of gaseous matter, which are either spiral or chaotic in form, the latter being the earlier stage of the former. They are visible through the telescope beyond the limits of the solar system.

**Nebular Theory** (or **Hypothesis**), was originated by Kant, developed by Sir William Herschel, La Place, and others, and is now generally accepted by astronomers. It supposes that the solar system is built up by the condensation and cohesion of nebulæ.

**Necromancy,** "the black art," was in olden times much believed in, and supposed to be an occult power by which its practitioners could converse with the spirits of the dead and learn the future.

**Needle Gun**—the ignition of the charge of which is produced by a fine steel rod or needle being pressed through the cartridge—was invented in 1827, and in 1836 was adapted to the breech-loading principle. It was used by the Prussians in their wars against Denmark and Austria in 1864 and 1866, but has since been superseded.

**Needles,** according to Stow, were first made in England in the reign of Elizabeth, and in Mary's time "there was a negro made fine Spanish needles in Cheapside, but would never teach his art to any." In modern times the manufacture of this useful article has been vastly improved and immense numbers are made at Redditch, Birmingham, and West Bromwich.

**Negroes** are the black-skinned, woolly-headed Negroid races, natives of tropical Africa, or descendants from such natives. The people of the Soudan, Senegambia, and of the great lake regions are the truest types, though it is customary to call Kaffirs, Zulus, and other blacks negroes. There are c. 10,000,000 negroes in U.S.A.

**Negus,** the name given to any mixture of wine and water, and said to have been named after Colonel Francis Negus about 1714. The sovereign of Abyssinia was styled the Negus.

**Nelson Monument,** in Trafalgar Square, London, is a column 145 ft. high, with the figure of Nelson on the top, erected in 1843 at a cost of £45,000, the four bronze lions at the corners of the base being contributed later by Landseer. There are four bronze reliefs representing respectively the battles of the Nile, St. Vincent, Copenhagen, and Trafalgar.

**Nematus,** a genus of insects of the willow-fly family, widely distributed and springing from larva, which reside in small protuberances on the leaves of the food-tree.

**Nemean Games** were instituted at Nemea in honour of Archemorus, and revived in 1226 B.C. They were celebrated every third year, and were finally given up in A.D. 396. The conqueror in contests of strength and agility was rewarded first with a crown of olives, and later with wreathed chaplets of parsley leaves.

**Neogene,** a geological term referring to the later Tertiary formation in contradistinction to the older Eocene strata.

**Neophron,** a genus of vulture, the leading representative of which is the Egyptian vulture. It has a white plumage with black primates, a bare head, and is about two feet long. Other members of the family are the Scavenger vulture of India and the Africa Pileated vulture.

**Neoplatonism,** a philosophical system originated in the 3rd century, and considerably developed in succeeding centuries by Plotinus, Proclus, Hypatia, and others, the first-named being its most famous exponent. In its later phases was largely influenced by Christianity. The Neoplatonists contend that by concentrating the mind exclusively on higher speculations it was possible to achieve a condition of ecstasy in which the Infinite would be revealed.

**Neotoma,** the scientific name of the wood-rats of North America; they are of large size, have thick fur and include many species. *Neotoma cinerea* has a squirrel-like brush; the rest are rat-tailed.

**Nepotism,** a term indicating a bestowal of office or patronage amongst relations, and having its origin in the custom of certain Popes to enrich their family out of the offices of the Church.

**Neptune,** the most distant of the planets, estimated to be about 2,780 millions of miles from the sun, and taking about 160 years to make a revolution round that luminary.

**Nesokia,** a genus of Asiatic rodent of the bandicoot family, possessing a nearly naked tail. *Nesokia*

*bandicota*, the "pig-rat," is often over a foot long.

**Nesotragus**, a sub-family of small but exceedingly graceful antelopes found only in Zanzibar and Mozambique.

**Nestorians** were at one time a very numerous body. They were followers of Nestorius, who was a patriarch of Constantinople in the 5th century. He taught that Christ was both human and divine, receiving His divinity from God and His human nature from Mary. There are still some Nestorian communities scattered about the world, principally in the Levant, though some few exist—more or less isolated—in America and even in London.

**Nests** are, strictly, habitations formed by birds for the reception of their eggs and the hatching and rearing of their young. They are of the most varied character, some being mere resting-places on the ground, while others display a remarkable skill in construction. Thus, the bower-bird and other species show very distinctive peculiarities. The most usual materials for bird-nest building are leaves, twigs, moss, wool, feathers, mud, clay, etc. Some birds burrow in sand-hills. Certain mammals and fishes also build nest-like structures for breeding in.

**Nethinim**, an order of hereditary attendants upon the Levites in the services of the second Hebrew Temple at Jerusalem.

**Neuroptera**, an order of insects which includes dragon-flies, caddis-flies, may-flies, and other four-winged species. The larvæ have six-jointed legs.

**Never-Never Land** is a name that is now frequently given to the seemingly illimitable plains of Northern Australia. Who coined the phrase is not known, but it was first uttered on a London stage by Sir H. Beerbohm Tree in the character of "Captain Swift," the gentlemanly Australian bushranger. The late Wilson Barrett used it as a title for both a play and a novel. It is also prominently used in Sir J. M. Barrie's Christmas play, "Peter Pan." In the early "eighties" of last century a book appeared with the title of *The Never-Never Land: A Ride through Northern Queensland*.

**Newgate Prison**, now pulled down and replaced by the handsome Sessions House opened in 1907, was situated near the point where once stood one of the old London city gates. There is a record of a prison upon this spot in the 13th century. Later a new one was built by the executors of Sir Richard Whittington, but this was destroyed by the Great Fire in 1666. Still another new prison on this site was erected between 1778 and 1780. In the Gordon Riots of the latter year it was destroyed by fire and re-erected. It was disused as a prison after 1881.

**New Lanark**, in Scotland, was the place where Robert Owen established his socialistic factories and settlement in the early part of the 19th century. At first the scheme seemed promising, but after a few years it had to be abandoned.

**News Letters** were an early form of newspaper, popular in the time of Charles II. They consisted of items of news and gossip collected at the various coffee-houses and other places of public resort. They often included blank pages on which readers wrote their private letters.

**Newspapers** did not come into existence before the early part of the 16th century, when, in Italy and Germany, one or two crude attempts at news-sheets were made. In 1622 and 1643 certain publications giving news were issued, but the *Publick Intelligencer*, established in 1633 by Sir Roger L'Estrange, was the first real English newspaper. It lasted three years, and was succeeded by the *Gazette*. The *Morning Post* is the oldest of existing English newspapers, having been started in 1772. *The Times*, under its first title of the *London Daily Universal Register*, was begun in 1785 and has been called by its present title since 1788. The first London evening paper was the *Globe*, begun in 1803. There are now over 5,000 newspapers, magazines, and periodicals published in the U.K.

**New Style**, of calendar reckoning, was adopted in Great Britain in 1752. (*See* **Calendar**.)

**Newt**, a British amphibian of lizard shape and mottled markings. The largest species, the *Triton cristatus*, attains a length of 6 inches.

**New Testament**. (*See* **Bible**.)

**New Year's Day, January 1st.** The first New Year's festival of which we have record is that constituted by Numa 713 B.C., and dedicated to Janus.

**Nexum**, an ancient Roman term indicating a ceremony of legal transfer by which a debtor unable to satisfy a debt became the creditor's bondman.

**Nibelungen-Lied**, the German epic of the 12th century comprising numerous mythical poems or sagas of which several English translations exist. These poems have been utilised with great effect as foundations for Wagner's famous series of operas comprised under the general title of "The Ring of the Nibelungen."

**Nicene Creed**, a summary of the principles of Christian faith, was first issued in 325 after being drawn up by the Council of Nice, and was meant to thwart the Arians and assert the godhead of Christ.

**Niche**, a recess or nook constructed for a statue or other special ornament. Such niches are numerous in the older ecclesiastical buildings, and usually contain the figures of saints or historic personages.

**Nickel**, a white ductile metal forming one of our most useful alloys, being largely used in the manufacture of German silver, and also for coinage in America and France.

**Nicolaitanes** were a religious sect supposed to have originated with Nicholas, one of the first seven deacons of the Christian Church, and are mentioned in the second chapter of the Revelation. They denied the divinity of Christ.

**Nicolo**, a large brass reed instrument, common in the 17th century, but superseded by the bassoon, often alternately called an "onicolo."

**Nicotine**, an alkaloid substance contained in the tobacco plant. It is a clear, colourless oil and highly poisonous, paralysing the nerves. In the act of smoking tobacco, however, only an infinitesimal quantity is absorbed in the smoke.

**Niello Work** was in considerable vogue in the Middle Ages, and is said to have suggested the idea of engraving upon copper. It was produced by rubbing a mixture of silver, lead, copper, sulphur, and borax into engravings on silver, and some highly decorative results were obtained. The process is still largely practised in Russia.

**Night-Heron**, sometimes called the night-raven, is a variety of heron of which only one species is known in Europe. It is an occasional visitor to Britain. It has a long white crest. In spite of its name its habits are not specially nocturnal.

**Nightingale**, a familiar singing bird which visits the southern counties of England every summer, and is sometimes found as far north as Yorkshire. It is a shy bird, not often seen, but the song of the male, usually heard in the late evening or at early morn, is of remarkable sweetness and variety. After its wooing period is over its song ceases.

**Night-Jar**, the popular name of the goatsucker bird. (*See* **Goatsucker**.)

**Nihilism**, in metaphysics the doctrine which rejects all belief that is unsupported by physical evidence. "Of positive or dogmatic nihilism there is in modern philosophy no example," Hamilton avers.

**Nihilists**, members of a political organisation which found its most numerous supporters in Russia. They carried on their work in secret and had representatives in all classes of society. They have been regarded as the moving spirits in many of the conspiracies and assassinations which were so frequent in Russia, their activity being greater than ever during the troubles subsequent to the Russo-Japanese war. How far the Nihilists were responsible for the assassination of Czar Alexander II. in 1881, and the numerous subsequent assassinations of authoritative persons (including that of the Grand Duke Serglus) will probably never be fully known. The Nihilists were a powerful obstructive force to autocracy. Since the overthrow of Russian Autocracy in Russia in 1917 we hear little or nothing of Nihilists or Nihilism.

**Nile, Battle of the**, fought in 1798 between the English and French fleets in Aboukir Bay. Nelson captured or destroyed the entire fleet of the enemy except two ships. Napoleon and his army were stranded in Egypt.

**Nilgau**, or **Nylgau**, an Indian antelope of a blue-grey colour and slightly humped.

**Nimbus**, a circlet of light depicted round the heads of saints or divine personages in ancient art.

**"Nineteenth Century,"** a monthly magazine started in 1877 by Sir James Knowles; noted for the high quality of its contents, and the celebrity of many of its contributors. Now known as "The Nineteenth Century and After."

**Niobium**, an uncommon metal found in Columbite and first called columbium by its discoverer, Hatchett, in 1801. Its present name was given to it by H. Rose in 1846, on re-discovering it.

**Nirvana**, in Buddhism, is the condition of supreme attainment, and involves the extinction of every form of desire, ambition, or unrest. It is the holy state.

**Nitre**, or **Saltpetre**, is now mostly manufactured by the double decomposition of sodium nitrate and potassium chloride, and forms the explosive ingredient in gunpowder, lucifer matches and certain detonating powders. It has been manufactured in England since 1625. As found, in certain parts of South America on the soil, it forms a valuable manure.

**Nitric Acid**, or **Aquafortis**, is a compound of nitrogen, hydrogen, and oxygen, and was first separated by Raymond Lully, the alchemist, in the 13th century. It was not, however, until towards the end of the 18th century that Cavendish demonstrated its real nature. It is a ready solvent of many metals.

**Nitrite of Amyl** is obtained by the action of nitrous acid on amyl alcohol, and forms an effective remedy in ailments of the respiratory organs.

**Nitrogen**, a non-combustible gas devoid of taste or smell, and constituting nearly four-fifths of the atmospheric air. In the 18th century Scheele separated the oxygen of the air from the nitrogen.

**Nitro-Glycerine**, an explosive yellow fluid produced by mixing small quantities of glycerine with a combination of one part of nitric acid and two parts of sulphuric acid. It was first employed as an explosive agent by Alfred Nobel in 1864. It is the main constituent of dynamite.

**Nitrous Oxide**, a compound of mild anæsthetic power, combining nitrogen and oxygen. Discovered by Priestley in 1772.

**Nizam**, the title by which the old rulers of Hyderabad were known. The first Nizam was Asaf Jah.

**Nobel Prizes.** These prizes, founded by the will of Dr. Alfred B. Nobel (d. 1896), are five, each worth about £8,000, and are awarded each year for the most important discoveries or improvements in (1) physics, (2) chemistry, (3) physiology or medicine, (4) the most distinguished literary work of an ideal tendency, (5) the best effort towards the promotion of peace. The British prize-winners include: for physics, Lord Rayleigh, Prof. J. J. Thomson, Prof. Sir W. H. Bragg, and Prof. W. L. Bragg; chemistry, Sir W. Ramsay, Prof. Soddy, Prof. Rutherford; medicine or physiology, Sir R. Ross; literature, Rudyard Kipling, Rabindranath Tagore (Indian), W. B. Yeats, G. B. Shaw; peace, Sir W. R. Cremer and Sir Austen Chamberlain. Eminent foreign prize-holders include: Prof. Röntgen, M. and Mme. Curie, Senator Marconi, Maurice Maeterlinck, and Th. Roosevelt. Awards for 1929: Duc de Broglie, A. Harden and Prof. V. Euler, Sir F. G. Hopkins and Dr. Eijkman, and Thomas Mann. Since 1927 no award has been made for peace. In 1930 the prize for literature went to the American novelist, Sinclair Lewis.

**Nobility** are people enjoying titles or rank. At first the right of peerage was only territorial, but gradually men who achieved great deeds were similarly honoured. (*See* different titles.)

**Noble**, an old English gold coin current in the 14th century, and of the value of 6s. 8d.

**Nocturne**, a name invented by John Field to indicate a certain kind of musical composition suggestive of night. Chopin used the term for his nocturnes for the pianoforte; and Whistler for some of his famous night effects.

**Noddy**, *Anous stolida*, a kind of tern or sea-swallow common on the coasts of tropical countries along the warmer parts of the Atlantic borders. It is said to be of a dull nature, hardly making any attempt to avoid capture, hence its name of "noddy," or simpleton.

**Noeggerathia**, the name of a genus of fossil plants found occasionally in European coal-measures.

**Nominalists**, a sect founded by Jean Roscellinus, Canon of Compiègne, in the 11th century, who maintained the doctrine that general ideas only exist by the names we give them, in opposition to the "Realists," who contended that general ideas are real things with positive existence.

**Nomogeny**, a term invented by Owen to express the life which has a natural origin, as opposed to *thaumatogeny*, or miraculously produced life; the theory of spontaneous generation.

**Nonage**, the ninth part of a deceased person's movable goods, which could be claimed by the clergy for devotion to pious purposes.

**Nonconformists**, or **Dissenters**, are all such religionists as do not conform to the doctrine of the Church of England. Up to the passing of the Act of Uniformity in 1662 they were called "Puritans." At various times the Nonconformists have been rigorously persecuted, but in later times the utmost toleration has been granted to them. The oldest bodies of Nonconformists are the Presbyterians, Baptists and Independents. The Methodists date from 1739. Throughout the world there is a membership of Methodists of 30,000,000, Baptists 7,000,000, Presbyterians 5,000,000, Congregationalists over a million and a quarter, and Friends over 100,000, not counting the many smaller Nonconformist bodies.

**Nones** were dates of the Roman calendar which fell on the 5th of each month, excepting March, May, July and October, when they fell on the 7th.

**Nonjurors** were an ecclesiastical party who refused to swear allegiance to William III. in 1689, contending that James II. had been unjustly deposed.

**Non Nobis, Domine!** ("Not unto us, O Lord!"), a musical canon, sung as a grace at public feasts, an old setting (by Birde, 1618) of part of Psalm cxv.

**Norfolk Islanders** are descendants of the mutineers of the "Bounty" who established themselves on Pitcairn Island in 1789. The Pitcairn families in the course of the next half century became so numerous that the island was unable to support them all, so in 1856 the British Government removed them to Norfolk Island, which was stocked with sheep, cattle and horses for their benefit. The Norfolk Islanders now number about 800, two-thirds of whom are descendants of the original mutineers.

**"North Briton"** was the title of John Wilkes's famous London radical periodical in which he published scathing indictments of the King and the Government. He was several times prosecuted and imprisoned, but his paper had a wide influence for many years.

**Northmen** were the early inhabitants of Scandinavia, famous as sea adventurers and pirates. Their attacks on Britain and other parts of northern Europe prior to the 11th century were often successful, and they established settlements in the islands off the Scottish coasts, and in the north of France, where they founded the duchy of Normandy, from which the Normans who conquered England in the 11th century were descended.

**North-West Passage**, from the Atlantic to the Pacific through the Arctic seas, has been the dream of navigators for centuries, and many have been the expeditions which have gone forth in the hope of making its discovery, at great sacrifice of life and money. From 1743 to 1818 the British Parliament offered a reward of £20,000 for such discovery, and in 1818 the offer was altered so as to provide for a payment of £5,000 to anyone who passed either 110°, 120°, or 130° W. long. Sir E. Parry was the first to win one of these payments. Sir John Franklin's ill-fated expedition in the ships "Erebus" and "Terror" set out in 1845, and though there is little doubt Sir John effected the discovery, he and all his associates perished. Sir Robert M'Clure achieved the passage in 1850–4. Numerous later expeditions have been undertaken, including those of McClintock, Young, Markham, etc. Sir G. S. Nares took command of a new expedition in 1875, in the "Alert" and "Discovery," for which Parliament voted £30,620. Dr. Nansen in the "Fram" (1893–6) reached a point nearer to the Pole than had ever before been attained. Expeditions under Greeley, Capt. Jackson, Lieut Peary, the Duke

of the Abruzzi (*see* **Arctic Exploration**), and others, have also been more or less successful, and the North Pole and the North-West Passage will doubtless continue to attract fresh adventurers, in spite of the fact that the ice presents an impenetrable barrier to any sea passage in that region being of practical use.

**"Not Proven,"** a verdict peculiar to Scottish law under which, in criminal cases where the evidence not being sufficient to fully demonstrate the charge made, a prisoner is given the benefit of the doubt and set free, and cannot be retried even if later evidence of his guilt be discovered.

**Notre Dame,** the famous Paris cathedral, was founded in 1163, and is one of the finest specimens of Gothic architecture in Europe. The best descriptions of the building are to be found in Victor Hugo's "Hunchback of Notre Dame."

**Novargent,** a substance consisting of chalk moistened with a solution of oxide of silver and cyanide of potassium; used for re-silvering plated articles.

**Novatians** were a sect founded by Novatus, a Stoic philosopher first and then a priest of Rome, in the 3rd century, who differed from the heads of the Church in regard to some minor points of doctrine. The Novatians did not stand out long, however, and most of them were taken back into the Church.

**November,** the 9th month of the year originally, but from 713 B.C., when Numa added January and February, it took its present position as the 11th month.

**"Novum Organum,"** Bacon's famous work, published in 1620, in which the main part of his system of inductive philosophy was set forth.

**Noyade,** a mode of execution by drowning practised during the Reign of Terror in France at Nantes. The victims were set afloat in a boat with a movable bottom, and when the vessel reached deep water the bottom opened and let the prisoners into the water.

**Numismatics,** the science of coins and medals, has proved a fascinating study to many, and has resulted in the discovery of valuable historic evidence at various times. The difference between a coin and a medal is that the former is a piece of money, while the latter commemorates some person or event. Numerous books have been written on both subjects, and there are many numismatic societies in existence.

**Nummulites** are fossil foraminiferæ, coin-shaped, and belonging to the Eocene formation. Nummulitic limestone is the commonest of all the Tertiary rocks in Europe, Asia, and Northern Africa.

**Nun-Bird,** a South American barbet of sombre colour, with white patches and markings on the head and wings.

**Nunc Dimittis,** a familiar hymn ("Now lettest thou thy servant depart in peace") forming part of the Evening Service in the various Christian Churches. (Luke ii. 29.)

**Nuncio,** the title given to a Papal Envoy to any Catholic State. In former times Nuncios acted as Judges of appeal.

**Nunneries,** convents for the exclusive residence of women who have taken the vows, are common in Roman Catholic countries, and there are still a few in Britain. The first English nunnery was founded at Folkestone in 630, and up to the dissolution of the monasteries such institutions were numerous.

**Nut-Hatch,** a tree-creeping bird, represented in England by only one species. It has long, curved claws that fit it for climbing, and it feeds mainly on nuts.

**Nutmeg,** the kernel of the stone of a tropical fruit, used as a spice and highly aromatic.

**Nyctea,** a kind of snow-owl of large size and white plumage found in the Arctic and Sub-Arctic latitudes of Europe, America and Asia.

**Nymphæa,** the white water-lily, dedicated by the Greeks to the water nymphs. *N. lotus,* an Indian species, is employed as a specific in cholera.

**Nyssa,** the black gum, or pepper-ridge tree of America, possessing a tough, almost unsplittable wood. The sub-acid fruit of one variety, *N. candicans,* is sometimes called the "Ogechee Lime," and used as a substitute for ordinary limes or lemons.

**Oak,** the most valuable of European timbers, re-remarkable for its strength and durability. Was used for building ships of the British fleet from the days of Charles II. to its supersession by iron. Has always been extensively used in furniture construction and cabinet work.

**Oak Boys,** an insurrectionary Irish party which had a brief prominence in 1763, and having for their object resistance to an Act which compelled householders to labour on the roads for a time. They wore oak sprays as a badge.

**"Oaks,"** the name of a famous race for three-year-old fillies run at Epsom two days after the "Derby."

**Oakum,** loose hemp and untwisted ropes, in the preparation of which prison labour used to be largely used in England.

**Oasis,** the name given to any fertile spot in a desert region. Such spots are fairly numerous on the Sahara and Libyan deserts, and some of them are extensively peopled and successfully cultivated.

**Oates' Plots.** (*See* **Oates, Titus,** "Prominent People" Section of *Pears' Cyclopaedia.*)

**Oaths** were introduced into English judicial trials in the 7th century, and are referred to in the Old Testament (Gen. xxi. 24; Exod. xxii. 11). The oath of supremacy dates from 1535. Quakers were permitted to substitute affirmations for oaths from 1696. Bradlaugh's Oaths Bill, passed in 1888, allowed affirmations in place of oaths whenever required. Since the passing of the Oaths Act, 1888, oaths administered in English courts have been by way of declaration and affirmation. By the Perjury Act, 1911, "oath" includes affirmation or declaration.

**Oats,** a well-known cereal product, probably native to Asia, but cultivated with considerable success for many centuries in Scotland and England. The United States also produces large quantities. Cakes and porridge of oatmeal are common articles of food in many countries, especially in Scotland.

**Obelisk** was regarded by the ancient Egyptians as the symbol of God, and as a monumental object was largely used by the Pharaohs. Twelve were transported from Egypt to Rome and set up at various times, there is one in the Place de la Concorde, Paris; and one in London, on the Thames Embankment. The British Museum has two. What we call "Cleopatra's Needle" was originally erected at Heliopolis by Thothmes III., about 1500 B.C.

**Oberammergau,** the Bavarian village where a kind of miracle play is acted in which the different episodes in the Passion of Christ are depicted. These performances take place every ten years, and in the summer of 1930 it attracted a crowd of visitors from all parts of the world.

**Obi,** the Japanese name for a coloured sash commonly worn by Japanese women, and tied with a large bow at the back of the waist.

**Obit,** the date or the anniversary of a person's demise; the term is used also in reference to a service of a religious character celebrated on such an occasion.

**Oblation,** a gift offered in worship, referring especially to the bread and wine given by the laity for the Eucharist.

**Oblivion, Act of,** was the act of "free pardon and oblivion" in respect of "all treasons and state offences" committed between 1637 and 1660 (the Civil War and Commonwealth period), excepting from it the "regicides" and certain priests.

**Oboe,** a well-known musical reed instrument, and a leading feature of modern orchestras. It was introduced into England about 1720.

**Obolite Grit,** a green-grained grit of Lower Silurian age and calcareous character, containing the obolus mollusc fossils, found in Russia.

**Obolus,** a silver coin of ancient Athens worth about a penny farthing in English. The name was also adopted for small coins in different parts of Europe in the 14th and 15th centuries; besides being applied to a small weight, equivalent to the sixth part of an Attic drachma. In palæontology an obolus is a fossil *Lingulidæ* of the Silurian period.

**Obscurantists**, a term applied to persons who are adverse to the extension of knowledge and view with distrust all measures of reform and the opening up of new lines of thought.

**Observants** were certain members of the Franciscan order who in the 15th century adopted a modified form of monasticism and ultimately were approved by the papal authorities.

**Observatories** existed in ancient Babylon and Egypt. They were erected on tombs and temples. The most famous observatory of Egypt was that of Alexandria, erected by Ptolemy Soter, 300 B.C. It was not until the 16th century, however, that an observatory adequately equipped for astronomical investigations was built. This was at Cassel. Tycho Brahe's observatory at Uranienburg was erected in 1576. The Royal Observatory at Greenwich was completed in 1675. In recent times such institutions, public and private, on a large scale, have been erected. At his observatory at Parsonstown, in Ireland, Lord Rosse erected a telescope the mirror of which was 6 feet in diameter, and cost £20,000. At the Lick Observatory, California, the telescope has a 36-inch refractor, but that at the Yerkes Observatory, Chicago, has a tube 75 feet long and an object glass 40 inches in diameter. The largest observatory in the world is the Mount Wilson Observatory in California.

**Obsidian**, a form of volcanic rock of vitreous structure, and usually a silicate of aluminium, lime, magnesium, etc.

**Ocarina**, a simple kind of musical instrument usually made of terra-cotta with a whistle mouth-piece and finger-holes. It has a rather liquid sound, and played by an expert is pleasant to listen to.

**Occultation**, in astronomy, refers to the concealment of a celestial body by the passing before it of some other heavenly body. The most frequent occultation is that of a fixed star by the moon.

**Occultism**, originally the practice or study of the occult or secret sciences, including alchemy, astrology, magic, necromancy, etc.; but in recent times referring also to theosophy, spiritualism, palmistry and so forth.

**Ocean** comprises the great body of water which covers five-eighths of the surface of the earth, and has an average depth of two miles.

**Ocean Currents** are well-defined streams running over certain portions of the ocean and caused in various ways. Usually the currents run in the direction of the poles from the equator, and by a natural counteraction currents are set up in the opposite direction. The ocean current with which Europeans are most familiar is the Gulf Stream.

**"Ocean Monarch,"** the name of an emigrant ship which left Liverpool for Boston on 24th August, 1848, with 400 persons on board. She took fire off Great Orme's Head and 178 people lost their lives.

**Ocelot**, usually called the leopard cat, is common in the more southern parts of the United States, in Mexico and Brazil. It is about 4 feet in length, including tail, and of a grey or tawny colour and spotted. It is very destructive to weaker animals; it does not devour them, but sucks their blood.

**Ochres**, the name of a number of natural earths impregnated with mineral colourings, chiefly silica and alumina. They include iron ochre, yellow ochre, and plumbic ochre, being respectively oxides of iron and lead. Ochres are largely used in the making of paints.

**Octagon**, in geometry, is a plane of eight angles and eight sides, and is a regular octagon when all the sides and angles are equal.

**Octahedron**, in geometry, consists of a solid figure bounded by eight triangular faces.

**Octarch**, the kings of the English heptarchy, Hengist (455) being the first, and Egbert (800) the last.

**Octastyle**, in architecture, is a term applied to an eight-columned portico such as that of the Parthenon of Rome.

**Octateuch**, meaning a collection of eight books, is a term generally applied to the first eight books of the Old Testament.

**Octave**, in music, is the interval between one note and the eighth note from giving a perfect concord.

**October**, the 10th month, but the 8th in the old Roman calendar. It was held sacred to Mars.

**Octopus**, an invertebrate fish of the *Cephalopoda* group, sometimes called "the devil fish," has eight arms covered with suckers, and a head with horny jaws and large globular eyes. It is very common in the Mediterranean.

**Octrois** are special taxes levied on articles of food before entering a city. They have been established in France from early times, and still exist, though at various periods they have been suspended.

**Ocuba Wax**, a vegetable wax used in Brazil in the manufacture of candles and obtained from the fruit of *Myristica ocuba*.

**Odd Fellows**, the name of several friendly societies the largest of which is the Manchester Unity whose headquarters are at Manchester. It existed in the 18th century as a social club, but was reorganised on its present basis in 1810. It has now nearly 5,000 lodges, and a membership (including juveniles) of more than one million, with a capital exceeding twenty-four million pounds sterling. The Society is also an Approved Society under the National Health Insurance Acts, for which purpose its membership is over 870,000 and its capital nearly eight million pounds sterling.

**Odes** were originally extempore compositions sung in honour of the gods by the ancient Greeks and Romans. They were divided into three sections: strophe, antistrophe, and epode. All the most famous ancient odes—of Anacreon, Pindar, Horace—were composed before the Christian era. Among the best known English odes are those of Milton, Dryden, Collins, Gray, Wordsworth and Keats.

**Odeum**, a small theatre for the recitation of musical compositions, generally contiguous to a larger public theatre, thus the odeum of Athens in classic days adjoined the theatre of Bacchus.

**Odometer**, an instrument for measuring distances travelled by wheeled vehicles. Such apparatus have been known since the 17th century, but have been improved in recent years; *e.g.* the taxi-meter.

**Odontograph**, a term in mechanics signifying an ingenious instrument enabling engineers to design and lay off infinitely the teeth of gear wheels.

**Odontography**, a description of the teeth and the natural phenomena of dentition.

**Odontology**, the science of the teeth, is but of comparatively recent growth and includes odontography and the study of dentition.

**Odour of Sanctity**, a phrase which originally expressed the belief that the corpse of a holy person emitted a sweet odour, while that of an unbaptised person gave forth an evil odour; the term is now employed figuratively of the reputation.

**Odyl**, Baron von Reichenbach's name for a supposed magnetic force developed by the material universe in general, and variously termed odic force, odylic force, etc. It has not met with scientific acceptance.

**Odyssey**, Homer's famous epic poem setting forth the incidents of the wanderings of Ulysses on his way back to Ithaca after the Siege of Troy.

**Œcumenical Council**, the general or universal council of the Eastern Church, originally established to discuss and decide points of doctrine and discipline, especially with reference to heresies which arose. After the Council of Nissus, 650, the Church divided into an Eastern and a Western confession.

**Œil-de-Bœuf**, a term in architecture denoting openings, usually round or oval, in friezes, roofs, or domes of buildings, designed for the admission of light.

**Ogham**, an ancient style of Irish or Celtic writing, not used later than the 9th or 10th century.

**Ogpu**, prior to 1922 was known as the Cheka. It is a powerful political department of the U.S.S.R. (*q.v.*). Its purpose is to counteract all political or economic opposition, as also general espionage or brigandage.

**Ogulnian Law**, the passing of which was secured by the two Tribunes Ogulnius, 300 B.C., had the effect of increasing the number of the Pontiffs and Augurs, and conceded eligibility for those offices to Plebeians.

**Ogyges Deluge**, occurred under King Ogyges in

1764 B.C., inundating Attica so that the country lay waste for nearly 200 years.

**Ohm's Law**, was propounded by Dr. G. S. Ohm, and determines the quantity of the electromotive force of the Voltaic battery. It is in accord with the discovery that the earth can be utilised as a conductor, and obviates the employment of a return wire in electric telegraphy. An ohm is the unit of resistance in electro-magnetics.

**Oidium**, the botanical name for a fungus, a variety of which is found on the grape-vine, causing what is known as the "vine disease." Another variety *Oidium lactis*, generates on the surface of sour milk; while yet a further form, *Oidium albicans*, develops, in certain unhealthy conditions, aphthæ in the human mouth.

**Oil Cake** is used as food for cattle. It is made from linseed, rape, and cotton seed, after the oils have been extracted, and is very fattening.

**Oil Gas**, a combustible gas obtained by the decomposition of oil, yielding a brilliant light, and largely employed for illuminating purposes.

**Oils** are of three classes, fatty or fixed oils, volatile or essential oils, and mineral oils. Fatty oils are obtained from animal and vegetable matters; fixed oils are used in the manufacture of soap, for lubricating purposes and for illumination. Volatile or essential oils are obtained by distillation and are used mainly for essences and colouring mediums; mineral oils are mostly used for producing artificial light, and are being largely utilised as oil fuel. Oil was used in lamps in the time of Abraham, and the references to it in the Old Testament show that the Jews used special oil for anointing kings, priests, and other high personages. Numerous experiments have been made with oil for calming turbulent waves, and some success has attended these experiments. (*See* Petrol, Petroleum.)

**Ojibway Indians** are a renowned tribe inhabiting the great lake districts of Canada. At one time they were very warlike and gave much trouble to the Government, but in recent years they have become largely civilised and live in prosperous settlements.

**Olber's Comet** was discovered in 1815 by Olbers the German astronomer. Olbers also discovered the asteroids Pallas and Vesta (1802–1807).

**Old Bailey**, the name generally given to the Sessions Court, adjoining Newgate Prison, for the trial of criminals in the City of London and throughout the county of Middlesex. There are eight sessions held during each year at what is still styled the "Old Bailey." The judges appointed to try cases are the Recorder and the Common Serjeant, one or more judges of the High Courts, the Lord Mayor and such aldermen as have passed the Chair. The Court House has recently been entirely rebuilt.

**Old Believers**, a Russian sect which separated from the Greek Church in 1654 in opposition to the Patriarch Nicon. They number now c. 12,000,000.

**Old Catholics** are the German Catholics who declined to accept the dogma of papal infallibility, and now form an independent sect. Professor Dollinger of Munich was their first leader, and Père Hyacinthe (Charles Loyson) has been the principal exponent of the party in England and Switzerland.

**Old Red Sandstone** is a geological term for the group of rocks lying below the Carboniferous formation. It has three series: the Upper, Lower, and Middle Devonian, all rich in fossils. Another name for this group is the Devonian Formation.

**Olefiant Gas**, or ethylene, is obtained by acting on ethyl alcohol with concentrated sulphuric acid or phosphoric acid. It is present in coal gas to the extent of about 6 per cent. It is a hydrocarbon and burns with a luminous flame.

**Olefines**, a series of hydrocarbons, in which the hydrogen atoms are double the number of those of carbon. The first member of the series is olefiant gas. Olefines differ from paraffins in that they combine directly with the halogens and the haloid acids, which paraffin will not do.

**Oleic Acid**, a prominent element of numerous fats and oils abounding in those obtained from the olive, almond, and similar fruits. It is styled an organic acid and contains oxygen, carbon and hydrogen, and is much used in the manufacture of certain soaps.

**Olein**, a colourless oil obtained from animal and vegetable fatty oils, and very widely distributed. It is not found in a pure state, and is soluble in alcohol and ether, but not in water.

**Oleographs**, the name given to reproductions of paintings in oils, the colours of the original being more or less faithfully copied. The process is one that closely resembles chromo-lithography.

**Oleo-margarine**, a solid fat of a yellowish colour, obtained from the leaf-fat of cattle. This fat is submitted to certain patented processes and sold as margarine, a substitute for butter.

**Oleometer**, an instrument for ascertaining the specific gravity of oil. (*See* Hydrometer.)

**Oleron Laws** are supposed to have been passed by Richard I. while on the Island of Oleron, in 1194, and have reference to the commerce of the seas. They were to a great extent the basis of the maritime laws of most of the European States.

**Olibanum**, a resinous gum obtained from trees grown in Somaliland and India.

**Olivenite**, a mineral of an olive-green colour, occurring in crystals lying near copper ore. Scientifically it is an arseniate of copper.

**Olives** are the fruit of the olive tree which grows so abundantly in Italy, and which in recent years has been cultivated with considerable success in Southern California and Australia. A stone fruit; in its unripe condition it is largely used for pickling purposes. Olive oil is obtained from the pulp of the fruit, and is the lightest of all fixed oils.

**Olivine**, a chrysolite, is a mineral of a pale green colour, found in volcanic rocks and meteorites. It is essentially a double silicate of iron and magnesium.

**Olla Podrida**, a sort of Spanish "haggis," combining in a stew a number of meats and vegetables.

**Olympiads** were periods of four years, the era of the Greeks, and originated in 776 B.C., this method of computation lasting until A.D. 440.

**Olympic Games**, instituted in honour of Zeus by the Greeks, were held every 5th year at Olympus in the Peloponnesus. These festivals included competitions in literature, art, drama, rhetoric, music and gymnastics, and they were continued, with intervals, from 1543 B.C. to A.D. 394.

**Ombrometer**, an instrument for gauging the depth of rainfall.

**Omega**, the last letter of the Greek alphabet, and widely adopted in literature in its figurative sense as indicating the end of anything.

**Omens** are auguries or presentiments of some coming event, usually something evil. In olden times omens, portents, and signs were seriously regarded, and among the Greeks and Romans emanated chiefly from the priests or augurs who were supposed to be the recipients of the warnings of the gods.

**Omnibus**, a public four or six wheeled vehicle for conveying passengers along certain defined routes for specified fares. The first vehicle of this description appeared in Paris in 1662. The omnibus system in reality was first established in Paris during the period 1820–1830. They were introduced into London by George Shillibeer in 1829. Shillibeer, whilst a coach-builder in Paris, had been commissioned to build an improved type of omnibus for the French capital, and thinking to make money he brought the omnibus to London. The first service ran from the "Yorkshire Stingo" at Marylebone to the Bank, and the fare for the journey was one shilling, whilst there was a halfway stage for 6d. Shillibeer's omnibus carried 22 persons, all inside. The passing of the Stage Carriage Act in 1832, which permitted the taking up and setting down of passengers in the streets, induced a boom in omnibus development in London. The London General Omnibus Co. was formed in Paris in 1855 and started operations in London in 1856. The first mechanical 'buses appeared in London in 1833. They were driven by steam-power and carried 14 passengers. They were driven off the highway by prohibitive legislation, and it was not until 1897 that the mechanical omnibus reappeared, by which date legislative restrictions had been removed. The petrol omnibus appeared in London in 1904—it was double decked and carried 30 passengers—and the last horse 'bus disappeared about 1912. The latest type of omnibus in London carries 54 passengers, 26 inside and 28 outside. Some of

the routes extend out into the country 25 miles from Charing Cross. In London the number of omnibus passengers has increased from 735,741,375 in 1913 to 1,556,078,863 in 1930. Tramway traffic was 209,533,845 passengers in 1930. The motor omnibus is very largely used in the provincial cities and towns as well as in the rural districts of the United Kingdom. A service of Thames water 'buses has been projected.

**Omnimeter**, an invention for superseding chain measuring and combining the theodolite and level. It was introduced in 1869, and is the invention of a German engineer named Eckhold.

**Omnipotent Act**, the name given to an English law passed in 1664, which provided that judgments and executions in Civil cases should not be stayed except upon recognisance.

**Omnivora**, the name of the hog tribe of non-ruminants, ranging from pigs to hippopotami and meaning animals whose diet is varied.

**Onager**, the wild ass of Central Asia.

**One Pound Notes** were issued by the Bank of England in 1797 and remained in circulation until 1823. A further issue took place in 1825, but lasted only a short time. Treasury Notes of the value of £1, also of 10s., have been in circulation since 1914, and are legal tender for any amount. In 1928 the Bank again issued £1 as well as 10s. notes.

**Onus Probandi**, a legal term signifying that the onus of proof rests on the party of the side indicated. This obligation of proof generally devolves upon the supporters of an affirmative.

**Onyx**, a kind of agate or quartz having its colours arranged in parallel layers. Onyx cuts and polishes well, and is much used for cameos.

**Oolitic Formation**, a geological term indicating beds of secondary rocks lying immediately below the Neocomian formation, and existing through a long stretch of country extending from Yorkshire to Dorsetshire. It abounds in fossils of molluscs and reptiles. Portland is a typical stone of oolite or roestone formation.

**Oolitic Structure** occurs in limestone, and comprises very small rounded grains suggesting the roe of a fish, or the spherical seeds of certain plants, each grain containing a minute central nucleus, round which the component carbonate of calcium has been deposited.

**Opals** are mineral substances, consisting of silica-like quartz, and are of numerous varieties and colours, ranging from white to brown and green. Some have a vitreous lustre and transparency which constitute what is called "opalescence." Opals are in great favour for jewellery; the best come from Hungary and Australia.

**Operas** are stage pieces in which music is the dominating feature, and have been one of the leading forms of amusement in modern times. There is a record of French opera performed as far back as 1240. The Italian opera came into being towards the end of the 18th century, and in 1600 an opera on the subject of Eurydice was given at Florence on the marriage of Marie de' Medici and Henry IV. of France. Louis XIVth set up an opera in Paris in 1672. Scarlatti was the most prolific producer of operas of the 17th century. About 1684 a species of opera was being performed in London under the management of Sir William Davenant. In 1711 Handel's "Rinaldo" was produced at the Haymarket; Gay's "Beggar's Opera" was first given in 1727, and ran for 63 nights; the operas of Mozart had a marked influence upon the development of operatic music at the latter part of the 18th century. The leading opera composers of the 19th century were Beethoven, Rossini, Weber, Donizetti, Auber, Verdi, Meyerbeer, Gounod, and Wagner, the last-named representing the most marked development that has hitherto occurred in the history of opera. Among the composers of light operas the names of Offenbach in France and Sir Arthur Sullivan in England rank high.

**Ophicleide**, a brass musical instrument in the nature of a keyed bassoon, invented by a Frenchman, Frichot, in the 19th century. Since used in brass bands.

**Ophidia**, a zoological term designating the order of reptilia embracing snakes and serpents.

**Ophthalmoscope**, an instrument invented in 1851 by Helmholtz for examining the interior of the eye.

**Opium** was known to the ancients, and used by them as a medicine. It is obtained from the white poppy, the unripe "head" or seed capsule of that flower yielding a juice which when dried becomes the opium of commerce. The poppy is largely cultivated in India, Egypt, Persia, and Asia Minor, for the sake of this juice, which yields various alkaloids, such as morphine, narcotine, thebane, etc. Laudanum is a tincture of opium. The Chinese are great smokers of opium, and the habit is one difficult to relinquish. In 1906 the Chinese Government proposed to the British Government an arrangement by which the importation of Indian opium into China should cease within ten years, and at the same time measures were adopted for closing opium dens in China. The cultivation of opium is restricted in India to a Government monopoly. The revenue amounts to about £14,982,000 per annum. The largest opium farms of Europe are in Macedonia, which produces sufficient opium for the medicinal needs of the whole world.

**Opium War**, so called because it followed on the destruction in 1840 of a number of British vessels carrying opium into Chinese ports. The result was the establishing of the "Treaty Ports" of China and the cession of Hong Kong to England.

**Opossum**, a familiar marsupial mammal found in the more southerly of the United States, South America, and Australia. It has a long prehensile tail and is not much larger in size than a cat. The females possess a pouch, in which they keep their young. It is of nocturnal habits, and a good scavenger.

**Opportunists**, a term which first came into use politically in France after the Franco-German war, and referred to a section of the Republican party of which Gambetta was the leader, who held that the true political policy was not to force opinions upon the people, but to wait until circumstances favoured their advocacy.

**O. P. Riots**, at Covent Garden Theatre in London, from the 18th September to the 16th December 1809 were caused by the increased prices of admission which J. P. Kemble endeavoured to institute. Much damage was done to the theatre, and the audience made it impossible for the performers to be heard. The riots ended by the restoration of the old prices.

**Optics**, the science which investigates the nature and properties of light and the phenomena of colour. Ptolemy wrote a treatise on optics 120 B.C., and burning lenses were known to the ancient Greeks. Spectacles were invented in the 13th century, and the camera obscura in the 16th century. Telescopes were not known until about 1571, and the microscope not before 1620. Among the most eminent writers on optics of modern times was Prof. Tyndall.

**Optimism**, the theory that everything happens for the best, has been propounded by many fathers of the church and philosophers from Plato to Rousseau. It is the opposite of pessimism.

**Optophone**, invented in 1914 by E. Fournier d'Albe, is an instrument whereby the blind can read ordinary letterpress. This dispenses with Braille (*q.v.*) By means of this instrument, in which the light-sensitive element selenium plays the important part, the letters are transposed into sounds, the alphabet of which the blind reader soon learns, and the positions and speed of the instrument can be regulated by him.

**Oracles** were in ancient times supposed to be words spoken by the gods, and it was the custom on important occasions to consult these oracles as to the future. The Greeks had the Oracles of Zeus at Dodona, and Apollo at Delphi, while the Romans consulted the Oracles of Mars, Fortune, and others.

**Orange**, a fruit growing in most sub-tropical climates and in universal demand. It is grown on an ever-green tree that attains a height of about 20 feet at maturity.

**Orangemen** are Irish Protestants, who derive their name from having originally supported William III., Prince of Orange. They exist in greatest numbers in Ulster, where the Protestant religion dominates.

**Orang Outang**, one of the largest of the anthropoid apes, found only in Borneo and Sumatra. When full-grown it stands over four feet in height, and

has very long arms. It lives mostly in trees, and exists on fruits, buds, etc.

**Oratorians** were an order of priests founded by St. Philip Neri, about 1564, and received their name from the Oratory of St. Jerome, where they worshipped. They also established themselves in France in the 17th century, and in England in recent times the Oratory at Brompton, where Father Faber and others have ministered, commemorates the earlier order.

**Oratorio,** a sacred musical drama, performed without scenic aid, originated with St. Philip Neri, and from about 1550 to the early part of the 18th century this class of composition was not known out of Italy. In 1738 Handel's Oratorio "Israel in Egypt" was performed, and the "Messiah" in 1741. Other great oratorios have been Haydn's "Creation," Beethoven's "Mount of Olives," Spohr's "Last Judgment," Mendelssohn's "Elijah," and Costa's "Eli."

**Orbit** indicates the course of a planet round the sun. All the planetary orbits are ellipitical.

**Orchestra,** a band of instrumental performers, either attached to a theatre or opera, and occupying a position close to the stage, or a separate band of orchestral performers engaged to interpret musical compositions apart from vocal illustration. A properly organised orchestra comprises stringed, wood, brass, wind, and percussion instruments.

**Orcin,** a colouring matter obtained from lichens. It assumes a deep blood-red colour when dissolved in ammonia, and in this form it is called "orcein."

**Ordeals,** or trials by ordeal, were known in England in the time of the Saxons, and existed down to 1218, when they were abolished. The ordeals were usually of fire, water, or poison. The accused would be set to handle red-hot iron, be cast into water, or made to partake of poison, and unless he could withstand these tests he was condemned as guilty; that is to say, that he was forsworn.

**Orders.** (*See* **Knighthood.**)

**Orders, Holy,** in the Roman Catholic Church are of seven kinds, extending from door-keepers, exorcists, readers, and acolytes, in the minor class, to deacons, priests and bishops of major rank; while in the Protestant Churches there are only three—deacons, priests, and bishops.

**Orders in Council** are such as are issued by the Sovereign as a result of the deliberations of the Privy Council.

**Ordination,** the ceremony of installing ministers or clergymen in clerical offices, has existed from the earliest times. In the Anglican and Roman Catholic Churches the rites of Ordination are performed by Bishops; among Nonconformists the power of ordination rests with the governing bodies of the different churches.

**Ordnance Office** was an old Government department entrusted with the supply of weapons and materials of war from the time of the archers to the days of guns and explosives. After the Crimean campaign, when the administration of the Ordnance Board was shown to be very defective, the office was abolished, and its duties vested in the War Minister.

**Ordnance Survey,** an authorised survey of Great Britain, entrusted to a special body of Royal Engineers and civilian experts, by whom maps and charts are from time to time produced, showing the full details of the geographical, geological and industrial condition of the country. The scale adopted for counties is 6 inches to 1 mile, and 1 inch to 1 mile for the general map of the kingdom. In 1872 the Ordnance Survey was placed under the direction of the Board of Works.

**Ordonnances** were special laws enacted by the French kings prior to 1789. They were issued in the name of the king, and had the effect of Acts of Parliament. It was the revival of ordonnances by Charles X. that led to the Revolution of 1830.

**Ores** are metalliferous deposits of rock from which, under the process of smelting, the metallic element is separated from the useless material. Ores found are in layers or beds, and are classed as oxides, which contain iron, tin and copper; and carbonates, such as iron, copper, zinc, and lead.

**Organs** are said to have been invented about 250 B.C., and form a highly scientific adaptation of the primitive pandean pipes. The instrument began to be used in churches in the 7th century, from which time it became the most prominent musical feature of Church services. Among the largest organs in the world are the following:—that of Haarlem, which has 60 stops and 8,000 pipes, the Albert Hall organ, 125 stops; the St. George's Hall (Liverpool) organ, 110 stops; one at St. Louis, America, 150 stops; and one in the Sydney Town Hall, 126 stops.

**Orgies** were originally secret celebrations in honour of Bacchus, and noted for the wild license displayed by the celebrants.

**Orguinette,** a musical instrument composed of reeds which are played upon by a bellows. A strip of paper passes over the holes of the reeds, moved by a crank, and the paper is cut into holes to represent the required sounds. As the rollers turn the bellows the melody is "ground out."

**Oriel College,** Oxford, derives its name from a building called "l'Oriole" which stood on its site; was founded by Archdeacon Adam de Brome in 1326.

**Oriel Window** is a window projected from the front of a building, and may be rectangular, triagonal, or pentagonal. The ordinary bay window and bow window are varieties of Oriel. When an Oriel window does not reach to the ground it usually rests upon moulded sills supported by corbels.

**Oriflamme,** the name of the original banner of the abbey of St. Denis, and adopted by Louis VI. as his standard. It remained the national emblem of France for three centuries. The flag was of red silk, the outer edge being cut in the form of flames.

**Origenists,** a sect of religionists who were followers of Origen who lived in the 3rd century. They believed that men's souls were created before their bodies, that the celestial bodies had souls, and that Christ was the Son of God only by adoption and grace. The Council of Constantinople in 553 condemned Origen's doctrines.

**"Origin of Species"** (1859), the title of Darwin's famous work—by many considered to be the most important book of the 19th century.

**Oriole,** a beautiful family of birds of the Passeres order, including the Golden Oriole, which is familiar in Central Europe in the summer, and sometimes visits England. The male is of a bright yellow plumage, with black wings and tail. There are several varieties of oriole in America.

**Orion,** a famous constellation of the heavens, comprising nearly a hundred stars, all visible to the naked eye. It contains three stars of the second magnitude in a line, and these are called "Orion's Belt."

**"Orlando Furioso,"** the title of Ariosto's 16th-century epic poem, describing the doughty deeds of Orlando and other knights of the Charlemagne period.

**Orleanists,** members and supporters of the House of Orleans, of which King Louis Philippe was a member.

**Ormolu,** a specially treated form of brass which assumes a gold colour and is largely used for decorative purposes, metal mountings and furnishings.

**Ormulum,** a version of the gospels and acts made by Orm, an ecclesiastic of the 12th century. It is metrical and exists in manuscript in the Bodleian Library.

**Ormuzd,** the spirit of good according to the Zoroastrian religion, represented as eternally warring against evil and personating purity of life.

**Ornithology,** the branch of Zoology which treats of the structure and habits of birds.

**Ornithorhynchus,** an aquatic bird, curiously mammalian in general structure, but oviparous, of which but one species is known, the Duck-bill or Water-mole of Australia and Tasmania.

**Orphrey,** the name of an ornamental border of gold and silver embroidered on ecclesiastical vestments.

**Orpiment,** a compound of arsenic and sulphur yielding the colour known as "king's yellow."

**Orrery,** an instrument by which the motions of the heavenly bodies are indicated. It consists of a globe encircled by a brass meridian line, and was the invention of Charles Boyle, the 3rd Earl of Orrery. Many improved developments of

this machine have been made in recent times.

**Orris Root**, the dried root or stem of a species of iris common in Southern Europe. It has medicinal uses, and is esteemed for its perfume and its utility in tooth-powder composition.

**Orthotomus**, a dainty little bird of the warbler kind including the tailor-birds. They inhabit Java, Sumatra, and Borneo, and have a dozen species.

**Ortolan**, an edible bird of the bunting family, native to Southern Europe, sometimes seen in England.

**Osborne House**, near Cowes, in the Isle of Wight, Queen Victoria's favourite winter residence, and where she died. It is used as a convalescent home for naval and military officers since Edward VII gave it to the nation.

**Osella**, a medal yearly struck and distributed by the Doges of Venice from early in the 16th century to the close of the Republic. It was of gold or silver, and was inscribed with the name of the Doge, the year, and a symbolic design.

**Osier**, a species of willow growing in damp soils and yielding branches utilised in basket-making.

**Osmium**, a metal of the platina order and one of the heaviest of known metals. It is obtained from the platina of South America, California, Australia and Russia, and has not hitherto been fused. The chief commercial purpose to which it is put is that of providing the tip for gold pens.

**Osprey**, a bird of prey widely distributed over all northern latitudes and a common visitor to the lakes of Scotland, where it used to build and breed. It is commonly known as the fish-hawk, and feeds almost entirely on fish.

**Osteopathy**, a system of healing and health based on the theory that structural derangements are the chief cause of disease, and lesions can be set right by manipulation of the spinal and other joints. Osteopaths also advocate exercise and sensible diet. The American School of Osteopathy was founded in 1892, since when osteopathy has spread considerably, and is regulated by law in the U.S.A. and parts of Canada. There are over 7,000 osteopathic practitioners in U.S.A. In Great Britain osteopathy came into prominence during the Great War. Sir Herbert Barker was knighted for his osteopathic skill on the wounded. It is, however, neither recognised nor regulated by law, although there are many practising osteopaths. The British Osteopathic Association is in Westminster, London.

**Ostracism**, a method of proscription adopted by the ancient Greeks, whereby sentences of banishment for ten years were voted. The names of objectionable persons were written on small oyster shells by the people, and these were collected in an urn and presented to the Senate, when a scrutiny took place, and the one whose name oftenest appeared was sentenced; but no one could be ostracised unless at least 6,000 votes were recorded against him.

**Ostrich**, a large African bird which inhabits the sandy plains, and is highly valued for the rich feathers grown on its wings and tail. The neck and legs are naked. The wings are useless in flight, but the birds have a fleetness of foot exceeding that of the swiftest horse. An ostrich's egg weighs 3 lb.

**Ostrogoths** were the Eastern Goths who flourished in the 4th and 5th centuries. Under their famous leader, Theodoric, they founded a monarchy in Italy in 493, but were overthrown in 553.

**Otary**, the name of a kind of seal remarkable for its external ears. It inhabits the sea-coast and islands of America, especially those of the North Pacific. The sea-bear and sea-lion are included in the family.

**Otheoscope**, an apparatus invented in 1877 by Sir W. Crookes, for showing molecular motion, the effects of radiation.

**Otter**, an aquatic carnivorous mammal widely distributed over Europe, and at one time very common in England and Wales. Otter hunting, indeed, is still a country sport in some districts, and a breed of dogs called otter-hounds is kept for the purpose. The otter averages about 2 feet in length, exclusive of tail, has web-feet, and is a very expert swimmer.

**Oubliette**, the name given in the Middle Ages to a secret dungeon in the old baronial castles.

**Ounce**, a carnivorous member of the cat family, spotted like a leopard and having a long bushy tail. It is only found at high altitudes on the Himalayas, and is often called the "snow leopard."

**Outlaw**, one who has been placed beyond the pale of law and is not entitled to its protection. Previous to the reign of Edward III. it was permissible for anyone to kill an outlaw. In modern times, however, outlawry applies only to property.

**Ouzel**, a bird of the thrush family, comprising the ring-ouzel and the dipper, both familiar in Britain.

**Ovation** was a triumph which the Romans accorded to their generals on their return after victory.

**Oviparous**, a zoological term referring to such mammals, birds, reptiles, and fishes as bring forth eggs to be hatched outside the body of the parent.

**Ovis**, the zoological name for the typical genus of sheep.

**Ovoviviparous**, a zoological term applied to such animals as produce eggs which are hatched in the body of the parent; the viper, the scorpion, and the earthworm are examples.

**Owens College**, Manchester, now incorporated with Victoria University, was founded in 1840 by means of a bequest of £100,000 by John Owens, a Manchester merchant. Various other valuable bequests have been made to the institution, and a handsome college building was opened in 1873.

**Owl**, a raptorial nocturnal bird distributed over the greater part of the world. Eleven species exist in Britain, including the barn-owl, the long-eared owl, and the short-eared owl. Owls have large heads and round piercing eyes embedded in rings of feathers. They are voracious feeders and live on the smaller mammals, birds, insects, and fish.

**Ox**, the popular name of the mammals included in the genus *Bos*. They are hollow-horned ruminants and hoofed quadrupeds, and include the various classes of domestic cattle as well as the different wild species. The adult male is called a bull, the female a cow, and the young a calf. The best-known breeds of domesticated cattle are the Durham, or shorthorn, the Angus, the Jersey, Ayrshire, Suffolk and Hereford.

**Oxalic Acid**, an organic acid obtained from numerous plants, such as sorrel and rhubarb, and produced artificially for commercial purposes from sawdust, treated with caustic potash or caustic soda. It combines with metals to form oxalates.

**Oxford Clay**, a geological formation consisting of a bed of clay hundreds of feet thick, and forming the lower portion of the Middle Oolite series.

**Oxford University** was founded in the reign of Henry III. on the site of certain schools which were said to have been built by King Alfred in 872. Merton College was founded in 1267. Queen Elizabeth granted the University a Charter of Incorporation in 1570. The University has been greatly extended in modern times and has to-day in residence between 3,000 and 4,000 undergraduates, a large number of whom are overseas students, while of late years the numbers of students assisted by scholarships and grants have much increased, as well as the numbers of undergraduates who have not attended public schools. It comprises the following colleges:—University, Balliol, Merton, Exeter, Oriel, Queen's, New, Lincoln, All Souls, Magdalen, Brasenose, Corpus Christi, Christ Church, St. John's, Trinity, Jesus, Wadham, Pembroke, Worcester, Hertford, Keble, St. Edmund Hall, as well as private Halls and 5 Women's Societies.

**Ox Gall**, the fluids secreted from the gall-bladder of the ox, and used, after clarifying, for fixing colours.

**Oxybaphon**, an ancient Greek vase with a wide mouth and handle on each side.

**Oxygen** is the most abundant of all substances, a gas that forms one-third of the solid earth, one-fifth of the atmosphere, and eight-ninths by weight of all water. Dr. Priestley in 1774 was the first to separate it from red oxide of mercury. It is colourless, tasteless, and odourless, and forms the chief life-supporting element of animal and vegetable life.

**"Oyer and Terminer,"** a legal term designating a commission directed to the Judges of the Supreme Courts, empowering them to hear and determine charges of treasons, felonies and misdemeanours, in the counties to which they are proceeding. Courts of Assize are known as Courts of Oyer and Terminer.

**Oyez !** a phrase used by the ushers of Courts of Justice to proclaim silence. It is the Norman-French word "Oyez" ("Hear ye.")

**Oyster,** a bivalve mollusc, of the genus Ostreæ, having a very numerous species and abounding in nearly all seas. The shell is rough and irregular, and the body shows a very simple organisation. Oysters are exceedingly prolific, spawning in May and June. In England and Scotland deep sea oysters are not allowed to be sold between 15th June and 4th August, and other kinds between 14th May and 4th August. In Ireland, no oysters may be taken between May 1st and September 1st, except in certain waters. The British supply is so greatly below the demand that large quantities are imported from America, Holland, and Portugal.

**Oyster Catcher,** a wading bird of considerable size found in most parts of the world. It feeds on small oysters and other molluscs.

**Ozokerite,** a mineral hydrocarbon found in Moldavia and Wallachia. From it is obtained a substance from which a special class of candle is made.

**Ozone** is an active modification of oxygen and contains three atoms to the molecule, while oxygen contains only two. It is only present in extremely small quantities, sea-air containing the most, and large towns none at all.

**Ozonometry,** the determination of the presence and properties of ozone in the atmosphere.

## P

**Paca,** burrowing rodents of the Dasyproctidæ family, found only in S. America, and resembling the guinea-pig. It is of nocturnal habits, has a streaked and spotted fur, and lives on fruits and plants.

**Pacific Ocean** has only been known to Europeans since 1513, and the first English navigator to cross the Pacific was Drake in 1577. In certain parts it is more than five miles in depth; over its surface are innumerable islands. (See *Gazetteer.*)

**Pacifism,** a movement for the abolition of war and the promotion of peace. The ideals of pacifism have spread considerably since the Great War.

**Pæan,** the song of praise or triumph sung by the Greeks on the occasion of great celebrations.

**Pæon,** a foot, in ancient prosody, consisting of one long syllable and three short, the positions of the long syllable being variable.

**Pagans** are heathens or idolaters, people who do not worship God. The Roman Senate renounced paganism in 388, but put an end to it only by 391. The word is from Latin, *paganus,* a countryman, an uncultivated person, a savage. In the Middle Ages the term was used largely to describe Mohammedans (Moors, Saracens, etc.).

**Pagoda,** the name given in China, India, and other Asiatic countries to a high pyramidal tower, usually, but not necessarily, connected with a temple.

**Palæontology,** the science which is devoted to the investigation of fossil evidences, animal, vegetable, and mineral. The achievements attained in this science by the many distinguished men who have followed it have been of the most valuable kind, establishing with astonishing accuracy the orders of animal existence belonging to the various prehistoric periods. Some 50,000 species of animals and plants have been made known through the researches of palæontology.

**Palæotherium,** a genus of extinct tapir-like animals of large size, discovered in the Paris basin and elsewhere, of the Upper Eocene Age.

**Palæozoic,** a geological term indicating the most ancient division of the strata formation of the earth's crust, and comprising two main groups, the newer and the older.

**Palanquin,** an East Indian covered vehicle fastened to a pole and carried on the shoulders of four or six natives, now falling into disuse because of improved methods of conveyance.

**Palatinate,** a term formerly applied to two German electorates or provinces, the Upper and Lower Palatinates, Amberg in Upper Bavaria being the capital of the former, the latter being the Rhineland Palatinate. They were apportioned amongst Bavaria, Baden, Hesse, and Prussia in 1815.

**Pale,** the name given to the part of Ireland colonised by the English and comprising portions of the counties of Louth, Dublin, Meath, and Kildare. The Anglo-Saxon rulers were styled "Lords of the Pale."

**Palimpsests** are ancient MSS. or parchments which have been partly effaced and used for fresh writings. Many valuable MSS. were thus lost, but sometimes the second writing has been washed out, enabling the original writings to be deciphered. Among such restorations are a dialogue of Cicero's, a portion of a book of Livy, etc.

**Pallium,** a vestmental ornamentation of white wool presented by the Pope to archbishops on their appointment, and the sign of Papal confirmation.

**Pall Mall,** the name of a celebrated West London thoroughfare, called after a French ball game played thereabout in the early part of the 17th century, and now obsolete.

**Palm,** a large straight-trunked plant or tree common to tropical countries, and usually fruit-yielding, such as dates, cocoa-nuts, etc. Many commodities useful to man are obtained from this tree.

**Palmistry,** the art of reading a person's destiny by the lines of the palm of the hand.

**Palmitic Acid** is obtained either from palm oil or solid fats, and forms a white tasteless and odourless substance. In combination with glycerine it forms "palmitin."

**Palm Sunday,** the Sunday before Easter, upon which occasion it is customary to carry palms to the churches in some countries, in commemoration of Christ's entry into Jerusalem for the Feast of the Passover, when the people went forth to greet Him with palm branches.

**Pampas Cat,** the wild cat of the Pampas of South America. It is of a yellow-grey colour with striped sides, and exists in very large numbers.

**Pampas Deer,** a small, graceful deer that inhabits the South American Pampas. The males possess large antlers.

**Pampillion,** a furry kind of cloth much used in olden times as garment trimming.

**Panama Canal,** over which de Lesseps came to grief, was available for commercial shipping from August 15th, 1914, although shipping passed through experimentally on September 26th, 1913, the date of the 400th anniversary of the discovery of the Pacific by Vasco de Balboa. Owing to serious landslides in 1915 it was found necessary to close it until the damage was made good. Its advantage to the U.S.—which until its opening had to rest content with a sea route of 12,000 or 14,000 miles separating her Eastern from her Western seaboard—is enormous, for now a canal 49 miles long connects the two oceans. America started with an expenditure of £10,000,000, and an engagement to pay, after ten years, an annual rent of £50,000, but by 1921 it had cost the U.S. nearly £90,000,000. In exchange for this she gets the virtual ownership of the canal zone, the Panama railway, the results of the canal companies' excavation and construction work, and their plant. For M. de Lesseps' original scheme a lock canal has been substituted, with its upper level at the middle of three alternate elevations; that is, at 98 feet above sea-level. The depth varies from 40 to 85 feet, and over 6,000 vessels passed through the Canal in 1930, paying tolls amounting to $27,076,890.

**Panda,** a Himalayan bear with large ears and a long bushy tail. It is also found in Tibet.

**Pandean Pipes,** supposed to have been invented or played upon by the god Pan, consist of seven reeds tuned to scale and blown into by breath from the lips of the performer.

**Pandex,** or **Pandects,** a summary of the Roman civil law, prepared by order of the Emperor Justinian, 533. A copy was discovered at Amalfi in 1137.

**Pangenesis,** Darwin's hypothesis by which he explained the phenomena of organic reproduction. As Darwin stated it, it implied that

every separate part of the organisation reproduces itself.

**Pangolin,** the scientific name of the "scaly ant-eater," a member of the armadillo family, found in Africa and Southern Asia. It has an extensive tongue, covered with glutinous matter, which it uses in catching ants, its chief food. When once caught on the tongue, the insects cannot escape. When attacked, the pangolin rolls itself into a ball, and its scales assume the form of sharp spikes.

**Panorama,** a name given to almost any series of continuous scene pictures exhibited, but strictly pertaining to such scenes when arranged round the inner walls of a circular building and viewed from the centre. Mr. Robert Barker, an Edinburgh artist, was the first to give a panoramic exhibition in 1788, and its success induced him in the following year to show a panorama in London. Great improvements have been made in such "shows" in later times.

**Panslavism,** a movement to form a close cultural alliance amongst the various Slavic peoples, first widely recognised in the 19th century. In origin the movement was entirely non-political.

**Pantagruel,** the leading character in one of the satires of Rabelais.

**Pantheism,** the doctrine of the universal presence of the Divine Spirit in Nature. A kind of Pantheism has found its way into most religious and philosophical systems; Buddhism and Hinduism partake of this doctrine.

**Pantheon,** the famous temple in Rome, built about 25 B.C. by Agrippa and consecrated to the gods, its splendid dome and portico constituting it one of the most interesting architectural monuments of ancient days. Since the 7th century it has been used as a Christian church. The Pantheon at Paris, built in 1764, is modelled upon it.

**Panther,** a large carnivorous quadruped, akin to the leopard, native to India and other parts of Asia, and found also in Africa.

**Pantomimes** were originally stage representations in which speech was not permitted, all the action being carried on by gesture and movement. The ancient Greeks and Romans favoured them. Later on pantomime became popular throughout Europe, and in the 18th century, with clown, harlequin, and columbine imported into it, was adopted as a form of theatrical Christmas entertainment in England, and still meets with acceptance, although in recent years the fun and frolic have been for the most part replaced by spectacle. The most famous English pantomime clown of the early period was Joseph Grimaldi.

**Papal Infallibility,** a dogma stoutly maintained by one party in the Roman Catholic Church, rejected utterly by another, and tolerated by a third, was finally adopted and promulgated by the general council at Rome on July 18th, 1870, a great many bishops having withdrawn by way of protest against the decree. Professor Döllinger was excommunicated at Munich for rejecting this dogma in 1871. (*See* Old Catholics.)

**Papaver,** the typical genus of the well-known botanical order Papaveraceæ, or poppies, found upon every continent of the globe.

**Paper** has been known in one form or another from very early times. The papyrus reeds of the Nile swamps, served the ancient Egyptians for sheets upon which to inscribe their records. The Chinese and Japanese, centuries later, were using something more akin to modern paper in substance, an Asiatic paper-mulberry, yielding a smooth fibrous material, being utilised. With the spread of learning in Western Europe the necessity of a readier medium made itself felt and paper began to be manufactured from pulped rags and other substances, though as to the precise period when this was accomplished, or by what country, there is no definite information. Paper was made in England in the reign of Elizabeth from linen and cotton rags, and down to a comparatively recent period these materials have constituted the chief component of paper. Other paper-making staples have been introduced in recent years, such as surat, a kind of bark brought from India, waste jute, esparto grass, and wood pulp. In modern mills logs are dissolved with sulphur and other solvents, and become pulp in three or four days. Then this is ground to finer consistency in a series of formidable machines, and is ultimately run off through heated rollers in continuous sheets, sometimes miles in length. Sizing is introduced generally at the pulp stage. Blotting and filtering papers are unsized, and are rendered additionally absorbent by the use of wool. The machinery for cutting the paper into sheets as required is of very ingenious construction. "Hand-made" paper is formed exclusively of prepared rags. The United Kingdom, apart from its own very large resources in this respect, imported £13,148,675 sterling worth of material for paper-making in 1929. Great quantities of paper for British newspaper use are now being made at Newfoundland paper-mills from native timber.

**Paper Hangings** were first manufactured in the East and entered Europe by way of Holland in the 16th century. In the 17th century they were adopted in England, and in recent years the improvements in this class of article have been great.

**Papier-mâché,** a composition of paper pulp and other substances, to which, when moulded into form, coatings of japan, with gilt and coloured inlayings, are added. Elegant and decorative objects are made of papier-mâché. A ceramic paper-mâché is very durable.

**Papyrus,** the earliest known paper made in Egypt at a very remote period from a large species of reed.

**Parachute,** an apparatus in the shape of an umbrella, intended mainly for use by aeronauts in times when their balloon is in danger. In recent years many descents from balloons and aeroplanes have been made by means of parachutes, and they are now part of the equipment of the Flying Corps.

**Paraclete** (the Holy Ghost, or Comforter), the name used in the English translations of St. John's Gospel, and adopted by Abelard to designate the convent in Champagne founded by him, and of which Heloise became the abbess.

**Paradise,** a Persian word used by the translators of the Old Testament to designate the Garden of Eden, and since meaning any place of happiness.

**Paraffin** was first obtained by distillation of coal, the process being discovered about 1830. About 1848, Mr. James Young procured it from mineral oil, and Irish peat also yielded it. The main source of paraffin supply to-day is crude petroleum. It is largely used in the manufacture of candles, for waterproofing, and numerous other purposes.

**Parcel Post** was established in England in 1883 for inland parcels up to 7 lb. in weight, the maximum being raised to 11 lb. in 1886. The system has since been extended to India, Egypt, and other countries. The British Postal authorities carry over 160 million parcels annually now, the postage on which exceeds four millions sterling.

**Parchment,** made chiefly from the skins of animals (those of the sheep and goat being mostly utilised), was employed in olden times, before printing was invented, for writing books upon. Latterly it has been mainly used for legal documents. A vegetable parchment was invented by W. E. Gaine in 1857, and though not equal in strength and durability to skin parchment, has been largely employed. Vellum is parchment made from the skins of young calves or lambs.

**Pardons** are complete remissions of penalties or punishments, a power that is vested (at least nominally) in the king or other heads of the state of a country.

**Parhelia** is the term applied to the very peculiar phenomena known as "mock-suns" seen sometimes in the higher Arctic regions. The sun is then attended by a number of halos crossing each other in various geometrical forms, and said to be due to the refraction of light caused by crystals of ice in the air.

**Pariah,** a very low caste of Hindu, outside the pale of regular castes, and avoided as something unclean. They are the lowest class of labourers, but are often employed as servants to European families.

**Paris University** is said to have been founded by Charlemagne, but as known to modern times was established in the 14th century, and is one of the greatest educational institutions of Europe.

**Parliament, as a British institution, derives its origin from the Saxon general assemblies, or Wittenagemot. The representatives of the people later formed a House of Commons, which was settled by statute in 1258 and gradually acquired its present transcendent and absolute power and jurisdiction, and sovereign and uncontrollable legislative authority The name comes from the French word *parlement* or discourse.**

**Parquetry,** the name of a style of flooring consisting of small rectangular wooden blocks laid down according to geometrical pattern.

**Parrot,** the popular name of a widely distributed family of tropical birds, including the African grey parrot, the green parrot of South America—both familiar cage pets in this country—and the various parrakeets, cockatoos, macaws, lories, etc. Nearly the whole of these birds possess a remarkable gift of imitating sounds, especially that of the human voice.

**Parsees,** descendants of the Zoroastrians, or Fire-worshippers of Persia, are now more numerous in India than in the land of the Shah. They are born traders, and many of them not only possess great wealth but are renowned for their charities.

**Parthenon,** the famous Temple of Minerva on the Acropolis at Athens, erected about 442 B.C. under the superintendence of Phidias, who therein placed his renowned statue of the Greek goddess. The Parthenon was 227 feet long by 101 feet broad, and was in the pure Doric style. The ruins still existing are of considerable extent. The famous sculptured friezes, known as the Elgin Marbles, are now in the British Museum.

**Partridge,** a well-known British game bird the shooting of which forms a considerable attraction to sportsmen in the season, which opens on September 1st. There exist only three species, two of which are native to this country.

**Passionists,** a priestly order founded in the 18th century in Italy by St. Paul of the Cross. In 1842 some Passionists established themselves in England, and the order has now several houses in this country, the leading one being at Highgate; the late Cardinal Manning solemnly blessed this monastery at its institution in 1876.

**Passover,** the Jewish festival commemorating the departure from Egypt and the passing of the Angel of Death over the houses of the Israelites.

**Passports** were at one time a necessary voucher for travellers, and consisted of a licence signed by a ruler, or proper State official, authorising the person named to pass through a country or from one country to another. Passports to British subjects are granted by the Foreign Office. In war-time they are necessary credentials, and restrictions on their issue are laid down.

**Pastel,** a painting material mostly used for portraits, composed mainly of pipeclay and colouring matter.

**Paten,** the dish used for holding the consecrated bread in the Eucharistic service.

**Pathology,** the science of diseases, in their full physiological and anatomical bearings; investigating their predisposing causes, characteristic symptoms, and progress from inception to climax and conclusion.

**Patricians,** the aristocracy of ancient Rome.

**Paul's Cathedral, St.,** stands on the site of an ancient Pagan temple that existed in London in the 3rd century. The present noble building is the third that has been erected on this ground. The second—a fine Gothic structure which possessed what was then the highest spire in the world—was totally destroyed in the Great Fire of 1666, and in 1674 the first stone of Wren's great church was laid. The edifice was completed in 1710 and cost £747,660. Its total length from the main portico to the east end is 510 feet, its breadth 282 feet, and its height 365 feet, the cross being 404 feet above water-level. The roof, which was in danger of falling in, was repaired in 1930, but voluntary funds are still being collected for restoration purposes.

**Peace Pact.** The Kellogg "peace pact" for the renunciation of war was signed by the representatives of the principal civilised countries of the world in Paris on August 27th, 1928. By the middle of September the original 15 signatories had been increased to over 50 nations, leaving about 15 still to be heard from. The preamble (*inter alia*) states:

"Convinced that all changes in their relations with one another should be sought only by pacific means and be the result of a peaceful and orderly process, and that any signatory Power which shall hereafter seek to promote its national interests by resort to war should be denied the benefits furnished by this Treaty.

"Have decided to conclude a treaty, and for that purpose have appointed as their respective plenipotentiaries: Who, having communicated to one another their full powers, found in good and due form, have agreed upon the following articles:—

"ARTICLE I—The High Contracting Parties solemnly declare, in the names of their respective peoples, that they condemn recourse to war for the solution of international controversies, and renounce it as an instrument of national policy in their relations with one another.

"ARTICLE II.—The High Contracting Parties agree that the settlement or solution of all disputes or conflicts of whatever nature or of whatever origin they may be, which may arise among them shall never be sought except by pacific means.

"ARTICLE III.—The present Treaty shall be ratified by the High Contracting Parties named in the preamble in accordance with their respective constitutional requirements, and shall take effect as between them as soon as all their several instruments of ratification shall have been deposited."

**Peacock,** a bird of large size and beautiful plumage, its characteristic features being a tail of brilliant "eyed" feathers, which it has the power of erecting and spreading out, the males possessing resplendent feathering to a much greater extent than the females.

**Pean,** a term in heraldry indicating one of the furs borne in coat armour, the ground of which is black, with ermine spots of gold.

**Pearl** is produced by certain shelled molluscs, chiefly the oyster. The inner surface of the shells of the pearl oyster yield "mother-of-pearl," and distinct pearls are believed to be morbid secretions, caused by some external irritation. Many fine pearls are found in the actual body of the oyster. Madagascar, Ceylon, the north-west coast of the Western Australia and the Gulf of Mexico are among the most productive pearl-fishing grounds. In ancient times Britain was renowned for its pearl fisheries, the pearls being obtained from a species of fresh water mussel. The Shah of Persia gave £180,000 for a pearl, and Cleopatra is said to have given £80,000 for another. Western Australia has produced a 40-grain pearl, the finest the world has seen. The largest pearl ever found was the "Beresford-Hope Pearl," which weighed 1,800 grains, over six times as much as the oyster that produced it.

**Peat,** decayed vegetable matter found mostly in marshy positions, and common in Ireland and Scotland. Peat is coal in its first stage of development. It is burnt for fuel in many cottage homes.

**Peccary,** an animal of the Ungulata order, found in large numbers in South America. They are shaped like a boar and are of pig-like habits. They are dark-coloured, covered with bristles and provided with tusks, which form powerful weapons of attack.

**Peculiar People,** a religious sect—founded in London about 1838—who held the theory that it was sinful to call in medical aid when people were sick, prayer being all-sufficing. Numerous charges of manslaughter were brought against these people from time to time because of neglect of medical aid, and some were imprisoned.

**Pedometer,** an instrument for recording distances walked, but only capable of registering the number of steps taken.

**Peel Tower,** the name applied to the numerous fortified towers or strongholds which are to be found along the Scottish Border.

**Peep o' Day Boys** were members of a secret insurrectionary society of Irishmen who in 1784 and later caused a good deal of trouble to the authorities. It was their custom to visit the houses of the "Defenders" at daybreak and carry off their arms.

**Pelagians** were a sect of the 5th century, founded by a Briton named Pelagius, who was preaching

in Rome *circa* 400. A bitter controversy was aroused over the Pelagian doctrine, which maintained, among other things, that the consequences of Adam's sin did not go beyond himself, and that the general resurrection of the dead was not due to the resurrection of Christ. Pelagianism was condemned by the councils of Jerusalem and Carthage.

**Pelican**, a genus of bird with long depressed bills, and a sort of pouch suspended beneath, enabling the bird to hold a number of fish in reserve for future consumption. They have immense wings and webbed feet.

**Pemmican**, venison or other meat sliced, dried, pounded and made into cakes, used by explorers and others when out of reach of fresh meat.

**Penal Laws** are such enactments as impose a penalty for certain acts of omission or commission.

**Penance**, a punishment prescribed or voluntarily accepted as an atonement for a sin or offence. Public penance was largely exacted in olden times, and in the Roman Catholic Church to-day penance appointed to the sin is imposed at confession.

**Penguin**, a genus of large birds with small wings and webbed feet, existing in enormous numbers in the Southern Ocean and Antarctic Sea. They breed on the rocky coast, and in the season are to be seen in vast numbers standing erect over their eggs. They are facile swimmers, and live on fish.

**Peninsular War** lasted from 1808 to 1814. Wellington defeated the French at Fuentes D'Onoro, Albuera, Ciudad Rodrigo, Badajos, Vittoria, Salamanca, and entered France with the Allies in 1814.

**Penitentiaries** are special prisons where convicts are confined and put through a course of training intended to reform and make useful citizens of them. The term is now used to designate places where criminals serve sentences of penal servitude.

**Penitents** were a conventual order established in 1272 by Bernard of Marseilles, and consisted mostly of repentant courtesans. They were called Penitents of St. Magdalen. Similar orders were established at Paris and Orvietto at later periods.

**Pentateuch**, the first five books of the Old Testament, Genesis, Exodus, Leviticus, Numbers, and Deuteronomy.

**Pentecost**, in the Christian Church, the Whitsuntide festival in commemoration of the descent of the Holy Ghost upon the apostles during the feast of the Pentecost; to the Jews it is a time of solemn celebration—"the feast of weeks," celebrated on the 50th day, or seven weeks after the Passover.

**Pepsin**, the leading constituent of the gastric juice, which may be obtained by digesting parts of the mucous membrane of the stomach of suitable mammiferous animals in water. It is used as a remedy for indigestion and other medical purposes.

**"Pepys' Diary,"** by Samuel Pepys, was first published in 1825. The original MS. is deposited at Magdalene College, Cambridge. The "Diary" gives a graphic picture of the social life of the period.

**Perch**, a well-known family of sea and fresh-water fishes, with dark striped sides. The common perch of British rivers and lakes falls an easy prey to the angler because of its voracity.

**Perfumes** are essences or odours obtained from floral and other substances. The chief flower perfumes are those obtained from rose, jasmine, orange flower, violet, and acacia. Heliotrope perfume is largely obtained from vanilla and almonds. Among the aromatic herbs which yield attractive perfumes are the rosemary, thyme, geranium, lavender, etc., while orange peel, citron peel, musk, sandalwood, patchouli, and other vegetable products are largely drawn upon. In recent times chemistry has been called into play in aid of the perfumer, and many of the popular perfumes of to-day are chemically prepared in simulation of the scents of the flowers or other natural substances the names of which they bear.

**Peripatetics** were followers of Aristotle, the name arising from the philosopher's habit of walking up and down while he expounded his theories.

**Periscope**, an optical instrument which enables the user to observe objects on the other side of an obstacle without exposing himself. During the Great War, when trench warfare was almost universal, the periscope was of invaluable assistance to the troops whether as fixtures on the parapets or as attachments to rifles or bayonets. In a submerged submarine the direction is gauged by the use of a periscope.

**Periwig.** (*See* Peruke.)

**Perjury**, the offence of giving false evidence. The ancient Romans threw the perjurer from the Tarpeian Rock, and after the Empire was Christianised, those who swore falsely upon the Gospel had their tongues cut out. The usual punishment in England from the 16th to the 19th century was the pillory, fine, and imprisonment. It is now punishable by imprisonment.

**Permian Formation**, a group of rocks lying between the Trias and the Carboniferous strata. It has three subdivisions, Upper, Middle and Lower Permian, all of which are rich in fossil deposits.

**Perpetual Motion** is a problem that has engaged the ingenuity of many inventors, known and obscure, including George Stephenson and Arkwright, both of whom struggled with the idea until convinced of its impracticability. There are even yet people who imagine that a machine that will possess within itself the power of supplying its own motion is among the inventive possibilities.

**Peruke**, the name given to the wig worn by men in the 17th and 18th centuries, and up to the end of the first decade of the 19th century. Perukes did not make their appearance in England until about 1260, and during the Restoration period were of great length, falling upon the shoulders. They gradually diminished in size until they disappeared.

**Peruvian Bark.** (*See* Cinchona.)

**Peseta**, a Spanish silver coin worth about 9½d.

**Pessimism**, the theory, as taught by Schopenhauer, that this is the worst of all worlds, and that it is better to sleep than to wake, and to die than to sleep. The term is also generally used to express a tendency to look upon the dark side of things.

**Pestalozzian System**, founded by Johann Pestalozzi in 1775, concerns itself with the education of poor children in reading, writing, and practical industrial employment. It was not successful in Pestalozzi's time, but has been improved and developed on prosperous lines since.

**Petard**, an instrument of war, invented in the 16th century, consisting of a metal cylinder which was filled with gunpowder, and fired at gates or barriers to blow them up. It is now obsolete.

**Peterloo Massacre**, a result of a conflict between the military and a large concourse of people assembled at a Parliamentary Reform meeting held on August 10th, 1819, on St. Peter's Field, Manchester, involving the loss of many lives.

**Peter's Pence**, an annual tribute paid in former times to the Pope, said to have been at first a voluntary offering by Ina, king of the West Saxons, and amounting to a penny a year levied on all families owning land of the annual value of 30d. The tax was continued down to the reign of Henry VIII., by whom it was abolished. It is still customary to call contributions sent to the Pope "Peter's Pence," but nowhere are such payments enforced to-day.

**Peter's, St.**, at Rome, as it at present exists, was built in the 16th and 17th centuries, the first stone being laid by Pope Julius II. in 1506, and completed and consecrated in November, 1626. The dome was designed by Michael Angelo, and Raphael was employed for a time in decorating the building. The length of the cathedral is 669 feet; it has a breadth of 442 feet at its widest point, and its highest point is 432 feet from the ground.

**Petitio Principii**, a line of argument which assumes the conclusion aimed at as a proved fact.

**Petition of Rights**, passed in the reign of Charles I., June 7th, 1628, contained the important proclamation that no freeman should be compelled to pay taxes except as laid down by Act of Parliament; that none should be illegally imprisoned: that soldiers and sailors should not be billeted on private persons; and that commissions should no more be issued for punishing by Martial Law.

**Petrel,** an ocean bird of great power of wing, common in the Southern Ocean, and, as regards some of its species, a visitor to the northern parts of the British Isles. The Stormy Petrel, Fulmar or "Mother Carey's chicken," breeds in Britain. The birds pass most of their time far out at sea.

**Petrol,** one of the products of refining petroleum and largely used for the propulsion of motor-cars.

**Petroleum,** the most abundant of inflammable mineral oils; during the last fifty years produced in enormous quantities. Previous to 1850, when a system of refining was discovered, it was not of much commercial value. The adoption of oil fuel for railway and shipping purposes —and especially for ships of war—is exercising a great influence upon the oil industry. In 1914 the world's petroleum production was 400,483,489 barrels of 42 gals., the United States contributing over 265,762,535 barrels, or about 63 per cent. of the world's output, Russia 67,020,522 barrels, and Mexico 21,188,427 barrels. Iraq is probably one of the richest oil-fields in the world, but its exploitation was not begun until 1925. Mexico produces about 50,000,000 barrels per annum, and Russia about 10,000,000 tons, the United States 1,005,598,000 barrels of petroleum.

**Pfennig,** a German copper coin, 100th part of a mark.

**Phalanx,** a name applied by the ancient Greeks to a body of troops drawn up in close array, with overlapping spears, and eight, ten, or more rows deep. The Macedonians stood sixteen deep. A Greek phalanx consisted of 8,000 men.

**Petty Officers** in the navy correspond with non-commissioned officers in the army.

**Pewter,** an alloy of tin and lead, and sometimes, as in Britannia metal, of tin, copper, and antimony.

**Pharmacopoeia,** the authorised book of formulæ for the preparation of medicines, published by the General Council of Medical Education and Registration of the United Kingdom. Each country publishes a similar book.

**Pharos,** the name of the first lighthouse, built by Ptolemy I., 283 B.C., on the Isle of Pharos, at the entrance to the harbour of Alexandria. It was 460 feet high, and one of the "seven wonders."

**Pheasant,** a familiar bird of the Gallinæ order allied to the jungle fowl and turkeys, and comprising some 15 species. Pheasants came from Western Asia, are of beautiful plumage, and bred for game.

**Phenyl,** an organic radical, found in carbolic acid (phenol), benzole, and aniline.

**Philippics,** the orations delivered by Demosthenes, 352–341 B.C., against Philip of Macedon—remarkable for their acrimonious invective —since when similar discourses have been styled philippics.

**Phillipsite,** a mineral found chiefly in old igneous rocks, and formed of silicate of aluminium, calcium, and potassium.

**Philology,** the study of the literary memorials of different nations. Comparative Philology is more strictly the science of language, in its various forms; origins, laws, and alliances.

**Philosopher's Stone.** (*See* Alchemy.)

**Philosophy,** as defined by Sir William Hamilton, is "the science of things divine and human and the causes in which they are contained; the science of effects and their causes; the science of sufficient reasons; the science of things possible . . . . the science of science; the science of the absolute." The greatest minds of all ages have engaged in philosophical speculations, and many systems and theories have been evolved. (See the various subject and name headings.)

**Phlogiston,** a term invented by Stahl to describe "the inflammable principle" as distinguished from fire in action. Stahl's theories placed the phenomena of combustion on an adequate basis.

**Phœnix,** a fabled bird. (See *Ancient Mythology.*)

**Phœnix Clubs,** for the spread of rebellious propaganda, were established in various parts of Ireland in 1858–9, and many arrests were made. Of the persons brought to trial, however, only one received punishment, Daniel Sullivan, who was sentenced to 10 years' penal servitude.

**Phœnix Park,** the great public park of Dublin, 1,800 acres in extent and containing the Vice-Regal Lodge. It was in this park that Lord Frederick Cavendish was assassinated in 1882.

**Phonograph,** an instrument for reproducing sounds and consisting of a wax cylinder, rotated by clockwork or by a handle, and having a mouthpiece into which a person speaks. As the voice reaches the cylinder the vibrations are recorded on the wax, from which what has been spoken into the mouthpiece can be afterwards reproduced as required.

**Phonography,** a system of shorthand introduced by the late Sir Isaac Pitman in 1837, and since greatly developed.

**Phosphorus** was discovered by Brandt in urine in 1667. It is found, more or less, in most animal and vegetable tissues, and in most minerals. It is an essential element of all plants and of the bones of animals, and is now chiefly obtained from bones. In combination with various metals it forms different phosphates, which are largely utilised as manures. The chief commercial use of phosphorus, however, is in the preparation of lucifer matches.

**Photo-electric cell** or Electric Eye, an instrument which registers light intensities. Its uses are numerous, and include measurement of stellar light, the density of photographic plates, and for converting light waves into sound waves as in the talking pictures.

**Photography,** has been known in regard to its general principles since the days of the alchemists, who discovered that chloride of silver turns black on exposure to light. Wedgwood had some success in chloride of silver experiments, but it was not until 1839, upon the discovery of Daguerre which introduced the photographic camera, that any great practical results were obtained. This discovery produced the daguerreotype. A few years later Talbot patented the calotype, by which photographs were obtained on paper treated with a solution of silver iodide in potassium iodide, and the negative was arrived at. Since then the development of photography has proceeded with remarkable success, improvement on improvement having been introduced. Colour photography is a subject that engages the attention of many experimenters, and some good results have been obtained. (See *Pears' Dictionary of Photography.*)

**Photometer,** an instrument, of which there are various forms, for measuring the intensity of light. The photometers of Bunsen and Rumford are in most general use.

**Phrenology,** the so-called science of the skull and brain propounded by Dr. Call, along with Spurzheim, in 1810–12. It has still many adherents, but few scientists of established reputation have accepted it as based on adequate principles.

**Phrynosoma,** a genus of horned lizards, allied to the molochs and to the toads or frogs, averaging some five inches in length and abundant in Texas and the southern parts of the United States. They have numerous hard spines on their heads; frequently kept as pets.

**Phylactery,** an amulet or charm worn about the person and supposed to have a protective influence over the wearer.

**Phylloxera,** a kind of plant lice which attack the grape vine, and in some years cause great devastation in the vineyards.

**Physicians, Royal College of,** was constituted in London, in 1518, Dr. Linacre, physician to Henry VIII., and the projector of the College, being its first president. The present College in Trafalgar Square was erected about 1825 from designs by Sir R. Smirke.

**Physiognomy,** a so-called science which claims to interpret the temperament and disposition of people from the features of the face. Aristotle and Cicero studied the subject, and from the 16th century to recent times it has had many expounders, the chief of whom was Lavater, whose investigations, as set forth in his "Fragment," published in 1776, were of extreme interest. Physiognomy cannot, however, be classed with accepted sciences; though most people believe in it to a certain extent.

**Physiology,** the science of the structure and functions of animal and plant life.

**Pianoforte** is claimed as an invention for a French instrument maker named Marius, a German organist named Schroeter, and an Italian named Cristofaeli, working independently of each other,

in the 18th century. It proved to be much superior to the harpsichord, which it superseded, inasmuch as the strings of the latter were struck by quills, while those of the pianoforte were struck by small hammers. Pianofortes were introduced into England about 1760, and a German named Zumpi was making them in London in 1766. The most eminent English makers have been Broadwood, Collard, Kirkman, Brinsmead, etc., and among the leading makers of France and Germany are Erard, Pleyel, Bechstein, etc. Upright pianos were introduced about 1800, and "cottage" pianos about 1840. The other kinds are the Grand, the Semi-Grand, and the Square pianofortes, all, however, worked on the same principle.

**Piastre,** once a common Spanish silver coin worth 4s. 3d. English. The name of piastre only applies to-day to certain coins of low denomination in Turkey and Egypt.

**Picquet,** a card game invented by Joquemin for the diversion of Charles VI. of France when in ill-health about 1390.

**Picts,** inhabitants of Scotland in pre-Roman times, are held by some historians to be a branch of the old Celtic race, by others to have been of Scythian origin. They occupied the Lowland portion of Scotland, and were subdued by the Scots in the 9th century, Kenneth II. becoming king of the whole of Scotland.

**Pictures of Great Price.** The costliest pictures in the British National Collection are Titian's Cornaro Group, purchased in 1929 for £122,000, the Wilton Diptych, £90,000. Holbein's portrait of the Duchess of Milan, £72,000. The next costliest is the "Ansidei Madonna" of Raphael, bought in 1885 from the Duke of Marlborough for £70,000—equal to upwards of £14 per square inch. Ruskin spoke of it as "quite the loveliest Raphael in the world." It has been valued by the Director of the National Gallery at £115,500, and Mr. Gladstone was wont to find satisfaction in having saved the tax-payers £45,500 in this purchase. The Rokeby Velasquez (Venus and Cupid) was bought for the National Collection in 1908, for £40,000. Titian's portrait of Ariosto was acquired for the National Gallery in 1904 from Sir George Donaldson for £30,000. Other costly acquisitions include Van Dyck's "Charles the First" (£17,500), Holbein's "Ambassadors," Velasquez's "Admiral Pulido-Pareja," and Moroni's "Italian Nobleman," from Longford Castle, which together cost £55,000. Prices at picture sales have attained extraordinary figures at many recent sales. Lawrence's "Pinkie" realised £77,000 at auction in 1927. £41,370 was paid for Romney's portrait of Lady de la Pole, for which the artist received only 100 guineas. Raeburn's portraits have also realised extraordinarily high figures in recent years. Many pictures from famous English homes have lately crossed the Atlantic.

**Pier,** a projecting embankment, wall, wharf, quay, or landing place, now to be found at most sea-coast towns. One at Southend, Essex, is over a mile in length, and the Southport Pier on the west coast is almost as long. There was an act passed by Parliament in 1862 to facilitate the formation, management and maintenance of piers and harbours in Great Britain and Ireland.

**Pietists** were a body of religious reformers, who, under the leadership of Spenner, a Leipzig professor, spread themselves over Germany in the 17th and 18th centuries. Although guilty of some extravagances they were zealous in their aims, and did good work in promoting the practical side of religion.

**Pig,** the popular name for a hog or swine, applied to both sexes, though, when making distinctions, the mature male is styled a boar and the female a sow.

**Pike,** a familiar fresh-water fish abundant in the temperate regions of both hemispheres. It forms good sport for the angler in our rivers and lakes, and sometimes attains a weight of from 20 lb. to 30 lb. It is extremely voracious, is covered with small scales, and has a ferocious-looking head.

**Pilchard,** a fish of the herring family, but with smaller scales and more rounded body. It appears off the Cornish coasts in vast shoals every summer.

**Pilgrimages,** the undertaking of a journey to a distant place or shrine, to satisfy a religious vow or secure spiritual benefit, were resorted to in early Christian times. The first recorded pilgrimage is that of the Empress Helena to Jerusalem in 326. In the Middle Ages they became common, and were undertaken by monarchs and people of rank in all Christian countries. The Mohammedans have been making pilgrimages to Mecca since the death of the Prophet, such duty being enjoined by the Koran. In recent years Roman Catholic pilgrimages to Lourdes, La Salette, and other places have drawn large numbers of the devout.

**Pilgrim Fathers,** the 74 men and 28 women, all English Puritans, who, after living some years in exile in Holland, to escape persecution in their own country, set sail from Southampton on August 15th, 1620, for America landing at Plymouth Rock on December 25th of that year. They founded the settlement of Plymouth, and are regarded as the pioneers of American colonisation although 13 years earlier a small Virginian colony had been established.

**"Pilgrim's Progress,"** Bunyan's famous allegory, written in Bedford gaol. The first part was issued in 1678. It is the greatest work of its kind, and has gone through hundreds of editions.

**Pilgrim Trust, The,** was established in 1930 through the generosity of an American, Mr. E. S. Harkness, who "has many ties of affection with the land (England) from which he draws his descent." A sum, approximately £2,000,000, has been placed in the hands of trustees—Mr. Baldwin, Lord Macmillan, Sir Josiah Stamp, Sir James Irvine, and Colonel John Buchan—to be distributed in Great Britain. The terms of the deed are sufficiently wide to cover charitable, educational and national institutions, and the disbursements will be made at the discretion of the trustees. This generous benefaction is due to the donor's admiration of the part Great Britain played in the Great War, and the financial burden she has since sustained.

**Pillory,** a wooden instrument of punishment in use in England until 1837. It consisted of a pair of movable boards with holes through which the culprit's head and hands were put, and was usually erected on a scaffold. While a person was undergoing this punishment the mob generally pelted him with stones and rubbish, sometimes to his serious injury. People convicted of forgery, perjury, or libel were often condemned to the pillory, but from 1815 to 1837 the only offence for which it could be inflicted was perjury.

**Pinchbeck,** an alloy (25 per cent. zinc, 75 copper) introduced by a London toyseller named Pinchbeck in the 18th century, and largely used for the making of watch cases and other articles where cheapness was desired. It was intended to imitate gold.

**Pine,** a coniferous tree that flourishes in most northern latitudes, and including may species, all of which afford valuable timber, and yield turpentine and tar. The "Scotch fir" is the only species native to Britain.

**Pinnacle,** a pointed, spire-shaped structure rising above the roof of a building, serving mainly as ornament, but also of use in giving firmness to the part it rests on. Pinnacles are found in nearly all styles of architecture.

**Pins** were in existence, no doubt, in prehistoric times, and have been unearthed in British barrows. Brass pins were introduced into England from France about 1540, and were being made in this country three years later. They were manufactured by machinery in England in 1824.

**Pipa,** a species of toad inhabiting Guiana, and not found elsewhere. It is of considerable size, and is remarkable for the fact that the female carries on its back the eggs of its young until they are hatched, herself depositing them in that position. Generally known as the "Surinam toad."

**Pipe-fish,** an eel-like fish with an elongated snout resembling a pipe. It is common in British waters, and there is an American species. In many places it is called the "sea horse."

**Pistole,** the name originally given to a Spanish gold coin, worth about 16s. sterling. Other countries —France, Italy, Germany—also adopted the name, and altered the value.

**Pistols,** small firearms, were invented at Pistoja in Italy, and adopted by the English cavalry in 1544. To-day pistols are mostly of the revolver pattern.

**Pitcairn Islanders** were originally the mutineers of the *Bounty*. They took possession of the island in 1790, and it was not until 1814 that their whereabouts was ascertained, accidentally, by a passing ship. The mutineers, under their leader, Adams, had settled down to a communal existence, married black women from a neighbouring island, and increased so in numbers that in the course of years they were too many for the island to support, and in 1856 they were removed by the British Government to Norfolk Island. (*See* Norfolk Islanders.)

**Pitch-blende,** a very scarce mineral, which has been much talked about recently because of its being the source of radium. Scientifically, it is an oxide of uranium, and is of black or brown colour. It occurs in masses with ores of lead, silver and tin, in the latter connection being found in Cornwall. Saxony, Bohemia, and Hungary also yield it in lead and silver veins, while small quantities have been found in some parts of the North American continent.

**Plack,** a Scotch coin of the 15th and 16th centuries.

**Plague,** a terribly fatal epidemic which spread over Europe and devastated England at different periods between the 10th and the 19th centuries. The most serious plague years were 1471, 1478, 1485, 1506, 1507, 1528, 1551 and 1665 (the great Plague of London).

**Plaice** a familiar British sea-fish, of the flounder family, largely used as food and of fair quality, though not reckoned equal to soles.

**Plaid,** a comprehensive garment or tartan of woollen material checked and coloured in distinctive markings for different Scottish clans and worn by women as well as men.

**Plain-song,** a style of musical composition sung in unison, familiar in the churches of the West from very early times, and still largely used.

**Planets,** the name given to such celestial bodies as revolve round the sun in elliptical orbits. The name was first used by the Greeks to indicate their difference from the fixed stars. There are eight primary planets, Mercury, Venus, the Earth, Mars, Jupiter, Saturn, Uranus, Neptune. The Asteroids revolve between Mars and Jupiter. In 1930 the existence of an eighth planet, whose presence had been for many years predicted, was established at the Lowel Observatory and the body named Pluto.

**Plan of Campaign,** the name given to the agitation, at its height in Ireland about 1887, the object of which was to compel landlords to reduce their rents. These proceedings were adopted in connection with the National Land League and gave rise to much disturbance. The Pope condemned the "Plan of Campaign" in 1888.

**Plantagenets,** the Kings who reigned in England between 1154 and 1485 and included the Houses of Lancaster and York.

**Plantigrada,** the scientific name for such Carnivora as walk with the sole of the foot flat to the ground, such as the bear, badger, racoon, etc.

**Plassey, Battle of,** was fought between the British under Clive and the Indians under Suraja Dowlah on June 23, 1757. The British had a force of only a few thousand men, but gained a decisive victory over an army of 68,000.

**Plate,** the term applied to gold, silver, or plated-ware, such as spoons, knives, forks, dishes, cups, etc. (*See* Goldsmiths' Company.) In recent times it has been the custom to include under the term articles of the baser metals covered with a thin coating of silver and differentiated as "electro-plate."

**Platinum,** a scarce white metal generally allied with iridium, osmium, ruthenium, and palladium. It can only be melted in an oxyhydrogen or electric furnace, but can be rolled out into a film-like sheet, or drawn out to the finest wire.

**Plebeians** were the ordinary citizens of Rome as distinguished from the Patricians. Intermarriage between the two classes was prohibited.

**Pleiades,** the name applied to the Seven Stars of the Taurus constellation, and really comprising many thousands of stars.

**Plough Monday,** the first Monday after the Epiphany, when in olden times the rustic population returned to work after the Christmas festivities.

**Plover,** a well-known wading bird, widely distributed over the marshy places of Europe, and a familiar object in many parts of Britain.

**"Plug" Riots** were frequent in the manufacturing districts of the North of England about 1842, when there was great distress among factory workers. The rioters attacked mills and, by drawing the plugs from the boilers, stopped the machinery.

**Plume,** strictly a feather, but often worn as a military head adornment consisting of a tuft of feathers.

**Plurality,** a term in Ecclesiastical Law denoting the holding of more than one benefice by one person at the same time. This was much indulged in formerly. The Pluralities Act, 1885, provides that two benefices may be held together by dispensation of the Archbishop.

**Pluto,** the new planet, was discovered by Dr. Slipper of the Lowell Observatory in Arizona on March 13, 1930. It is similar to the earth in that it is a solid and cold body. At present it is estimated to be 3,810 million miles distant from the sun.

**Plymouth Brethren,** a Nonconformist sect founded about 1830 by Mr. Darby. They are not at great variance with other Protestant churches, recognise no order of ministers, and receive into communion all who acknowledge Christ.

**Pneumatic Despatch,** a method of parcel forwarding, by means of compressed air, through a tube or along an enclosed railroad. The experiments hitherto made in this direction have not been particularly successful on a very extensive scale, but it seems probable that pneumatic despatch will be ultimately widely adopted. The system is satisfactorily at work in connection with the short-distance transit of letters, packets, etc.

**Poet Laureate** is an office that dates from a very early period. There was a Versificator Regis in the time of Henry III. Chaucer held the office in the reign of Richard II. Skelton was Poet Laureate under Henry VIII.; Spenser held the post in Queen Elizabeth's time; Ben Jonson also held it. Dryden was Laureate from 1670 to 1700. In the 19th century the Poet Laureates were Southey, Wordsworth and Tennyson. Mr. Alfred Austin was Poet Laureate between 1896 and 1913, when Dr. Robert Bridges succeeded to the office, and since the death of Dr. Bridges in 1929, Dr. John Masefield.

**Poictiers, Battle of,** was fought on September 19th, 1356, when Edward the Black Prince gained a complete victory over John, King of France, who was taken prisoner and brought to London.

**Pointer,** a sporting dog of Spanish origin known in this country from about 1688. When it sees game it stands still and points with its uplifted foot in its direction.

**Polar Medal,** for service in the Polar regions, was first granted to the officers and crew of the *Discovery*, in recognition of the success of their enterprise in the South Polar regions.

**Pole-Cat,** an animal of a dark-brown colour, about 18 inches in length, exclusive of tail. It is carnivorous and belongs to the weasel family. Like the skunk, it emits an offensive odour.

**Pole-Star** is of the second magnitude, and the last in the tail of the Little Bear constellation. Being near the North pole of the heavens—never more than about one degree from due north—it always remains visible in the Northern hemisphere; hence its use as a guide to seamen.

**Police** have existed from the earliest times. There was a London watch in the 13th century, and its members were increased and its jurisdiction extended from time to time until the early part of the 19th century, when an improved police system was established. It was introduced by Sir Robert Peel (then Mr. Peel), and in 1839 extended to other parts of the country. London has about 22,000 police, with 282 horses, and the total number in England and Wales is about 33,436, exclusive of City of London and Metropolitan Police; Scotland has 6,605; and N. Ireland, 2,934. The Metropolitan and City of London Police cost over £8,000,000 a year, and the cost of the county and borough police in the British Isles outside of the metropolis, is over £11,000,000 annually.

**Political Geography** deals with the subjects of political power and its distribution among the nations, having regard to population, productive capacity, social features and methods of government.

**Polka,** a dancé introduced into England from Bohemia in 1843; it won great popularity, but now seldom danced.

**Poll Tax,** a tax levied on every adult—every head or poll—was first imposed in England in 1380, and led to the "Peasants' Revolt," headed by Wat Tyler. It was re-imposed in 1513, and again by Charles II., but abolished by William III. in 1689.

**Polo,** a game which has been well styled "hockey on horseback," and seems to have existed in the East for a long period.

**Polyandry,** a kind of domestic existence which allows a woman a plurality of husbands. It only prevails in a few remote communities, in some parts of Asia, and among certain savage tribes.

**Polytheism,** the doctrine of plurality of godheads.

**Polyzoa,** the name given to a class of molluscoida living in aggregated masses, and having the appearance of moss. They are diverse in form, of very primitive structure, and the reproductive organs of both sexes are present in the same individual.

**Pomace,** the name given first to the pulp of apples and other fruit after pressing—as in cider-making; and later to fish refuse after the oil has been compressed from it. The latter is then exposed to the sun and in its dried form constitutes fish guano.

**Pomander,** the name given to a small ball or box which was formerly carried suspended from the neck or girdle, and contained perfumes and spices which were supposed to be a protection against infection.

**Pomology,** the science of fruits, treating of the cultivation and properties of fruit trees and fruit-bearing shrubs.

**Poniard,** a stabbing weapon somewhat larger than a dagger; very commonly carried about the person by Spaniards and Italians of the 16th and 17th centuries, but never much in vogue in England.

**Pontifex,** the title assigned in ancient Rome to members of the chief College of Priests, whose duties were of a general kind. The "pontifex maximus" was the chief religious official of the State.

**Pontoon,** any temporary floating structure that forms part of a bridge across a river. Pontoons are in various forms, mostly cylindrical and hollow, others take the shape of deck-boats locked together. Pontoon bridges capable of supporting railways are a feature of modern military equipment.

**Poodle,** a well-known variety of domestic dog, having a thick curly coat which in France it is the custom to cut close on the lower part of the body. It is an exceptionally intelligent animal, capable of being taught many tricks.

**Pope (The),** the head of the Roman Catholic Church, and successor of St. Peter. He is elected by the body of Cardinals; since 1870, when the King of Italy deposed the holder of the office from temporal power, no Pope had left the Vatican between appointment and death until 1929, when peace was made between the Church and State in Italy and a sum of nearly £20,000,000 was paid to the Holy See as compensation.

**Poplin,** a favourite fabric composed of silk and worsted, and now chiefly manufactured in Dublin. The industry was introduced into this country from France by Huguenot refugees in 1693.

**Poppy Oil,** a fixed oil obtained from the seeds of the opium-poppy, and used as a food, for illumination, and in a certain class of soap-making.

**Population of the British Empire.**—The British Empire—according to the most recent returns (*i.e.* 1931), numbers 450 million persons:—England, 37,354,917; Wales, 2,593,014; Scotland, 4,882,497; Isle of Man, 49,338; Channel Isles, 93,061; Ireland, 4,228,553 (1926). The population of the principal Dominions and Colonies is as follows:—

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|---|---|
| India | 350,352,678 |
| Australian Commonwealth | 6,373,219 |
| New Zealand | 1,344,469 |
| Canada | 10,300,000 |
| Natal | 1,429,431 |
| Cape Colony | 2,781,185 |
| Transvaal | 2,087,837 |
| Orange Free State | 629,000 |
| Rhodesia | 1,882,730 |
| Uganda | 3,533,010 |
| Nigeria | 18,765,790 |

**Porcupine,** a peculiarly constructed rodent whose back is covered with long, sharp, black and white spikes, which form a powerful means of defence. There are two species—the Common Porcupine, which is found in Southern Europe and Northern Africa; and the Tree Porcupine, which is restricted to the American continent.

**Porphyry,** a form of crystalline rock of many varieties that in ancient Egypt was quarried and used for the decorative portions of buildings and vessels. The term is applied generally to the eruptive rocks of the porphyritic class.

**Porpoise,** a marine mammal of the dolphin family, and a common inhabitant of northern seas. Porpoises travel in shoals, their progression being marked by constant leapings and plungings. Their average length is from four to five feet.

**Port,** a special kind of red Portuguese wine, taking its name from Oporto. It was little known in England until the Methuen Treaty of 1703, when it was permitted to be imported at a low duty.

**Portcullis,** a strong, movable timber or iron grating let into the wall of the gateway to a feudal castle, and capable of being lowered or raised at will. It formed an effective protection against attack in days anterior to firearms.

**Porter** received its name from the fact that it was first drunk by porters in London. (*See* **Beer.**)

**Portland Cement** is a mixture of about 20 parts of clay with 80 parts of chalk, specially prepared in kilns, and forming a substance which, after admixture with water, will set hard and solid.

**Portland Vase,** one of the most renowned specimens of Greek Art, long in the possession of the Portland family. In 1810 it was placed on loan in the British Museum, and in 1845 was smashed to pieces with a stone by a man named Lloyd; but, having been cleverly restored, it was exhibited in the Jewel room. It was discovered in the 16th century near Rome in a marble sarcophagus, and is supposed to have been the cinerary urn of some Imperial personage. It was purchased from the Barberini family in 1770 by the Duchess of Portland. The vase stands about 10 inches high, and is ornamented with figures in white enamel on a dark blue ground. The vase was removed by the owner from the British Museum in 1929. It was put up for auction with a high reserve and not sold. Later a private American buyer negotiated for it.

**Portreeve** in olden times was an official appointed to superintend a port or harbour, and before the name of mayor was used the chief magistrate of London was styled the Portreeve.

**Porzana,** the name given a bird of the rail family. In England it is commonly called the crake.

**Positivism,** a system of philosophy propounded by Auguste Comte, rejecting all metaphysical conceptions; a species of utilitarianism.

**Posse Comitatus,** an old legal term designating all available people in a county, between the ages of 15 and 70, liable to be called upon to aid the sheriff in asserting the power of the law.

**Post Impressionism, Cubism,** and **Futurism** embrace three latter-day art movements which, to some extent, represent the barbaric in artistic expression. The Post Impressionists regard drawing as secondary to beauty of paint, and leave the artist to scatter his colours as may best convey his impression. The Cubists and Futurists go still farther, and aim at realising, by a series of chaotically-placed colours, the pictorial idea in the mind of the artist. While to the lay onlooker all three movements signify little that is understandable, to their devotees they indicate a healthy desire to break away from old conventions.

**Post-obit** is a bond given for a loan undertaking to repay the lender the sum borrowed with interest, after the decease of another person from whom he expects to receive money.

**Post Office.** A post office system of a kind has existed for centuries, but after the introduction of railways postal administration assumed special magnitude. With the penny postage system, inaugurated by Sir Rowland Hill in 1840, the modern post office era may be said to have commenced. In 1838 the Post Office began to handle money for the public by establishing the Money Order Department. The Post Office Savings Bank followed in 1861, and Postal Orders were introduced in 1880. Since 1870 the Telegraphs have been owned by the State, and the Post Office Telephone system was established in 1892, although the National Telephone Co.'s system was not fully combined with the Post Office Telephone service until January 1, 1912. With a largely augmented business and increased facilities there was a lowering of rates, the 6d. telegram dating from 1880, and 1d. per 4-ozs. inland letter postage rate from 1897. In 1915, however, owing to the war, the telegram rate was advanced to 9d. and the inland letter postage to 1d. for the first ounce, 2d. for 1 oz. to 2 ozs., and ½d. for every additional 2 ozs., now 1½d. under 2 ozs. plus ½d. for each succeeding 2 ozs., and telegrams 12 words for 1s. The Parcel Post was inaugurated in 1881. In 1929–30, 6,400,000,000 letters, etc. and 160,500,000 parcels were delivered in the United Kingdom, 15,030,000 money orders, 170,900,000 postal orders were issued; 56,500,000 telegrams sent, and £77,400,000 were invested in the Post Office Savings Bank. The estimated expenditure of the P.O. for 1930–31 was £38,508,815. A new General Post Office has been built on the old Christ's Hospital site in Newgate Street, at a cost of £310,000. (For **Postal Rates** *see Office Compendium.*)

**Potassium,** a metal discovered by Sir Humphry Davy in 1807, and now generally obtained by the electrolysis of fused potassium hydroxide. It is a common constituent of numerous rocks, and found in many soils and vegetable and animal tissues. Its chief compounds are nitrate, caustic potash, etc.

**Potoroo,** a marsupial animal so like the kangaroo in shape as to be called the kangaroo rat. Found only in West Australia and Tasmania.

**Potstones,** large pear-shaped flints discovered from time to time in the chalk formation, and supposed to be the fossils of large sponges.

**Pottery** was made in prehistoric times. The ancient Egyptians attained great skill in this art, and all the early civilised peoples devoted themselves with success to pottery production. In the Middle Ages the Italians, Germans, Flemings and Dutch made great progress in pottery developments, bringing into use enamels and glazes. Delft, in Holland, introduced a class of earthenware in imitation of porcelain which was in great vogue throughout Europe for a considerable time. In France, Bernard Palissy produced the famous enamelled ware which bore his name, and a little later the English Staffordshire potteries came into prominence, and attained great prosperity and high artistic realisation under Wedgwood. Among the other great centres of pottery and porcelain production may be mentioned Dresden and Sèvres. In England, in addition to the Staffordshire potteries, successful manufactories have been established at Chelsea, Derby, Worcester, Coalport, and Colebrook Dale; while in the Far East the Japanese and Chinese have always been famed for their productions of beautiful ware.

**Pot-Wallopers,** the name applied to certain electors who, prior to the Reform Act of 1832, were permitted to receive the Franchise on producing proof that they had, as the phrase went, "boiled their own pot" in the constituency during the six months preceding an election.

**Poulett Peerage Claim** was the claim of William Turnour Thomas Poulett to the Poulett earldom. The claimant used to wheel a street organ, about bearing a placard with the inscription "I am Viscount Hinton, son of Earl Poulett." The House of Lords pronounced against him, and he died in a workhouse in 1909.

**Poultry Compter** was one of the old London City prisons, and stood in what is now called the Poultry. The Poultry Chapel was built on the site of the Old Compter in 1819.

**Prado Gallery,** the great public picture collection of Madrid, containing a superb collection of paintings by Velasquez, Murillo, Raphael, Titian, Dürer, Van Dyck, Rubens, Holbein, etc.

**Præmunire,** a legal term applied to any offence calculated to interfere with, or cast contempt upon, the prerogative of the Crown. The law against this, at first intended to prevent the encroachments of papal power in England, was passed in 1306.

**Prætorian Guards,** a personal bodyguard established by the Emperor Augustus, and employed down to the time of Constantine.

**Prairie Dogs** are common rodents in Western America, and very like the marmot in general structure. They live in communities in burrows.

**Prawns,** crustacean animals allied to lobsters, shrimps, and cray fishes, *e.g.* the prawn.

**Prebendary,** a clergyman who receives a prebend or stipend because of his special connection with a Cathedral or Cathedral Church.

**Preceptors, College of,** founded 1846 for middle-class teachers. Diplomas are granted for Associates, Licentiates, and Fellows. Professorship of the Science of Education since 1873.

**Predestination,** the Calvinistic doctrine that God from and to all eternity predestined everything to happen as it does and must happen, even to the fixing of the souls to be rewarded and punished.

**Prefect,** chief magistrates in Ancient Rome. The title is now applied to the Chiefs of Administration of the Departments of France.

**Prehnite,** a translucent mineral of a pale green colour and crystalline in structure. It is a double silicate of aluminium and calcium, and is mostly found in old igneous rock formations.

**Pre-Raphaelites,** a school of artists formed about 1850, and including among its exponents Millais, Rossetti, Holman Hunt and others, whose ideal was absolute fidelity to Nature. For a time the school kept well together, and exercised much influence upon art developments; but although much of their work still pleases, the movement is regarded as out of date.

**Presbyterian Churches.** In 1930 membership in England 84,598, in Ireland 93,744; for figures in Scotland *see* **Church of Scotland.**

**Press-Gang,** a body of sailors employed to impress men into naval service, frequently resorted to in former times in England, especially during the war with France in the early 19th century, but not since.

**Prester, John,** a Christian ruler or priest of the Middle Ages, supposed to have lived in Africa.

**Primogeniture,** the right of the first-born male child to inherit the real estate of his father, in the absence of direction by will or deed to the contrary.

**Primrose League,** founded in 1883 to commemorate Lord Beaconsfield's political work and to promote the principles he advocated. April 19th, is Primrose Day.

**Prinos,** the evergreen oak, or Winterberry, a bush the leaves of which are sometimes used in America as a substitute for tea.

**Printing** by movable types was first practically utilised by John Gutenberg, at Mayence, about the middle of the fifteenth century, Fust and Schoeffer being associated with him. The invention is claimed for Gutenberg, and also for Laurence Coster of Haarlem. It was introduced into England by Caxton, who set up a printing press in Westminster in 1475. Gothic characters were first used, being superseded by Roman letters in 1518. The mechanism of the printing press was crude up to 1801, when the first iron press was invented by the third Earl of Stanhope. Steam printing dates from 1814, Mr. John Walter, of the *Times* newspaper, being the first to use the steam press invented by a German named Konig. This press printed 1,100 sheets per hour. Improvements were subsequently introduced by Applegarth and Cowper, and great strides were made in 1858 when the Hoe machine, which turned out 20,000 impressions an hour, was put on the market. Then came the Walter press, which printed on continuous rolls of paper from curved stereotyped plates. In connection with printing the Linotype invention has been of great utility, and another and somewhat analogous machine contrivance is the Monotype.

**Priories** existed in this country from the 8th to the 15th century, and were dependent upon the Abbeys.

**Privateers** were ships of private individuals licensed in time of war to seize and plunder the ships of the enemy. In 1856, however, privateering was abolished.

**Privy Council**, of advisers to the Sovereign, has existed in England from early times. It comprises members selected from the most distinguished men in the Realm, and includes the Royal Princes and Archbishops, the principal Officers of State and of the Royal Household, and has a Lord President, appointed by Letters Patent. It grants Charters of Incorporation; but, generally speaking, its power is small in comparison with what it was in the past.

**Prohibition**, a term meaning the control and regulation of the liquor traffic by legislation. In 1920 prohibition was applied in 33 States of the U.S.A. America "went dry," the manufacture and sale of alcoholic drinks being prohibited.

**Protectionists**, as a political party, derived their name from a society for the protection of agriculture established in 1844 in opposition to the Anti-Corn Law League, led by Lord George Bentinck from 1846 to 1848. The society was dissolved in 1853. Protection as a political policy did not cease to have its adherents, and recent years have witnessed a strong revival of the Protectionist idea in England, and the fiscal policy known as Tariff Reform, on the lines advocated by Mr. Chamberlain, was generally adopted by the Unionist party. The war of 1914–18 has had the effect of giving solidarity to the movement. The high tariff walls round all European States except England have led to serious economic difficulties and the Free Traders have largely revised their ideas. At the present time some kind of protection is generally admitted to be necessary, though some would advocate a campaign of Empire Free Trade.

**Protestant**, as a denominational term, was first applied to the Lutherans, who, in 1529, protested against the encroaching power of papacy.

**Proteus**, a peculiar genus of amphibian newt found only in the subterranean caverns and lakes of Central Europe. It averages about a foot in length, and is of a flesh colour. It is said that its blood corpuscles are 15 times larger than those in human blood.

**Protocol**, diplomatic term denoting the first draft of any important document to be used for political purposes.

**Protogine**, an Alpine variety of granite, some variations of which contain talc or chlorite.

**Protoplasm**, meaning the first creation of a thing, is a term applied to describe the substance which, under the right conditions, develops into organic life. Scientifically, protoplasm is defined as consisting of hydrogen, carbon, oxygen, and nitrogen in intricate combination. Attempts to make protoplasm synthetically have so far failed.

**Provost**, a Scottish official similar in rank to an English mayor. The Provosts of Edinburgh, Glasgow, Aberdeen, Perth, and Dundee are styled Lord Provosts. The title of provost is also given to the heads of various English colleges.

**Prozymite**, a term used in the 11th century to indicate such as used leavened bread in the Eucharist.

**Prud'hommes** (Prudent Men), Councils of, were French trade tribunals, of masters and workmen, formed to decide on disputes. Such tribunals existed in the Middle Ages at Marseilles and Lyons, and were formally revived in the latter city in 1806. Similar bodies exist in other parts of France.

**Prunella**, a kind of material once largely used for gowns of peasant women, and shoe linings.

**Prussic acid** is a compound of nitrogen, carbon and hydrogen, and obtained by distillation of cyanide of potassium. It is probably the most poisonous of known compounds.

**Psalms, Book of**, believed to have been mainly written by King David; this part of the Holy Scriptures contains 150 separate compositions.

**Psychical Research** concerns itself with the investigation of such phenomena as the nature of the mind and spirit, its possible super-material powers and survival after death. On the spiritualistic side the movement is a religious one, while others represent a desire for a rationalistic treatment. Several prominent names have been connected with one or other of these tendencies, *e.g.* Sir O. Lodge, Sir A. Conan Doyle, etc. Rightly most of these problems belong to the field of psychology on the one hand and to physiology and physics on the other. The Society for Psychical Research was founded in 1882, and has now about a thousand members.

**Psycho-Analysis**, a therapeutic treatment of neurosis based on the theory of the unconscious mind, which retains the unpleasant or indecent impressions which the conscious mind suppresses, thus setting up a series of pernicious complexes. Treatment consists mainly in bringing to light by a process of cross-examination the nature of these suppressions and suggests the best method of dealing with them. The first to formulate and practise these methods by using interpretations of dreams and the explanation of symbolism in dreams and unconscious ideas was Prof. Sigmund Freud of Vienna. Later schools, such as those of Jung and Adler, have considerably modified his theories.

**Psychology**, the science of the mind, properly speaking a department of pure philosophy. The term was first used in the 17th century, but as a separate study and in its application to medicine, education and sociology it has only developed since the beginning of the present century. The main schools of thought are represented on the one hand by Freud (*see* Psycho-analysis) and the Behaviourists on the other, headed by G. B. Watson and Pavlov.

**Ptarmigan**, a family of birds of the grouse class, mostly inhabiting the mountains of Scotland and other northern countries. It lives on Alpine and similar plants, and in the winter assumes a white plumage.

**Pterodactyl**, the name of a remarkable group of extinct flying reptiles, the fossil remains of which have been found in the rocks of the Lower Lias, the chalk of the Mesozoic epoch, and other strata.

**Ptomaine**, a term applied to decaying animal or vegetable matter, usually of a poisonous nature.

**Publicans**, under the Roman Empire, were people who farmed the public taxes. It is this class of officials that is alluded to in the "publicans and sinners" phrase in the New Testament.

**Public Schools** in England include the following:—Bedford Grammar School (founded (1552); Birmingham, King Edward School (1552); Brighton College (1845); Charterhouse School, Godalming (1611); Cheltenham College (1841); Christ's Hospital, West Horsham (1552); City of London School (1442); Clifton College, Bristol (1862); Dulwich College (1619); Eton College (1440); Felsted School (1564); Haileybury College (1862); Harrow School (1571); Malvern College (1865); Manchester Grammar School (1515); Marlborough College (1843); Merchant Taylors' School (1561); Mill Hill School (1807); Repton School, Derbyshire (1557); Rugby School (1567); St. Paul's School (1509); Sherborne School (1550); Shrewsbury School (1552); Stonyhurst College (1594); Tonbridge School (1553); Uppingham School (1584); Wellington College (1859); Westminster School (1339); Winchester College (1394), and Warwick (1123). One of the oldest Girls' Public Schools, St. Saviour and St. Olave's in N. Kent Rd., London, was founded in 1562, but the majority are of relatively recent foundation, mostly from the end of the last century.

**Puma**, a carnivorous quadruped of South America, where it is called the "American lion," though smaller than the lion, seldom attaining a greater length than 40 inches, exclusive of tail, and a height of 2 ft.

**Pumice**, a light stone of variable substance, utilised for cleaning purposes, for polishing, and for smoothing surfaces and edges of pasteboard and surfaces of wood, metal, and other material. It is imported from the Lipari Isles.

**"Punch,"** the leading English humorous publication, was established in 1841, and has had among its editors Mark Lemon, Shirley Brooks, Tom

Taylor, Sir F. Burnand, and now Sir Owen Seaman. Among its contributors it has numbered Thackeray, Douglas Jerrold, Tom Hood, Gilbert a'Beckett, and its artists have included Richard Doyle, John Leech, Sir John Tenniel, Charles Keene, George du Maurier, Phil May, Linley Stambourne and Bernard Partridge. It adopted a partly coloured cover in 1913.

**Punt,** a small, flat-bottomed boat, used for fishing and ferrying, propelled by pushing a long pole against the bed of a stream.

**Purgatory,** the place where, according to the Roman Catholic doctrine, the souls of the dead find temporary habitation while undergoing purification.

**Puritans,** the name originally given to the followers of Calvin in England in the time of Elizabeth, and afterwards applied to dissenting bodies generally, who took sides against the Stuarts and High Church party when Parliament was in civil conflict.

**Pylon,** the huge monumental gateways erected in front of ancient temples or other buildings.

**Pyramids of Egypt,** near Cairo, on the left bank of the Nile, are vast masses of brick or stone with inner chambers and subterranean entrances, dating from about 3650 B.C. The largest was built by Cheops, the Egyptian king, for his tomb, and there he was buried, 100,000 men being employed for 20 years upon it. This is called the Great Pyramid, and has a height of 480 feet, and its base is 764 feet square. It is supposed to have been originally enclosed in a marble casing. The brother and successor of Cheops erected the second pyramid, and the third was built by Mycerinus, a son of Cheops. The second and third Pyramids, though of vast proportions, are considerably inferior in size to the Great Pyramid. A most informing book upon the subject is *The Great Pyramid: Observatory, Tomb and Temple,* by R. A. Proctor.

**Pythian Games** were one of the four great Greek festivals in honour of Apollo and Diana, when many contests were held and laurels distributed as prizes. These games took place every fourth year near the temple of Delphi.

**Python,** one of the largest kind of snake, non-poisonous, and destroying its prey by crushing it. Some species average 30 feet in length, and prey upon deer and other small mammals. It is found only in the Old World.

## Q

**Quack** is one who pretends to possess medical skill for the purpose of making money. Although not so numerous now as in former times, quacks are still to be found in all countries. There is nothing to prevent a man offering a remedy or a person taking it; but if fraud can be proved, or a quack does injury by what he persuades people to buy, he is liable to prosecution.

**"Quad,"** the quadrangle, as of a college or gaol; hence the slang name quad (or "quod") for a prison.

**Quadragesima Sunday** is the first Sunday in Lent, [the fortieth day before Easter.

**Quadrans-Muralis,** a small northern constellation, with no large stars.

**Quadrant,** an astronomical instrument for measuring altitudes, superseded in modern times by the sextant. It consists of a brass arc of a circle 90 degrees in length properly graduated. There are numerous quadrants used in navigation.

**Quadrille,** adapted from an old French country dance, became fashionable throughout Europe in the early part of the 19th century, but seldom danced now.

**Quadroon,** the offspring of a white person and a half-breed or mulatto, representing three-fourths white to one-fourth black.

**Quadrumana,** an order of mammals deriving the name from the fact of their being "four-handed"—that is, being able to use the hind feet as well as the fore feet as hands; *e.g.* monkeys.

**Quadruped,** the term applied to four-footed animals generally, irrespective of class or species.

**Quadruple Agreement,** an agreement made at the Washington Conference in 1922 between the United States, Great Britain, France and Japan for the preservation of peace in the Pacific for ten years.

**Quadruple Alliance.** The most noted have been those of England, France, Austria and Holland in 1718, to maintain the Treaty of Utrecht; and that of 1814, under which England, Austria, Prussia and Russia combined against Napoleon.

**Quadruple Treaty,** signed in London on the 22nd April, 1834, by the representatives of Great Britain, France, Spain and Portugal, for securing the Spanish throne to Isabella II.

**Quæstor,** an official appointed to guard the public treasure in ancient Rome. At first two Quæstors sufficed; then the number was increased to eight; and under Julius Cæsar there were 40.

**Quagga,** an African quadruped of the horse species, striped like a zebra on the neck and head, but not on other parts. It is now extremely scarce.

**Quahog,** a bivalve of the clam order, with large round shell, highly valued as a food. It is chiefly confined to the Atlantic coasts of North America.

**Quail,** an edible bird of the partridge family, of which only one species, the Common Quail, is found in England. It is not more than 8 inches long. It is common in most of the warmer regions of the Old World. The peculiar dactylic call of the extremely pugnacious male bird of the Common Quail species has given rise to its popular rustic name "Wet-my-lips, Wet-my-feet," from a fancied similarity of sound.

**Quair,** an old name for a pamphlet, or little book.

**Quakers,** the popular name for members of the Society of Friends, a religious sect founded by George Fox in the 17th century. In matters of belief they do not differ materially from other Protestant bodies; the chief difference is in worship, Quakers having no prescribed formulas. They assemble in their Meeting Houses, and any one in the congregation speaks when individually prompted, "as the Spirit moves them." Silent meetings are not infrequent. The ordinances of baptism and the Lord's Supper they reject. They object to swear upon oath, and up to 1833 were punishable by law for this refusal; since then they have been permitted to affirm. Until recent times they adopted great simplicity of attire, and in addressing people used the second person singular, but gradually have conformed more to common usage. Many Friends have attained distinction both in public life and in business, and as a body they are highly respected for their honourable dealings. William Penn was one of the most prominent of the early Quakers, and introduced the religion into America. The term Quaker was first applied to the sect because of the founder's frequent use of the word "Tremble" in his exhortations. The number of members of the Society of Friends in England and Wales is over 19,000, and in Ireland about 2,200.

**Quare Impedit** ("Why he hinders"), the title of a writ calling upon any person interfering with the rights of the owner of a presentation to a benefice to show cause why he impedes.

**Quarrel,** the old name for a dart or bolt, shot from a crossbow or catapult in war, before the employment of firearms. [two pints.

**Quart,** a measure of capacity, a quarter of a gallon,

**Quarter,** a fourth part—as, a quarter in avoirdupois weight, that is 28 lb., a quarter of a hundredweight; eight bushels.

**Quarter-Days** in England are Lady Day (March 25th), Midsummer Day (June 24th), Michaelmas Day (September 29th), and Christmas Day (December 25th). In Scotland the legal terms are Whitsun (May 15th), Martinmas (November 11th); the conventional terms Candlemas (February 2nd) and Lammas (August 1st) make up the quarter-days.

**Quartering,** in heraldry, is the disposition of various escutcheons or coats of arms in their proper "quarters" of the family shield, in such order as indicates the alliances with other families.

**"Quarterly Review,"** the great Tory quarterly was started in 1809, in opposition to the *Edinburgh Review,* the Whig organ, est. in 1802.

**Quartermaster,** a military officer charged with the provisioning and superintendence of soldiers in camp or barracks, and holding the equivalent rank to a lieutenant. The Quartermaster-General is an officer who presides over the provisioning department of the whole army. A Quartermaster in the Navy is an officer charged with the steering equipment.

**Quarter-Sessions**, a quarterly criminal court held by justices of the peace in counties and by Recorders in boroughs, having jurisdiction in minor offences, highway and Poor Law administration, etc. In N. Ireland quarter-sessions are held by county court judges. In Scotland a court of quarter-sessions is held in the county towns by the justices, who have power to revise sentences passed at special and petty sessions.

**Quarter-staff**, an old English weapon, consisting of a stout pole some 6½ feet long, which was grasped in the middle and could be swung with telling force in defence or attack.

**Quartet**, a musical composition in four parts, vocal or instrumental. String quartets, consisting of first and second violin, a viola, and a violoncello were most in vogue in the 18th century, and some of the finest instrumental music we possess was composed for these instruments.

**Quarto**, a sheet of paper folded to make four leaves, or eight pages; usually abbreviated to "4to."

**Quartodecimani**, an early Christian community who celebrated the Paschal festival on the 14th day of the month, when the Jews celebrated their Passover. In consequence of the confusion caused, the practice of the Quartodecimani was condemned by the Council of Nice in 325.

**Quartz** is a common and usually colourless mineral, abundantly diffused, and occurring crystallised and massive. In the first form it is in hexagonal prisms, terminating in pyramids. When pure its specific gravity is 2·66. It is one of the constituents of granite, gneiss, etc. Among the quartz varieties are *rock crystal* (colourless), *smoky quartz* (tinged, as *yellow topaz*, *amethyst*, and *sapphire*), ordinary or false, *milky quartz*, and *rose quartz*. Quartz veins in metamorphic rocks often yield rich deposits of gold. Mining for gold in the rock is termed quartz-mining.

**Quasi**, a Latin prefix to other words implying a somewhat false resemblance.

**Quassia**, a genus of plants of the Simarubaceæ order, with five-lobed calyx. There are two species, the most commonly known being a native of tropical America, the other of Africa. It yields a drug called bitterwood, much valued as a medicine. The negroes use it as a fever remedy. In commerce the product of the bitter-ash and other allied trees is generally substituted for quassia.

**Quaternary Deposits**, or **Post-Tertiary**, are the latest stratified rocks of the earth's crust, and include the Glacial, post-Glacial, and Recent systems.

**Quaternions**, a mathematical method invented by Sir William Rowan Hamilton, based upon mental transference or motion by vectors, four numbers being involved; hence the name. The system, though intricate, is of great use in the solving of problems in solid geometry.

**Quatrefoil**, in architecture an ornament, piercing, or panel, resembling the four petals of a cruciform flower, largely used in the English Perpendicular style, and less frequently in the Decorated.

**Quattrino**, an Italian coin worth about ¼d.

**Quaver**, a note of music, equal to one-eighth of a semibreve and one-fourth of a minim.

**Queen**, a female sovereign. The first queen of which there is historical record is said to have been Sebeknefrure, of the 12th Theban dynasty, who reigned about 1650 B.C. The ruling queens of England have been Mary I., who reigned 4 years; Elizabeth (45 years); Mary II. (jointly with William III.) (6 years); Anne (12 years); Victoria (63 years).

**Queen Anne's Bounty**, a fund established in the reign of Anne (1704) for augmenting small church livings and aiding in rebuilding parsonages, etc. Its income is derived from tithes, Parliamentary grants, and private gifts. The total amount for distribution for the year ending 1929 was £19,838. The governors of the Bounty hold securities to the value of over 7 million pounds.

**Queen Anne's Farthings** are supposed to fetch very high prices, but ordinarily they are not worth more than £1 each. Those with the emblematic design of "Peace in a Car" engraved on them, which are extremely rare, realise £5 or more.

**Queer Strikes.** Not long ago the school children of Colsterworth, near Grantham, went out on strike against one of their masters. Other queer strikes may be recalled. The executioners of Canton went out on strike once, complaining that unless they got more than 500 cash (a shilling) a head they would starve; the female prisoners in Wormwood Scrubs Prison struck against an order requiring them to carry coals to the laundry fires, work which had previously been the prerogative of "gentleman" convicts; the beer-drinkers of Bamber Bridge, near Preston, struck as one man against an increase in the price of their favourite beverage; the barristers of St. Amand struck as a protest against the "tyrannical attitude" of the presiding judge; and among other bodies who have struck within recent years are paupers, choir-boys, ministers (who considered a pound a day "little better than an insult"), commercial travellers, and undertakers' men.

**Quelea**, a name given to the crimson-beaked weaver [bird of Africa.

**Quercitron**, the bark of a species of American oak, from which a yellow colouring matter is obtained. It is also used in tanning.

**Quern**, a form of stone handmill for grinding corn, in use in early times. It consisted of two flat stones, the upper revolving on a pin inserted in the lower.

**Quicksilver.** (*See* Mercury.)

**Quietism**, a doctrine first expounded by a Spaniard, Miguel Molinos, in the 17th century, and serving for the foundation of a sect in France. It dispensed with rites and ceremonies, and claimed that the mercies of God and the merits of Christ were sufficient for a man's religious needs. Madame Guyon was a devoted Quietist.

**Quills** for writing with were first used in the 6th century, and superseded by steel pens in the 19th.

**Quince**, a well-known hardy orchard tree of the pear family, bearing fragrant, yellow, pear-shaped fruit, largely used for preserves. A mucilage is made from the seeds, which also possess medicinal virtues.

**Quindecemvir**, one of the fifteen ancient Roman magistrates appointed to keep charge of the Sibylline books, and called priests of Apollo.

**Quinine**, a vegetable alkali obtained from the bark of several trees of the *Cinchona* genus. It is extremely bitter and colourless. The drug, sulphate of quinine, is one of the most valuable medicines, forming a powerful tonic. It is anti-periodic, antipyretic, and antineuralgic. In cases of malaria it is the most efficacious simple remedy known.

**Quintain**, a tilting post, from the top of which a board was suspended horizontally for the tilters to strike at with their lances.

**Quintal Metrique**, a French weight of 100 kilogrammes, or 220 lb. avoirdupois.

**Quintet**, a musical composition of five parts, for voices or strings.

**Quintilians**, the name given to certain heretics of the 2nd century, who used bread and cheese for the Eucharist and permitted women to be priests. Their leader was a Roman woman named Quintilia.

**Quirinal**, one of the seven hills of Rome.

**Quiscalus**, a class of birds of black plumage belonging to *Passeres* order, popularly known as Boat-tails, because of the feathers of the tail being turned up. They are confined to the Southern States of North America and Central and South America.

**Quiver**, a leather receptacle for arrows.

**Quorum**, the number of members of any body or company necessary to be present at any meeting or commission before business can be transacted. Forty form a quorum in the House of Commons.

**Quo Warranto** ("By what Authority"), a form of writ which has existed in England since 1289, and is a direction to the proper authorities to inquire into the circumstances under which any office or franchise is held. The proceedings at the present day are by "information." The application must be made by counsel and not by the party in person.

## R

**Rabbi**, a Jewish term applied to specially ordained officials who pronounce upon questions of legal form and ritual, and also generally accorded to any Jewish scholar of eminence.

**Rabbit**, a rodent burrowing mammal, a native of

Europe but now common in other countries —where it has been introduced and multiplied enormously, especially in Australia. In its wild state it has a brownish fur, while in its domesticated varieties it is of many colours—grey, white, black, and pied. Wild rabbits have erect ears, but in some domestic breeds the ears are long and droop, hence the term lop-eared. They breed rapidly, rearing several litters a year. The fur is utilised for clothing and other purposes, and the flesh is a popular article of food.

**Racahout**, a substance made from the acorn of the belote or Barbary oak, and much used as a food and medicament by Arabs. An admixture of the same name, with various added ingredients, is sold in France.

**Raceme**, a botanical term indicating flowers of a clustering and pendant form, the individual blossoms being borne on simple stalks arranged round a single common axis.

**Rack**, an ancient instrument of torture, consisting of a platform fitted with bars, one of which was movable. The feet of the victim were fastened to one bar and the hands to the other; then by means of the movable bar the limbs were stretched to great tension until the tortured one "confessed" or became senseless.

**Rack-rent**, rent of the full yearly value of the property held. A term generally used to denote excessive rent.

**Rack-work**, a piece of mechanism in which a rack is used; a rack-and-pinion arrangement or the like. A rack in this sense is a toothed-bar, adapted to work into the wheel teeth.

**Racoon**, a plantigrade carnivorous mammal, common to the American continent. Is about 2 feet long, with a bushy ringed tail, and sharp snout. Its skin is valuable. The racoon has the peculiar habit of dipping its food in water before eating it.

**Radcliffe Library**, Oxford, was founded under the will of Dr. John Radcliffe, who died in 1714, leaving £40,000 for that purpose. The Library was opened in 1749.

**Radicals**, democratic Liberals, as the name of a political party dates from about 1816, when the Reform movement began to assume prominence and "Radical Reform" was agitated for.

**Radiology**, a science dealing with radiant energy. The word is also used to mean the application of radiant energy in medicine. Five kinds of radiation are known: (1) radiant heat, applied to thermo-therapy; (2) light for helio-therapy; (3) Ultra violet rays for actino-therapy; (4) X-rays for radio-therapy, and (5) gamma rays for radium therapy. All these radiations travel with the speed of light. Radiology has been successfully applied to the treatment of cancer and the removal of tumours. The British Institute of Radiology, 1924, speaks for the development of a new branch of medicine invaluable in the diagnosis and in the treatment of disease.

**Radiometer**, an instrument invented by Sir William Crookes in 1876, for transforming radiant energy into mechanic force. It consists of four horizontal arms of fine glass, poised so as to revolve easily on a point, and is enclosed in a glass or metal tube almost exhausted of air. The arms move under the influence of light and heat, according to the strength of the rays.

**Radium**, a remarkable element discovered by Madame Curie in infinitesimal quantities in pitch-blende, and possessing an astonishing degree of radio-activity, giving off heat and light with an intensity not approached by any other substance. It is about 268 times as heavy as hydrogen, and according to Sir Oliver Lodge 100,000 electrons of radium could lie in the diameter of an atom. It is assumed that radium is present in the sun, and some scientists hold that in this element we have probably what may solve the problem of the material universe. As yet, however, it is impossible to foreshadow the extent to which radium can be practically utilised. The Radium Institute, founded and equipped by Lord Iveagh and Sir Ernest Cassel, was opened in August, 1911, for the treatment of patients and the prosecution of researches into the effect of radium on the human system. In 1929 a public subscription for the supply of radium to hospitals reached over £150,000 in a few days, the Government adding £100,000.

**Radius**, in geometry, is the measurement of a straight line marked from the centre to the circumference of a circle or curve.

**Ragged Schools** were established in this country in 1884 by a number of philanthropists headed by the Earl of Shaftesbury, with the object of educating and protecting very poor children. There are now hundreds of such institutions in the United Kingdom.

**Rail**, a well-known genus of the *Rallidæ* family—one species of which—the Water Rail—is common in various parts of Continental Europe, and also in the fen districts of England.

**Railways.** Britain had 19,822 miles of railways in 1931, but as new lines are being constructed and opened constantly all over the world these figures increase considerably every year.

**Rain** is water discharged from clouds in drops, and formed of the aqueous vapour of the atmosphere, derived from the evaporation of water both from sea and land. Before it reaches the earth it is the purest form of water known. The heaviest rains occur in equatorial regions, and the smallest in the deserts.

**Rain Gauge**, an instrument consisting of a deep metal funnel whose stem dips into a graduated glass jar and measures the rainfall dropped in it.

**Rajah**, the title of a Hindoo prince, once equivalent to that of king, but now only implying chieftainship in the native states of India.

**Ramadan**, the time of the Mohammedan Lent, the 9th month of the Moslem year, a movable period fixed according to lunar calculation. It lasts for thirty days, and all good Mohammedans fast in Ramadan from sunrise to sunset each day, during the interval from sunset to sunrise being at liberty to eat, drink, and make merry.

**"Rambler (The),"** published by Dr. Johnson twice a week between 1750–52.

**Rambouillet** was a royal French château near Paris, and a royal residence for nearly three centuries.

**Ramie**, or **China Grass**, a plant largely grown in China, Japan, and other parts of Asia. From its fibre many beautiful lustrous textiles are manufactured in China and Japan, and attempts have been made to establish the industry in England.

**Ramism**, the logical doctrine propounded by Pierre de la Ramée, opposed to that of Aristotle, and the subject of some controversy in the 17th century. Milton wrote upon it, and for a time it was in favour at Cambridge University.

**Rampant**, in heraldry, is a term applied to the figure of an animal with forelegs elevated, the dexter uppermost. When the animal is shown side-faced it is *rampant displayed*, when full-face, *rampant guardant*; when looking back, *rampant reguardant*; and when in sitting position *rampant sejant*.

**Rampion**, the common name for plants of the bell-flower family.

**Rampur Chudder**, a kind of fine woollen shawl made at Rampur in India.

**Ranelagh Gardens** was a fashionable public garden at Chelsea for concerts and dancing in the 18th century, and existed down to 1804.

**"Ranters,"** a name applied at one time to the Primitive Methodists, a body who separated themselves from the Wesleyan Methodists in 1810, and by their more demonstrative practices, such as street preaching, camp meetings, processions, etc., attracted much popular attention.

**Ranz des Vaches** (pronounced "Rauntz Day Vache") a Swiss herdsman's melody, played on the alpenhorn, as a call to the cows.

**Rape**, a cruciferous plant yielding coleseed or rape-seed, extensively grown in all parts of Europe and India. Rape oil or colza is made from the seeds, and the leaves and refuse are are used for sheep-food. Rape oil is a yellow, thick oil, of considerable commercial importance as a lubricant and for other purposes. It was at one time much used as an illuminant.

**Raphides**, crystals of calcium oxalate, found mostly in cells of plants of the palm and lily order.

**Raptores**, an order of birds of prey, of which there are upwards of 500 species, divisible into two main sections, *Falconidæ* and *Strigidæ*.

**Rastadt Treaty of Peace**, between the French and Germans, was signed on the 6th March, 1714, and closed the War of the Spanish Succession.

**Rat**, a well-known order of rodent embracing many species. The *brown rat* appeared in Europe early

in the 18th century, coming from the East and entering by way of Russia; now it is widespread and met with in Britain and all parts of the Continent. The *black rat*, which was the common rat before the arrival of the brown species, is a smaller animal and now comparatively scarce. There are numerous other kinds, all of them gross feeders, and existing in such numbers in many places as to constitute a pest. Very active measures of extermination have lately been adopted, such as Rat Week, etc.

**Ratel**, a carnivorous animal of the badger family, having the lower part of the body black, and the upper part a light grey. It is found in India and at the Cape, and is often styled the "honey-badger" because of its honey-eating propensities.

**Rationalism**, claims to decide matters of belief and doctrine by the test of reason. It recognises only what is demonstrable by science, rejects supernatural authority and revelation, but does not entirely deny the existence of a God or the immortality of the soul. A sect calling themselves Rational Christians first obtained registered places of worship in this country in 1876; they claim that their methods of investigating religious matters are more rational than those of Christians of other recognised denominations.

**Ratitæ**, a bird classification which includes ostriches, cassowaries and other flightless, flat-breasted birds.

**Rattening**, the act of concealing or taking away workmen's tools to prevent them being used during trade disputes. The word came into use at Sheffield during labour disputes in 1867.

**Rattlesnake**, venomous snakes which obtain their name from the possession of a rattle in the end of their tail, consisting of horny pieces so arranged that when vibrated they make a rattling sound. They are only found in N. and S. America.

**Ravelin**, a detached fortification of triangular shape, with two embankments forming a projecting angle.

**Raven**, a black-plumaged bird of the crow family, with raucous voice and massive bill. Occurs in many parts of Europe, Asia and America. Ravens are easily domesticated and form interesting pets. Dickens had one which he described in "Barnaby Rudge."

**Ray**, a kind of fish with a very flat body and broad and fleshy pectoral fins. There are about 140 species. In Britain they are generally called *skate*.

**Razor Bill**, a sea-bird of the auk family, having a high, furrowed bill, and dark plumage. It inhabits rocky cliffs during the breeding season and at other times is mostly out on the open sea. It lives exclusively on fish, which it catches by sudden diving.

**Readers**, a class of ministrants introduced in the Church of England in 1866 and still continued. Their duties are to read certain portions of the Service and otherwise to assist in church work, though they are not ordained or entitled to be styled "reverend."

**Real**, a silver coin current in Spain, Mexico, and South America, and worth about 2½d. English.

**Realgar**, a mineral of a reddish colour formed in crystals and also granular, in China, Mexico, and some parts of central Europe, and is a compound of arsenic and sulphur.

**Reaping Machine**, in its present practical form, is an American invention which cuts down standing grain and binds it in sheaves ready for carting. The leading machine of this kind is the invention of McCormick.

**Rebeccaites** were a secret Welsh organisation, existing in 1843, whose object was to destroy toll-gates, which were so numerous as to be a burden to the people. They dressed in women's clothes, and called themselves "Rebecca's daughters," with particular reference to the passage, "And they blessed Rebecca, and said unto her, Let thy seed possess the *gate* of those which hate them." They went abroad in the night-time and did much destruction. A general relief from highway tolls followed after a commission of inquiry.

**Rebus**, a kind of word-puzzle in which pictures of things are given in place of words and letters. For instance Ramsgate might be represented by a couple of rams and a gate. These picture puzzles afforded much amusement to the leisured class of the Middle Ages. The name of Aldershot is a perpetuated rebus, the arms of the town including representations of an alder tree and pyramidal heaps of shot.

**Recent Formations**, in geology, are the newest strata or beds, and represent a period later than the Pleistocene.

**Rechabites**, members of a society of total abstainers from intoxicating drinks. Rechab, father of Jonadab, refused to drink wine, build or live in houses, sow seeds, or plant or own vineyards. The modern Rechabites do not carry their abstention further than refraining from intoxicants.

**Recitative**, a style of singing only slightly removed from ordinary speaking, and utilised for narrative portions of operas, oratorios, etc.

**Recluse**, one who withdraws from the world usually to devote himself to religious meditations.

**Recorder**, a judge of a city or borough having a court of quarter-sessions. The Recorder of the City of London is elected by the Lord Mayor and Aldermen, but other recorders are barristers of eminence appointed by the Crown.

**Record Office**, in Chancery Lane, London, the place where the Public Records of England are now preserved, including Domesday Book, the various Rolls of Charters, and important historical documents from a remote period.

**Recreative Religionists**, was the name given to a body of gentlemen who sought to popularise natural religion by courses of scientific lectures. Lectures by such eminent men as Huxley, Carpenter, and others were very popular, and led to the formation of the Sunday Lecture Society.

**Rector**, a clergyman having charge of an ecclesiastical parish, and entitled to receive all the tithes; also the head officer of some of the Universities and Colleges.

**Recusants**, people who refused to attend the Anglican Church or to acknowledge the ecclesiastical supremacy of the Crown in the days of Elizabeth.

**Redan**, a fortification consisting of two parapets or mounds of earth in angle form, the apex pointing outward.

**Red Crag**, the name given to a strata of incoherent gravel or sand, containing certain fossil mollusc deposits, found on the Suffolk and Essex coast, and largely used in manure manufacture.

**Red Cross.** (*See* **Geneva Convention.**)

**Rede Lecture**, at Cambridge University, was instituted and endowed in 1524 by Sir Robert Rede, chief Justice of Common Pleas. These lectures were superseded by an annual oration, which is usually given by an eminent scientist

**Red Letter Day**, a church festival day indicated in the Prayer Book by red letters, now a popular term for any day of special significance.

**Redoubt**, a term applied to enclosed fortified works generally, but more especially to a small area temporarily fortified as a place of retreat for a defending force.

**Redpole**, a family of birds noted for bright crimson foreheads and crowns. They inhabit parts of Southern Europe and North America, are abundant in Western Asia, and are represented in Britain by the linnet and the common redpole, both admirable songsters.

**Red Sand Stone**, the general name for red sand stone geological formations, chiefly produced by the disintegration of ordinary crystalline or metamorphic schists, oxide of iron forming the colouring factor.

**Redstart**, the sub-family of the *Saxacolinæ* order of birds, confined to the Old World, and nearly allied to the Redbreasts. They have red feathers in their tails. The two species found in Britain are the common Redbreast, and the Black Redstart, the former a winter and the latter a summer visitor.

**Redwing**, a bird of the thrush family which finds its way to this country for the winter. It is not so large as the common thrush, but it is very similar in its general colouring and structure.

**Redwood**, a great timber tree found in California, growing from 200 to 300 feet high and from 8 to 12 feet in diameter, with a bark from 6 to 12 inches thick. The wood is used for building purposes. There are several other species of red wood in the East and West Indies, and the Scotch pine is locally known by the same name.

**Reed Instrument**, any wind instrument of the

*oboe or clarinet class, the sound of which is produced through a tongue or plate of reed, wood, or metal in the mouthpiece, which when blown* through emits a musical sound, by the vibrations induced.

**Refectory,** the name given to the eating room, chamber or other apartment of a monastery, or other place where meals are regularly eaten.

**Referendar,** the name given in Germany to a candidate for judicial office who has only passed a portion of his examinations and is filling a minor position without pay.

**Referendum,** a term applied to a clause introduced into the Swiss Constitution in 1874, providing that certain laws passed by the Legislature should not be put into force until referred to, or ratified by, the people generally. Also used to signify a note by an ambassador to his government on a point respecting which he is without specific instructions.

**Reformation,** the great religious movement of the 16th century, which resulted in the establishment of Protestantism. In the previous century Wycliffe, Huss and others had sounded the warning note, and when later on Luther took up the cause in Germany, and Zwingli in Switzerland, adherents soon became numerous. The wholesale vending of indulgences by the Papal agents had incensed the people, and when Luther denounced these things he spoke to willing ears. After much controversy, the Reformers boldly propounded the principles of the new doctrine, and the struggle for religious supremacy grew bitter. They claimed justification by faith, and the use as well as the authority of the Scriptures, rejecting the doctrine of transubstantiation, the adoration of the Virgin and Saints, and the headship of the Pope. Luther was excommunicated. But the Reformation principles spread, and ultimately a great part of Germany, as well as Switzerland, the Low Countries, Scandinavia, England and Scotland were won over to the new faith. In England, Henry VIII. readily espoused the cause of the Reformation, his own personal quarrel with the Pope acting as an incentive. Under Mary there was a brief and sanguinary reaction, but Elizabeth gave completeness to the work which her father had initiated.

**Reformatory Schools,** for the reclamation of juvenile offenders, originated in France in 1839. The Philanthropic Society of London founded such an institution at Redhill in Surrey in 1850. Since then many other schools of this class have been opened, under government authority and inspection, and there are now some 45 Reformatory, 139 Industrial, 14 Truant and 24 Day Industrial Schools in existence in Great Britain. The Borstal Association deals with about 1,300 cases, and with few exceptions is able to find work upon discharge.

**Reform Bills.** The principal Bills have been passed for the Reform of the Parliamentary Franchise. The first was that of 1832, which in addition to a sweeping re-distribution of seats, granted the franchise to borough householders paying a £10 rental, and in counties to those with a rental of £50. The second Reform Bill was passed in 1867, conferring the franchise on all borough householders paying poor rates, on lodgers paying £10 a year, and to tenants in counties paying £12. A third Reform Bill, passed in 1884, practically gave household suffrage and effected a large measure of redistribution of seats. The Parliament Bill of 1911 may also be classed with Reform Bills, since it practically abolishes the veto of the House of Lords, and paves the way for the reconstitution of that Chamber. In 1918 the Representation of the People Act abolished the qualification as property owners and lodgers, but extended the franchise to women.

**Regalia,** the ensigns of royalty, such as the crown, sceptre, swords of State, etc., which, in the case of the British insignia, are kept in the Tower of London; in its stricter sense it means the prerogatives of royalty, which are six in number—the power of judicature, of life and death, of war and peace, of estrays, etc., of assessments, and of minting money.

**Regattas,** boat or yacht races, were introduced into this country in 1775, when the Thames was the scene of one of these competitions. Since *then they have become popular on the river and round the coast. Henley every year has a fashionable Regatta.*

**Regency Acts** were *Acts of Parliament passed in* the reign of George III., appointing the Prince of Wales (afterwards George IV.) to the Regency during his father's mental incapacity.

**Regent's Canal,** extending from Paddington—where it connects with the Grand Junction Canal—through Regent's Park, Islington, Hoxton and Hackney, to Limehouse, where it merges into the Thames. It is 9 miles long and part of its course is subterranean. Opened in 1820.

**Regicides,** the commissioners who tried and condemned Charles I. They were 150 in number, of whom 70 acted, and 59 signed the death warrant.

**Regiments** are bodies of military forces forming the largest permanent unit commanded by a colonel. The Dragoon Guards, the Scots Greys, and the Royal Irish were formed c. 1684, the Coldstream Guards in 1660, and the first regiment of Lancers in 1816.

**Regium Donum,** a royal gift in support of the Presbyterian ministry of Ireland, begun by Charles II. in 1672, and revived by William III. in 1690.

**Regius Professor,** a University Professor occupying one of the Chairs established by Henry VIII. Oxford has eight Regius Professors, Cambridge three, and Dublin five.

**Reichsrath,** the old Austrian Parliament, comprising an Upper House of Princes, Nobles and Prelates, and a Lower House of 353 members.

**Reichstag,** the Diet or Federal Parliament of Germany.

**Reign of Terror,** in France, practically dated from the ascendancy of Robespierre to his fall, March 1793 to July 1794.

**Reindeer,** a genus of deer horned in both sexes, occurring only in northerly regions. It has an average height of 4 feet 6 inches, is very fleet of foot, and the Laplanders utilise it for draught purposes.

**Relativity,** a modern physical theory propounded by Prof. Albert Einstein in the 20th century and accepted by almost the entire scientific world. The theory is based on the hypothesis that the interval of space between two objects and the interval of time between two events are not absolute, but relative, and have different values for different observers.

**Relics** are objects which the Roman Catholic Church has declared to be worthy of special veneration, and comprise supposed portions of the Cross, bones and garments of saints, etc., which are treasured in churches and shrines, and often attract large bodies of pilgrims.

**Relief** in sculpture is of three kinds—**high relief** (*alto-relievo*), in which the figures stand out to the extent of one-half on their natural proportions, **low-relief** (*basso-relievo*) when the figures project but slightly; and **middle-relief** (*mezzo-relievo*), when the projection is intermediate.

**Religions** are of more numerous kinds than can well be classified. At the present time it is estimated there are throughout the world about 683,000,000 Christian adherents, including 331,500,000 Roman Catholics and 206,000,000 Protestants; nearly 350,600,000 Confucians and Taoists, 230,000,000 followers of Hindooism, 210,000,000 Mohammedans, 150,000,000 Buddhists and 16,000,000 members of the Jewish faith.

**Religious Tract Society,** was founded in 1779, and circulates from 60 million to 70 million copies of its numerous publications yearly.

**Remainder,** a legal term signifying a future condition of an estate, taking effect after its enjoyment by the present tenant is terminated. It does not "vest" until the event which will put an end to the precedent estate is certain of happening.

**Renaissance,** a term designating the revival of classic ideals in literature, painting and architecture, a movement which was most prominently exemplified in Italy, and lasted through the main part of the 15th and 16th centuries. The influence of the Renaissance in England was mostly literary.

**Rennet,** a substance obtained from the stomach of a calf or other suckling quadruped, and used for curdling milk, making junkets, etc.

**Rent Restrictions Act,** (1920–25). Under this Act

landlords of unfurnished premises were not allowed to eject tenants or raise the rent. It expired in 1927 in England, but the Provisions of Part II in the Act of 1923 remain for a further 5 years after the expiration of the 1920 Act.

**Reparations** for losses of the Great War, 1914–18, were practically agreed upon at The Hague Meeting in August 1929. The original amount of the German indemnity was fixed at a figure thought by the experts to be too high for Germany to pay. The "Dawes Plan" arranged for certain payments to be made annually by Germany to the various Claimant Countries, but did not fix the total liability. The "Young Plan" Conference met for this purpose in 1929, when it was agreed that an average amount of just over 100 million pounds per annum should by paid by Germany for 37 years, and a smaller and diminishing amount for a further 22 years. Part of these sums might be paid "in kind" during the first 10 years, when such were to cease. The principal Creditor Countries and the approximate yearly payments were, in round figures, France 52 millions per annum, Great Britain 20 millions, Italy 10 millions, Belgium 6, Yugoslavia 4, U.S.A. 3, Roumania 1. The balance to be divided between the smaller countries. The figures given here refer to German payments only and not to sums owing to Great Britain by her allies, nor to the loan from U.S.A. to Great Britain. At the 2nd session of The Hague Conference, Jan. 1930, the principles of the Young Plan were adopted. This determined the settlement of the Germans' Reparations Problem.

**Repeater**, the name applied to a watch that will strike the hour, quarters and minutes last past on the pressure of a spring.

**Repousse**, a style of ornamentation produced by hammering up metal from the inside, so as to form distinct designs on the outer surface.

**Representative Peers** are peers elected by their fellow peers to sit in the House of Lords—Scotland has 16, elected or re-elected for each Parliament; Ireland has 28, elected for life.

**Reptilia**, the class of vertebrate animals including tortoises, lizards, snakes, crocodiles, etc. They are in structural arrangement very similar to birds, and the theory of evolution indicates that birds are the descendants of the Reptilia.

**Requiem**, a Mass for the Dead, musical settings of which have been written by many eminent composers. Among the best-known Requiems are those of Palestrina, Mozart, and Verdi.

**Reredos**, the ornamental screen at the back of the altar or Communion table. It is often of a highly-decorative character.

**Resins**, are vegetable compounds largely employed in the industrial arts. They comprise india-rubber, amber, turpentine, mastic, copal, dragon's blood, etc.

**Respirator**, a protective article worn over the mouth by persons affected with throat or lung disease, to prevent their breathing the raw cold air or fog. Ordinarily it is made of wire gauze so contrived that the air in its passage into the mouth is slightly warmed. Respirators charged with filtering substances have been introduced.

**Rest**, a musical term denoting silence or cessation from playing for the period represented by the character of the rest. Thus there are minim, semibreve, quaver, and other rests, which represent the same lengths of silence as the notes themselves would represent in sound.

**Retriever**, a domestic dog useful to sportsmen for bringing in game that have been shot. It is a capital water-dog, usually black or brown.

**Reuter**, the chief British and international news agency, founded by Baron J. de Reuter in 1849.

**Revolver**, a revolving pistol provided with a number of chambers (six being the usual number), each of which can be fired in succession by the pulling of the trigger. A weapon of this kind existed in the 17th century, but it was not until 1851, when Colt's revolver was introduced, that a really serviceable small arm of this class was available. The principle of the revolver has been adapted to breach-loading guns, as in the mitrailleuse and the mauser.

**Rhaetic Beds**, term applied to certain strata which connect the Lias and Trias formations. They abound in fish fossils, and occur at Penarth in Wales and in certain parts of the Alps.

**Rhea**, a large bird of the ostrich family, a native of America, and the only species of the *Ratitæ* known on the American continent.

**Rhinoceros**, a huge hoofed quadruped, of which there are nine existing species; native to the river and marsh regions of Africa, India, Borneo and Java. It is remarkable for its thick hide and upturned snout, from which springs a long horn. The white rhinoceros, which is scarce, is the biggest species, attaining a length of 10 to 12 feet and a height of from 5 to 6 feet. The black rhinoceros is the most familiar.

**Rhodium**, a scarce metal discovered by Dr. Wollaston in 1804 in platinum ores.

**Rialto**, a famous bridge that crosses the Grand Canal at Venice, and dates from 1591.

**Ribbon Fish**, is a deep-sea fish, deriving its name from the ribbon-like shape. Though many feet in length, it is only an inch or two thick. By reason of its keeping to the ocean depths, the ribbon fish is rarely met with.

**Ribbonism**, a term applied to an agitation got up in Ireland about 1820 by a secret society whose object was to avenge upon landlords what the conspirators considered the wrongs of tenants. Many agrarian crimes were committed by the members of this society between 1858 and 1871, when a special Act was passed for their repression.

**Ribbons**, strips usually made of silk, velvet, or satin, and in a great variety of colours and designs. They came into vogue in the 16th century. Coventry is the chief seat of the ribbon industry in England.

**Ribbon Seal**, a kind of seal found in the North Pacific, remarkable for being ornamented with an almost white broad band along its back and around its neck.

**Rice**, a grain-yielding grass extensively cultivated in India, China, and certain parts of America, and forming the main article of food of the Indian and Chinese peoples. Rice to the value of about three million pounds sterling is annually imported into this country. Arrack, an alcoholic liquor, is made from fermented rice seeds.

**Ricolite**, an ornamental stone, found almost exclusively in New Mexico, and presenting a series of white, olive and green serpentine layers.

**Rider**, the popular name of a Dutch gold coin first put into circulation in the 16th century, but not now in use. Its name was derived from its having engraved upon its obverse the figure of a horseman. It weighed about 50 grains. A coin of the same name was issued by James VI. of Scotland, afterwards James I. of England.

**Rifle**, a firearm, grooved in the barrel in order that the projectile may receive a rotatory motion on its own axis upon expulsion

**Rifle Bird** is a beautiful Australian bird of a deep glossy black with olive-green and blue metallic markings. It is of arboreal habits.

**"Rights of Man,"** the title of the declaration of the French National Assembly in 1798, proclaiming that all men have equal rights. Also the title of a famous book by Tom Paine, justifying the Revolution.

**Rinderpest**, an infectious cattle disease. It spreads very quickly when once it breaks out, and over 50 per cent. of all the animals attacked die. It comes from Central Asia, and some of its visitations to this country have been attended by enormous loss of life. In 1866, out of 120,740 cattle attacked, over 73,000 died. The disease brings about a congestion of the mucous membranes, and cessation of milk secretion.

**Ring Dove**, a blue-grey wood-pigeon, common in Britain, and about 17 inches long.

**Ring-Money** is supposed to have been in circulation among the ancient races of Europe.

**Rinks**, for roller-skating, began to be popular in 1875, and were started all over the country. A revival of rinking is noticeable of late, especially ice-rinks for skating.

**Riot Act (The)**, was passed in 1715, its object being to prevent riotous assemblies. In times of disturbance when a breach of the peace is threatened, if a magistrate, justice of the peace, sheriff or mayor reads a proclamation commanding a crowd of twelve or more persons to disperse, anyone refusing is liable to arrest and a long term of imprisonment under this Act.

**Ritualists**, the term used to designate an extreme High Church section of the Church of England, who brought into the ceremony of public worship

coloured vestments, lighted candles, incense, and other features of Romanist worship, and excited much opposition and contention. A Ritual Commission was appointed in 1904 to receive evidence in regard to ceremonial excesses, and attempts are being made to arrive at a basis by which both High Church and Low Church adherents can agree upon the subject of ceremonial. The report of the Ritual Commission, published in 1906, concluded that the law of public worship in the Church of England had become too narrow for the present generation's religious life; and that the machinery for discipline had broken down. The Commissioners favoured the giving of greater power to Bishops for the suppression of objectionable practices, but beyond this no immediate remedy of any effectuality or extent was suggested, and Ritualism remains practically unchecked.

**Roach,** a well-known small fresh-water fish of the carp family.

**Roburite,** a flameless explosive invented and adopted in Germany in 1888. It is composed of chlorinated dinitrobenzene mixed with sufficient ammonium nitrate to oxidise it.

**Rock Butter,** the name commonly given to petroleum when found in its semi-solid state.

**Rockets** for use in war were invented by Sir William Congreve early in the 19th century, and proved very destructive in siege operations. Rockets, as implements of war, however, are now superseded by more efficient agents; but they are still used for signalling purposes, while in that connection their utility has been much increased in recent years. Boxer's life-saving rockets are mostly used in England.

**Rockling,** a marine fish of the cod family, distributed over the coasts of Europe, Iceland, Japan, South Africa, and New Zealand. There are eight known species, five of which are found on the British coast. This fish carries a number of barbels around its mouth.

**Rocks** comprise the solid portions of the earth's crust, and all are composed of mineral substances and classed in reference to their various formations and conditions.

**Rock Soap,** a kind of clay or black bole of a sticky nature, used for washing cloth and in the manufacture of crayons. It is a hydrate of silicate of aluminium.

**Rod,** a measure of length equalling 5½ yards, also called a pole or a perch. A square rod is a rood.

**Rodentia,** an order of mammals of the gnawing class, and including rats, mice, squirrels, etc.

**Roe,** the parts of fishes which extend on each side of the ribs in lobes next to the intestines. "Hard roe" is that of the female and consists of eggs; that of the male is the soft roe or milt. The ova in one conger-eel number millions.

**Roebuck,** a deer that was formerly common in the forests and parks of Britain, but is now only found at large in the northern parts of Scotland. It is met with in many of the temperate regions of Northern Europe and Asia.

**Rogation Week** begins with Rogation Sunday, the Sunday before Ascension day, when extra prayers and supplications are offered as a preparation for the Ascension.

**Rois Fainéants** (King Do-Nothings) were the Merovingian Kings of France between 656 and 751, so-called because of their leaving the duty of government to their ministers.

**Roller,** an African and Asiatic bird of the *Coraciidæ* family. It gets its name from its habit of turning over in the air like the tumbler pigeon.

**Roman Catholic Church** is the Christian Church whose head is the Pope of Rome. Its Creed comprises twelve articles, the seven sacraments of Baptism, Confirmation, Eucharist, Penance, Extreme Unction, Orders, and Matrimony: the doctrines include those of Original Sin and Justification, sanctioned by the Council of Trent; the Mass, as a propitiatory sacrifice; Purgatory; Papal Supremacy, etc. It was the established Church of England until the Reformation, after which many disabilities were imposed upon Roman Catholics, and continued in a more or less severe form until the passing of the Emancipation Act of 1829. There are four Roman Catholic Archbishops in England (Westminster, Birmingham, Liverpool and Cardiff), two in Scotland (St. Andrews and Edinburgh, and Glasgow), and four in Ireland (Armagh, Dublin, Cashel and Tuam). There are over 331,500,000 Roman Catholics throughout the world, of whom 2,661,710 are in England, Scotland and Wales, and over 3,250,000 in Ireland.

**Romanesque Architecture** includes the round-arched and vaulted orders, which were prominent from the 5th to the 11th century, and retains some characteristics of the Classical style, modified on Mediæval lines.

**Roman Roads** were made for the most part by criminals, and were of great strength and durability. Four such roads were made in England during the Roman occupation, fragments of which still remain. These were Watling Street, stretching from Kent to Cardigan; the Icknield Way, from St. David's to Tynemouth; Fosse, from Cornwall to Lincoln; and Ermin Street, from St. David's to Southampton.

**Roman Walls** for defence against invasion were built by Agricola, Hadrian, and Septimius Severus on the northern borders of England as a protection against the Picts and Scots. The first wall was begun by Agricola in A.D. 79, and extended a distance of 80 miles from the Tyne to the Solway Firth: the second was built from the Firth of Forth to the Firth of Clyde, 36 miles. Agricola's wall was extended by Hadrian in 121, and by Septimius Severus in 208, and ran from Bowness to Wallsend-on-Tyne. Many parts of these walls still remain.

**Rondo,** the name of a short musical composition with one prominent theme recurring throughout.

**Röntgen Rays** were discovered in 1895 by Professor Röntgen, of Wurtzburg, while experimenting with a Crookes vacuum tube, when the fact was accidentally revealed that a photographic plate, contained in a dark box and exposed to its rays, reflected metal objects, the box itself seeming transparent. Further experiments developed the idea, and now by the aid of Rongten Rays photographs can be obtained of objects enclosed in solid bodies, enabling bullets and any solid bodies of metal, as well as bones, etc., in the body to be perfectly located and investigated. The discovery has proved of great advantage in surgical operations.

**Roodebok,** a reddish-brown member of the deer family, with large ears and pointed horns, abounding in the forests of Southern Africa.

**Rood Screen,** an ornamental partition separating the choir from the nave in a church, and fronting the rood or crucifix.

**Rook,** a very common bird of the crow family abounding in all parts of Britain.

**Rorqual,** a marine mammal of the whale order, specimens of which have been met with of from 70 to 100 feet long. They yield very little blubber, and therefore are not much hunted. Several species are found in the North Sea.

**Rosaniline,** a well known aniline dye commonly known as magenta. (*See* **Aniline.**)

**Rosary,** a circular chain of beads, used by Catholics when reciting a particular form of sustained prayer. Each bead represents an entire prayer, and the combined prayers constitute The Rosary.

**Rose Beetle,** so-called because it feeds, wherever possible, on the juice of the rose. It is of a green colour on the back, red underneath, and is not more than one inch in length.

**Roses** retain their pre-eminence among flowers year after year, and the attar of roses is the most famous and most costly of all perfumes. The finest rose-gardens in the world are those of Bulgaria, where the plantations, which lie along the sweet Valley of Maritza, extend for upwards of 40 miles. Here nearly 6,000 lb. of the attar is produced every year, to make which several thousand tons of picked petals are used, for it takes about 200 lb. of rose petals to make a single ounce of the attar. The price of the Turkish attar, which is normally from £15 to £20 per lb., rose during the war to over £70; but that which comes from the South of France is even more expensive.

**Roses, Wars of the,** between the rival houses of York and Lancaster, for the possession of the English crown, began in the reign of Henry VI. and ended with the death of Richard III. on Bosworth Field. The emblem or badge of the Lancastrians was the red rose, and of the Yorkists the white rose. All rivalry between the Roses ended by the marriage of Henry VII.,

the Lancastrian, with the Princess Elizabeth, daughter of Edward IV., the Yorkist.

**Rosetta Stone**, discovered in 1799 by the French at Rosetta in Egypt, and deposited in the British Museum. It is a piece of black basalt about 3 feet long, and contains a decree of Ptolemy Epiphanes, of about 195 B.C. in (1) hieroglyphics, (2) demotic, and (3) Greek characters. It was by means of the three different inscriptions on the same stone that hieroglyphic writing was first able to be deciphered.

**Rosewood**, the name given to the timber of various South American trees of the *Leguminosæ* order. Its colour is dark brown with red streakings.

**Rosicrucians** were a sect of philosophers founded by a German monk named Rosencreuz in the 14th century. A good deal of mystery, however, surrounds the history of this secret society, the members of which were credited with the possession of the secrets of alchemy.

**Rota Club** was a political association formed during the Commonwealth, whose object was to secure the election of the chief officers of the State by ballot, and to have annual changes of Members of Parliament by rotation. They did not accomplish much.

**Rotary Clubs**, local clubs of business men, first started in Chicago, 1905, to further business service, foster social relations, and encourage high ethical standards in business. The meetings take place in rotation at the offices of the several members (hence the name). The movement has spread considerably. In 1912 the organisation became an International Association. In 1930 there were Rotary clubs in nearly 50 countries.

**Rotche**, a small sea-dove of the Auk family, mostly inhabiting the Arctic Regions. Its back and wings are black and the under parts white. Familiarly known as the "Little Auk."

**Rotifera**, the order of animals known as "wheel-animalcules," microscopic in size, but possessing highly organised structures.

**Rotten Row**, a corruption of *route de roi* (king's drive), the famous riding resort in Hyde Park.

**Rottenstone**, a siliceous limestone made porous by the action of water. In a pulverised form it is used for polishing soft metals.

**Rouble**, a Russian silver coin of the nominal value of about 2s. English.

**Rouge**, a substance obtained by heating copperas to the point of decomposition. This form of rouge is utilised both for polishing purposes and as a pigment. Another rouge used as an artificial colouring matter is obtained from the dried flowers of *Carthamus tinctorius*, mixed with powdered French chalk.

**Rouge et Noir**, a well-known gambling card game played on a table divided into two sections and marked with two black and two red lozenges. Any number of players can take part, and the money is staked on the red or black spaces. The cards are dealt out, first to Noir, until the pips aggregate more than 30; then in like manner to the Rouge, and the packet coming nearest to 31 wins the stakes.

**Roulette**, a gambling game played on a table carrying a revolving disc divided into 30 compartments, coloured red and black respectively. The players stake their money on any compartment, colour, or combination of numbers they please. The disc is whirled round and a ball is set rolling in the opposite direction, dropping finally into one of the compartments thus deciding the winning number or colour.

**Round**, a musical composition in several parts, taken up by each participator at a different point from the other, and effecting a harmonious combination throughout. A Catch is similar in form, but usually allied to humorous words.

**Roundheads**, the Parliamentary party during the Civil War. It was originally a term of derision applied by the Royalists.

**Round Towers** are conical erections of considerable height, dating, probably, from some period between the 6th and 12th centuries. These buildings are numerous in Ireland, and three remain in Scotland. It is supposed they were built for ecclesiastical purposes, but there is no direct evidence of this existing.

**Rove Beetles**, beetles with long narrow bodies, and a habit of suddenly curving up their tails when surprised. They are a numerous genus.

**Royal Academy** was founded in London in 1768, under the patronage of George III., with Sir Joshua Reynolds, who was knighted for the occasion, as first president. The early exhibitions of the Academy were held first in Pall Mall, and later in Somerset House, where the exhibitions continued to be held until 1838, when, the National Gallery being built, the Academy moved its quarters to that building. In 1869 the present Royal Academy at Burlington House was opened. The Academy numbers 40 R.A.'s and about 30 A.R.A.'s. List of presidents: Sir Joshua Reynolds (1768), Benjamin West (1792), James Wyatt (1805), B. West (1806), Sir Thomas Lawrence (1820), Sir M. A. Shee (1830), Sir C. Eastlake (1850), Sir F. Grant (1866), Lord Leighton (1878), Sir J. E. Millais (1896), Sir E. J. Poynter (1896), Sir Aston Webb (1919), Sir F. Dicksee (1924), and Sir William Llewellyn (1928). The Academy holds an exhibition of pictures, statuary and architectural designs every summer, to which non-members are invited to send their work. Usually only about a tenth of the work submitted is accepted. Of over 11,000 pictures sent in 1930 only 1,362 were hung.

**Royal Academy of Music**, founded in 1823, has enjoyed a Royal charter since 1830, and an annual Government grant of £500 since 1868. Every form of music is taught there, and the chief modern languages. It has valuable scholarships, and has produced many eminent musicians.

**Royal Agricultural Society** was founded in 1838 and incorporated in 1840. It holds an annual show, at which valuable prizes are offered for the best stock and the most important inventions in agricultural implements. These shows were held at different places each year from 1839 until a few years ago, when London was fixed upon as what was hoped would be a permanent show place, and a large tract of ground was secured at Park Royal for that purpose. The shows held at the latter place, however, failed to attract the public, and a reversion was made to the old system in 1906.

**Royal College of Music**, at South Kensington, was incorporated in 1883, and receives pupils of both sexes. It has 57 Open Free Scholarships and 11 Close Free Scholarships.

**Royal Geographical Society**, with headquarters in Kensington, held an International conference in 1930, and supports geographical research in all parts of the world.

**Royal Horticulture Society** holds fortnightly exhibitions in Vincent Square, Westminster, and has gardens and a school in Ripley, Surrey.

**Royal Humane Society.** (*See* Humane Society, Royal.)

**Royal Institution** was established in 1799, and was incorporated by Royal charter in 1800 for "the promotion, extension and diffusion of Science and of Useful Knowledge." It was in the building of the Institution that Faraday conducted his experiments. Since 1838 it has supported two professors, one of chemistry and one of physiology.

**Royal Society** was founded in 1660 and received a Royal Charter in 1662, Sir Robert Moray being the first president. Two years later the society began to publish its *Philosophical Transactions*. It was to the Royal Society that Newton first read his *Principia*. The meetings are held in Burlington House. There is a Parliamentary grant of £4,000 a year for scientific purposes. Among the presidents have been Sir Christopher Wren, Pepys, Sir Isaac Newton, Sir Joseph Banks, Sir Humphry Davy, Professor Huxley, Lord Rayleigh, Sir Archibald Geikie, Sir J. J. Thomson, O.M., and Professor C. S. Sherrington, G.B.E., M.A., M.D. Sir E. Rutherford is now President (1931).

**Rubber**, produced from the juice of certain trees and shrubs of tropical countries, is in such extensive demand now for tyres and other purposes that rubber plantations have been established in almost every part of the world where rubber can be grown. The best kinds come from the Amazon valley. In 1910 a great rubber "boom" was experienced, hundreds of new companies being floated, while the price of rubber more than doubled. In 1922, however, the price fell very considerably. In 1929 the

United Kingdom imported raw rubber to the value of £13,148,675.

**Rubicon,** a small river falling into the Adriatic, and forming one of the Italian boundaries, the crossing of which anciently involved decisive action and constituted a declaration of war. Thus the phrase "crossing the Rubicon" came into general use, denoting an act from which there is no withdrawal.

**Rubidium,** a scarce element first discovered in certain mineral waters in Bavaria in 1861 by Bunsen. It is always associated with lithium, and frequently with potassium and sodium.

**Rubrics** are instructions in regard to the ceremonies of the Church, appearing in red in the Prayer Book.

**Ruby** is a deep red kind of *Corundum*, and a variety of sapphire; one of the most valued of precious stones, the best examples being worth more than diamonds of the same size and quality. Burma yields some of the finest, and rubies of inferior colour are found in Siam, Ceylon, South Africa, and Brazil.

**Rudd,** a fresh-water fish of wide distribution, plentiful in the rivers of Britain, and found in most other parts of Europe, also in Asia Minor. It is of a reddish-gold colour, with a greenish-blue beard.

**Rudesheimer,** a noted brand of white wine made from grapes grown in the districts of Rudesheimer on the right bank of the Rhine.

**Ruff,** a bird of the sandpiper family, at one time very common in the Fen districts. The males have a ruff of feathers round the neck.

**Ruffe,** a small fresh-water fish common in most parts of Central Europe, and similar in appearance to the ordinary perch. It is found in British rivers.

**Ruffles,** the name given to a pleated strip of fine linen worn by men in the breast of the shirt, and fashionable down to the early part of the 19th century.

**"Rule, Britannia!"** the national sea-song of England, was written by James Thomson, the author of the "Seasons," and set to music by Dr. Arne about 1740.

**Rum,** an ardent spirit distilled from molasses, and containing from 40 to 50 per cent. of alcohol. It is chiefly manufactured in the West Indies, and derives its special flavour from a volatile oil.

**Ruminantia,** a class of ruminants that chew the cud, being provided with a compartmented stomach, enabling them to swallow food, and later to bring it back to the mouth for mastication; *e.g.* sheep, goats, oxen, etc.

**Rummage Sale,** the name given to a clear-out sale of articles, at docks or other public places, which have not been claimed by their owners within a prescribed period.

**Runes,** or **Runic Inscriptions,** the description applied to certain characters discovered cut upon stone monuments and implements found in many parts of Europe, including England. In only a very few instances has it been possible to put any distinct and conclusive interpretation upon them.

**Rupee,** an East Indian coin forming the standard unit of value in India. Its nominal value is 2*s.*, but, owing to the fluctuating price of silver, its value has deteriorated, its actual value being rated by an Act of Parliament in 1898 at 1*s.* 4*d.*

**Rusa,** a genus of deer inhabiting India, Ceylon, the Philippines, and the Malay Archipelago. It stands about 5 feet high, is of a dark brown hue, and of a somewhat sturdy build. Its antlers are long and powerful. The Sambur is the most familiar species.

**Ruschine,** a red substance resulting from evaporating the green solution formed when chlorine, water and ammonia are added to quinine already in solution.

**Rye House Plot,** formed in 1683 with the object of assassinating Charles II. and the Duke of York (afterwards James II.), in order to secure the succession of the Duke of Monmouth. The plot was frustrated

## S

**Sabaoth,** a Hebrew word, meaning an army or host, and applied sometimes to the Supreme Being, *e.g.* "the Lord of Hosts" (Rom. ix. 29).

**Sabbatarians,** a term usually employed to designate such as rigidly observe the Sabbath, but in the 17th century applied to a sect which was in favour of Saturday (Seventh Day) being honoured as the Christian Sabbath. In America there are still several sects of Sabbatarians, or Seventh Day Baptists.

**Sabbath,** the Hebrew "day of rest," or seventh day of the week. The Christian "Sunday" or day of the Sun, is the first day of the week.

**Sabbath Breaking.**—In England penalties for the disregard of the Sabbath have been imposed from time to time by the Legislature. By the Statute 29, Charles II., c. 7, still in force, "No person is allowed to work on the Lord's day, or use any boat or barge, or expose any goods for sale, except meat in public houses, milk at certain hours, and works of necessity or charity, on forfeiture of 5*s.*" Prosecutions under this Act are regularly carried out in several places, and the penalty imposed is duly paid by tradesmen who break the law.

**Sabbatical Year** was instituted by the Jews in ancient times for the purpose of giving the soil a rest from cultivation. This was every seventh year.

**Sabellianism** designates a religion founded in Egypt in the 3rd century by Sabellius, who did not accept the Trinity. A Council of the Roman Church condemned it in A.D. 260.

**Sabines** were a brave race inhabiting a territory near Rome in early times. The Sabines were absorbed in the Roman people about 266 B.C.

**Sable,** a furred mammal of the weasel family mainly inhabiting Siberia. It is bright brown in colour, and has a long, bushy tail. There is also an American variety. It is hunted for its valuable fur.

**Saccharin** is an imide of orthosulphobenzoic acid, a coal-tar product, and is 300 times as sweet as cane sugar. It is not used as a substitute for sugar, but simply as a sweetening agent when sugar is forbidden, as in certain diseases, or when there is a shortage, as, for instance, in war-time. It has no value as a food.

**Saccharoid,** a name given by Kane to a sweetish substance, similar to orcin, produced by the decomposition of Heeren's pseudo-erythrin.

**Saccharometer,** an instrument for determining the amount of sugar in solution by means of polarised light. Used in breweries and distilleries for estimating the specific gravity of worts, etc.

**Sack,** the white dry wines of Spain and Madeira, canary being the most popular.

**Sacrament,** according to the Protestant Church, includes Baptism and the Lord's Supper. In the Roman Catholic Church there are seven Sacraments. (*See* Roman Catholic Church.)

**Sacred Books of the East** is the term applied to the Books in which the faiths of Brahmans, Buddhists and Mohammedans are set down; and are claimed by believers to be works of Divine inspiration.

**Sacrifice,** the offering up to a deity of some object as an expression of thanksgiving or penitence. The first sacrifice we read of in the Bible was that offered to God by Abel. The ancient Greeks and the Romans practised sacrifice.

**Sacrilege** is the breaking into a place of worship and stealing articles therefrom. In olden times this offence was punishable with death, but by Acts passed in the last century it was generally treated as an ordinary burglarious offence. By the Larceny Act, 1916, breaking and entering any place of divine worship and committing a felony therein is punishable by penal servitude.

**Saddles** were introduced by the ancient Greeks or Romans, and were not known in England probably before the 6th century.

**Sadducees,** a Jewish sect of unbelievers, who held that the soul was mortal, and that there was no hereafter. Alluded to in the New Testament.

**Safety Lamp,** as used in coal mines, was invented by Sir Humphry Davy in 1815, and illustrates the principle that flame surrounded by fine wire-gauze is ineffective to ignite inflammable gases. George Stephenson invented a safety lamp about the same time and much on the same principle, but the completely effective safety lamp has yet to be invented.

**Sagitta,** or "the Arrow," one of the celestial constellations situated between Cygnus and Aquila. Sagittarius is another of the zodiacal constella-

tions of 69 stars, which ancient astronomers worked into the representation of an archer. It lies between Scorpio and Capricornus.

**Saiga,** an antelope of Tartary, Western Asia, and Eastern Europe, tawny yellow.

**Sainfoin,** a widely cultivated forage plant, especially adapted for sheep. It is of strong, leafy growth and bears bright red flowers.

**Salamander,** a species of amphibian lizard, of which there are several varieties; the spotted salamander is black spotted with gold, and is popularly credited with being incombustible in fire, which is, of course, a fallacy. Neither is it venomous, as has been supposed.

**Salicin,** a white crystalline substance, much used as a medicament, and obtained from the bark of willow-poplar, and other allied trees. It is a compound of carbon, hydrogen and oxygen.

**Salic Law** was instituted in France in the 6th century for the purpose of excluding females from inheriting the Crown. The Bourbons introduced the same law into Spain, but this was abolished by decree in 1830 to enable Isabella II. to succeed.

**Salicylic Acid** can be obtained from the flowers of the meadow-sweet, and from oil of wintergreen, but is now usually prepared by the action of carbon dioxide on sodium phenate under pressure. The acid is then prepared from the sodium salicylate. It is used both as an antiseptic and as a food preservative.

**Salmon,** a familiar fish notable for its habit of ascending rivers from the sea in the autumn and there depositing its spawn, not returning to the sea until the early spring. It is unlawful to catch salmon between Sept. 14th and Feb. 1st.

**Salt,** one of the oldest of condiments, exists in many substances, and is chloride of sodium, compounded of the non-metal chlorine and the metal sodium. It is obtained from deposits in the earth, from salt-springs, and from seawater. There are salt mines in Galicia which have been worked for hundreds of years. The chief English salt mines are in Cheshire.

**Saltpetre.** (See Nitre.)

**Salvage,** compensation given in respect of property saved from the perils of the sea, when the ship containing it has had to be abandoned, or it has been lost. Salvage compensation varies from one-tenth to one-half the value of the rescued property.

**Salvation Army** originated in East London in 1865, under the name of the Christian Mission, by William Booth, a former Methodist minister. The body in 1878 took the title of The Salvation Army, and for working purposes adopted a quasi-military organisation, with its General (Mr. Booth) as its commander-in-chief. The movement had for its object the promotion of religion among the masses. It preaches in 73 languages, and publishes 128 periodicals in 34 languages, with a total weekly issue of over 1¾ millions. Its operations extend to 82 countries and colonies. It has over 15,000 corps and outposts; many social institutions; and 1,040 day schools; 30 naval and military homes; over 25,000 officers and cadets; over 110,000 voluntary local officers, and 9,644 persons without rank wholly employed in Salvation Army work. It has 1,568 shelters and homes. It supplies annually over eleven million beds and more than twenty-four million meals. An International Congress of Salvationists was held in London in 1904, and again in 1914, and King Edward received "General" Booth in private audience at Buckingham Palace. Later the venerable head of the organisation made extensive motor-car tours and trips abroad in furtherance of his work. He died in August, 1912, and was given a great funeral after a lying-in-state. Bramwell Booth, his eldest son, succeeded him until 1929, when Commissioner Edward J. Higgins, then Chief of the Staff, was elected by the High Council of The Salvation Army to be General. Self-Denial Week in 1930 raised £163,673.

**Sanatorium,** an institution for people out of health, requiring nursing and medical attendance.

**Sanctuaries** were places where offenders against the law were free from arrest, and previous to 1697, when sanctuaries were suppressed, several parts of London were treated as sanctuaries. The chief of these refuge localities was in Whitefriars. There were others in the Minories, Mitre Court, the Savoy, Westminster and the Mint. Other sanctuaries were at Beverley and at St. Burian's in Cornwall.

**Sand Blast,** an American invention introduced in 1871, is a method of cutting or decorating glass and other hard substances by means of sand driven by a blast of air or steam.

**Sanderling,** a bird of the sandpiper family, occurring on the British coast mostly as a bird of passage, and making its home in Arctic regions.

**Sandpiper,** a bird comprising several varieties, some of which inhabit Britain along the northern coasts.

**Sanhedrim,** the ancient Jewish Ecclesiastical Council of 70 members, said to have been originated by Moses when he called together 70 elders to assist him as judges. In modern times the Sanhedrim has only been summoned very rarely.

**Sanitation,** the science of health in its application to disease prevention generally, embracing the investigation of drainage, air supply, isolation in infectious disease, and hygienic measures of all kinds. The Sanitary Institute of Great Britain, founded in 1876, has accomplished much valuable work in the interests of Public health and convenience.

**Sankhya,** one of the leading systems of the Hindu faith, and supposed to be the philosophy from which Buddhism originated. It recognises no deity, but assumes the existence of primordial matter and of spiritual individuality.

**Sans-Culottes,** a term first applied by the French aristocrats to the revolutionary leaders in 1790, and adopted by the latter as a title of honour.

**Sanskrit** is the language of ancient East India, spoken by the Brahmins, and existing in early Oriental literature. As written in India at the present day the Sanskrit alphabet comprises 47 letters—14 vowels and 33 consonants. The language is still spoken in certain parts of southern India.

**Saponin,** a compound obtained from the soapwort root, and from certain barks, seeds, and plants. It is utilised to some extent as a bronchial remedy, and in its pulverised form induces excessive sneezing.

**Sappan-Wood,** the timber of a tree attaining a height of from 30 feet to 40 feet, abundant in Ceylon and the East Indies. It is chiefly of value as yielding a red dye.

**Sappers and Miners,** the name given originally to members of the regiment of Royal Engineers.

**Sapphic Verse,** a metric form of verse said to have been invented by Sappho, the lyric poetess of Mitylene, who flourished about 600 B.C. This verse consists of five trochees, the second of which is a spondee, and the third a dactyl.

**Sapphire,** a valuable deep blue stone, next in hardness to the diamond, found mostly in India, Ceylon, and Northern Italy.

**Saracens,** a band of Bedouin Arabs, who in the Middle Ages were employed with considerable success by the Emperor Valens against the Goths. In the 6th century they became Mohammedans, and in the 8th conquered Spain. Later, the term Saracen was used to indicate the non-Christian races generally against whom the Crusades were directed.

**Sarcine,** a white crystalline solid found in animal tissues and juices.

**Sarcophagus,** the name given to a stone coffin, such as was used by the ancient Egyptians, Greeks and Romans, for receiving the remains of their famous dead. These sacophagi were often decorated with rich carvings and sculptures.

**Sardine,** formerly supposed to be a distinct species of fish, but now conclusively proved to be the young of the pilchard. They abound in the Mediterranean and on the Norwegian coasts, and form a valuable table commodity, being largely preserved in oil and other substances for British, Continental and American consumption.

**Sardonyx,** a species of agate comprising layers of alternating brown, red, white and other colours. It is much esteemed as a gem.

**Sarrancolin,** a valuable ornamental marble occurring in the Aure Valley, France. It is varicoloured, with yellow predominating.

**Sassanides** were a dynasty of Persian rulers descended from Artaxerxes from 226 to 652.

**Sassoline** is native boric acid of a yellow white colour, occurring as a deposit in the water from the hot springs of Tuscany.

**Satellites** are small planets revolving round the larger ones. The moon is the earth's only satellite. Saturn has eight.

**Satin**, a silk fabric of glossy surface of a velvety texture, once very fashionable for dresses, but now little used except for trimming purposes.

**Satin-Bird**, the famous "bower bird" of Australia so named from its habit of constructing a bower-like nest; has a glossy black plumage, with the under parts yellow.

**Satinwood**, the timber of a tree plentiful in India and Ceylon, and valued for cabinet work. It is of fine grain and very hard. Varieties also exist in the West Indies, Florida and Tasmania.

**Satrap**, the name given in ancient times to a Persian Governor of a Province.

**Saturday**, the seventh day of the week (the Jewish Sabbath), derived its name from Saturn, or, as some hold, is called after the Saxon idol, Saterne, which was worshipped on this day.

**Saturn**, a planet, the sixth from the Sun, from which it is distant about 887 millions of miles, and around which it makes a revolution in 10,759 days. It is about 71,000 miles in mean diameter, or ten times as large as the earth, and rotates on its axis in ten and a quarter hours. It is surrounded by a series of rings apart from, but revolving round, the planet. It has eight satellites.

**Saturnalia**, festivals held in ancient Rome in honour of the god Saturn. They were made the scene of the most boisterous festivities, and were continued for several days at the end of December.

**Savings Bank.** (*See* Banking in "Business" Section.)

**Savoy Palace**, in London, between the Strand and the Thames, was originally built in the 13th century by Peter of Savoy. It was burnt in the Wat Tyler Rebellion in 1381, and afterwards restored and converted into a hospital in the reign of Henry VII. It was here that the famous but fruitless Savoy Conference was held between the Church and the Presbyterian Party in 1661. The ancient chapel of the Savoy was burnt down in 1864, but rebuilt in 1865.

**Saw**, a tool said, by Pliny, to have been invented by Dædalus, and fashioned in imitation of the jaw-bone of a snake. Saw-mills date from the 15th century, in Maderia and Breslau, but were introduced into England only in the 17th century, when they met with opposition. The circular saw was invented in the 18th century.

**Sawfish**, a sub-tropical fish whose snout often attains the length of several feet, and is provided with saw-like projections which render it dangerous even to the whale itself.

**Saxons**, a Teutonic race originally inhabiting what is now Holstein. The conquerors of England sprang from this people in the 5th century.

**Saxophone**, invented by a German called Sax, patent taken out in 1846. It is a musical wind instrument with about 20 keys and is able to imitate almost any kind of sound.

**Scald**, the name of the Norse poets, who were similar to the bards of Wales. They had to celebrate the achievements of their warriors and leaders.

**Scapular**, a vestment hanging from the shoulder to the knees, worn by members of certain Roman Catholic orders. The name is also given to two small pieces of cloth worn over the shoulders by lay members of the church in honour of the Virgin.

**Scarabæus**, a genus of beetles widely distributed through Africa and Asia and the inner parts of Europe. It is to this genus that the "Sacred Beetle" of the Egyptians belongs, and numerous representations of it are found on ancient monuments.

**Sceat**, a small Anglo-Saxon coin, circulated in the 7th and 8th centuries, and worth nominally a penny; struck sometimes in silver.

**Sceptics**, a sect of philosophers founded by Pyrrho in ancient Greece 334 B.C. Their philosophy consisted in general doubt concerning everything.

**Sceptre**, the staff or rod constituting the symbol of supreme authority. Tarquin, the elder, was the first Roman to assume the sceptre in 468 B.C. The French kings of the 5th century made a golden rod their sceptre.

**Schiedam**, a kind of gin, commonly called Hollands, manufactured at Schiedam, from the juice of the juniper berry and malt barley.

**Schism** was constituted a punishable offence in 1713, Bolingbroke introducing a law "to prevent the growth of schism and for the further security of the Churches of England and Ireland as by law established." Teachers were required to conform to the Church. The Act was repealed in 1719.

**Schist**, the geological name of certain rocks in closely parallel layers, the mica schist being the most important. Quartz is a main constituent.

**Schoolmen**, or **Scholastic Philosophers**, were a body who, in the Middle Ages, devoted themselves to the study and exposition of questions of religious inquiry, and attempted to reconcile the teaching of the Church to the dictates of human reason. The chief Schoolmen were Archbishop Anselm, Albertus Magnus, Thomas Aquinas, Peter Lombard, Duns Scotus.

**Schooner**, a small two-masted vessel with fore and aft sails. Some also carry top-sails. The schooner is a favourite sailing vessel on account of its speed.

**Science Museum**, Kensington, London, a collection to illustrate the application of science to industry and the developments of scientific and industrial instruments and machinery. A library of over 193,000 volumes on pure and applied science is attached to the Museum.

**Scorpion**, a large form of spider, in structure not unlike a lobster. It is only found in hot climates, and often attains a length of 6 or 7 inches. The tail is provided with a venomous sting, which, though seldom fatal, causes extreme pain.

**Scotists** were followers of the Schoolman, John Duns Scotus, who propounded certain moral laws and doctrines which were somewhat at variance with the teachings of the main body of Schoolmen.

**Scotland Yard**, the Metropolitan Police Headquarters from which all public orders are given to the police force. The original Scotland Yard was a street near Trafalgar Square, so called because a palace stood there given by King Edgar (10th century) to Kenneth II of Scotland. New Scotland Yard, the present official name for S.Y., is on the Thames Embankment, and the famous "C.I.D." (Criminal Investigation Dept.) has its headquarters there.

**Scouts, Boy.** This movement, founded by Lord Baden-Powell of Gilwell in 1908 "to help the boys of whatever class to become all-round men," has been developed with great spirit and success. Its aim is to develop good citizenship among boys by forming their character—training them in habits of observation, obedience and self-reliance—inculcating loyalty and thoughtfulness for others—teaching them services useful to the public and handicrafts useful to themselves—promoting their physical development and hygiene. There are 2,031,274 scouts in the world, among whom there are 756,883 British scouts, which figure includes 231,408 Cubs (junior scouts), 42,733 Rovers (senior scouts) and 5,705 Sea Scouts. The next Jamboree (international assembly of scouts) will be in 1933. The movement has been extended to girls as the Girl Guides' Association, incorporated in 1925, with 895,000 members.

**Scruple**, in English apothecaries' weight, comprises 20 grains, or the third of a drachm. In ancient Rome a scruple was the 24th part of an ounce, and also indicated a surface and time measure.

**Sculpture** is believed to have originated in Egypt, and Pliny refers to a school of statuary at Sicyon about 568 B.C. Lysippus was appointed sculptor to Alexander the Great 326 B.C. The greatest of the Grecian sculptors were Phidias (42 B.C.), Myron (480 B.C.) and Praxiteles (362 B.C.). The Romans did not cultivate sculpture with any special success, and it was not until the Art revival of the Middle Ages that it was earnestly taken up again. It was Michael Angelo who carried Italian sculpture to its highest point in the 16th century. Not until the 18th century did England produce any particularly striking sculpture, and even then

the art was mainly represented by foreigners. The chief sculptors since then have been Flaxman, Chantrey, Westmacott, Gibson, Foley, Woolner and Thornycroft; Canova in Italy, Thorwaldsen in Denmark, Rodin in France. Among the leading European sculptors to-day are Meshtrovich, Epstein, and Dobson.

**Scutage, or Escuage,** was a feudal tax levied on lands subject to knight service, the service being exercised in lieu of paying the tax.

**Scythians,** a nomadic people of ancient times.

**Sea Eagle,** a large genus of Eagles, consisting of seven species, two of which occur in Europe. They live on fish and carrion and sometimes seek their prey among living animals.

**Sea Elephant,** a curious species of seal, the males of which possess a proboscis a foot or more in length. They are found on the coast of California, and in certain parts of the Southern Ocean; their blubber has a commercial value.

**Sea Horse,** a rather common sea-fish, very numerous in the tropics and comprising some 20 species. Their bodies are ringed and they have prehensile tails. Their heads are horse-shaped, and they swim in a vertical position.

**Seals,** or **Signets,** have been in use from the remotest times. Some impressions of seals of Saxon kings are in the British Museum. The Great Seal of England was first used by Edward the Confessor, and is now used on the writs summoning Parliament, and for sealing all State documents of importance. The Lord Chancellor is the official custodian of the Seal.

**Sea Mouse,** a genus of Annelids of the Aphrodite family, of oval shape and some 8 or 9 inches long, and iridescent. They are covered with fine hairs, and in some species are barbed and bristled.

**Seasons** comprise the four natural divisions of the year, and are due to the inclinations of the earth's axis to the plane of the elliptic. (*See* **Equinox.**) The spring season is entered about the 21st March, autumn September 22. The summer and winter seasons are governed by the solstices (which see), and begin respectively about June 21 and December 22.

**Sea Urchin,** a curious kind of echinoid encased in a calcareous globular shell, covered with spines which are used both for defence and locomotion.

**"Se-Baptists"** were a sect of the 17th century, who held that baptism was sufficiently fulfilled by a man baptising himself.

**Secretary Bird,** so called because of the quill-like plumes about its ears, is a bird of prey common in Africa, and of considerable service as an exterminator of snakes. It is a large bird about 4 feet in height.

**Secularism** describes the principles first advocated by Bradlaugh, Holyoake and others, not in opposition to Christianity, but apart from it, and deals with matters of human welfare and utility, ignoring altogether theological questions.

**Sedan Chairs** were first made at Sedan in France in the 16th century, and introduced into England in the reign of James I. They were in general use in the 18th century, when they were the usual means of carriage for ladies and gentlemen. They were borne on two side poles by a couple of bearers, and only accommodated one person.

**Sedgmoor, Battle of,** the deciding battle of the Monmouth Rebellion, fought on July 6th, 1685, at Sedgmoor in Somersetshire. The Duke of Monmouth was made captive, tried, and beheaded.

**Sedition,** the incitement to opposition to the governing powers, was formerly severely dealt with. A Sedition Bill was passed in 1795, and for the next quarter of a century this statute was much in evidence to put down seditious writings, meetings, and assemblies. In later times numerous prosecutions for sedition have taken place in Ireland. By the Seditious Meetings Act, 1819, political meetings of more than 50 persons within one mile of Westminster Hall are unlawful whilst Parliament is sitting.

**Seismometer,** an instrument for measuring the force of earthquake shocks, is in its present improved form the invention of Messrs. Ewing and Grey. It is a clockwork apparatus, with a duplex pendulum, and records the direction and velocity of seismic waves.

**Selden Society,** for the study of English legal history, was founded in 1887.

**Selenium,** a non-metallic element of a dark red colour, and solid, found associated with sulphur, iron, pyrites, etc., though only in small quantities. It possesses strong electrical resistance which varies according to whether the element is illuminated or not, and is valuable in the construction of electrical instruments.

**Self-Denying Ordinance** was a measure passed in 1645, providing that no member of Parliament should hold military or civil office, and was forced through the House of Commons by Cromwell, in order to deprive the Earl of Essex and other Presbyterians of power.

**Seminoles,** a tribe of North American Indians originally located in Florida, but now for the most part living on reservations in the Indian Territory.

**Semitic Languages** are divided into two sections; one including the Assyrian, Armæan, Hebrew and Phœnician groups; the other embracing the Arabic and the Ethiopian. The Arabic is the most copious, the Aramæan the poorest; the Hebrew standing in an intermediary position.

**Senate,** the higher governing Assembly of a Legislature. The Senate of Rome originally comprised 100 members, all of whom were patricians. The number was increased from time to time, and under Julius Cæsar reached 900. The French Senate dates from 1799; the United States Senate from the establishment of the Republic.

**Seneschal,** a high official of a royal or noble household, the title originating in France in the 10th century, and being afterwards adopted in England and other parts of Europe.

**Separatists,** the name given to the Dissenters in the time of Charles II., who pressed several severe measures against them. In recent times the term has been applied to the Irish Home Rule Party.

**Sephardim,** the name of the descendants of those Jews of Spain and Portugal who left those countries in the 15th and 16th centuries to avoid the persecutions of the Inquisition.

**Sepia,** a pigment prepared from a black secretion of the cuttle-fish. In the East it is used as a writing ink, but in this country is best known as a colour, which is formed by its being treated with caustic lye.

**Sepoys,** native Indian troops under the command of British officers. The name dates back to the 16th century when the Prince of Sind had a bodyguard of natives dressed and armed like Europeans. The Sepoys comprise over 150,000 men, the Imperial Indian army containing about half the number.

**September,** the ninth month of the year, and the seventh of the old Roman calendar; hence the name, from Septimus. The designation was several times changed by the Emperors, but none of the new names survived for long.

**Septembrists** were participants in the massacre of prisoners in Paris in September, 1792.

**Septuagesima Sunday,** the third Sunday before Lent.

**Sequin,** a gold coin of Italy, notably of Venice, which circulated from the 13th to the 18th century. It was worth about 9*s.* 3*d.* English.

**Serfs,** the name given to the slaves formerly existing in Russia, who answered to the condition of the feudal "villeins" of England. They were attached to the soil and were transferred with it in all sales or leases. In 1861 the whole of the serfs in Russia were emancipated. Serfdom existed in Prussia down to 1702, in Denmark to 1766, and in the German hereditary States to 1781.

**Serge,** a mixed worsted cloth used for male and female garments, and of considerable durability.

**Serjeants at Law,** the highest degree of barrister-rank formerly existing in England; until 1873 it was necessary for all Common Law Judges to be Serjeants before their elevation to the Bench. This obligation was abolished, by the Judicature Act of that year, and no Serjeants have been made since 1868, though Serjeant Sullivan, K.C., formerly of the Irish Bar, still enjoys an extensive practice at the English Bar.

**Serval,** a small carnivorous animal of the lynx order, with black spots on a tawny ground. It is numerous in Africa, preys upon the smaller animals of the deer family, and is sometimes styled the "Tiger Cat."

**Settlement, Act of,** was passed in 1689, with the

object of limiting the Succession to the British Throne to Protestants.

**Seven Champions of Christendom,** as set forth in mediæval literature, were St. George of England, St. Andrew of Scotland, St. Patrick of Ireland, St. David of Wales, St. James of Spain, St. Denis of France, and St. Anthony of Italy.

**Seven Churches of Asia,** referred to in the Revelation of St. John, were those of Ephesus, founded by St. Paul in 57, Smyrna, Pergamos, Thyatria, Sardis, Philadelphia (now Allah Shahr) and Laodicea.

**Seven Sages** (or **Seven Wise Men of Greece**), regarded as the chief philosophers of the age before Socrates, were, according to the best authorities, Solon of Athens; Thales of Miletus: Pittaccus of Mitylene; Bias of Priene; Chilo of Sparta; Cleobulus of Lindus; and Periander of Corinth.

**Seven Sleepers,** of the ancient legend, took refuge from the wrath of the Emperor Decius in a mountain cavern, when they were made to sleep for 300 years.

**Seven Wonders of the World** were: 1, the Pyramids of Egypt; 2, the tomb of Mausolus, King of Caria (hence the word mausoleum); 3, the Temple of Diana at Ephesus; 4, the Walls and Hanging Gardens of Babylon; 5, the Colossus at Rhodes; 6, the Ivory and Gold Statue of Jupiter Olympus; and 7, the Pharos, or Watch Tower built at Alexandria by Ptolemy Philadelphus, King of Egypt.

**Seven Years' War** was that waged by Frederick the Great and England against Austria, France and Russia, from 1756 to 1763. It resulted in the secession of Silesia to Prussia, of Canada to England, and in the strengthening of our Indian Empire.

**Sewing Machine,** a machine for stitching cloth or other materials, and operated by manual, steam, or other power. Many attempts were made to produce such a machine between 1780 and 1840, but the first really practical invention of the kind was that of Elias Howe, an American, in 1841. Other sewing machines were afterwards introduced, and many improvements have been effected.

**Sexagesima Sunday** is the second Sunday before Lent.

**Sextant,** an instrument which has superseded the quadrant as a measurer of angles between distant objects. It is of special importance in navigation and surveying, and contains 60 degrees described on a graduated arc. A small telescope is attached, and there are also a couple of mirrors which reflect the distant objects so as to enable them to be accurately observed. It was invented by Hadley in 1731.

**Shad,** a common sea-fish of the herring kind, abounding on the British coasts and ascending the rivers for spawning in the spring. Its back is dark blue, with silvery sides.

**Shagreen,** shark's skin; also a leather of peculiar grain made from skins of wild asses, camels, horses, etc., and mostly manufactured in Astrakhan and Asia Minor.

**Shake,** a musical term, signifying a vibrant effect produced by the rapid trilling of two notes.

**Shakers** were originally an English sect who emigrated to America in 1772, and under the leadership of Ann Lee established themselves in a community at New Lebanon, in New York State. They practise celibacy and oral confession, hold goods in common, and reject baptism and the Lord's Supper. Dancing constitutes a part of their worship.

**Shalloon,** a kind of cloth manufactured from wool and worsted, and used chiefly for women's dresses and coat linings. It gets its name from the fact that it was originally made at Chalons.

**Shamrock,** wood-sorrel, the three-leaved plant native to Ireland and its national emblem.

**Shark,** a large and powerful ocean fish, comprising many species, very widely distributed, but most numerous in tropical seas. They have formidable teeth and are the most carnivorous of all fishes. They usually attain a large size, the whale-shark being often of a length of 50 feet. Commercially the shark yields shagreen from its skin, the fins are made into gelatine, and an oil is obtained from the liver.

**Shawls** are loose coverings worn by women over their shoulders and were introduced into Europe from the East. They are made of various materials, wools, silk, cotton, etc., or of mixed fabrics, and those from Cashmere, India, are famed for their beauty of colour and design. At one time these were very fashionable, as were the shawls made at Paisley for the great part of the 19th century.

**Sheep,** a well-known family of ruminants of great utility as wool-producers, and for food. From the earliest times sheep have been a source of wealth to England. So much were they valued in the 15th and 16th centuries that their exportation was frequently prohibited. The chief English varieties are the Leicester, Cotswold, Southdown and Cheviot breeds. Of the foreign breeds the most valued are the Merino sheep of Spain, which yield a fine long wool. At the present day Australia and the Argentine are the largest wool-producing countries in the world.

**Sheldrake,** a genus of ducks, one of which, the common sheldrake, is an inhabitant of this country. It is a beautiful plumaged bird with white neck, light red body and black head. Another species, the ruddy sheldrake, a native of Asia, appears in Britain only occasionally.

**Sheriff,** meaning the reeve or governor of a shire, has existed as an office in England from before the Norman Conquest. These county officials are now called High Sheriffs, and are nominated each year on November 12th. This office has, however, in recent times lost much of its ancient significance, though it is still usually filled by men of prominence and wealth. They are appointed by the Crown upon presentation of the Judges, except in the metropolis, where the citizens retain the right of electing sheriffs for London and Middlesex. Ordinarily the term is applied to officials acting as High Bailiffs. The Sheriffs Act 1887 repealed many old Acts.

**Shibboleth** was the test word which Jephthah used to distinguish the Gileadites, his own men, from the Ephraimites as they passed the Jordan. Such as would not give the word were refused passage. The term is now frequently used to designate any special watchword or party phrase.

**Shield,** a weapon of defence carried on the arm by soldiers before the invention of firearms, mostly made of metal, leather, or wood. In heraldry the term implies a shield-shaped escutcheon forming the ground on which arms are displayed.

**Shilling** has been an English coin from Saxon times, but it was not of the value of 12 pence until after the Conquest. The present style of shilling dates from the time of Henry VII.

**Ship-money,** first levied in the 11th century, was re-imposed in a very burdensome form by Charles I. in 1634–6, and was the immediate cause of the Civil War. London was assessed in 7 ships of 4,000 tons and 1,560 men, and other places in like proportion. Hampden was the first prominent man to refuse to pay the tax, and there was a general disposition to support him. The Long Parliament declared it to be illegal and in the reign of Charles II. it was ultimately abolished.

**Ships** have existed from prehistoric times. There is mention of one that sailed from Egypt to Greece in 1485 B.C., and in 786 B.C., the Tyrians built a double-decked vessel. No double-decked ship was known in England, however, before the *Royal Harry* was built by Henry VII., and it was not until the 17th century that shipbuilding was carried on in this country as a prominent industry.

**Ship-worm.** (*See* **Teredo.**)

**Shirts** do not seem to have been generally worn in Europe before the 8th century. According to Stow woollen shirts were commonly worn until about 1253, when linen of a coarse kind, then first manufactured in England by Flemish weavers, was adopted.

**Shoddy,** the name given to a kind of cloth mainly composed of woollen or worsted rags, torn up and re-fabricated by powerful machinery. It was first made at Batley in Yorkshire about 1813, and in later times has become a very important industry employing many thousands of people at Batley and the neighbouring town of Dewsbury.

**Shoes,** as coverings for the human foot, have been worn from the earliest times. They are referred,

to in the Bible, and early historical records. The shoes of the Jews were made of wood, rush, linen, or leather. Pythagoras directed his followers to wear shoes made from the bark of trees. The Romans were the first to set the example of costly shoes, and introduced various decorative adornments of ivory and precious stones. In the Middle Ages fashion played some fantastic tricks with shoes, and in England, about the middle of the 15th century, shoes with such long points were worn that they had to be tied to the knees for convenience of walking, the dandies using silver chains for the purpose. It was about 1633 when shoes of the present form were introduced, and in 1668 the buckle came into use as an ornament. These continued in vogue up to the 19th century, before which period shoes were not made "rights" and "lefts."

**Short Parliament,** that of Charles I. in 1640, lasting only three weeks.

**Shot,** the name given to solid projectiles fired from guns. In the time of Henry V. stone shot was used, later leaden shot, then iron shot, and finally steel shot, introduced by Sir Joseph Whitworth.

**Shrike,** the name of an extensive group of birds, mostly inhabiting Africa and South America. The shrike is commonly called the "Butcher Bird," and is of sober plumage. It preys upon small animals and birds, and from the effective way in which it kills its victims gets its common name. Four species, of which the red-backed shrike is the most numerous, visit England.

**Shrimp,** an edible sea crustacean of the lobster family, is found in great numbers in the shallow places of our coast.

**Shrove Tuesday,** the day before the first day of Lent, receiving its name from the old custom of shriving, or making confession, on that day. In England the day has always been associated with the making of pancakes.

**Sibyls, or Sibyllæ,** women reputed to be inspired, who flourished at different periods in various parts of the world. Pliny, Plato, Ælian and Varro speak of some of these weird creatures; and an Erythean Sybil, who offered books of destiny for a large sum to Tarquin II., is famous in classic story.

**Sicilian Vespers,** the term applied to the terrible massacre of French people in Sicily in 1282. The French were then in occupation of the island, and had been guilty of many cruelties. On Easter Monday at Palermo in the year named, by a preconcerted signal, a general rising began on the stroke of the Vesper Bell, and spread through the whole island, 8,000 persons being killed in Palermo alone. The result was the supersession of French by Spanish rule.

**Siderostat,** an instrument invented in 1868 for observing the light of the stars on the principle of the Camera Obscura.

**Siegenite,** a variety of Cobalt Linnæite of a nickeliferous quality, found at Siegen in Prussia.

**Signals,** for conveying information or warning to ships at sea, were not in much use in any English fleet before the time of Elizabeth. Flags are now in most general use, and a very elaborate code in connection with them is adopted, enabling words and sentences to be clearly comprehended by their varied manipulation. Other modes of sea signalling are afforded by steam jets, and at night by flashes of light and also by wireless signals. Land signalling is usually by heliograph (which see). Semaphores are the principal signals on railways, in connection with coloured lamps. The block-signal system now in general use—which ensures the safety of a train within a given distance by not permitting another train to be on the same line of rails within that distance—has been of great service in preventing railway accidents. There are also electric, automatic, and pneumatic signals, and for times of fog explosives called fog-signals are placed on railway metals.

**Sikhs,** a Hindoo sect established in the 15th century, but, gradually extending into a powerful race, settled mainly in the Punjab, and of an intensely military spirit. The Sikhs, under Pandit Singh, strongly opposed the British rule in the early part of the 19th century, and many fierce battles were fought before they were finally subdued, and their country annexed in 1848. They are now amongst the most loyal of His Majesty's Indian subjects.

**Silence, Towers of,** are towers, usually about 25 feet high, erected by the Parsees of Persia and India for the reception of the corpses of their dead. The vultures flock there and strip the bodies of flesh, and the bones fall through a grating into a pit, whence they are afterwards removed for burial.

**Silhouette,** a form of black profile portrait, invented by Etienne de Silhouette in 1759, and formed by an outline cutting made with scissors or other sharp instrument from cloth, paper, or other flat substance.

**Silicon,** an important non-metallic element entering into the constitution of many earths, minerals, and metallic oxides. Next to oxygen, it is the most abundant constituent of our globe's crust.

**Silk,** the name given to a soft glossy fabric manufactured from the fine thread produced by the silk-worm. It was known to, and highly prized by the ancients, being at one time paid for, weight for weight, with gold. The manufacture of silk was carried on in Sicily in the 12th century, later spreading to Italy, Spain, and the South of France. It was not manufactured in England before 1604; but when certain French refugees established themselves at Spitalfields in 1688, the industry was developed and became of importance. In the 18th century the Lombes of Derby achieved great success in this industry, and in recent years an important new branch of silk manufacture was established by Lord Masham at Bradford, by which what is known as "waste silk" is fabricated into plushes, velvets, etc., on an enormous scale.

**Silkworm,** the larva of a species of moth. It is native to China, and has been cultivated with success in India, Persia, Turkey, and Italy. The silkworm of commerce feeds on mulberry leaves, and produces a cocoon of silk varying in colour from white to orange. The cocoon is the silken habitation constructed by the worm for its entrance upon the pupa condition, and to obtain the silk the pupa is killed by immersion in hot water.

**Silures,** an ancient British tribe settled in Monmouth and Herefordshire at the time of the Roman Invasion, and with difficulty subdued by Ostorius Scapula, the Roman General, A.D. 50.

**Silver,** a white precious metal, found in a free state, also in certain combinations, and in a variety of ores. The chief silver-producing regions are the Andes and Cordilleras. Peru, Bolivia, and Mexico have yielded vast supplies of the metal since the 16th century, and Colorado and Nevada in the United States, have also been very prolific in silver yield. Violent fluctuations in the price have taken place. In 1920 the price rose to 89½*d.* per oz., and our silver coinage was then worth more than its face value. The fineness has since been reduced to counteract this. The depreciation in silver values in recent years has greatly retarded production. In 1930 it was 1*s.* 4½*d.* per oz.

**Simnel Conspiracy** was an English historical incident of 1486, when Lambert Simnel, a baker's son, claimed to be the nephew of Edward Plantagenet, Earl of Warwick, and heir to the throne. He induced a large number of followers to join him in rebellion, but his army was defeated and he was taken prisoner, but pardoned and subsequently employed in the Royal household as a menial.

**Simonian,** one who, like Simon Magus (Acts viii. 18), would purchase the gift of the Holy Ghost with money. A trafficker in spiritual things or Church benefices.

**Simony,** the offence of trading in church offices, has been contrary to English law since the time of Elizabeth. The Benefices Act, 1898, permits Resignation Bonds by which a clergyman who has been presented a living by a patron, undertakes to resign the living at a certain period. Advowsons may be sold when not actually vacant.

**Sin-eaters** were people hired in certain parts of the British Isles in olden times to eat bread over dead bodies at funerals, the idea being that the eaters thereby took upon themselves the burden of the sins of the dead.

**Sinn-Fein** is the name of the organisation which supported the Irish Republican Party. This movement was prior to the establishment of the Irish Free State in 1922.

**Sinople**, a ferruginous earth found near Sinope on the Black Sea, and sometimes used as a pigment.

**Sirius**, the dog-star, so called because of its situation in the mouth of the Dog (Canis Major); it is the brightest of all the fixed stars, and is also one of the nearest to us.

**Siskin**, a small bird of the goldfinch family, common in Northern regions, and of a grey-green colour. It is a lively, swift-flying bird with a very acute bill.

**Sistine Chapel** is the chapel of the Pope in the Vatican, renowned for its marvellous frescoes by Michael Angelo.

**Six Articles, The Statute of the**, was passed in 1539 for compelling adhesion to the chief doctrines of faith: transubstantiation, communion in one kind, vows of chastity, celibacy of the clergy, private masses, and auricular confession; and those who refused to subscribe to the Articles were treated as heretics. The Act was repealed in 1547.

**Sizar**, a student of Cambridge or Dublin University to whom concessions in regard to college bills are made by virtue of being aided by benefactions. Similar students at Oxford are called Servitors.

**Size**, a gelatinous substance used as a varnish and made from shreds of parchment, glue, hides, etc.

**Skate**, a genus of sea-fishes, some of which attain a considerable size. They belong to the Ray family.

**Ski**, long thin, wooden snowshoes, originated in Scandinavia. Each one is 7 pounds in weight. They are attached to the feet and used for rapid travel over snow, when a speed of 50 miles can be attained. Ski-ing is much in vogue as a sport in snow countries.

**Skilling**, an old Scandinavian and North German copper coin, worth from a farthing to a penny.

**Skink**, a smooth-scaled lizard, inhabiting the warmer parts of Africa. Its average length is about 5 inches.

**Skunk**, a North American mammal of the weasel family, with short legs and long bushy tail, and of a black colour, with a white patch on the back. It secretes and ejects at will a foul-smelling fluid. Anything tainted with this fluid retains the odour for days.

**Skyscraper**; owing to congestion, lack of ground space and growth of modern cities, buildings are being made higher than broader; hence the name. The structures are constructed of a steel framework usually clothed in concrete or reinforced concrete. Among the highest examples are the Empire State Building of New York (1048 ft.) and the Crane Building of Chicago (1022 ft.)

**Slate**, a hard kind of shale rock capable of being split into thin sheets, and chiefly used for roofing purposes. The largest slate quarries are in Wales and Cumberland. Slate varies in colour.

**Slate Club**, deriving its name from the fact of its transactions being originally recorded on a slate, is a society whose members pay weekly contributions into a common fund, to provide against sickness or unemployment, or for obtaining a lump sum for Christmas. Many of these societies have the handling of large sums.

**Slavery**, in its earlier forms, as in the times of the Romans, in the Feudal Ages, when vassalage and villeinage existed, and in the serfdom of Russia and other northern nations, was attended by many inhumanities and evils; but perhaps in the negro slavery system which prevailed in the British Colonies for upwards of 200 years and in certain parts of the United States up to 1865, it attained its highest point of cruelty. Since 1833 no form of slavery has existed within the British Empire.

**Slings** as a weapon of attack find prominent illustration in the Old Testament, as the instrument with which David slew Goliath. There were bodies of slingers in the Carthaginian and Roman armies, and slings were used as late as the 17th century when it was necessary to economise powder.

**Sloop**, a fore and aft rigged, one-masted vessel, carrying jib, fore-staysail, mainsail and gaff-topsail. A sloop of war used to be a gun-carrying vessel of swift motion and great utility.

**Sloth**, a curious family of arboreal animals, only found in South America. They dwell almost entirely in the trees, proceeding from branch to branch with their bodies hanging downwards, and live upon leaves and fruit. When on the ground they move very slowly and with much difficulty, hence their name.

**Sloyd**, a Finnish system of manual training, in which pupils in the elementary schools are taught the use of ordinary tools as a preparation for later technical instruction.

**Snail Industries.** The rearing of snails as a food product is carried on in various European countries, especially in France and Italy. Many species are regarded as edible; but the large white snail (*Helix pomatia*) is the one generally preferred. The Romans reared this species in enormous quantities. In the United States edible snails are frequently to be seen exposed for sale; but they are not raised in that country, and have been shipped to America alive from Europe. In Vienna, again, during Lent there is a snail market, the snails coming in barrels from Swabia. The great centre for the consumption of snails, however, is Paris and some of the French provinces.

**Snake**, an important order of reptilia, having a scaly cylindrical body, without fore-limbs, and only in some instances possessing rudimentary hind-limbs. Their locomotion is accomplished by means of the excessive mobility of their ribs, which are very numerous. All snakes have teeth which only serve for seizing prey, and the poisonous varieties are furnished with poison fangs in the upper jaw. These fangs are perforated and the venom passes into them from glands in the skull. Snakes are found in tropical and sub-tropical regions.

**Snipe**, a wading bird, of which two species are found in Britain—the Common Snipe, that appears in the winter, and the Great Snipe that is but an occasional winter visitor.

**Sniper**, a soldier who is a crack shot and can pick off the enemy by rifle fire, usually from under cover and at a distance. Turkish women made good snipers during the Dardanelles campaign in the Great War.

**Snow** is frozen rain formed in the upper portion of the atmosphere and taking the form of light flakes, which fall to the earth at a much slower rate than rain. All snow assumes the form of crystals.

**Soap.** (See *Dictionary of the Toilet.*)

**Socialism**, a word that first came into general use about 1834 in connection with Robert Owen's Communistic Settlement at New Lanark. The idea of Socialism is joint ownership by all the members of a community of the instruments and means of production, and there are more or less Socialistic organisations in various countries. About the middle of the 19th century Charles Kingsley and others established a form of Christian Socialism, and the late William Morris, Mr. John Burns and others founded a Socialist League in 1886. Modern Socialism began with the Utopian schemes of Robert Owen, and with the development of Trade Unions it took a practical trend. The first two Socialist members of the House of Commons were returned in 1898 and worked with the support of the Liberals for many years, until in 1905 they won 10 seats; since when the growth of the party has been very rapid. In 1929 Labour members numbered 295, and in 1930 had a parliamentary majority. Since 1926 the Socialist tendencies of the Labour Party have been much less pronounced, while, on the other hand, some principles which were once denounced as Socialistic doctrines are now accepted by all parties. The Independent Labour Party still adheres to a Socialistic basis. The Social Democratic Federation directs its policy towards international Socialism and socialisation of industries and trade. Continental Socialism has always been more cosmopolitan and international in tendency than English. (*See* **Syndicalism.**)

**Social Science**, which deals with social conditions generally, has formed a subject of much study in recent years. In 1857 an Association for the Promotion of Social Science was organised, and

has ever since continued to hold annual meetings. Lord Brougham was the first President.

**Socinians** were followers of Lælius and Faustus Socinus, two Siennese noblemen, who preached in the 16th century, and held that there was only one God, that Christ was mortal, and that it was unlawful for princes to make war. Many Socinian bodies still continue to exist.

**Sociology**, the science of human society, dealing with social problems and human progress.

**Soda Ash**, carbonate of soda, is now mainly obtained by certain processes of manufacture from common salt. It was formerly obtained from the ashes of plants permeated with sea-salt. Bicarbonate of soda results from the action of carbonic acid gas upon soda crystals, and is a white powder much utilised for effervescent drinks, and for medicinal purposes.

**Sodium**, a metallic element first obtained by Sir Humphry Davy in 1807 from soda, by means of the electric battery. It is found in the various forms of salt in combination with chlorine in many minerals, and in most vegetable and animal organisms.

**Soil**, the upper portion of the crust of the earth, the medium from which all vegetation springs. It consists of rocky decomposition and organic matter, and is always characteristic of the rocky formation where it is found. It is either dominated by sand, or clay, or chalk, or humus.

**Solar System**, a general term embracing the sun, the planets and their satellites, and all celestial bodies which revolve round the sun.

**Sole**, a much-esteemed table fish, and one of the best known members of the Marine flat-fish family. The British Common Sole is the finest in food quality, and after that comes the Lemon Sole, which is very abundant in the English Channel.

**Solicitor.** (*See* **Attorney.**)

**Solstice**, an astronomical term indicating the point at which the sun is most distant from the equator, which occurs about June 21st, when the Summer Solstice is entered, and December 22nd, for the Winter Solstice.

**Somerset House**, a large Government building stretching from the Strand to the Thames at the corner of Waterloo Bridge, and comprising the headquarters of the Inland Revenue and various other offices and registries. It was built towards the end of the 18th century on the site of an old palace which had belonged to the Protector Somerset.

**Sonnet**, a favourite form of short poem in which Shakespeare, Milton, Wordsworth and Keats especially excelled. It consists of fourteen decasyllabic lines, and is said to have been invented in the 11th century by Guido d'Arezzo.

**Soot**, a black substance deposited from fuel, gas or other flame, in combustion, and adhering to the sides of any aperture through which the smoke, its principal constituent, may pass. It forms a useful manure, and also a medicine.

**Sophists** were the first Athenian teachers of philosophy in the 5th century B.C., who were supposed to base their reasoning on false premises, sacrificing much to mere quibble of rhetoric. They were denounced by Socrates and avenged themselves upon that philosopher by plotting against him. Plato and Aristotle also railed against the Sophists, and the term "Sophism" has in later times been generally applied to fallacious arguments.

**Sorcerers** were sufficiently numerous in the middle of the 16th century to have severe laws passed against them, and in 1603 James I. made it a capital offence to pretend to gifts of sorcery or witchcraft.

**Soundings at sea**, to determine its depth at any point, have been taken in all seas, with the result that the ocean's depths have been defined with considerable accuracy. The deepest reading was that of the *Challenger* Expedition in 1873, near St. Thomas's in the North Atlantic, when 3,875 fathoms were sounded; but since then a depth of 32,089 ft. has been touched off Mindanao in the Pacific, *i.e.* a distance about 3,000 ft. greater than the height of Mt. Everest. The sounding is accomplished by lead and line.

**South Sea Bubble**, a project entered upon in 1710 as a financial speculation by what was called the South Sea Company. Harley, Earl of Oxford, who was then in power, conceived the idea of utilising this project for getting together a sufficient sum to pay off the National Debt, then standing at about £30,000,000. The company contracted to redeem the whole debt in 26 years on condition that they were granted a monopoly of the South Sea trade. The idea fascinated the public, fabulous profits being dreamt of, and there was an immense demand for shares, which ran up in value from £100 to £1,000. All classes joined in the gamble, but by the wise policy of Sir Robert Walpole the fraud was exposed in 1720, when the whole scheme collapsed and thousands of people were ruined.

**Sovereign**, a British gold coin worth 20*s*. It was first coined in 1489, and has ever since remained the principal coin of the realm. Its weight was fixed at 123·27447 grains troy, and it consists of 22 parts of pure gold to 2 parts of alloy.

**Spade Guinea**, a guinea coined in the reign of George III. and receiving the name because it has on the reverse a spade-shaped shield.

**Sparrow**, the most familiar of all British birds.

**Sparrow-Hawk**, a member of the Falconidæ family, of which six species only are known, one of which is a native of Britain, and one of the best-known birds of prey. It is from 10 to 12 inches long.

**Speaker of the House of Commons**, an official who presides over the deliberations of the Lower House of Parliament. The first Speaker was Peter de Montfort, 1260, but the first regular official to bear the title was Sir Peter de la Marc, 1376. Since 1857 there have been seven Speakers—John Evelyn Denison (afterwards Viscount Ossington), from 1857 to 1872; Sir H. W. B. Brand (afterwards Viscount Hampden) 1872 to 1884; Arthur Wellesley Peel (afterwards Viscount Peel), from 1884 to 1895; Mr. W. C. Gully (Viscount Selby), from 1895 to 1905; Mr. J. W. Lowther (Viscount Ullswater), 1905 to 1921; Rt. Hon. J. H. Whitley resigned 1928; the present Speaker is Captain Fitzroy.

**Spectacles** are said to have been invented about 1285 by a Florentine monk, Alexander de Spina. The invention, however, is also claimed for Roger Bacon and others. The lenses of spectacles are made either of glass or pebble (rock crystal). Spectacles are worn either to assist or correct defective sight.

**"Spectator,"** Addison's famous periodical publication, was first issued on March 1st, 1711, the last issue being December 20th, 1714. The bulk of the papers were contributed by Addison and Steele. A review of the same name started in London in 1828, one of the ablest papers of its class.

**Spectroscope**, an instrument for forming, investigating, and ascertaining the composition of spectra of luminous bodies. It consists of a tube through which the light enters to a collimating lens, and then through the prism under investigation, a telescope serving the purpose of examination instrument.

**Spectrum**, the name applied to a colour or band of light reflected from the sun or other luminous body through a small hole or slit refracted by a prism, and resulting in an intermingling of various colours—violet, blue, green, red, orange, yellow, indigo. Newton was the first discoverer of the phenomena, and in later times experiments have led to various chemical discoveries.

**Speculum Metal** is a white hard substance formed of one part of tin with two parts of copper. From its high polishing quality it is much used for the reflecting surfaces of telescopes.

**Spelling Reform** is a subject which has many distinguished supporters—philologists and men of letters—and the "Simplified Speling Societi," whose aim is to bring about a system of spelling which shall represent the actual pronunciation of each word, and numbers over 2,000 members, which included the late Sir James A. H. Murray, Viscount Bryce, Sir William Ramsay, and Andrew Carnegie, is actively engaged in spreading the new spelling propaganda.

**Spermatozoa**, the infinitesimal organisms constituting the generating element in male animals, and possessing the power of fertilising the female ovum.

**Spiders** were formerly classed as insects, but are now included with the animals of the Arachnida class. They have eight legs, breathe through pulmonary sacs, have six to eight eyes, and in most species spin webs composed of a viscid fluid.

**Spinet,** a keyed instrument of the 17th century, something like the harpsichord.

**Spirituals,** negro melodies with religious inspiration, and which are still spontaneously created, but have also passed into art-music. Paul Robeson, the American negro, is the best-known singer of spirituals to day.

**Sponge,** a marine organism of a low order, comprising a series of aggregated *Amœba*-like animals. While the sponge lives a current of water circulates through the main apertures. It is the dead skeleton of this mass that forms the sponge of commerce.

**Spoonbill,** a large white bird of the Heron family, remarkable for its broad, flat, spoon-shaped bill. It inhabits tropical regions.

**Sprat,** a sea-fish of the herring order, plentiful on all European coasts. It averages from 3 to 4 inches in length. It frequently does duty for the preparation of "anchovy" paste, as its fry does for whitebait.

**Spurs** have been used by horse riders from ancient times; in the feudal period a knight was allowed to wear gilt spurs, an esquire silver ones.

**Squirrels,** of which there are over 100 species, are not found in Australia, but are abundant in most other parts of the world. They are of arboreal habits, and feed on vegetable substances.

**Stag,** a large species of deer, still to be found in its wild state in the forest regions of Scotland, and kept as a domestic animal in many parks. It has large curved antlers, and is a noble-looking animal, giving capital sport when hunted.

**Stage Coaches.** (*See* **Mail Coaches.**)

**Stalactites** are calcium deposits formed on the roofs and sides of limestone caves, and in tunnels, under bridges, and other places where the acid of rain-water percolates through and partly dissolves the limestone, resulting in the growth of icicle-like forms that often assume groupings. The water that drops from these and rests upon the ground is called *stalagmite*, which accumulates and hardens into a series of sharp mounds or hillocks.

**Stamp Duties** were first imposed in 1670–1, and applied to certain legal documents only. An important extension of the Stamp Duty was effected in 1711 by the Newspaper Stamp Tax, which was continued in one form or another until 1855. Stamps on Notes or Bills of Exchange date from 1782. Since 1865 all fees in the Superior Courts are collected by stamps. The law is consolidated in the Stamp Act, 1891, and Stamp Duties Management Act, 1891. Total revenue, 1930–31, £27,000,000.

**"Standard,"** a Conservative morning newspaper started in 1827, and an evening issue dating from 1857. In 1905 these papers were acquired by the Pearson Company, when the *Evening Standard* absorbed *The St. James's Gazette*. The morning *Standard* is no longer issued.

**Starch** is an organic compound occurring in granules in nearly all green plants, and especially in the seeds of dicotyledonous and cereal plants, potatoes, rice, etc. In its pure form starch is a tasteless, odourless white powder, and is a carbohydrate consisting of carbon, hydrogen, and oxygen. It enters largely into various kinds of foods.

**Star Chamber,** an ancient Tribunal of State in existence in 1486 and possibly earlier, charged with the duty of trying offences against the Government, unfettered by the ordinary rules of law. It was in effect a Privy Council entrusted with judicial functions, and the present Judicial Committee of the Privy Council to some extent represents the older Tribunal. Under Charles I. the Star Chamber was used by the King and his party in the most unjust manner to persecute their opponents, and became such a scandal that in 1640 it had to be abolished.

**Starling,** a well-known European insectivorous bird, one species of which is common in Britain. It nests in holes and crevices, and is a familiar object on roofs and chimneys.

**States General of France** consisted of three Orders, the Clergy, Nobility, and Commons, and constituted a sort of Privy Council. Louis XVI. summoned the States General to Versailles on 5th May, 1789, when the body comprised 308 Ecclesiastics, 285 Nobles, and 621 Deputies. That was the occasion on which the Deputies assumed the title of "The National Assembly," with but one House.

**Staurolite,** a silicate of aluminium and iron found in brown prismatic crystals. Rocks of staurolite slate occur in Scotland and the Pyrenees.

**Steam,** the vapour derived from water heated to boiling point, and of great service as a motive power, possessing an immense elasticity of force, enabling it to be applied to many industrial purposes.

**Steam Engine,** a machine whereby steam becomes the active agent of the working of machinery, and of very wide application. The leading types of steam engine are: (*a*) condensing, or low-pressure engines, where the steam is generated by a boiler; (*b*) non-condensing, in which the cylinder exhausts its steam into the open air. Engines of the latter type are used where portable engines are required.

**Steam Hammer,** invented by James Nasmyth in 1839, and proved of great utility in the development of the iron trade. The hammer itself, which is fixed to the end of a piston-rod passing through the bottom of an inverted cylinder, often weighs as much as 80 or 100 tons, and is so perfectly controlled by the steam power that its action can be so accurately gauged that it could be made to crack the glass of a watch without actually breaking it, or brought down upon a mass of molten iron with a force representing many hundreds of tons.

**Stearine** is the portion of fatty matters and oils which remains solid at an ordinary temperature, and is a compound of stearic acid with glycerine. It is largely used in the manufacture of candles and for other commercial purposes.

**Steel,** the variety of iron that has been in general use from the earliest times, but how and where first manufactured remains a mystery. Carbon is regarded as an essential element in steel, other ingredients present being silicon, manganese, sulphur and phosphorus. The oldest method, and the one now generally adopted for the manufacture of steel, is that known as the "cementation process," but the most important method of all was introduced by Sir Henry Bessemer in 1855. This is known as the "Bessemer process," which consists in first burning all the carbon out of pig iron, and then putting back into it a sufficient quantity of carbon to produce steel containing the required proportion of this element. The metal produced by this process is called "Bessemer steel," which is of the highest value for structural purposes, rails, etc. For the manufacture of tools and weapons steel is indispensable. The United States, Great Britain and Germany are the leading countries in the world in steel production.

**Steel Yard,** was a sort of exchange which existed in Cannon Street, London, from the 13th to the 16th centuries. It was the chief resort of the Hanse merchants and the Flemings, to whom many privileges in regard to the exportation of English goods to the Continent were given.

**Stencil,** a wax sheet or metal plate, on which is cut a pattern or set of words. By placing the stencil on a sheet of paper or other substance and applying ink or paint to the cut-out pattern a copy of the pattern is obtained on the paper. Modern business practice has proved the usefulness of stencils. Cut on wax sheets by a typewriter a good stencil can produce as many as 100 copies or duplicates.

**Stenography,** the art of short-hand writing, was practised by the ancients, but was not in use in England before the 16th century. The systems invented in the 18th century were numerous, but the one that was most widely adopted was that of Mason, as improved by Gurney. In 1837 Pitman's phonographic system was first announced, which was a decided advance on any previous system, establishing a simple series of phonetic signs, that was easily learned and admitted of great abbreviation. The average speed is 120 words a minute. This is the system in general use to-day. Its inventor received the honour of knighthood.

**Stereometer,** an instrument by which the specific gravity of liquids can be ascertained. It was invented by M. Say in 1797.

**Stereoscope,** an optical instrument invented by Professor Wheatstone and afterwards con-

siderably improved. It blends into one picture two plane representations of things seen by each eye separately, which has the effect of seeming to throw natural objects into relief. It was only after photography was utilised in connection with the stereoscope that it became of special significance.

**Stereotype,** a metal cast taken from movable type which has been set up in the ordinary way. The first to introduce the process in practical form in this country was William Ged, of Edinburgh, who made stereotype plates in 1730. An impression of the type matter is first taken by means of a mould of prepared plaster of Paris or moistened sheets of specially prepared paper, and when molten stereo metal is poured upon the mould and allowed to cool and harden, the stereo plate is formed, and can be printed from as a solid block for some time.

**Stethoscope,** an instrument by which the action of the heart and other organs of the chest can be heard and gauged. It was invented by Laënnec, of Paris, in 1816, and consists of a cylinder, one end having a funnel-shaped opening which is placed against the chest, while the other end is held to the listener's ear. There is also a binaural stethoscope, which has two india-rubber tubes for the ears.

**Stirrups,** a support for a horseman's feet, usually having a metal loop at the bottom. They are attached to saddles, and were not in common use before the 13th century.

**Stocks,** an instrument of punishment, consisting of a framework of wood, with holes through which the offender's feet are put; he was compelled to sit in that position for a prescribed time. Much used in olden times, but now abolished.

**Stoics** were the followers of Zeno, a Greek philosopher of the 5th century B.C. They received their name from the fact that they were taught in a porch. Zeno's doctrine was that happiness was only attainable by living agreeably to nature and reason, and that God was the Soul of the World.

**Stonehenge,** a remarkable collection of huge stones arranged in two circles, and covering an area of 10,000 feet in circumference, situated on Salisbury Plain. The inference is that these stones are the remains of an ancient Druidical Temple.

**Stool of Repentance,** a seat placed near the pulpit in Scottish churches in former times, on which persons guilty of moral lapse were ordered to sit in expiation during service.

**Stork,** a family of heron-like birds with long bills, freely distributed over Europe, Asia, and Africa, and inhabiting marshy regions. The White Stork is an occasional visitor to England, and, more rarely, the Black Stork; these are the only two European storks.

**Storthing,** the Norwegian legislative assembly, dates back to 1223, when the first Storthing was held at Bergen by Haco V.

**Strathspey,** a Scottish dance of the reel class, originated in the valley of the Spey.

**Strikes.** A strike is a voluntary stopping of work by common agreement of a number of workers in order to force the employer to alter conditions of employment, or to resist conditions which are not approved of. Strikes have been frequent in the 20th century. In the Coal Strike in 1921, 73 million working days were lost, 35 million pounds in wages and about 18 million pounds in indirect losses. Between 1913 and Sept. 1930 there were 5,172 trade disputes in which 7,496,000 workpeople were involved and 229,483,000 days were lost.

**Strontium,** a metallic element existing chiefly as celestine and strontianite. The native carbonate of Strontia was discovered at Strontian, in Argyllshire, in 1787, and in 1808 Sir Humphry Davy first obtained from it the metal Strontium. It is much used in the preparation of fireworks.

**Stucco,** a mixture composed of plaster of Paris mixed with a solution of glue, and much used in architectural decoration. It was known to the ancients and freely utilised in Italy in the 16th century.

**Sturgeon,** a large elongated marine fish, with five rows of osseous bucklers, and pointed mouth with four barbels. It is plentiful in the seas of our coasts, and often attains a length of from 8 to 10 feet. It is a good table fish, and passes the spawning period in rivers. Caviare is prepared from sturgeon ova.

**Sublimation,** the process by which solid substances are first turned into vapour by heating and then allowed to cool into solidity, thus becoming freed from impurities.

**Sublime Porte,** the official name of the court of the Sultan of Turkey. The name was originally given to a piece of sacred black stone placed at the entrance to the palace of the caliphs of Bagdad.

**Submarines** have in recent years become an important feature of the fleets of different nations. The French first introduced them. All the belligerent countries have largely accelerated their pace of submarine building since 1914, and great improvements have been made in the types and power of this class of craft. In 1921, Great Britain had 92 built and 8 building; United States had 107 built and 41 building; France had 49 built and 5 building; Italy had 51 built; Japan had 24 built and 15 building; Germany nil; Russia had 36 built and 23 building It was proposed at the Washington Conference to limit United States and Great Britain to 60,000 tons of submarine, France and Japan 31,000 tons, Italy 21,000 tons, but although the Conference adopted a treaty prohibiting unrestricted submarine warfare, no agreement was reached. By the Naval Treaty, the result of the London Conference of 1930, the tonnage of submarines, destroyers and cruisers was limited by a maximum of 541,700 for Great Britain, 367,050 for Japan, 526,200 for U.S.A.; submarines not to exceed 2,000 tons. Three, however, could be added up to 2,600 tons. Meanwhile the treaty further provided that submarines "must conform to the rules of international law to which surface vessels are subject."

**Succession, Acts of,** have been passed at various periods to secure royal descent in a particular line. That establishing the Protestant Succession, passed in 1689, is the one under which our present dynasty reigns.

**Suez Canal,** connecting the Red Sea to the Bay of Pelusium, was first projected in 1852 by Ferdinand de Lesseps. A company was formed with a capital of £8,000,000, mostly subscribed in France, and in 1869 the formal opening of the Canal took place. It has a length of 100 miles, and was at first 27 feet deep with a maximum width of 72 feet. It is now 147 feet wide with a depth of 30 feet and whereas originally only vessels under 5,000 tons could pass through, taking 48 hours, to-day ships of 27,000 tons can safely navigate the canal in 15 hours. In 1927 over 5,500 ships passed through with a tonnage of 29 millions—57 per cent. being British—the fees for which amounted to about 8½ million pounds. The Canal shortens the distance between London and Bombay by about 24 days. The total cost at the time of opening was £12,000,000, of which £2,500,000 was paid to the Khedive in shares, and it was the purchase of these shares in 1875 for £4,080,000 by the British Government that gave Britain a controlling interest. The shares are now worth £54,579,331.

**Suffrage,** approval, consent, vote, right to vote at municipal and parliamentary elections. The origin of the word is the Latin word *suffrago*, the ankle bone of a horse used for balloting with by the Romans.

**Suffragette,** name given to a woman who belonged to the Woman's Suffrage Movement in the early part of this century. They agitated to obtain the parliamentary vote; many suffragettes were "militant" and caused much destruction, violence and disturbance; many suffered imprisonment and went on hunger-strike. The movement ended in 1918, when women of 30 were given the vote. In 1928 a Bill was passed in Parliament granting equal suffrage to men and women. The leaders of the Women's' Suffrage Movement were Mrs. Pankhurst and her two daughters, Sylvia and Christabel, Mrs. Fawcett, Nellie Kenny and others.

**Sugar,** an article of food obtained from the juices of the sugar cane, the sugar beet, the sugar maple, and certain grasses. These yield sugar in its crude form, after which it is refined by well-known processes. Treacle is sugar in its uncrystallised form.

**Sulphur,** an elementary brittle crystalline solid abounding in the vicinity of volcanoes. It occurs in combination with other elements, as sulphates and sulphides, and allied with oxygen, hydrogen, chlorine, etc., is of great commercial utility. Used in its pure state it constitutes the inflammable element in gunpowder; it is also used for matches.

**Sulphuric Acid,** a compound of great commercial importance, used in a variety of manufactures, and composed of sulphur, oxygen and hydrogen.

**Sultan,** the title of the Turkish Ruler and first held by Angrolipez and Musgad in the 11th century. The last of these sultans, Muhamed VI, escaped to Malta in November 1922, and the National Assembly declared a republic in Turkey on October 29, 1923.

**Summer Time.** In 1916 an Act was passed advancing Greenwich Mean Time (G.M.T.), by one hour during the Summer Months, and this Act was made permanent in 1925. It starts from the day following the third Saturday in April and now finishes on the first Saturday in October of each year. France, Belgium, Spain and Portugal have followed Great Britain in instituting "Summer Time" for the same period.

**Sumptuary Laws.** Both the Greeks and Romans passed laws against luxury, and under Edward III. and Henry VIII. many curious restrictions were imposed in England, prescribing the quality of the cloth which should be worn by people of different ranks, etc. Most of these restrictions were repealed by James I. and the remainder by Queen Victoria in 1857.

**Sun,** the centre of the solar system, estimated to be distant from the earth 93,000,000 miles, to have a diameter of 865,000 miles, and a density 330,000 times that of the earth. It has a seeming diurnal motion from East to West caused by the earth's rotation on its axis, and an annual motion through the ecliptic caused by the earth's revolution round the sun. From these motions we get the variations day and night, and the seasons. Large spots are observed on the sun—varying in size from 30,000 miles in diameter—which form and disappear at irregular intervals. Investigation of the solar system shows that in its atmosphere are present hydrogen, oxygen, caldium, radium, helium, sodium, magnesium, lead, uranium, aluminium, and other elements. The sun's temperature is such that it is estimated each square metre of the sun's surface radiates a sufficient quantity of heat per minute to raise 10,000 kilograms of water from freezing to boiling point.

**Sun-bathing,** exposure of the body to the rays of the sun. (*See* Heliotherapy.)

**Sunday,** the first day of the week, among the Christians called "Lord's Day." In ancient times it was the day on which the sun was worshipped. In Anglo-Saxon days the Sabbath day was kept holy from Saturday at 3 p.m. to Monday, daybreak.

**Sunday Schools,** for the religious instruction of children, have existed since the 16th century, but as at present organised were established by Robert Raikes, in 1780.

**Sunnites,** the great body of Mohammedans who accept the *Sunna*, a collection of traditions concerning Mohammed, as well as the Koran. Only the Shiites, mostly confined to Persia, reject the *Sunna*.

**Surgeons** are strictly distinct from physicians, in that they deal with such diseases or injuries as demand operations by instruments for their cure. Most doctors, however, are now both physicians and surgeons—general practitioners—yet no one is entitled to call himself surgeon until he is a Fellow or a Member of one of the Royal Colleges of Surgeons, or of some other body authorised to confer the degree of Bachelor of Surgery.

**Surnames** were not used in England before the Conquest. The elder Normans used the word "Fits," signifying son, as "Fitzwilliam." The "O" of the Irish meant grandson, as "O'Connor," while the Scottish Highlanders used "Mac" for son, as "MacKenzie," "MacIntosh," etc. Then among the English the word "son" itself was simply added to the father's name, as "Johnson," "Robertson," "Simpson," etc. When surnames came into use they generally had reference to occupation, places of residence, or personal characteristics, and this style of naming is responsible for the great majority of existing surnames. Smith, Taylor, Butler, Baker, etc., are of the occupation type: Hill, Dale, Brook, Beck, etc., and place-names generally, belong to what may be called the geographical type; while personal peculiarities are denoted in such names as Savage, Redman, Black, White, Brown, etc.

**Suspension Bridges.** (*See* **Bridges.**)

**Suttee,** the practice prevalent in some parts of India, until specially prohibited by a law of 1829, of the self-burning of widows on their husband's pyre, the idea being, according to the religion of Brahma, that widows thus immolated passed direct to heaven.

**Swallow,** a familiar summer bird visitor to Britain from April to October. There are nearly 100 species, but only three visit England—the Common Swallow, the House Martin, and the Sand Martin.

**Swan,** a large water-bird of graceful appearance, greatly esteemed for its whiteness and beauty, and kept on many rivers and ornamental waters in this country. The largest swannery is at Abbotsbury, near Weymouth.

**Swaraj** (Sanscrit, *swa* = self, *rajya* = government). In 1919 Gandhi adopted the word as a label for his political party. It is now the term for complete independence of India.

**Swearing,** on the Gospels, was first introduced in judicial proceedings about 600. There are various enactments imposing fines for profane swearing. (*See* **Oaths.**)

**Swedenborgians** are the followers of Emmanuel Swedenborg. They also call themselves "the New Jerusalemites."

**Swift,** a bird so called from its rapid flight, is a native of Southern Asia, and comprises over 50 species. Two species are seen in Britain.

**Swords,** from 20 to 30 inches long, were used by the Romans. The most famous swords of the Middle Ages were those made of Damascus and Ferrara steel.

**Symphony,** an orchestral composition of wide scope, and comprising five different movements—the introduction, allegro, andante, scherzo, and finale. The most famous composers of symphonies have been Beethoven, Handel, Haydn, and Mozart.

**Syndicalism,** a labour movement which demands that industries shall be controlled by those who work them.

**Synods,** assemblies of heads or representatives of State and ecclesiastics for settling disputes relating to Church authority and government. The first National Synod in England was in 673 at Hertford, the last was held by Cardinal Pole in 1555. In Presbyterian churches a Synod is a court of Presbyteries.

## T

**Tabanus,** the type genus, entomologically, of the Tabanidæ; a familiar British variety is the Breeze-fly.

**Tabard,** a cloak or outer garment worn in mediæval days by the peasantry. The name was also applied to a garment worn by knights over their armour.

**Tabernacle,** a place of worship; a sacred place; specifically in Hebrew history the Temple of Solomon. "Spurgeon's Tabernacle" in London, built for the famous Baptist preacher in 1861, is a familiar non-Jewish example of the application of the name.

**Tael,** a Chinese coin equal in value to 1⅓ oz. of pure silver; the Haikwan customs tael is worth about 4*s.* 9*d.*

**Taffety,** a kind of silk fabric manufactured in England in the 16th century, and now generally applied to a mixed cloth of silk and wool.

**Tailor Bird,** a familiar bird in India and China, of an olive-green colour, and remarkable for its habit of constructing its nest of leaves, which it sews together.

**Taiping Rebellion,** in China in 1850, was intended to overthrow the Manchurian dynasty. It was suppressed in 1864 by the aid of General Gordon.

**Taj Mahal,** the white marble mausoleum built at Agra by Shah Jehan in memory of his favourite wife. Over 20,000 men were occupied for over twenty years in its erection.

**Talc,** a lustrous silvery mineral found in foliated and granular masses, soft to the touch, and used as a substitute for chalk. Soapstone is a variety of talc.

**Talent,** an ancient denomination of coin or money value. In Palestine it was worth 3,000 shekels, or between £300 and £400. The Attic talent was of the value of about £200, the Roman great talent £90, the little talent £75.

**Talisman,** a charm, consisting of a magical figure, engraved under superstitious observance of the configuration of the heavens, to which wonderful potentiality for averting evil was anciently ascribed.

**Talkie,** the popular name for a sound picture which combines pictures of actions with sound; talkies have revolutionised the film industry since about 1927, and are gradually ousting the silent films. The development of sound pictures is also invaluable in news pictures, for the speeches of Royalty and statesmen are permanently recorded for future history.

**Tallage,** in Norman times, were taxes levied by the Crown upon lands of the royal demesnes.

**Tallow,** the more solid portions of animal fat, and prepared from beef, mutton, and other fats by melting at a low temperature. Stearin is its chief constituent. Used for making candles, soap, etc.

**Tally Office,** in the Exchequer, was the department of the Government in which tallies were kept, representing the acknowledgment of moneys paid or lent; in 1834 the Houses of Parliament were burnt down through the overheating of a stove with discarded Exchequer tallies.

**Talmud,** the book containing the civil and canonical laws of the ancient Jews, comprising the Mishna, a compilation from oral tradition, and the Gemara, a collection of criticisms and comments on the Mishna by eminent Jewish Rabbis. There are two Talmuds—the Jerusalem, compiled in the 4th or 6th century, and the Babylonish, in the 6th.

**Tamarind,** a tree of great utility, of which there are two varieties, one in the West Indies and the other in the East Indies. Its wood makes good building timber, its bark has tonic properties, its leaves yield a valuable dye, and its fruit is used in the making of sauces and cooling drinks.

**Tambourine,** a light, small one-headed drum, formed of a ring or hoop of wood, or metal, with loose discs of metal let into the sides which jingle when shaken. In ancient times this instrument was called the timbrel. It is much played in Southern Europe as a dance accompaniment, and of late years has had a sort of revival in England, by its use by girls of the Salvation Army.

**Tammany,** a New York democratic organisation, sprang out of an old benevolent society named after an Indian chief, and has exerted a powerful influence over political movements in New York. The leaders of the organisation have used their power when their party has been successful at the polls in a manner which has brought down upon them the strongest condemnation of the supporters of pure municipal government. They have appointed their nominees to every prominent office, and have exacted bribes for concessions and privileges, and generally Tammany rule has meant wholesale corruption. Of this there is ample evidence in the disclosures of the Tweed and other Tammany frauds, and in the fact that the "Boss" for the time being usually contrives to make himself wealthy.

**Tanistry,** a system of land tenure which once prevailed among the Celts, by which the succession devolved upon the eldest male member of the family

**Tank,** a heavily armoured car fort impervious to bullets and moving on "caterpillar" bands enabling it to travel over the roughest ground. First used by the British as a complete surprise to the enemy in the Great War in Sept. 1916. There is a Royal Tank Corps in the British Regular Army to-day

**Tannin,** a substance obtained from a variety of plants and trees, from oak-bark, and from gall-nuts, and largely used in leather making.

**Tanning,** the process by which skins and hides are converted into leather. Tannin, or tannic acid, is the chief ingredient used, and this is obtained mainly from the bark of oak, hemlock, birch, beech, and other trees. The skins are steeped in baths or tanks of the tannic preparation for a considerable time, and in absorbing acid become gradually converted into leather.

**Tantalum,** a scarce metal occurring in very small quantities in combination with various rare minerals, such as tantalite, columbite, etc., associated with niobium.

**Tapestry,** a fabric largely used in former times for wall decoration and hangings. It was known to the ancient Greeks, but in its modern form came into prominence in the 15th and 16th centuries, when it was manufactured in a marked degree of excellence by the weavers of Flanders, especially those of Arras. The manufacture was introduced into England early in the 17th century, and was attended by considerable success. At the present day the term is applied to worsted cloths for furniture coverings, and there are also various kinds of tapestry carpets now made. The most famous tapestries of olden times were the Aubusson Tapestry, and the Savonnerie. The Gobelin Tapestry factory originated in Paris in the reign of Francis I., is still a national establishment. (*See also* **Bayeux** Tapestry.)

**Tapioca,** a food-substance yielded by the tuber of a tropical plant, poisonous in its raw state, but purified by roasting.

**Tapir,** a hoofed quadruped of hog-like form, having a flexible proboscis. It is a vegetable feeder, lives in the forest regions of South America, Sumatra and Borneo, and is of a dark brown colour.

**Tar** is a dark viscid product obtained from the destructive distillation of wood, coal, peat, etc. The woods mainly used are of the pine family. The product of the distillation of wood is acid; that of coal is alkaline. In the course of distillation it yields light oil consisting of benzine and similar hydrocarbons; dead oil, comprising carbolic acid, aniline, naphthalene, etc.; and pitch, a leading ingredient in asphalts and black varnishes. From coal-tar numerous dyes and other compounds are obtained.

**Tarantula,** a large hairy spider common in Italy. Music was supposed to cure its sting, hence the Tarantula dance.

**Targums,** certain Chaldee paraphrases of portions of the Old Testament, probably of the 1st century. The most valuable Targums are those on the Pentateuch.

**Tarlatan,** a thin transparent muslin fabric.

**Tarpeian Rock** at Rome received its name from the tradition that Tarpia, the daughter of the Governor of the Citadel who betrayed the fortress to the Sabines, was crushed to death by their shields and buried beneath the rock. From this height persons guilty of treason were hurled to death.

**Tarsus,** the seven small bones constituting the ankle or instep, including the three metatarsal bones.

**Tartan,** a cloth of woollen or worsted plaid; formerly each clan of the Scottish Highlanders had its own tartan.

**Tartar,** an Asiatic race, but also a term used to denote a person of irascible temper, a vixen or shrew; to "catch a tartar" was to encounter more than was bargained for.

**Tartaric Acid** is prepared from tartar deposited in wine vats during fermentation. The commercial kind is obtained from acid potassium tartrate (Argol), and used in dyeing, calico printing, and the manufacture of effervescing beverages. The purified sort is cream of tartar.

**Tate Gallery,** named after its founder, Sir Henry Tate, is at Millbank, S.W., was opened in 1897; Sir Henry Tate bore the cost of the building (£80,000) and also contributed the nucleus of the present collection. A "Turner Wing," erected by Sir Joseph Duveen, was added in 1910. The collection is thoroughly representative of modern British art.

**Tattersall's,** a famous horse-market at Knightsbridge, originated by Richard Tattersall in 1770, and since carried on by his successors with success, the sale of thoroughbreds being the chief business.

**Taverns** were not known before the 13th century. In Edward III.'s time there were only three in

London; "one in Chepe, one in Walbrook, and the other in Lombard Street."

**Taximeter** is an ingenious contrivance by which the strictly legal fare chargeable for a cab journey is indicated. It is now in use extensively in this country for motor cabs.

**Taxin** is a resinous substance obtained from the leaves of the yew-tree.

**Tay Bridge** spans the Tay at Dundee, is over two miles in length, and was opened for traffic on the 20th June, 1887. A previous bridge, completed in 1877, was blown down on the 28th December, 1879, as a railway train was passing over it, and upwards of eighty people perished.

**Tea** was introduced into England about the middle of the 17th century, when it was a great luxury, and fetched from £6 to £10 a pound. It is an Asiatic plant, native properly to China, Japan, and India. Up to about 1885 the greater portion of the tea imported into this country came from China; the bulk is now obtained from India and Ceylon, although China tea of good quality is again working its way into favour. Green tea and black tea differ by reason of the method of their drying and preparation for the market, the former being roasted after but a short exposure to the air, and the latter after a much longer exposure. The amount of tea consumed in Great Britain is about 9 02 lb. per head, nearly ten times as much as was sold 100 years ago, whereas only 0 95 lb. of coffee is now drunk on an average.

**Teak,** the wood of an E. Indian and African tree of great hardness and durability, largely used in shipbuilding.

**Teal,** a small fresh-water duck, of which two kinds, the Common Teal and the Garganey, occur in Britain. Other species—there are seventeen in all—are found in America and other countries.

**Te Deum,** the song of praise ("Te Deum laudamus"—"We praise Thee, O God"), is supposed to have been the composition of St. Ambrose in the 4th century. It is used in the services of the Roman Catholic and English churches.

**Teetotalers,** a name given to the originators of the first English Temperance Society.

**Telegraph.** The first practical telegraphic instruments were invented by Gauss and Weber in 1833, and by Sir Charles Wheatstone in 1836, although the idea of using electricity for transmitting intelligible messages was first suggested towards the close of the 18th century. The Morse-Digney recording instrument, which is now most largely used, is a kind of clockwork arrangement in which the slight clicking sounds alone are sufficient to interpret the message, the letters being indicated by various combinations of dots and dashes. From 60 to 100 words per minute can be transmitted by this method. Of late years various systems of multiplex-telegraphy have been devised, by means of which many messages can be transmitted over the line at the same time. The principle of a 6*d.* telegram was adopted by the House of Commons in 1883, but the Act did not come into operation until 1885. The most important and interesting of recent telegraphic developments have been in connection with wireless telegraphy, introduced by Signor Marconi. An arrangement came into force on January 1st, 1905, whereby telegrams for transmission from wireless stations on the coasts to ships at sea are accepted at a charge of 10½*d.* a word. An arrangement exists with Britain and the Marconi Co. for wireless stations in London, Egypt, Aden, Bangalore, Pretoria, and Singapore, linking all parts of the Empire. Since October, 1907, there has been wireless telegraphy between this country and America.

**Telepathy** supposes such a mental sympathy between persons as enables emotional influences to pass from one to another at a distance without external means and independently of the ordinary action of the senses.

**Telephone,** an instrument for producing sound at a distance over a conducting wire or cord by the agency of electricity, was invented by Graham Bell in 1876, although it is only in recent years that it has come into general use. It consists of a thin disc of iron vibrating in front of a magnet, surrounded by a coil of insulated copper wire which is connected with a similar coil at a distant station. By speaking into the mouthpiece of the telephone, currents of electricity are induced which are transmitted through the line, and thus sounds are reproduced. The National Telephone Company, which was an amalgamation of various companies originally formed to develop the telephone industry of this country, was taken over by the General Post Office from January 1, 1912. There are International Telephone lines connecting England and Belgium and England and France. Wireless telephones are now in use. It is possible to hold conversation with a ship 400 miles at sea. It is probable that all large ships will be fitted with instruments to enable passengers to converse either with England or America from any part of the Atlantic in the near future. Automatic telephones have lately been introduced.

**Telescope,** an optical instrument for reviewing objects at a distance. The ordinary telescope consists of an object-glass and an eye-lens, with two intermediates to bring the object into an erect position. A lens brings it near to us, and the magnifier enlarges it for inspection. A refracting telescope gathers the rays together near the eye-piece, and is necessarily limited as to size, but the reflecting telescope collects the rays on a larger mirror, and these are thrown back to the eye-piece. The object glass of refractors rarely exceeds 26 inches in diameter, but "reflectors" are made up to 100 inches in diameter, and it is thought possible that in the future these may, by being built up of glass plates, reach 50 feet in diameter. Several large refractors are now erected in South Africa, but the largest reflectors are at the Mount Wilson Observatory, California, with a 100-inch mirror, the Victoria, B.C., observatory 72-inch mirror, and the observatory at Bloemfontein, S.A., with a 60-inch glass. The origin of the telescope is doubtful. Roger Bacon is supposed to have had some knowledge of it in 1551. Galileo in 1609 constructed one. Hadley constructed a reflector in 1718, and Herschel made his reflector in 1789.

**Television,** or the transmission of recognisable images of moving objects over a telephone line, has been experimented on in France and in America. In England Mr. J. L. Baird has recently given demonstrations to show that this may shortly be practically achieved. The first television talkie was shown in London in March 1930, and demonstrations have been made public on several occasions.

**Tellurium,** a scarce element found in minute quantities in its native state and in combination with gold, silver, and other metals. It is a crystalline, brittle substance, resembling sulphur and selenium.

**Temperance Societies** were originally started in the United States about 1826. The British and Foreign Temperance Society was established in 1831, and the London Temperance League in 1851.

**Templars** were soldier knights organised in the 12th century for the purpose of protecting pilgrims in their journeyings to and from Jerusalem, and obtained their name from having granted to them by Baldwin II. a temple for their accommodation. At first they were non-military, and wore neither crests nor helmets, but a long wide mantle and a red cross on the left shoulder. They were established in England about 1180. During the crusades they rendered valuable service, showing great bravery and devotion. In the 12th century they founded numerous religious houses in various parts of Europe and became possessed of considerable wealth. It was this that caused their downfall. Kings and Popes alike grew jealous of their influence, and they were subjected to much persecution, and Pope Clement V. abolished the Order in 1312. Edward II. in 1308 seized all the property of the English Templars. The English possessions of the Order were transferred to the Hospitallers of St. John, afterwards called the Knights of Malta. The London Temple is on the site of the chief seat of the Order in this country.

**Temple,** a building dedicated to the worship of a deity or deities. Those built by the ancient Greeks at Olympia, Athens, and Delphi were

the most famous. The Temple of Diana at Ephesus was another. The Temple of Solomon 1012 B.C. was destroyed by Titus A.D. 70.

**Temple Bar,** an historic gateway that until 1879 stood at the western entrance to Fleet Street, near the bottom of Chancery Lane. In olden times it was the custom to impale the heads of traitors over this gateway. Re-erected at Theobald's Park, Cheshunt.

**Tempo,** a musical expression referring to the pace at which a composition is to be played, and generally used in combination with a qualifying word, as "Tempo Ordinario," ordinary time.

**Tenant Right** is the right which a tenant has in unexhausted improvements introduced into land he is relinquishing, and applies both to permament improvements and ungathered crops.

**Tench,** a familiar fresh-water fish of the Carp family, averaging some three pounds in weight, and of a mingled green and olive colour.

**Tenebrae** (*darkness*), the title given to a solemn service peculiar to the Roman Catholic Church on Good Friday and two previous days, when all the lights but one are extinguished

**Tenor,** the part sung by the highest natural male voice. Its compass covers about two octaves. Tenor songs are printed in the treble clef, but the voice is singing an octave lower.

**Teraphim,** the name used by the ancient Hebrews to designate certain household gods.

**Teredo,** the scientific name of the ship-worm, a peculiar bivalve mollusc, which lodges itself when young in the bottoms of ships, and bores its way outward, causing much injury. Modern ships, however do not offer opportunities to the ship-worm, for even when of wood they are metal-sheathed.

**Termites** are white ants which abound in hot countries and live in colonies, their habitations being built upon mounds rising to a height of 12 or 15 feet, and constructed with a labyrinth series of galleries and chambers. A king and queen are at the head of a colony; the rest are neuters, the males being soldiers and the females workers.

**Tern,** a species of sea-gull of elegant plumage, smaller than the ordinary gull. There are some sixty species, about a dozen of which are British.

**Terra-cotta,** a kind of unglazed pottery, mostly of a red colour, largely used for building and garden decoration.

**Terrapin,** a kind of fresh-water tortoise, common on the Atlantic coast of America.

**Terrier,** the name applied to several breeds of hardy dogs ranging from the shaggy Skye to the old English black and tan. The class also includes the fox-terrier, the Maltese, the Boston, and the Yorkshire.

**Territorials.** The Territorial Force of the British Army came into being from the 1st April, 1908, when the Volunteer Force and the Imperial Yeomanry were combined in the new organisation. This Second Line force is controlled by the various County Associations formed for this purpose, and is regional in character, each district recruiting one, and three of them two divisions each. There are Divisions, Mounted Brigades and Army Troops, with Artillery and Engineers for defended ports; and the equipment is on the latest modern lines, with wireless, cable and air-line, telegraph companies, cyclist battalions, etc. In March 1931 the Territorials numbered 6,565 officers and 126,684 men of other ranks.

**Tertiary Series,** the third in order of the geological formations, comprising the three sub-groups of the Pliocene, Miocene, and Eocene divisions.

**Test Act,** passed in 1673, prescribed that all government officers, civil and military, should be compelled to receive the sacrament according to the forms of the Church. It was repealed in 1828.

**Tester,** a French and Scotch silver coin of the 16th century. There was also an English tester of the value of 1*s.*, and later on worth 6*d.*

**Testudo,** the name given to a military movement in use by the ancient Roman soldiers. It consisted of a defensive screen formed by troops standing close together and massing their shields above their heads.

**Teutonic Order,** of German military knights, was founded in the Holy Land at the end of the 12th century for succouring the wounded of the Christian army before Acre. They were dispersed in the 15th century by Jagellon, Duke of Lithuania. The Order continued to exist until 1809 when Napoleon I. ended its existence by confiscating its possessions.

**Teutons,** a German race that came into prominence in the 4th century B.C., and later invaded Gaul, but were defeated by Marcius 102 B.C. The name Teutons was afterwards applied to the German peoples generally.

**Thaler,** a German silver coin which has existed since the 16th century. That of the present day is worth about 3*s.* English. "Dollar" is its derivative.

**Thallium,** a scarce metal, discovered by Sir William Crookes in 1861 from the refuse left after the distillation of selenium. It is found in iron and copper pyrites, and is employed in the manufacture of glass.

**Thames,** the principal river of England, rising in the Cotswold Hills, and passing through Wiltshire, Berkshire, and Oxfordshire, and pursuing its ever-broadening seaward course through Reading, Windsor, Richmond, London, Greenwich, and Gravesend. It is about 210 miles long, and at the Nore, where it joins the sea, is six miles wide. Commercially, it is the most important river of Great Britain. The trade of the Port of London has a value of about 6 or 7 million pounds per annum.

**Thane,** a title of nobility used in Anglo-Saxon times, and in the reign of Athelstan conferred upon any free man who possessed five hides of land, or had accomplished three sea voyages.

**Thaumaturgy,** the working of miracles.

**Theatines,** a religious Order established in Italy in the 16th century, for the purpose of repressing heresy. They bound themselves to poverty, and refrained from soliciting alms, though they did not refuse voluntary gifts. Some remnants of the Order still exist in Italy.

**Theatres** are buildings in which plays are performed. The theatres of the ancient Greeks and Romans were generally circular, with tiers of stone seats around them, and roofless. The first authorised theatre in England was that of Burbage, built in Shoreditch in 1574. Other theatres were erected at Bankside, in Southwark—the Globe, where some of Shakespeare's plays were first produced, and the Blackfriars. From 1642 to 1660 all London theatres were closed, but at the Restoration they were opened again, and for the first time women were allowed to appear on the stage, female parts having previously been played by young beardless men. At present there are nearly 100 theatres licensed by the Lord Chamberlain in London alone, affording accommodation for over 400,000 persons, and at which there is an average daily attendance of between 70,000 and 80,000. Besides the big theatres, small repertory companies are endeavouring to produce less popular and new plays as experiments.

**Theism,** belief in a personal Deity.

**Thellusson Act.** Peter Isaac Thellusson, a wealthy London merchant, left the bulk of his property, over £600,000, to accumulate during the lives of his three sons and their sons, after which the accumulated fund was to go to the eldest male descendant. Mr. Thellusson died in 1797, and the publication of his will gave rise to so much censure that the Thellusson Act was passed in 1800 restraining testators from devising property for accumulation for longer periods than 21 years after death.

**Theobromine,** an alkaloid substance found in the seeds or beans of the Cacao plant, and a chief constituent of the cocoa and chocolate of commerce. It is the alkaloid present in tea and coffee.

**Theodolite,** an instrument, used by surveyors, for measuring horizontal angles upon a circle.

**Theosophists.** The Theosophical Society, which has its headquarters in Madras, was founded by Mdme. Blavatsky and Col. Olcott in 1873, in New York, and has now over 400 branches in different parts of the world. Its professed aims are (1) to form a nucleus of the universal brotherhood of humanity; (2) to encourage the study of comparative religion, philosophy and science; (3) to investigate the unexplained laws of nature and the powers latent in man. Among other things, theosophy claims to "restore to

the world the science of the spirit," while its bond of union is "not the profession of a common belief but a common search and aspiration for Truth."

**Therapeutics**, the science which treats of the healing of diseases and the laws of health.

**Therm.** The charges for gas for lighting and heating (formerly reckoned at per cubic foot) are now based on the calorific, or heat value of the gas, and the unit is termed a therm. The gas therm is 100,000 British thermal units of a quality of 450 B.Th.U. per cubic foot. Thus 1,000 cubic feet of gas (old style) is equal to 4·50 therms. 10,000 cubic feet is equal to 45 therms, and so on.

**Thermit** is the name of a mixture of granulated aluminium and oxide of iron in atomic proportions, and was developed by Dr. Hans Goldschmidt, of Essen, Ruhr. It is used with success for welding purposes. Thermit may be stirred with a red hot poker, thrown into the fire, or have melted cast iron poured over it without setting up any visible action; but, raised to a higher temperature, reaction ensues, and a heat a thousand degrees hotter than any furnace.

**Thermo-Dynamics**, a term first applied by Joule to designate that branch of physical science which treats of the relations of heat to work. What is called the first law of thermo-dynamics is thus stated by Clerk Maxwell: "When work is transformed into heat, or heat into work, the quantity of work is mechanically equivalent to the quantity of heat." The second law asserts that "the heat tends to flow from a body of hotter temperature to one that is colder, and will not naturally flow in any other way."

**Thermo-Electricity** is the electrical current resulting from the heating or cooling of two or more dissimilar metals at the point of union.

**Thermometer**, an instrument by which the temperature of bodies is ascertained, was invented by Galileo, and developed by his pupils in the early part of the 17th century. It consists of a glass tube with a very small bore, containing, in general, mercury or alcohol. This expands or contracts by variation in the temperature, and the state of the atmosphere, the body, liquid, or gas as the case may be, with regard to heat, is indicated by a scale on the surface of the tube. Various forms of thermometer are used for particular purposes. For further information and illustrative comparisons see *Office Compendium*.

**Thirty-nine Articles.** (*See* Articles.)

**Thirty Years' War**, between the Roman Catholics and Protestants in Germany (1618 to 1648).

**Thistle, Order of.** (*See* Orders.)

**Thistlewood Conspiracy** was headed by Arthur Thistlewood, who had been imprisoned previously for challenging Lord Sidmouth, and had for its object the overthrowing of the Cabinet, and the assassination of the Ministry, on the occasion of George III.'s funeral in 1820. The plotters met in Cato Street, Tottenham Court Road, London, but were betrayed and brought to trial, and Thistlewood and four more conspirators were hanged for treason.

**Thorium**, a scarce metal of the nature of aluminium. It ignites below a red heat, and burns with great brilliancy.

**Thorn Back**, a fish of the ray or skate species, common in the British seas, and popular as food. It has a mottled skin.

**Thorough Bass**, a musical term applied to a voice part accompanied by numerals, showing the chord applicable to each note. The term also refers to the entire science of harmonic composition.

**Thous**, a kind of fox or small wolf—in some respects resembling a jackal—occurring in Africa and parts of Asia. It is of various colours, but mostly brindled, with dark stripes across the back.

**Thrush**, a well-known song bird, also known as the throstle and the mavis. It is widely distributed over Europe, Asia, and South America. There are some hundred species, eight occurring in Britain.

**Thugs** were a secret organisation of Indian fanatical assassins. They strangled their victims, and buried their bodies with a consecrated pickaxe, and set apart one-third of their plunder to the goddess Kali. These assassins were difficult to suppress, but vigorous measures ultimately, after twenty years' effort, secured their extermination about 1820.

**Thumb-Screw**, an instrument of torture used in olden times to extort confessions from prisoners. It consisted of a frame of three upright bars, between which the thumb of the victim was inserted; then a screw was turned on with sufficient force to give intense pain without jeopardising life.

**Thursday**, the 5th day of the week, named after Thor, the Scandinavian deity. To the ancient Romans Thursday was *dies Jovis*, or Jupiter's day.

**Thyrsus**, a staff carried in ancient Greece by the Bacchantes during their festivities. It frequently appears in ancient sculptures.

**Tiara** was the name originally given to a head ornament worn by the ancient Persians. The name was afterwards applied to the Pope's Triple Crown. The tiara of the first French kings was a high round cap. At the present day any coronet or frontal head ornament is styled a tiara.

**Tichborne Case**, the longest trial ever known in English Courts, was begun on 11th May, 1871, when Arthur Orton, claiming to be Sir Roger Tichborne, commenced proceedings to establish his right to the Tichborne estates, worth £24,000 a year, and lasted until the 6th March, 1872, having occupied 103 days—the claimant being non-suited and arrested on a charge of perjury. The claimant himself was under examination 22 days, and the speech of Sir John (afterwards Lord) Coleridge extended over 26 days. These proceedings cost the estate over £90,000. The claimant's trial for perjury and forgery was begun on the 23rd April, 1872, and lasted off and on until the 28th February, 1874, when Orton was sentenced to 14 years' imprisonment. He was released on ticket of leave in 1884, and some years later made a written confession of his guilt.

**Tides**, the periodical rise and fall of the waters of the ocean and its arms, are due to the attraction of the moon and sun. Newton was the first to give a general explanation of the phenomenon of the tides. He supposed the ocean to cover the whole earth, and to assume at each instant a figure of equilibrium, under the combined gravitation influence of earth, sun and moon, thus making and controlling the tides.

**Tiers État**, the lowest of the three estates of the realm as reckoned in France—nobility, clergy, and *tiers état*—prior to the Revolution.

**Tiger**, a powerful carnivorous animal of the cat family, which occurs in India and certain other parts of Asia. Its skin is of a tawny yellow, relieved by black stripings of great beauty of formation. The tiger is hunted in India, and its ferocious disposition renders the sport both exciting and dangerous. The prey of the tiger includes buffaloes, antelopes, and occasionally human beings, though the man-eating tiger is the exception rather than the rule. Some tigers attain a length of from 9 to 12 feet.

**Tiger-cat**, though much smaller than the tiger, bears considerable resemblance to it in regard to its markings and general structure. It is found not only in India but in Java and South America. It preys on small game.

**Tiles** are slabs of baked clay, used for covering floors, roofs, passages, etc.; and of various forms; they were used in ancient times and were often made of marble or enamelled earthenware. In modern times tiles have been largely used for decorative purposes, especially for fire-places, hearths, and floors, many beautiful designs having been produced.

**"Times"** (The) newspaper was founded in 1785, as "The London Daily Universal Register," and assumed its present title in 1788. Since 1803 the Walter family have been the chief proprietors and directors. On a reorganisation in 1908, Lord Northcliffe acquired a large proprietary share It is now a company and the chairman is Major the Hon. J. J. Astor, M.P.

**Tin**, a metal generally found in veins of rock, in Cornwall and Devon, the Malay Archipelago, and Australia. It is a white metal, susceptible of being rolled to an extreme fineness, and forms one of the most useful alloys, being a component of Britannia metal, bell metal, bronze, pewter, etc.

**Tin-Plate** is tin-coated steel plate, largely used for domestic utensils, and other purposes. The chief centre of the trade in this country is South Wales.

**Titanium**, a scarce metal found in association with oxygen in rutile, anatase, and brookite, as well as with certain magnetic iron ores. It combines with nitrogen at a high temperature.

**Tithes**, an ecclesiastical tax consisting of a tenth part of the annual produce, known to the ancient Jews, and first imposed by Christian authorities in the 4th century, although not made compulsory in England before the 9th century. Tithes derived from land are termed "prædial," those derived from cattle being styled "mixed," while others are personal. After the passing of the Tithes' Commutation Act of 1836, tithes were gradually converted into rent charges, and today the old form of tithes exists only to a small degree.

**Titles by Purchase.** Titles are not officially bought but conferred for services. A title of nobility from one of the German States used to cost £8,000, and that of baron of the empire £12,000. In Spain one could receive the Order of Charles III., of Isabella, or that of Merit for £250, the Cross of the Chevalier or any title of nobility for £1,000. At the Vatican the Orders of Pius IX., of Gregory, and of Silvester have been sold; the Commander's Orders for £280, that of Chevalier for £120, Gentlemen of the Cap and Sword for £120, Baron £1,800, Count £2,400.

**Titmouse**, a small but powerful bird of the woodlands and forests. There are over 90 species, six of which occur in Britain, *e.g.* the long-tailed titmouse being the most common.

**Tobacco** is made from the leaves of various narcotic plants of the Nicotiana family, which contain a volatile oil and an alkaloid called nicotine. Tobacco is largely grown in America, Cuba, France, and other countries of a warm climate. It undergoes various processes of preparation. The leaves are first dried, then cut into small pieces, moistened and compressed, and in this form is known as cut or "shag" tobacco; when moistened with syrup or treacle and pressed into cakes, it is Cavendish; when twisted into string form, it is "twist" or "pig-tail." For cigars the mid-ribs of the dry leaves are removed, and what is left is moistened and rolled into cylindrical shape. For snuff, the tobacco leaves are moistened and allowed to ferment, then dried, powdered and scented. The consumption of tobacco in the United Kingdom is over 95,000,000 lb. per annum, the amount paid for duty on the same aggregating over £62,909,202 in 1930.

**Toc H**, an association that originated during the Great War of young men pledged to help one another and study social conditions. Toc H promotes clubs and hostels. The name is from the Expeditionary Force's telegraphic abbreviation of Talbot House, Poperinghe, Belgium, a Church Institute named after a fallen officer, G. W. L. Talbot.

**Toga**, an outer robe worn by the ancient Romans, and corresponding to the pallium of the Greeks. It was white and made of wool.

**Toleration Act** was passed in 1689, to relieve Protestant dissenters from the more serious of the disabilities under which they had previously laboured.

**Tolls.** Payments for privileges of passage were first exacted in respect of ships passing up rivers, tolls being demanded on the Elbe in 1109. Tolls for land passage are said to have originated in England in 1269, toll-bars being erected at certain distances on the highroads in the 17th century, where toll had to be paid for all vehicles passing to and fro. After about 1825 they began to disappear, but still linger on some country roads and bridges. Tolls on London river bridges ceased in 1878–9.

**Tomahawk**, an axe-like weapon formerly nimbly used by the North American Indians.

**Ton**, a weight of 20 cwt. avoirdupois, or 2,240 lb. In the United States the ton is an even 2,000 lb.

**Tonic Sol-Fa** system of musical notation, in which letters are substituted for notes, was invented about 1840 by Miss Glover, of Norwich, and afterwards developed with considerable success by the Rev. John Curwen. The Tonic Sol-Fa Association was founded in 1853, and the College in 1862.

**Tonsure**, the shaven part of the head of a Roman Catholic ecclesiastic, dates from the 5th or 6th century. In the Roman Catholic Church only a circle, or a crown, is shaved, while in the Greek Church shaving is forbidden.

**Topaz**, a transparent mineral gem, being a silicate and fluoride of aluminium and generally found in granitic rocks. Its colour is yellow, but it also occurs in pink and blue shades. The best kinds come from Brazil.

**Tope**, a small kind of shark, sometimes called the dog-fish. It occurs in European waters; one species, which has a dark back, and is white underneath, is found in British seas.

**Tories**, a political party name which came into use about 1678. They supported the hereditary doctrine of divine right, were opposed to Dissenters, and were essentially members of the Court party. In later times they opposed the Reform Bill and held out for the maintenance of Church and State unimpaired.

**Torpedoes.** (*See* **Navy.**)

**Tort**, a legal term specifying an actionable wrong, apart from mere breach of contract. Torts are classed as wrongful acts, such as trespass, libel, etc., and acts resulting in pecuniary loss, such as negligence, nuisance, etc.

**Tortoises**, or **Turtles**, are cold-blooded reptiles, four-footed, and encased in a strong shell protection, the shells of some species being of beautiful horny substance and design, in much demand for combs, spectacle frames and ornamental work. It is the custom to designate the land species as tortoises and the aquatic kinds as turtles. Green turtle is in great demand for soup.

**Torture**, as a form of punishment, was in use among the Romans, though only upon the persons of slaves. In the Middle Ages it was commonly resorted to, especially in connection with charges of heresy. It was held that torture would make a guilty person confess, but not an innocent one. It was not inflicted in England after 1640.

**Totalisator**, or **Pari-mutuel**, is a mechanical device now erected on some racecourses which indicates the amount of money staked on each horse running, and it is altered every time a fresh deposit is made, so that a backer can see at any time his position in the event of a win by the horse he has backed. It is legalised by the Racecourse Betting Act, 1928.

**Toucan**, a South American family of birds, remarkable for their huge bills, are brightly coloured, and often attain a length of from 6 to 8 inches. Toucans live on fruit, are of arboreal habits, and nest in holes.

**Touchstone**, a kind of jasper called by the ancients "Lydian stone," of economic value in testing the quality of metal alloys, especially gold alloys. The testing process is very simple. The alloy is drawn across the broken surface of the Touchstone, and from the nature of the mark or streak it makes the quality of the alloy can be ascertained.

**Tourmaline**, a mineral occurring in different colours in prismatic crystals, and remarkable for its action on light, having the power of polarising light rays under certain conditions. It is a double silicate of aluminium, iron, and certain other metals, and occurs in Cornwall, Devon, South America, and Asia.

**Tournaments** were equestrian contests between military knights and others armed with lances, and frequent in the Middle Ages. The Normans introduced them into England in the Middle Ages.

**Tower of London** was a royal palace from the time of the Conqueror, who began the building of the White Tower in 1078. Later kings made considerable additions. From the 15th to the 18th centuries many princes and nobles were executed or imprisoned here, and here Henry VI., Edward V., and his brother were put to death. The Crown Jewels are kept at the Tower, and in the Armoury a fine collection of armour of various dates is preserved.

**Tractarianism**, a term that came into use from about 1833 in reference to a religious movement, headed by Pusey, Keble, Newman, and other Oxford high churchmen, who published "Tracts for the Times," in which their views were set forth. Among other things, they advocated a

higher degree of ceremonial in worship, and their enthusiasm put new activity into the Church, although the secession to Rome of some of their more prominent members showed the tendency of the movement.

**Trafalgar, Battle of,** was fought off Cape Trafalgar on the 21st October, 1805, between the British and the combined French and Spanish Fleets, the former, under Nelson's command, consisting of twenty-seven vessels; the latter, under the command of Villeneuve, comprising eighteen French and fifteen Spanish men-of-war. The British destroyed, captured, or sunk nineteen of the enemy's ships, and a complete victory was gained, though at the cost of Nelson's life.

**Tramways** were first established in New York by John Francis Train about 1858, and the first English tramway was opened in 1860 at Birkenhead. The first London tramway was established at Bayswater, in 1861. It was not until after 1870, however, when an Act to facilitate the construction of tramways was passed, that any great extension of these roads took place. Between 1870 and 1880, 233 miles of tramways were constructed in England and Wales. Up to this time the cars had been drawn by horses. A steam cable tramway was opened on Highgate Hill in 1884, and steam came to be largely employed during the next few years. In later years, however, electricity has gradually superseded other forms of motive power on tramways, and the result has been an enormous extension of this method of transit. In 1878 there were only 269 miles of tramways open within the United Kingdom, and in 1912 there were about 3,000 miles open. The capital expended is about 74 millions sterling, and the majority of the systems in running are electrified and under municipal control both in London and the great provincial towns, and cost over 27 million p. a. Several millions of passengers are carried annually. Electric tramway development, however, is being considerably arrested by the extension of the motor-bus services.

**Transcendentalism,** a term applied to a system of philosophy which transcends ordinary experience. It originated in Germany, and had for its chief apostles Richter, Fichte, and Shelling. In America Emerson propounded transcendental theories.

**Transept,** the portion of a church which extends across the interior between the nave and the choir. The terminal portions are called respectively the north and south transepts. Some of the older churches have two transepts.

**Transmigration of Souls** was a doctrine expounded by Pythagoras, and forms part of the Brahmin and Buddhist religions. The ancient Greeks termed it metempsychosis, and the theory is that after death the soul of a man passes into the body of some other man or animal.

**Transubstantiation,** a term which first came into recognised use in the controversy between Berengarius and Lanfranc in the 11th century, indicating the supposed conversion of the bread and wine of the Eucharist into the body and blood of Christ, and called the doctrine of the "Real Presence."

**Trappists,** an austere monkish Order, a branch of the Cistercians, founded at La Trappe, in Normandy, in 1140. A new Order of Trappists was established by Rancé in 1662, the members of which were enjoined to silence, prayer, reading, and manual labour, and forbidden to study or to eat fish or drink wine. They were expelled from France when the Revolution broke out, and settled in Worcestershire, but in 1815 they removed to Mount Melleray, in Co. Waterford, Ireland. There are to-day Trappists' Monasteries in France, Belgium, Italy, Algeria, Ireland, and the United States.

**"Travellers' Tree,"** the name given to a peculiar kind of tree which grows in Madagascar, its branches and leaves forming themselves into the shape of a peacock's tail. The leaves are several feet in length, and their stalks are full of water, which furnishes a refreshing drink to travellers.

**Treadmill,** a large cylindrical machine provided with a series of steps, and maintained in rotary motion by the pressure of men's weight. A rail is fixed outside the wheel, and to this the workers of the treadmill hold by their hands, while their feet are kept continually in motion from step to step, the weight of their bodies keeping the machinery revolving. It is no longer used in prisons as a form of punishment.

**Treasure-Trove,** a legal term applying to money, plate, or bullion found hidden in the earth, or elsewhere, and for which there is no owner. The treasure legally belongs to the Crown, but it is the practice to reward the finder with the full value of the property on its being delivered up. Coroners' Act, 1887, provides that inquests may be held but not as to title as between the Crown and any other claimant.

**Treble,** in music, is the highest part of vocal or instrumental music, as sung by soprano voices, or played by the violin or other instrument of high pitch.

**Tree-frog,** a kind of frog very plentiful in South America. The European kind is of a greenish colour, and possesses feet of peculiar formation, with discs exuding a sticky composition, which enables it to cling to trees and other objects with ease.

**Trent, Council of,** first sat in 1545, the last sitting being in 1563. At this Council the general policy, principles, and dogmas of the Roman Catholic Church were authoritatively settled.

**Triassic Formation** is the lower division of the Mesozoic series of rocks, lying above the Permian and below the Jurassic series.

**Tribunes,** of the Romans, were first elected from the people in 494 B.C. At first there were only two, then the number was raised to five, and finally to ten. They held the power of *veto*, and their persons were regarded as sacred. In modern times a tribune means a special board or committee set up, *e.g.* the local tribunes during the war which decided the fitness of citizens for military service and considered their complaints.

**Tricolour,** the flag of the French Republic since 1789, consisting of three equal vertical bands of red, white, and blue.

**Triennial Act,** which fixed the duration of Parliament to three years, was passed in 1641. Charles II. repealed this Act, it was re-enacted in 1694; in 1716 the Septennial Act was passed. In 1911 it was made five years' duration.

**Trigonometry,** a department of mathematics dealing with angles and their functions in every form, and divided into two sections—plane trigonometry and spherical trigonometry.

**Trimmer,** a time-server, a name that came into use in English politics in the latter part of the 17th century, being specially applied to the party headed by the Marquis of Halifax, who was charged with adapting himself to both Whigs and Tories.

**Trimurti,** the Hindu triad, Brahma, Vishnu, and Siva, symbolised as an entity. In the depictions of the Trimurti three distinct heads are represented, the theological unity combining Brahma, the creative power, Vishnu, the preserving element, and Siva, the destroying principle, in one supreme unification.

**Trinity,** the term applied to the Godhead, "three persons and one God," as it is expressed in the Litany—Father, Son, and Holy Ghost. The doctrine of the Trinity has general acceptance among Christian communities, and has been explained in different ways. One of the earlier statements of it is the Athanasian: "We worship one God in Trinity, and Trinity in unity: neither confounding the Persons, nor dividing the substance."

**Trinity House,** on Tower Hill, London, was incorporated in 1514 as an association for piloting ships, and has ever since been entrusted with various matters connected with the regulation of British navigation. Since 1854 the lighthouses of the country have been under its supervision. The acting Elder Brethren act as Nautical Assessors in Marine causes which are tried by the High Court of Justice. Field-Marshal H.R.H. the Duke of Connaught and Strathearn, K. G., was Master of the Corporation when the Prince of Wales and the Prime Minister were among the Elder Brethren.

**Triple Alliance.** There have been several Triple Alliances; among others that of England, Sweden and the Netherlands against France in 1668; that of Great Britain, France and the Netherlands in 1717 against Spain; and that of

Germany, Austria, Italy, in 1882, against Russia and France.

**Triptych**, a picture, carving, or other representation, with two swing doors, by which it could be closed in; frequently used as an altar-piece. Also a writing tablet in three parts, two of which folded over the one in the centre.

**Trireme**, an ancient vessel with three rows of oars, of great effectuality in early naval warfare. Mentioned by Thucydides. It was a long, narrow vessel propelled by 170 rowers. The Romans copied it from the Greeks.

**Trisagion** ("thrice holy"), an ancient Jewish hymn, still regularly sung in the service of the Greek Church. A version of it—"Tersanctus"—also forms part of the Anglican Eucharistic service.

**Triumvirate**, a term used to denote a coalition of three persons in the exercise of supreme authority. The first Roman triumvirate was that of Pompey, Julius Cæsar and Crassus, 60 B.C.; the second was that of Mark Antony, Octavian and Lepidus, 43 B.C. There have been modern instances of office-holding by triumvirate, the most notable being that of Jefferson, Madison and Gallatin in America. The term is used also in respect of any trio or triad of persons or qualities.

**Troglodyte**, signifying "a cave-dweller"—a term used by several classic writers in speaking of prehistoric races who lived in caverns and excavations where they could be safe from the attacks of wild animals. Evidences of such existence have been found in many parts of Europe, and there are cave-dwellers to this day among certain Indian tribes of North America.

**Trogon**, a bird of the woodpecker family. It is strictly a tropical bird.

**Trombone**, a brass musical instrument of the trumpet order, comprising three tubes, one of which fits into another and can be moved to and fro to produce the various notes. The tone of the trombone is rich, and it forms one of the most useful adjuncts of a modern orchestra or band.

**Troop**, as constituted in the British cavalry force, forms a body of 56 non-commissioned officers and men, commanded by a captain and two lieutenants. A squadron comprises two troops.

**Trophies** are memorials of victory, often consisting of arms or other spoils captured in battle. In modern times trophies have often taken the form of symbolical erections, but, generally, a trophy constituted an object or a group of objects taken from an enemy, or captured in the chase, such as arms, flags, etc.

**Tropic-Bird**, a long-tailed kind of sea-bird of white plumage, about the size of a pigeon.

**Troubadours** was the name given to the early Provençal poets, whose rhymes were chiefly devoted to chivalry and romance. They did much to cultivate the romantic sentiment in days when society was somewhat barbaric, and helped considerably in the formation of those unwritten codes of honour which served to mitigate the rudeness of mediæval days. Their vogue was from the 11th to the 13th century, and they were chiefly of knightly rank. With the decline of chivalry their occupation was gone, and though minstrels of a commoner type continued to appear as troubadours for some time later, men of the true troubadour spirit no longer existed.

**Trout**, a fresh-water fish of the Salmonidæ family.

**Trôuvère**, or **Trôuveur**, were mediæval poets, of northern France, whose productions were of a more elaborate character—epics, romances, fables, and chansons de geste—than those of their contemporaries the Troubadours.

**Truffles** are a subterranean edible fungus much esteemed for seasoning purposes. There are many species, and they are found in considerable quantities in France, England, Italy, and other places. They are often met with under birch or oak trees, and prefer calcareous soils, but there are no positive indications on the surface to show where they are, and they are not to be cultivated. Hogs, and sometimes dogs, are used to scent them out, the former, by reason of their rooting propensities, being the most successful in the work.

**Trumpet**, a very ancient wind musical instrument consisting of a single tube of brass or other metal, and in olden times used chiefly for military music, though now adopted in orchestral composition.

**Trunk-hose** was the part of the hose which covered the trunk or body, and extended in bag form from the waist to the middle of the thigh, enclosing the hips. In vogue in the 16th and 17th centuries.

**Tsetse**, an African dipterous fly of considerable size whose bite is poisonous and often fatal to animals.

**Tube Railway** is a deep level underground railway running through a circular tunnel, lined with cast iron segments. The principle of its construction is the driving of a deep-level tube through the ground by means of the Greathead shield or the rotary excavator, a modern improvement of the Greathead shield. The Greathead shield was invented by Henry Greathead (1844–1896), who constructed the first tube railway in London. The shield operates by being forced forward by hydraulic rams as it bores its way with spinning cutters. As excavation proceeds the tunnel is lined with cast iron segments which are placed in position and bolted together; the space between them and the face of the earth is filled in with liquid cement, which is pumped through holes in the segments. Tube railway construction in London has proceeded almost continuously since 1890, when the first tube railway was opened, viz., the City and South London Railway from Stockwell to King William Street, 3¼ miles long. The total length of the tube railway single tunnel in London is now about 100 miles and the route mileage approximately 50 miles. The largest continuous tunnel is from south of Golders Green Station to a point just north of Morden Station on the City and South London Railway, running *via* Euston and the Bank. It is 16½ miles long and is the longest railway tunnel in the world. The average depth of a tube railway is 60 to 70 feet. The cost of a fully equipped tube railway is about £850,000 per route mile of double tunnel. The tube railways in London are now undergoing considerable extension under the National Development (Relief of Unemployment) Act of 1929. There are 5 London Tube railways: Bakerloo, Central London, the Piccadilly, the Hampstead, and the Waterloo and City.

**Tuberculosis** is a disease resulting from the formation of tubercles and the presence of tubercle-bacillus. Tuberculosis of the lungs is what is known as consumption.

**Tudor Period** extends from 1485 to 1603. The first Tudor sovereign was Henry VII., descended from Owen Tudor; then followed Henry VIII., Edward VI., Mary, and Elizabeth, the last of the line.

**Tuesday**, the third day of the week, named from the Saxon deity Tuisto, Tiw, or Teusco. To the Romans it was the day of Mars.

**Tuileries**, a French royal and imperial palace, dating from 1564. It was attacked by insurgents during the outbreaks of 1793, 1830, and 1848, and in 1871 was burned down by the Commune.

**Tulle**, a delicate kind of silk lace, originally made at Tulle in France. It was much used for the ornamentation of ladies' garments, hats, etc., and for veils.

**Tumulus**, a mound of earth raised over the bodies of the dead. The mound of Marathon, enclosing the bodies of the Athenians who were killed in the famous battle with the Persians is a celebrated tumulus. Such mounds were commonly raised over the tombs of the distinguished dead in ancient times, and sometimes enclosed heavy structures of masonry. The Roman "barrows" were tumuli. Evidences of such mounds are frequent in prehistoric remains.

**Tun**, a liquid measure formerly in general use, but now obsolete. A tun of ale was 216 gallons.

**Tundra** is the name of a vast treeless plain of Northern Russia with small lakes and morasses scattered here and there, but almost devoid of vegetation. It is a cold, bare region, where only the reindeer can find sufficient sustenance.

**Tungsten**, a metal some of whose ores are known as *wolfram* and *sheelite*.

**Tunny**, the name of a species of mackerel common in Mediterranean and Atlantic waters. Grows to a great size—eight or ten feet frequently—

and is the object of important fisheries. A large trade is done in preserved tunny.

**Turban**, a head-dress worn by men in Oriental countries, and consists of a scarf wrapped round the tasboosh or cap. Turbans vary in material, colour, and folds, according to the rank of the wearer.

**Turbines**, propelled by steam, have recently come into prominence in connection with steamship transit. Numerous vessels are now afloat and many more are building of this type. Although the principle was embodied in patents of sixty years ago, it is only within the last few years that any special effort has been made to secure its more general adoption. Turbine engines have been decided upon for many new British liners, and a considerable number have been successfully tried in America. The English Channel service has also got its turbine steamers, and a torpedo turbine is a recent achievement. For high speed the turbine class of steamer possesses advantages over ordinary reciprocating engines.

**Turbot**, a large flat fish, highly valued as food. It often attains from 30 to 40 lb. in weight. Its flesh is white and firm. It is confined to European waters, and is caught by line or trawl.

**Turkey**, a fowl of American origin, brought to Europe from America soon after the discovery of that country. It was a domesticated bird in England in the first half of the 16th century.

**Turmeric**, a yellow dye substance obtained from an East Indian plant of the ginger class, which is cultivated in other warm climates also, for commercial purposes. Turmeric, in its commercial form, comprises the root of the plant dried or powdered. Used in curry powder and to detect presence of alkali.

**Turpentine**, a resinous substance obtained from a variety of mostly coniferous trees, the *Pinus australis*, of which there are large forests in North Carolina, being the most productive of the oily matter. The crude turpentine undergoes distillation, the oil of which is separated from the resin, being colourless and of a pungent odour. Its uses are many. It is largely utilised in making paints and varnishes, and has medicinal properties.

**Turquoise**, formerly called Turkey Stone, is a blue, or greenish-blue precious stone, the earliest and best specimens of which came from Persia. It is composed of a phosphate of aluminium, with small proportions of copper and iron. India, Tibet, and Silesia yield turquoises, and a variety is found in New Mexico and Nevada. It derives its name from the fact that the first specimens were imported through Turkey.

**Turtle-Dove**, a small kind of wild pigeon, which visits the southern parts of England about May and remains until September. The heads of the male birds are a light bluish-grey, the back is greyish-brown, while the breast has a purple tint. The female is less pronounced in colour.

**Tweed**, a twilled fabric, consisting of two or more colours of yarn combined in the same cloth, and should be entirely of wool, though there are inferior kinds in which cotton has a part. The surface of the cloth is unfinished. Tweed was originally woven in the valley of the Tweed, hence its name, but is now manufactured in all cloth-producing centres.

**Twelfth Night** is the eve of the feast of the Epiphany, and in olden times was made the occasion of many festivities. It was the most popular festival next to Christmas, but is now little observed.

**Twilight** is the light which is reflected in the atmosphere when the sun is below the horizon before sunrise or after sunset. The term is most usually understood to refer, however, to the evening light; the morning light we call dawn. The twilight varies in duration in different countries, according to the position of the sun. In tropical countries it is short; in the extreme north it continues through the night.

**Tyburn**, the name of a turnpike which formerly stood near the present Marble Arch, and a notorious place of public execution of criminals.

**Tycoon**, a title often used by foreigners to designate the Emperor of Japan, but not used or recognised by the Japanese. The title seems to have been coined in 1854 by those concerned in concluding the treaty between the United States and Japan. In Japanese Tycoon simply means "great prince."

**Tympanum** is, in architectural phraseology, the triangular space at the back of a pediment, or, indeed, any space in a similar position, as over window or between the lintel and the arch of a doorway. In ecclesiastical edifices the tympanum is often utilised for sculptured ornamentation.

**Tynewald**, the title given to the Parliament of the Isle of Man, which includes the Governor and Council (the Upper House), and the House of Keys, the representative assembly. This practically constitutes Home Rule, the acts passed by the Tynewald simply requiring the assent of the Sovereign.

**Typewriting** is a method of printing in type letters be means of a machine called a type-writer, of which there are several kinds, including the Remington, Smith-Premier, Underwood, Oliver, and others. Each machine is fitted with a keyboard, indicating the various letters of the alphabet, figures, punctuation marks, etc., and as these are struck by the finger of the operator the corresponding type-signs are impressed on the paper, the ink being conveyed by an ink-saturated ribbon or pad. Typewriters are now a necessary feature of business houses, and are also much used by literary men and others. One of the most generally effective of modern labour-saving contrivances. An efficient copying typist should be able to maintain a speed of about 80 words per minute.

**Typhoon**, a cyclonic storm of great violence occurring in the autumn months in the China seas.

**Tyrollenne**, a Tyrolean dance of a waltz character.

**Tyrolite**, the name given to a hydrous arseniate of copper—soft, flexible, and in colour a bluish-green.

## U

**Ubbonites**, a sect of German Anabaptists.

**Ubiquarians** (or Ubiquitarians), a small German sect, originated in 1560 by John Brentius, who held that the body of Christ was present everywhere.

**Uckewallists**, a Mennonite sect who believed that Judas and Pilate would be saved by reason of their ignorance, and taught the doctrine of Universalism.

**Uhlan**, a light cavalry soldier armed with a lance. Marshal Saxe had a corps of them; and in the Franco-German war of 1870 the Prussian Uhlans won fame.

**Ukase**, a Russian edict, issued by the government and having the force of regular laws.

**Ulster Custom**, a tenant-right usage prevailing in Ulster, and recognising the right of a yearly tenant to remain in occupation so long as a fair rent is paid, to dispose of his tenancy, and to obtain compensation if the landlord resumes possession for himself.

**Ultramarine**, a sky-blue pigment obtained from *lapis lazuli*, a stone found in Tibet, Persia, Siberia, and some other countries. A cheaper ultramarine is now produced by grinding and heating a mixture of clay, sulphur, carbonate of soda and resin.

**Ultramontanism** is the term applied to the views of Roman Catholics who desire that absolute authority in religious affairs should be vested in the Pope, subordinate only to the Œcumenical Council.

**Umber** is of two kinds, raw and burnt. Both are used as pigments, the former being a dark brown and the latter a reddish-brown. It is made from brown hematite and clay.

**Umbrellas** did not come into general use in England until the latter part of the 18th century. They were known to the ancients, however, by whom they were used both against sun and rain.

**Uncials** were a form of written characters used in times prior to the 10th century; while smaller than capitals they were larger than the later minuscule. The term uncial was a misapplication of St. Jerome's *litteræ unciales*, "inch-high," letters.

**"Uncle Sam,"** the name of the personification of the United States of North America.

**"Uncle Tom's Cabin,"** by Mrs. H. Beecher Stowe, a story published in 1852, setting forth the horrors of the slave trade as they existed in America.

**Unction**, the act of anointing with oil, a symbol of consecration practised in the Roman Catholic, Greek, and other Churches, but not in the Protestant. *Extreme unction* is the rite of anointing a dying person with holy oil. This function consists in anointing the eyes, ears, nostrils, mouth, the palms of the hands, and the soles of the feet.

**Undulatory Theory** is the theory which traces light to vibrations set up in an invisible medium termed the luminiferous ether, and therefrom transmitted and diffused to the permeation of all space.

**Unearned Increment** is an increase in value of land, houses, etc., brought about by influences independent of the efforts or outlay of the owner.

**Unicorn**, a fabulous single-horned animal. In heraldry its form is horse-like, with the tail of a lion and pointed single horn growing out of the forehead.

**Uniformity Act** was passed in 1559, and prescribed the restoration of the English Prayer Book, ordering it to be read in all churches, and imposing a penalty on those who neglected to attend church. Both Roman Catholics and Puritans suffered by this enactment. In 1662, Charles II.'s Act of Uniformity commanded all clergymen to subscribe unreservedly to the whole of the Prayer Book. This Act was amended in 1872 by authorising certain changes in the services. A further revision of the Prayer Book was accepted by the Convocation and considered by Parliament during the session 1929–30, but rejected. It is now known as the Deposited Book and is used in some churches.

**Uniforms** for soldiers were introduced by Louis XIV. in 1665, but were not adopted in the British military service until some years later.

**Unionists**, the name given to the Conservatives and seceding Liberals who opposed Mr. Gladstone's Home Rule Bill in 1886.

**Union Jack** is a combination of two flags—the banner of St. George, white with a red cross, the original English flag, and the banner of Scotland, blue with a white diagonal cross. This combination was effected after the union with Scotland, and the term Jack is supposed to refer to James I. (Jacques). A further addition was made to the Union Jack after the union with Ireland in 1801, when the banner of St. Patrick, white with a diagonal red cross, was introduced.

**Union of Great Britain and Ireland** was proposed in the Irish Parliament in January, 1799, but rejected by a majority of one, while in the English House of Commons the majority in favour of it was overwhelming. The measure was ultimately passed with adequate majorities by both Parliaments, and the union came into force on January 1, 1801. A revolution was begun in 1917, and in 1924 Dominion status was accorded to South Ireland, Ulster remaining an integral part of Great Britain.

**Union, Treaty of**, was the treaty by which Scotland became formally united to England, the two countries being incorporated as the United Kingdom of Great Britain, the same Parliament to represent both, Scotland electing sixteen peers and forty-five members of the House of Commons. Uniformity of coins, weights, and measures was provided for, Scottish trade laws and customs were assimilated to those of England, and as regards religion and the practice of the law, Scotland was to continue as before. This act was ratified on May 1, 1707.

**U.S.S.R.**, Union of Socialist Soviet Republics, is the special name for Soviet Russia. The constitution of the new State was adopted in 1918, since when certain alterations and additions have been made at Soviet Congresses. The Union now consists of 7 constituent States: (R.S.F.S.R.), Ukraine (U.S.S.R.), White Russia (W.R.S.S.R.), Transcaucasia, Uzbek, Turcoman and Tajikistan. U.S.S.R. is governed by a Union Central Executive Committee and a Union Council of People's Commissaries. Total area of U.S.S.R. is given as 8,241,910 sq. miles, and the population is about 148 millions.

**Union of South Africa**, formed in 1909, consists of the provinces of the Cape of Good Hope, Natal, the Transvaal and the Orange Free State. There is a Governor-General and an Executive Council. The seat of Government is Pretoria, and the seat of legislature is Cape Town. Both English and Dutch are official languages. Area: 471,917 sq. miles. Pop. c. 7 millions.

**Unit**, a former British gold coin of the value of 20s. issued in 1604 by James I.

**Unitarianism** is the doctrine which proclaims the impersonality of God, and denies the theory of the Trinity. It was not until after the Reformation that Unitarianism developed to any particular extent in England. In the United States Unitarians are numerically strong and have produced some eminent preachers, such as Dr. Channing and Theodore Parker. In great Britain the Unitarians have at present 345 chapels or other places of worship, and 350 recognised ministers.

**United Irishmen** were an association of Irishmen whose aim was to establish an Irish Republic. They were in league with French supporters and had six war frigates ready for action. The leader Wolfe Tone, was captured, however, in October, 1798, and the movement was effectually crushed. Wolfe Tone committed suicide in prison.

**Universalists**, a sect in the 3rd century, and condemned by the Council of Constantinople in 553. They held the doctrine of the salvation of all men. They have several Churches in America to-day, but the sect has few followers in Britain.

**Universities** are institutions for providing higher education, with power to confer degrees on such members as pass certain prescribed educational standards. In England there are eleven universities—Oxford and Cambridge, both founded before the 12th century; London 1830; Liverpool, Leeds, Manchester, Durham, Sheffield, Reading, Bristol, and Birmingham. Scotland has four—St. Andrews, Glasgow, Aberdeen, and Edinburgh; the first three having been founded in the 15th century, and that of Edinburgh in 1582. In Ireland there are three Universities—Dublin University (founded in 1591 as Trinity College); the National University of Ireland established in 1908; and the Queen's University of Belfast founded in 1908. The University of Wales dates from 1893. The universities of France, Germany, and other countries are numerous, and many of them very ancient. The Bologna and Paris Universities were founded in the 12th century. The chief universities of the United States are those of Yale and Harvard.

**University Boat-Race** is raced annually between Oxford and Cambridge. First rowed in 1829 at Henley. From 1836–39 it was rowed from Westminster to Putney, in 1846, '56 and '63 from Mortlake to Putney, while all the other years it has been rowed from Putney to Mortlake (4¼ miles). Between 1924–31 Cambridge has won each year, and the totals then stood at 42 wins by Cambridge and 40 by Oxford.

**University Extension** is a method which has been in operation for a number of years of extending the means of university teaching to men and women who would otherwise be unable to avail themselves of university advantages. Under this scheme lectures are given and classes opened in the chief centres of population, and the higher education of the universities is thus brought within popular reach.

**Upas**, the poisonous sap of certain trees growing in Java and the Malayan and Philippine Islands. The natives use the sap for arrow-poison. Strychnine is yielded by one of these trees, the *Strychnos Ignatia*.

**Ur** of the Chaldees, and probably the site of Abraham's early home, is an ancient Sumerian site where important excavations have been conducted by Taylor in 1854 and by Hall and Woolley in this century. The excavated graves and other discoveries have thrown valuable light on the period subsequent to the "Flood" and have added much to modern archæology.

**Uræus**, the sacred serpent of the ancient Egyptians, always represented on the head-dresses of divinities and royal personages. It was the symbol of supreme power, and was in the form of an asp.

**Uralite**, a mineral substance having the crystalline form of augite, but the physical properties of hornblende. It is commonly regarded as a paramorph of the last named mineral.

**Uraninite**, a pitch-black heavy mineral usually

found in granite rocks and forming the chief source of uranium. It is also called pitch-blende, and occurs sparingly in Cornwall.

**Uranium,** a metal discovered by Klaproth in 1789 in pitch-blende. It is of a dark colour and heavy, and is found in Cornwall, Saxony, and elsewhere. The oxides and salts of uranium are of importance, and are used for colouring glass and other purposes. Uranite is an emerald-green ore of uranium, and the discovery of radium was due to experiments with uranium.

**Uranus,** the seventh of the major planets in distance from the sun, from which it is removed 1,800 millions of miles. It is nearly four times the diameter of the earth and has four satellites. Sir Wm. Herschel discovered the planet in 1781.

**Uriconian,** the name given to a series of volcanic rocks occurring in Shropshire near Wroxeter, the site of the old Roman station of Uriconium.

**Ursa Major,** the Greater Bear, or "Charles's Wain," a constellation familiar to all observers because of the brilliance of the seven stars forming its outline. It never sets in these latitudes.

**Ursa Minor,** the Lesser Bear Constellation, has, like Ursa Major, seven prominent stars, of which the pole star is the brightest.

**Usquebaugh** is the old Celtic name for spirit, distilled originally from barley. The name is still used in Scotland. Burns, in *Tam o' Shanter*, wrote, "Wi' usquebae we'll face the de'il."

**U.S.S.R.** *See after* **Union, Treaty of.**

**Utilitarianism** is a term that originated with the Italian philosopher Beccaria, and has for its aim "the greatest happiness of the greatest number," and insists that this should be the sole aim of all public action. Jeremy Bentham was the chief propounder of the philosophy, and in more recent times John Stuart Mill advocated it with much acceptance. Herbert Spencer's exposition of the theory represented a still higher development of it.

**Utopia** was the imaginary island of Sir Thomas More's ideal state, where the conditions of life and government were perfect. The work, published in 1516, was the forerunner of a host of such books by Swift, Voltaire, and, in our own time, Bellamy, Mallock, and others.

**Utrecht, Treaty of,** was the famous treaty by which the war of the Spanish Succession was brought to a close in 1713.

**Uvarovite,** an emerald-green variety of garnet. It contains chromium sesquioxide. Named after Uvarov, the Russian statesman.

**Uvula-wort** (or **Throatwort**), the nettle-leaved Bell-flower (*Campanula Trachelium*), found plentifully in English copses, and has the reputation of being of service medicinally in the treatment of pains and swellings in the throat.

**Uzema,** a Burman linear measure equal to about 12 English miles.

## V

**Vaccination,** a system of inoculation against smallpox discovered by Dr. Jenner in the 18th century. It is compulsory in most countries. In Great Britain all infants within 6 months of birth must be vaccinated, unless the parent conscientiously believes that it would be harmful to the infant's health, in which case he must make a declaration to that effect to the district Vaccination Officer.

**Vagrancy** was the subject of stringent punishment under the old English laws. A vagabond on conviction was sentenced to be branded with a "V" and sent into slavery for two years by an ordinance of 1547, while whipping, setting in the stocks, and mutilating the ears were other penalties of this offence. The present Vagrant Act was passed in 1824. At the present day the lack of fixed abode and a total sum of money amounting to less than eightpence constitute vagrancy.

**Valentine's Day,** the 14th February, is a festival in celebration of St. Valentine, one of the Christian martyrs of the 3rd century. A sweetheart or Valentine is chosen on that day and letters or tokens sent secretly to the object of affection.

**Valentinians were a sect of the 2nd century,** adherents of **Valentine, a priest,** who deserted his faith and proclaimed a doctrine in which gods and goddesses were substituted for the Trinity.

**Valhalla,** in Scandinavian mythology, is the special Paradise to which the souls of warriors slain in battle were transported. The term is also generally used to designate a burial place of great men.

**Valkyria,** the chosen handmaidens of Odin, appointed to serve at the Valhalla banquets. Their most important office, however, according to the Norse mythology, was to ride through the air at a time of battle and point out the heroes who were to fall. It is one of these Valkyria who is made the heroine of Wagner's opera "Die Walküre."

**Vampire,** or **Werewolf,** according to ancient superstition, was a spectre in human form, which rose from its grave in the night-time and preyed upon the living as they slept, sucking their blood, and then returning to the grave.

**Vampire-Bats,** a peculiar kind of bat commonly known as a "flying fox." These bats are found in South America, Asia, Africa, and the Malay Archipelago, and receive their name from the supposition that they live on the blood of animals.

**Vanadium,** a scarce metallic element found in iron ores and certain minerals and clays. It forms oxides which develop salts of commercial value in dyeing and calico printing. Originally discovered by Sefström in 1830, it was found also in the copper-beds of Cheshire by Roscoe in 1865.

**Vandals** were a Teutonic race who ravaged Gaul, Spain, and North Africa in the 5th century, and finally attacked the city of Rome, drawing down upon themselves universal opprobrium for their wanton destruction of beautiful objects and monuments.

**Vanilla,** a climbing orchid of tropical America, found also in Asia; the dried fruit of certain species furnishes the agreeable aromatic vanilla of commerce.

**Varnish** is of two leading kinds: spirit varnish, made from resinous substances dissolved in spirit; and oil-varnish, in which the dissolving agent is linseed oil and turpentine.

**Vase,** a hollow vessel of a decorative character, with or without handles, and of various shapes and designs. One of the finest examples of a Greco-Roman vase is the famous Portland Vase. (*See* **Portland Vase.**)

**Vatican,** the Papal residence at Rome, a famous palace on the hill adjacent to St. Peter's. Its museum is a rich treasure-house of literary and artistic objects.

**Vauxhall Gardens,** a famous London pleasure resort from the early part of the 18th to the middle of the 19th centuries. It was here that many great singers appeared, where the earliest balloon ascents were made, and where there were fine displays of fireworks.

**Vedas,** the sacred writings of the ancient Hindus, comprising hymns, sacred formulæ, and prayers.

**Vegetarianism** is the theory that vegetables are the only proper food for human beings and afford all the sustenance that is necessary for a healthy life. A Vegetarian Society was founded in London in 1847, and both in the metropolis and in numerous provincial towns vegetarian restaurants have been established with considerable success.

**Vehmgericht,** a mediæval tribunal said to have been founded by Charlemagne in the 12th century. It dealt with cases in which the penalty of death was involved. The last of these courts was held in 1568, by which time the suppression of the tribunal had become a public necessity.

**Vellum.** (*See* **Parchment.**)

**Velvet,** silk fabric that is woven with a fine pile on one side only. When the piece is made entirely of silk it is styled silk velvet; when cotton is mixed with the silk, it is cotton-velvet or velveteen.

**Ventilation** is a means adopted of obtaining fresh supplies of air in rooms and buildings. It is a science that has been much studied in recent years and has led to the adoption of methods of air renewal by which the public health has been greatly improved. The ventilation of underground places such as tube railways is provided for by a supply of oxygen passed by pressure through specially constructed pipes.

**Ventriloquism,** the art of speaking in many voices and at apparent different distances, without

seeming motion of the lips. The art was practised by the ancient Greeks and Romans.

**Venue**, a legal term designating the place where an action is to be tried or from which a jury is to be summoned.

**Venus**, the planet second in order from the Sun, and distant from that orb 67,500,000 miles. It is 7,600 miles in diameter and rotates on its axis only once in 225 days. At wide intervals Venus passes between the earth and the sun, when what is called the "Transit of Venus" takes place. The last transit was in 1882. There will not be another until 2004.

**Verd-Antique**, a peculiar kind of stone found chiefly in Italy, and to some extent quarried in Cornwall and certain parts of Scotland, Ireland, and the United States. It is a highly-ornamental stone, vari-coloured, beautifully veined and capable of a high polish.

**Verdigris**, a compound formed by exposing copper to contact with vinegar in the air. There is blue verdigris and green verdigris, the latter containing the greater proportion of copper. Verdigris is used both as a mordant and as a pigment.

**Verjuice**, an acid liquid formerly much used in cooking. It is derived mostly from sour grapes, crab-apples, and other acid fruits.

**Vermilion**, a pigment obtained from cinnabar, but generally made artificially from a mixture of one part of sulphur with four of mercury. It yields a bright red colour.

**Versailles Treaty**, the peace treaty signed by the Allies and Germany on June 28, 1919, which marked the termination of the Great War.

**Verst**, a Russian measure of length equal to 3,500 ft., *i.e.* about two-thirds of an English mile.

**Vertebrate**, the zoological division comprising such animals as have a backbone.

**Vesta**, a minor planet discovered by Dr. Olbers of Bremen in 1807. It revolves round the Sun between Mars and Jupiter.

**Vestals** were priestesses of ancient Rome, appointed to guard the perpetual fire consecrated to Vesta. They were required to take vows of chastity, and during the thousand years from Numa, 710 B.C. to Theodosius, A.D. 394, when the order was abolished, only 18 vestals were condemned for incontinence.

**Viaticum** (literally "provision for a journey"), an expression designating the ministering of Holy Communion to one on the point of death.

**Vicar of Bray**, the original of the ballad of that name was Simon Alleyn, vicar of Bray between 1540–85, who was "twice a Papist and twice a Protestant," as Fuller asserts, serving under four monarchs, Henry VIII., Edward VI., Mary I., and Elizabeth.

**Victoria and Albert Museum**, in Kensington, London, is a museum of applied and industrial art. It was begun in 1852 and now has 9 departments: Architecture and Sculpture; Ceramics; Engraving, Illustration and Design; Metalwork; Paintings; Woodwork; Textiles; Library (of books on art) and Book-production; and the Dept. of Circulation. The administrative expenses are nearly £140,000 per annum, and are met by Parliament. The building is a very fine one and the arrangement very modern.

**Victoria Cross**, an order of merit for conspicuous valour, awarded to members of the Army and Navy, was established in 1856, since when there have been over 1,100 distributions made, 570 of which were awarded in the war of 1914–18. The Cross carries with it a pension of £10 a year to non-commissioned officers and men with an extra £5 for every bar.

**Victoria Regia**, a species of large water-lily, a native of South America, having leaves of a diameter of 5 to 6 feet, the flower being about a foot in diameter, white, with a rose-centre. Specimens are to be seen growing at Kew.

**Vicuna**, a large mammal of the camel family, found wild in the mountain regions of Bolivia and Chili. It yields a wool which is made into dress fabrics.

**Vienna Congress**, sat at Vienna from September 1814 to June 1815, and settled the delimitation of the territories of the various European nations after the subjugation of Napoleon. Ceylon, Mauritius, Cape Colony, Heligoland, Malta, and part of Guiana were accorded to England; France was not permitted to hold more territory than she had possessed at the outbreak of the Revolution, in 1789; Austria took Northern Italy; Russia part of Poland; and Prussia, part of Saxony and the Rhenish province.

**Vikings** were Scandinavian sea-plunderers who from the 8th to the 10th centuries were the terrors of northern waters.

**Villeinage.** (*See* **Serfs and Slavery.**)

**Vinegar** is obtained by the fermentation of alcoholic liquids, induced by various processes. It is a diluted acetic acid. Vinegar has been used as a condiment from the days of the Romans, and is the active agent in the preparation of pickles and many sauces.

**Violin**, a familiar stringed musical instrument, a smaller form of the more ancient viol. Instruments of the violin type have been in use from remote times, and the form as now played upon is practically the same as that of the 16th century. The construction of the violin was in the century following brought to a point of refinement that has not since been equalled. The greatest of all violin-makers was Stradivari of Cremona, whose violins to-day fetch immense prices.

**Violoncello**, a large, stringed instrument, tuned an octave lower than the viola, and held by the performer between his knees while playing. An effective orchestral instrument.

**Viper**, a species of poisonous snake of which there is one example in Britain, the common viper or adder, only found in very dry localities.

**Virginal**, a keyed instrument of a clavichord type, fashionable in the 16th and 17th centuries, and said to have been played upon by Queen Elizabeth and Mary Queen of Scots.

**Virgo**, the 6th constellation of the Zodiac, lying between Leo and Libra. It has seven prominent stars ranged in the form of the letter "Y." One of these stars is of the first magnitude, the other six being of the third magnitude.

**Viscount**, a title of rank coming next below that of an Earl. The title originally stood for deputy-earl. The first English Viscount was Viscount Beaumont, created in 1440.

**Vishnu.** The second person of the Hindu Trinity, representing a principle of stability, to whom the creation of the world is sometimes attributed.

**Visigoths** were an offshoot of the Ostrogoths. They invaded Italy under Alaric in A.D. 400, and 10 years later acquired and occupied Rome. They were powerful up to the 6th and 7th centuries, ruling in Spain, France and Italy in turn, until in 711 the Saracens overthrew them.

**Vitamins** are accessory food factors considered essential to health and growth. So far 5 vitamins have been discovered: vitamins A, B, C, D and E. Vit. A is anti-infective; Vit. B is anti-neurotic (cures Beri-beri); Vit. C is anti-scorbutic (cures scurvy); Vit. D is anti-rachitic (cures rickets); Vit. E is the fertility vitamin. Vit. D has been produced synthetically by irradiating ergosterol with ultra-violet light. The chemical composition of vitamins is not known, but they are present in the following foods: Vit. A in milk and dairy products, eggs, liver and green vegetables; Vit. B in yeast and extracts of wheat; Vit. C in oranges, lemons raw cabbage, turnips and tomatoes; Vit. D in cod-liver oil, egg yolk and in milk, and dairy products contain it in small quantities; Vit. E in fresh lettuce and the oil of wheat embryo.

**Vitriol**, the old name of sulphuric acid, represented in its pure form by oil of vitriol. Sulphate of copper forms blue vitriol; sulphate of iron, green vitriol; and sulphate of zinc, white vitriol. Among other vitriols are nickel vitriol, red vitriol, and blue vitriol.

**Vivandière**, a female camp follower informally attached to French military regiments, and acting as vendor of liquors, fruits, etc.

**Vivisection**, the dissection for scientific purposes of living animals. The practice has been strongly opposed by humanitarians and Acts have been passed for restricting vivisection to authorised persons.

**Vizier, a chief Turkish minister in the olden days.** The first Grand Vizier to the Ottoman Porte was appointed in 1386, and although the office was formally abolished in 1838, it has since been occasionally revived.

**Volapuk**, a commercial language intended for

universal use, invented by Johann M. Schleyer about 1879.

**Volcanoes** are mountains or mounds beneath which, in the depths of the earth, there is a continual fire that at intervals throws up flame, molten rock (lava), ashes, etc. The most active volcanoes of modern times have been those of Ætna, Vesuvius and Stromboli, in Italy; Hekla in Iceland; and Mont Pelée in Martinique. The last named was in violent eruption in 1902, when the chief town of St. Pierre was completely destroyed, and many lives were lost. In Hawaii there are Mauna Loa, Kea and Hualalai, and others have recently been active in Japan and the West Indies.

**Vols**, a small rodent represented in Britain by three species, the best known being the Short-tailed Field Mouse. There are in all some 50 species, including the water-rat and distributed over nearly all parts of the world.

**Volt**, the electro-motive force unit, named after Volta, and defined and adopted since 1893 in terms of the ohm and the ampere.

**Volunteers** were first raised in England during the American War in 1778, and in 1793–94, when a French invasion was feared, a considerable Volunteer force was organised. The Volunteers at that time numbered over 400,000. Another agitation in 1859 concerning a probable French invasion caused the formation of the Volunteer force. The enrolled strength of the Volunteer organisation in 1870 was 193,893; and in 1901 it reached its highest point, 288,476. In 1907 the entire number of Volunteers was 257,918. The force was re-formed as the Territorial Force in 1908. The British army has been recruited from volunteers in times of peace, and largely in times of war for several centuries, but conscription has always been resorted to in time of need, as during the Great War. The Boer War and the early battles of the Great War, however, were fought entirely by volunteer armies. (*See* **Territorials.**)

**Vulcanite** (ebonite), the dark form of india-rubber, capable of being vulcanised at a high temperature. It is used as an electrical insulator, and for many commercial purposes, such as the manufacture of combs, piano keys, etc.

**Vulgate**, a term used to designate the Latin version of the Scriptures sanctioned by the Council of Trent.

**Vulpine Phalanger**, an Australian marsupial mammal, resembling a small fox, and called also the Brush-tailed Opossum.

**Vulture**, a famous bird of prey of two distinctive groups; that of the Old World, which has the nostrils divided by a mass of bone, and the New World vulture, which has no such division. Vultures feed on carrion and are the great scavengers of tropical regions. The European species are the Griffon Vulture and the Egyptian Vulture, which, however, have seldom been known to visit England. Vultures have no feathers on the head and neck.

## W

**W.A.A.C.**, Women's Army Auxiliary Corps, established during the Great War (1917–18) as a branch of the British army; much useful work was fulfilled by women at home and overseas in canteens as clerks, barracks and fieldwork, etc.

**Wading Birds**, an order of long-legged birds, including the stork, flamingo, heron, crane, etc., which frequent marshes and shallow waters, and are able to stand in the water to watch for prey.

**Wagram, Battle of**, was fought on the 5th and 6th July, 1809, when Napoleon completely defeated the Austrians.

**Wagtail**, a familiar long-tailed small bird, of which four species are British, the Pied, Grey, Yellow, and White Wagtails, while the Blue-headed Wagtail also occasionally makes his appearance. Wagtails nest in ruts, and are active of habit.

**Wahabees** were followers of Abd-el-Wahab, an Arab reformer who advocated complete obedience to the Koran.

**Waifs**, a legal term applied to stolen goods that have been thrown away in flight. They are liable to be forfeited to the Crown, but will be given up to the person robbed if it be shown that he has taken adequate steps to have the thief arrested.

**Waits**, the night minstrels who sing carols at Christmas in the open, a remnant of the old-time minstrels attached to Courts and feudal dwellings.

**Wakes** were orinally parish festivals in celebration of the patron saint's day and the dedication of the church in the all-night vigil. Regulated by law in 1536, they gradually fell into desuetude, or became divorced from their former significance; also vigils for the dead before interment.

**Walcheren Expedition** was undertaken under the command of the 2nd Earl of Chatham, heading 40,000 land forces, and Sir Richard Strachan, with a fleet of 35 ships of the line and 200 smaller vessels, in July, 1809, its object being to capture Walcheren, then in the possession of the French. The project ended in disaster, and Chatham was compelled to resign his post.

**Waldenses**, the name given to a settlement of Christians under the leadership of Peter de Waldo of Lyons in the 14th century. The Waldenses are now a somewhat numerous sect, having over fifty places of worship in Piedmont and a membership of over 15,000. They have had full freedom of worship since 1848.

**Wall of China (The Great)**, begun in 214 B.C. and intended as a barrier against invasion. It is nearly 1,500 miles in length, stretching along the north-western boundary of the country, and varying in height and thickness, being the strongest in the neighbourhood of Peking.

**Walloons** were French Protestants inhabiting certain parts of France and Belgium, and many of them came to this country in 1556 as refugees.

**Walpurgis Night**, the night before the 1st of May, when witches and creatures of evil are supposed to have liberty to roam. Named after St Walpurgis, an English nun, who went on a mission to Germany in the 8th century. There is a famous Walpurgis night scene in Goethe's *Faust*.

**Walrus**, a large marine mammal having in the upper jaw two large curved tusks, which average in length from fifteen inches to two feet. It lives on fish, and inhabits the North Polar regions.

**Waltz**, a popular round dance, danced in couples, introduced into England from the continent in 1813.

**Wanderoo Monkey**, a bearded monkey with a tufted tail, found on the Malabar Coast, and often called the "lion-tailed monkey."

**Wapentake**, the ancient name given in the northern counties to territorial divisions corresponding to the Hundreds of southern counties.

**Wapinschaw**, an ancient Scottish custom of assembling the people for the purpose of testing their capacity for bearing arms and their readiness to take the field.

**Wapiti**, a large North American deer with great brown-tined horns, often, but erroneously, styled the Elk or Grey Moose.

**Warbler**, a small, lively bird famed for its song, and represented in Britain by over 20 species, including the nightingale, the red-breast, the willow-wren, etc.

**Wardmotes** are annual meetings of the inhabitants of London wards, at which they elect their Common Councilmen. Their meetings date from 1386.

**War Expenditure.** Russia's weekly expenditure of £1,097,250 towards the close of the war with Japan was by no means extraordinary. Our own war in South Africa worked out at £1,500,000 a week. The total cost of the Crimean War was about £313,000,000; out of this Russia paid £142,000,000, France £93,000,000, and Great Britain £78,000,000, the weekly expenditure for the three countries being, Russia, £1,400,000, France £900,000, and Great Britain £700,000. America's civil war cost £121,000,000, or just under £1,600,000 a week. France, after her conflict with Germany in 1870–71, had to pay £318,000,000. The Napoleonic wars were comparatively cheap for France; the total bill only amounted to £255,000,000, while that of Great Britain amounted to £831,000,000. The Great War, however, put all other wars into the shade. Up to March, 1916, Great Britain had incurred a total war responsibility of £2,052,000,000—a gross cost of £5,000,000 a day. In May, 1917, Great Britian had an average war

expenditure of nearly £7,000,000 a day. In 1918 the total war expenditure had exceeded £5,000,000,000. Germany's war outlay at the same date was £5,000,000 a day, and that of France £4,409,000. Great Britain's figures included advances to Allies.

**Washington Conference** was convened in 1921 by President Harding (U.S.A.) for the purpose of discussing the limitation of armaments and Pacific problems.

**Wasp**, the name of a well-known order of insects which live in communities of males, females, and workers, much the same as bees. The female wasp and neuters have a venomous sting.

**Water Deer**, the Chinese musk deer, an animal of small size and aquatic habits, and hornless.

**Water Flea**, a small crustacean provided with several pairs of legs, carrying gills which enable it to swim rapidly to and fro on the water.

**Water Frame**, the name given to the spinning frame invented by Arkwright, because of its being driven by water-power. In Lancashire, where it was most used, it was known as the "throstle."

**Water-Gas** is an illuminating gas, and also in its non-luminous form is used as a heating gas. It is obtained by means of a specially constructed furnace into which steam is admitted, and passes upward through the fire and into a regenerator, where it becomes decomposed. As the steam passes through the furnace it is charged with either coal dust or crude naphtha, which process induces chemical reaction, and a fixed gas is the result.

**Waterlander**, a sect established in Holland as an offshoot of the Mennonites. They were more tolerant than the original sect, and did not regard the Bible as necessary to salvation. Ultimately they became reconciled with their opponents, with whom they are now united.

**Waterloo, Battle of**, was fought on Sunday, June 18th, 1815. Napoleon had 71,947 men and 246 guns; while Wellington's army, at the beginning of the battle, comprised 67,661 men and 156 guns. The battle raged from 10 in the morning until 5 in the afternoon with alternating success, Wellington gradually gaining the mastery, however, and when the Prussian forces under Blücher joined him late in the afternoon the whole allied army moved forward and Napoleon's defeat was rendered complete. The total losses of the Allied Army in killed, wounded and missing were 22,976. The French lost over 30,000 men.

**Waterloo Bridge**, crossing the Thames, was built by Rennie, and opened in 1817. It has nine arches, each of 120 feet span, is built of granite, and has a length (including approaches) of 2,456 feet.

**Waterproofing**, a method of rendering cloths capable of resisting water, an art which has been greatly developed in recent years. The first article of the kind was what is called "Mackintosh," made mainly of india-rubber, but later processes mingle the waterproofing with the threads of the fabric by the introduction of additional substances. Recently very light silk and satin fabrics have been used for waterproof coats.

**Water-Spider**, an interesting little animal which spins a sac of silk on a water-plant, which it uses as a sort of diving bell. From this it obtains bubbles of air, one at a time. Thus the spider is enabled to remain below the surface a considerable time.

**Water-Spout**, a column of water drawn to a considerable height in the air and descending to earth with a rapid whirling motion. The phenomenon only lasts a few minutes, and frequently a number of water-spouts form and discharge either simultaneously or in rapid succession. Water-spouts only occur over the sea.

**Watling Street**, the name of the old Roman road which ran from Dover, by way of Canterbury, Rochester, London, and Bedford, to Chester.

**Wax**, the name applied to certain plant substances or mixtures, and used for various purposes, such as the making of wax candles, bleaching, and making artificial flowers, anatomical models, etc., also in pharmacy for blending in the composition of plasters, ointment, etc. The best known natural wax is beeswax, and there are others, such as spermaceti, obtained from the sperm whale, and Chinese wax, which is a cerotyl cerotate.

**Waxbill**, a small Oriental and African bird of the Ploceidæ family, with wax-like bill, and beautifully variegated plumage. The Java sparrow, the South African Grosbeak, and the blue-breasted waxbill are attractive, and often find their way into cages.

**Wayz-Goose**, the name generally given to a festive gathering of people employed in printing and other works, so called from the fact that in earlier times a goose was the principal dish of the feast.

**Weasel**, a small carnivorous mammal common in Britain, of nocturnal habits, living on small rodents, birds, etc.

**Weather Office** is now a branch of the Air Ministry. In the United States £200,000 a year is spent on this kind of work, and the advice given to fruit farmers and cotton planters abundantly compensates for the outlay. The British Weather Office staff are always glad to help anyone to information for a special purpose.

**Weather Predictions by Animals.** Cats are credited with washing right over their ears when rain is approaching. Cats also become restless and wander aimlessly about the house when a thunderstorm is brewing. The braying of a donkey is said to be a sign of coming rain. Before winter sets in, moles prepare a sort of basin in which they deposit a quantity of earthworms. When these basins are fewer in number than usual the mole-catchers state that the winter is sure to be mild. The field-mouse has been noticed carefully to cover up its hole prior to the setting in of cold and snow. Sheep in mountainous districts will change their feeding ground to the lee side of the hills before the arrival of severe gales and rain. Bees are very sensitive to atmospheric changes. When they return to the hive, and do not come out again for a time, rain is indicated. Working bees, when collecting honey, are said to be so afraid of bad weather that if a cloud obscures the sun they will hurry home. If domestic geese are seen to fly without any palpable reason, rain is to be expected. If ducks are noticed going out on to the grass fields in the daytime in search of snails, a shower may usually be looked for. When it is likely to be wet, garden-spiders spin only short threads. When the shrill voice of the peacock is heard, a change of weather is probable. If the swallow flies high it is a sign of fine weather, but when it is near the ground rain is to be expected. The movements of rooks are much watched by some agriculturists as an index to the coming weather. If the rooks are seen settling noisily upon trees and flying hither and thither instead of going straight away, a wet day is probable. If they are flying low in the winter, going and returning silently, early and late, before sunrise and after sunset, a sharp frost may be looked for. Fish are extremely sensitive to the weather, as the angler well knows, many species declining to feed when a change is in progress.

**Weaver Bird**, a small bird inhabiting Southern Asia and Australia, remarkable for its habit of building a nest formed of blades of grass dexterously interwoven and suspended from the boughs of trees.

**Weaving** has been practised since before any times of which we have record. The Egyptians credit the invention to Isis, the Grecians to Minerva. The main principle of the weaving loom is the same to-day as it was thousands of years ago; a warp extends lengthwise through the loom, the threads being held in separate regular order by being passed through a reed or "slay," while the weft is crossed through alternating threads of the warp by means of a shuttle which holds the weft. Thus the fabric is built up. Weaving was done by hand up to the early part of the 19th century, when Cartwright's steam-power loom was introduced, and is now in universal use. The Jacquard loom for weaving figured designs dates from 1801.

**Wedding Days**, or anniversaries observed, in addition to the original wedding day, are as follows: Silver Wedding Day, commemorates the 25th year of married life; Golden Wedding Day, 50 years; Diamond Wedding, 60 years.

**Wednesday**, the 4th day of the week, derived its name from Woden or Odin, the Norse god of war

**Week.** (*See* **Calendar.**)

**"Weekly Dispatch"** was started as a London Liberal Sunday newspaper in 1801.

**Weever**, a species of sea-fishes which possess the power of inflicting stings by means of the dorsal fin. The British species are the Great Weever, which averages some 15 inches in length, and the Little Weever, which is about 7 inches long.

**Weevil**, the popular name of a large order of beetles of a very destructive kind. They abound in all parts of the world, and are voracious feeders on leaves, seeds and grain. Some of the tropical species possess brilliant plumage.

**Weights and Measures** are said to have been introduced by Pheidon, Tyrant of Argos, in 895 B.C. Weights were at first calculated from grains of wheat, the lowest still called a grain. The basis of ancient measures was the natural proportions of the human body, the digit or breadth of the middle part of the first joint of the forefinger being taken as the lowest unit. Under Richard I., standards of weights and measures had to be provided for the whole kingdom by the sheriffs of London. The Standards Office is a department of the Board of Trade.

**Wellington College.** (*See* **Public Schools.**)

**Wenlock Group**, in geology, a sub-group of the Upper Silurian series, 4,000 feet in thickness, consisting of limestone and shale.

**Werewolf**, according to an Old World superstition, was a human being changed into a wolf, but preserving its original intelligence. Numerous men charged in the Middle Ages with crimes were deemed of the Werewolf category. The superstition prevailed in many parts of Europe to a comparatively recent time, and some such belief is prevalent amongst most savage races at the present day.

**Wesleyan Methodists.** (*See* **Methodists.**)

**Western Church**, the Roman Catholic Church, as distinct from the Eastern or Greek Church.

**Westminster Abbey** stands on the site of an old church and religious establishment of the 7th century. It was rebuilt under Edward the Confessor, and again under Henry III., and important additions were made by Edward II., Edward III., Richard II., Richard III., and Henry VII., the latter erecting the beautiful eastern chapel in the Decorated style which bears his name. The western towers and front were rebuilt by Wren in the 18th century. It contains tombs of many sovereigns, of the Unknown Warrior, and many other illustrious men are commemorated by monuments.

**Westminster Cathedral**, a Roman Catholic cathedral built between 1893 and 1905 on the old site of a woman's prison. It was designed by Bentley and is distinguished by a campanile 283 ft. high. The interior when completed will be very imposing and decorative.

**Westminster Hall**, adjoining the Houses of Parliament, was built as a Banqueting Hall by William Rufus, and many courtly festivals were held there in succeeding centuries. King John established the Law Courts there. It now forms a gigantic hallway, leading to the Houses of Parliament, but was used as a Banqueting Hall in August, 1905, when the then Prime Minister, Mr. Balfour, entertained the Officers of the French Fleet here.

**Whale**, a marine animal averaging, when full grown, from 40 to 60 feet long, the head comprising nearly one-third of the whole length. It inhabits the Arctic Ocean, and is much hunted for the sake of its blubber, a thick mass of fat, underlying its skin to a thickness of from 8 to 16 inches. This blubber yields the whale oil of commerce, and the whalebone is derived from the baleen plates forming the structural portion of the mouth. The whale fisheries form an important industry, Dundee being the headquarters of the whale-fishing fleet. About half a ton of whalebone is obtained from one whale, which is worth between £2,000 to £3,000 per ton. The whaling industry of British Dependencies of Falkland Islands, S. Shetlands, S. Georgia, S. Sandwich Isles, Graham's Land, etc. is the greatest in the world. 13,514 whales were caught in 1928–29, their oil fetching about £4,363,092. (*See* **Rorqual and Sperm Whale.**)

**Wheat**, the name of several varieties of plants of the Grass family, yielding a fruit or grain which, in its crushed state, is termed flour, and from which is obtained our most valuable food staple. Over five and a half million tons of wheat grain is imported into this country. There are less than two million acres under wheat in Great Britain. Of the wheat consumed annually in this country (about 33,500,000 quarters), only 7,500,000 quarters are grown at home. It is calculated, however, that Canada's capacity for wheat production is so vast that we could look to that colony alone to supply us all we want. The greatest wheat-growing country is Soviet Russia, with a production of over 100 million quarters. U.S.A. runs very close, and after that Canada with between 40 and 50 million quarters. The International Institute of Agriculture held its first International Wheat Conference in 1927, as a result of which many more stations for the study of wheat questions were set up in 200 different countries all over the world. The second conference will be held in 1932, after a preliminary debate early in 1931.

**Whelk**, a molluscous univalve with a spiral shell, and comprising some 20 species. The Common Whelk is abundant on the British Coasts, and is captured in large quantities and sold as food.

**Whidah Bird**, the widow-bird of West and Equatorial Africa, a beautiful genus including the "Mourning Widows" and "Paradise Widow-birds" of the dealers. To a body of about 5 inches long, the males of some of the species have a tail of something like 11 inches during the breeding season. The plumage is showy and the song pleasing.

**Whigs**, a political name which came into use in the time of Charles II., and designated the progressive party down to the passing of the Reform Bill of 1832, when it was superseded by the term Liberal.

**Whimbrel**, a bird of the Curlew family, more common in Scotland than in England.

**Whinchat**, a small migratory bird, which is seen in Britain from April till September, and has a bright brown plumage, spotted with darker brown.

**Whip**, the name commonly given to the Patronage Secretary of the Treasury, whose duty it is to keep the supporters of the Government together for important Parliamentary divisions. Each party has its own chief Whip, with assistants.

**Whirlpool**, a circling current of water often of great power, capable of drawing into its centre and submerging small vessels. The most famous whirlpool is the maelstrom on the Norwegian coast.

**Whirlwind**, a sudden circular rush of opposing winds, which often causes much damage.

**Whisky**, an ardent spirit distilled from malt or other grain, and containing a large percentage of alcohol. It has a greater consumption than any other spirit, and is of many kinds, Scotch and Irish whiskies being chiefly consumed in this country, and being of pot still or patent still production, or a blend of the two. American whiskies are mostly distilled from Indian corn or rye.

**Whistler**, a kind of marmot found in the mountains of Northern and Western America.

**White Ant.** (*See* **Termite.**)

**Whitebait.** (*See* **Herring.**)

**White Cross League**, a missionary association working in the principal towns and cantonments of India. The Bishop of Lahore is president.

**White Elephant**, a term in common use to designate a gift that causes the recipient more trouble or cost than it is worth; derived from an old-time custom of the Kings of Siam who presented a white elephant to a courtier it was desired to ruin.

**Whitehall**, erected within sight of Westminster Abbey and Palace in the 13th century, was the residence of the Archbishops of York until Henry VIII. took possession of it in 1530. Thenceforward to 1697, when it was burned down, it continued to be the favourite town residence of royalty, and to the Stuarts especially it was a great centre of court festivities. In those days, with its grounds, it extended from the Strand to the river. The only portion of Whitehall now standing is the Banqueting Hall

built by Inigo Jones, on a scaffold projected from the front of which Charles I. was beheaded.

**White House**, the official residence at Washington of the President of the United States.

**Whitethroat**, a bird of the warbler family seen in British hedgerows in the summer time.

**Whiting**, a sea-fish of the cod family, very plentiful around our coasts, much used as food.

**Whitsuntide**, the festival celebrating the descent of the Holy Ghost and occurring seven weeks after Easter.

**Widgeon**, a kind of Duck common in Northern Europe, and breeding to some extent in Scotland. The male is of somewhat brilliant colours, with interminglings of black, red, and white.

**Wild Cattle** existed in our dense forests for some time after the Norman Conquest Fitzstephen mentions that forest bulls were to be found around London, and Walbran, in his *Memorials of the Abbey of St. Mary of Fountains*, states that "fierce wild cattle" were to be found in Knaresborough Forest. Descendants of these fierce animals are said to exist now in a few famous herds in a semi-domesticated state. The most famous of these are the Chillingham herd of white cattle of the Earl of Tankerville, and Earl Ferrer's Chartley Park herd.

**Wild Sheep** still exist in St. Kilda, but nowhere else in Great Britain. In the 18th century the proprietor of St. Kilda was entitled to one out of every seven sheep born on the main island. These were carried to one of the smaller islets, where they were allowed to run wild.

**Will**, a written document signed by a person containing directions as to the disposition of his property or possessions after his death. The person making a will must be of full age, and the will must be signed in the presence of two witnesses, who must also sign their names to the document in the testator's presence. *See* "Office Compendium."

**Willow**, a waterside-loving tree of the genus Salix, to which the osiers belong. The White Willow makes the best cricket-bat blades, and its wood is useful in carpentry also; while the bark of nearly all the species is of considerable commercial importance, especially for tannery purposes.

**Wimple**, an antique outdoor covering for the neck, chin, and sides of the face, of silk or linen, worn by women in Anglo-Saxon and Norman days; and still retained as a Conventual dress for nuns in some places. It was bound on the forehead of females of quality by a golden and jewelled fillet.

**Wincey**, a fabric sometimes woven entirely of wool, but more commonly of wool and cotton. Also sometimes called linsey-Wolsey.

**Wind**, air set in motion by special atmospheric conditions, is of various degrees, from a slight rustling breeze to a hurricane. Winds are *constant*, as in trade winds or anti-trade winds; *periodic*, as in monsoons and other wind-visitations occurring according to influences of season; *cyclonic* and *anti-cyclonic*, when their motion is spiral; *whirlwinds*, *hurricanes* and *tornados*, when high temperature and great density induce extreme agitation. Ordinarily, a wind is named from the point from which it blows. The *sirocco*, the *mistral*, and the *simoom* are local forms of winds of great velocity. A *blizzard* is a biting blast of icy temperature.

**Windmills** were in use in the East in ancient times, but were not much seen in Europe before the 13th century. Wind sawmills were invented by a Dutchman in the 17th century, and one was erected near the Strand in London in 1633. Great improvements have been made in these mills in recent years, especially in the United States, where, by the application of the wind shaft principle, much space is saved and the mills can be used for pumping, grinding and other purposes.

**Windows**, originally apertures for the admission of the wind into dwellings, began to be made of glass and used only for the admission of light in very early times. There is evidence of glass windows having been used at Pompeii, but they did not become common in England before the 12th century. A window tax was imposed in 1695, and again at later dates for special revenue purposes. As late as 1850, the sum of £1,832,684 was obtained from this tax. It was repealed in 1851.

**Windsor Castle**, the famous British royal residence on the banks of the Thames, as it now stands, was mainly built by Henry III., though a royal residence had existed there from the time of the Conqueror. Additions were made by Henry VIII., Elizabeth, and Charles II. Windsor Park and Forest comprise over 13,000 acres. In 1915 King George V. took the surname of Windsor in place of that of Saxe-Coburg.

**Wine**, the fermented juice of the grape, to which alcohol and other matters are added. The varieties are innumerable, each obtaining its distinctive character from the kind and quality of the grapes of which it is made, the locality in which it is produced, or the amount of alcohol it contains. Wines are "sparkling," as champagne, due to their being bottled before fermentation is completed; or "still," that is, non-effervescent. Alcohol is present in ports and sherries to the extent of from 16 to 25 per cent.; in lighter wines from 7 to 10 per cent. France, Germany, Spain, Portugal, Italy, Greece, and Austria-Hungary are all wine-producing countries; and the United States, Australia, and South Africa have also to be reckoned with in this connection, their wines improving in quality year by year.

**Wire**, originally made by hammering, is now produced by means of powerful machinery which draws the heated metal through a series of holes of gradually diminishing size. The first wire mill in England was set up at Mortlake in 1663.

**Wireless.** (*See* special Wireless Section.)

**Witchcraft** was generally believed in all through the Middle Ages, and thousands of people were put to death as witches. In England the laws against witchcraft existed down to 1736. According to one authority, "the judicial murders for witchcraft in England in 200 years was 30,000." The last executions for witchcraft in England were in 1716, when a Mrs. Hicks and her daughter aged nine were hanged at Huntingdon.

**Witenagemot**, the name given to the Great Council of the Anglo-Saxons, "the Council of the Wise Men," and composed of the leading nobility.

**Woad**, a plant that in olden days was largely used in England for the blue-dye obtained from it. It is a biennial plant, and is still cultivated in some parts.

**Wolf-Fish**, a voracious sea-fish living largely on crustaceans, which its strong teeth enable it easily to crush. It is also called the cat-fish.

**Wolverine**, a species of wolf inhabiting the more northerly parts of the United States, and somewhat resembling the Polar bear in shape and structure though of a dark colour.

**Wolves**, well-known carnivorous animals still found in many parts of Europe, but not existing in Britain since the middle of the 17th century.

**Woodcock**, a game-bird greatly valued for its flesh, but not very abundant at present in Britain. It is of the Snipe family, and winters with us. It is one of the birds protected by the Game Laws. The parent birds carry their young to and from the feeding spots.

**Wood-Louse**, any terrestrial isopod of the Oniscidæ family. They have segmented bodies and many legs, and feed mostly on decaying matter, animal and vegetable.

**Woodpecker**, a familiar tree-climbing bird, of which three species are found in Britain. It builds in hollows of trees, and feeds on insects which it obtains from the trunks of trees by tapping them, for which purpose it has a wedge-shaped bill and a protrusile tongue. There are some 250 species.

**Wool** has been largely grown and used in the manufacture of cloth in England from the times anterior to the Roman invasion. It is grown on the backs of sheep, and is of various kinds, according to the breed of sheep from which it is derived. Wool differs from hair in that it has a wavy, serrated fibre, its curl being a notable characteristic, whereas hair has a smooth surface comparatively free from serratures. Long wools are mostly used for the manufacture of worsted goods, and short wools for woollen cloths, though the improvements in machinery in recent years have enabled manufacturers to utilise short wools to a great extent for dress fabrics as well as for woollens. The finest wools are obtained from the fleece of the Spanish merino sheep. Australia, New Zealand and

the Argentine are the greatest wool-producing countries.

**Woolsack**, the name given to the seat occupied by the Lord Chancellor in the House of Lords. At the time when it was first used, in the reign of Edward III., wool was the great staple commodity of the country.

**Worcester, Battle of**, was fought on September 3rd, 1651, between Cromwell and his forces and the Scots army under Charles Stuart (afterwards Charles II.), when the latter was defeated.

**Work Divisions in Different Nations.** From a table showing the division of labour in different countries, the following comparisons are obtained. Occupations are divided into three classes, namely, agriculture, horticulture and forestry; manufactures and mining; and commerce and transportation. In the last-named class Holland leads with a percentage of 17·2, while America is 16·3. England's is only 13, Germany is 10·6, and France 9·4. In manufactures and mining America has a comparatively low rank, her percentage being only 24·1. Scotland leads all with 60 4, followed closely by England and Wales with 58 3. Germany has 37·4, and France 33·6. Belgium, Holland and Switzerland also, of course, rank high, each of them having more than one-third of its working population thus engaged. In the first class, of agricultural and allied occupations, America has a percentage of 35·9, while Germany has 37·5, France 44·3, Austria and Hungary respectively 58·2 and 58·6, Italy 59·4, Holland 30·7, Belgium 21·1, Scotland 12, and England and Wales only 8.

**World's Greatest City, The.**—London, the capital of the British Empire, is the largest, wealthiest and most populous city of the world. It covers an area of 699 sq. miles—inclusive of what is legitimately called "Greater London"—has a population of 7,480,201, consuming over 275 million gallons of water per day. It has 10 docks, covering in all 2,800 acres, and the value of the trade of the port in 1920 exceeded 1,000 million pounds. London's markets provide foodstuffs for 8½ million people, and entertainment is furnished by over 100 theatres and music-halls, while the daily newspapers published amount to 27. Nineteen bridges span the Thames in the Greater London area. It has over ten sq. miles of parks and open spaces, having 609 acres of cemeteries, and being protected by a force of 21,440 police. Greater London's mean rateable value for Metropolitan Police purposes is, roundly, 56 millions a year. It is governed, as to the City proper, by the Lord Mayor and Corporation, as to the whole of London, for general administrative purposes, by the London County Council; and as to smaller local affairs, by the various borough councils, of which it has 28. It returns 61 representatives to Parliament. It has 77 livery companies owning property of the aggregate value of £15,000,000, with a total annual income of nearly £800,000. It is estimated that 1,250,000 persons enter the central portion of the city every day. Within the City proper—the portion presided over by the Lord Mayor and Corporation—there are 48¼ miles of crowded streets, with a day population of 359,940 and a night population of 13,706. The number of foreigners permanently resident in London is over 200,000. In the hospitals and dispensaries of London nearly 3,000,000 patients are treated every year, involving a total ordinary expenditure of about £800,000. There are 1,056 elementary schools in London, with accommodation for over 800,000 children. There are about 700 railway stations in Greater London and the various railways running into London carry in and out of it every day 1¼ million passengers; the *omnibuses*, now all of the motor class, carry another 4,003,784 passengers; while the different tramways—those of the County Council and the combined services of the various private companies running services—are responsible for fully half-a-million more. London has about 10,742 motor cabs besides 2,750 tramway cars and 5,873 omnibuses and 811 motor coaches. Over 70,000 articles (including 27,000 umbrellas) are left in public carriages every year. There are more people in London streets between six and seven in the evening than at any other time, when very many workers are setting off from their employment for home. There are 200,000 females working within the London area under the Factory Acts' cognisance, while there are 300,000 one-room dwellers, and about 2,000 people who are homeless. The landowners of London number 34,600, the largest landowners being the Crown, the Ecclesiastical Commissioners, and the City Corporation, who own together 19 sq. miles. There are in addition 183 large landowners owning on the average ¼ of a sq. mile each. It is estimated that for 1929–30 the Estates Revenue of London totalled £204,002 7*s.* 8*d.*, and Market Revenues over £249,045, the grand total of receipts being £289,742,113 0*s.* 3*d.* Port trade in 1928, £692,730,143. The assessable value of the County of London was £54,659,409, the rating for 1930–31 being 6*s.* 11*d.* in the pound, now increased.

**Worsted**, a fabric made from long wools or wools mixed with cotton or other fibrous material. It was first manufactured at, and derived its name from, Worsted in Norfolk, in the 14th century. Norwich was, until the latter part of the 18th century, the headquarters of this industry, but now for more than 100 years the worsted manufacturing centre has been Bradford.

**W.R.A.F.**, Women's Royal Air Force, a branch of the R.A.F. staffed by women during the Great War, 1914–18.

**Wrasse**, a sea-fish of the Labridæ family. The family has numerous species, all of which are thick-lipped. The British species are the ballooon wrasse and the red wrasse.

**Wren**, a class of small passerine birds possessing upturned tails and most abundant in South America. The British species is an interesting singing bird with a surprisingly loud note for its size.

**W.R.E.N.**, Women's Royal Naval Service. During the Great War, 1914–18, women were enrolled in this branch of the Navy, where they rendered valuable service as clerks, at the dockyards, and often in work of a heavy manual character.

**Wroth Silver**, certain annual payments made by tenants of the Duke of Buccleuch on the 11th of November each year at Knightlow Hill, in Warwickshire.

**Wryneck**, a tree-creeping bird of the Woodpecker family, only one species of which visits Britain. It is of pretty plumage and gains its name from its curious habit of curving its neck.

## X

**Xanthanide**, a crystalline substance, produced by passing ammoniacal gas into an alcoholic solution of zanthic ether.

**Xanthia**, a genus of moths with brilliant yellow markings found in America and the West Indies.

**Xanthic Acid**, the name given to various ether acids; it consists of an oily liquid of an astringent character yielding salts of a yellow colour.

**Xanthura**, a genus of American jays, green in colour, mingled with yellow, blue and white, and attaining a length of from 12 to 14 inches.

**Xebec**, a light three-masted vessel much favoured in former times by Algerian corsairs.

**Xema**, a snow-white sea-gull, with a forked tail, inhabiting the northern shore of the American Continent.

**Xenops**, a lively small bird of the Tree-creeper family, common in South America and peculiar in having an upturned bill.

**Xenurus**, one of the Armadillos of tropical America.

**Xenylenic Alcohol**, or diphenylic acid; a diatonic alcohol, obtained by the action of water on diazo-benzidine nitrate.

**Xerus**, an African ground squirrel with a rather bristly fur, and an enormous bushy tail.

**Xoanon**, the name given to sculptured wooden images of the time of the ancient Greeks.

**Xonaltite**, a Mexican mineral, tough and greyish white, found associated with bustamite and apophyllite.

**X-Rays.** (*See* **Röntgen Rays.**)

**Xylograph**, the name given to an engraving on wood or an impression thereof.

**Xyloidine**, an explosive compound recently much used in gun-cotton, prepared by triturating

**starch with fuming nitric acid and reducing it to an inodorous powder.**

**Xylophone,** a musical instrument comprising a series of tuned wooden bars supported on bands, and usually played with wooden hammers.

## Y

**Yacht,** a light vessel now much used for pleasure trips and racing. The first yachting club was the Cork Harbour Club, started about 1720; and in 1812 the Royal Yacht Squadron was founded at Cowes. The Royal Thames Yacht Club dates from 1823. There are over 100 yachting clubs in this country. The yacht-racing competitions of greatest interest in recent years have been those for the America Cup, for which Sir Thomas Lipton has unsuccessfully competed on behalf of England.

**Yak,** a curious, long-haired ox, found in Tibet, and there employed as a beast of burden.

**Yale University** was established in 1701, and is one of the leading universities of the United States. It received its name from Elihu Yale, who endowed it largely in 1716.

**Yam,** the root of various kinds of diascorea, a plant which grows in Asia, America, Africa and Australia; used as a substitute for the potato, roasted or boiled. It also furnishes a flour for bread or pudding making.

**Yankee,** a term applied to residents in the New England States. The origin of the word is uncertain.

**Yard,** a standard measure of 36 inches, the word being derived from the Saxon gyrd, or rod. The yard was anciently regarded as the circumference of the body, but Henry I. decreed it should be the length of his arm.

**Yarn** is the textile thread or fibre spun into the form of weft or warp ready to be woven into fabrics.

**Yataghan,** a peculiar kind of sword with a curved edge, but without guard or cross-piece. It is worn by soldiers and others in the Turkish principalities, and by Turks and Arabs in other parts. The word is also written "ataghan."

**Yawl,** the jolly boat of a ship, also the name given to any small yacht of the cutter class.

**Year.** (*See* **Calendar.**)

**Year-Books,** containing annual reports of legal cases, were issued, in England, as far back as the 11th century, and formed the first attempt to establish legal reports. In modern times the title has been given to almost any kind of annual publication.

**Yearling,** a young horse or other animal in the second year of its age.

**Yeast,** a substance that sets up fermentation, and discovered in 1836 to be a fungoid or vegetable cell. It is the potent agent in the production of alcohol from sugar; added with warm water to flour it commences the process of fermentation that gives sponginess to the loaf in bread-making.

**Yeast-Powder,** a preparation of soda, phosphates, and other substances that cause fermentation, and is used for leavening bread. Baking-powders are similar preparations.

**Yellow-Hammer,** a common British bird of the bunting family, which builds on the ground.

**Yen,** the Japanese monetary unit, represented by a gold coin of the value of about 2*s.* 0½*d.* English.

**Yeomen of the Guard** (commonly called "Beef-eaters"—a corruption of "Buffetiers") is a body of Foot Guards established in the reign of Henry VIII. for the protection of the Royal Person. These soldiers are now few in number, and their duties are those of attendants at the Tower and appearing in full dress upon ceremonious State occasions. They still wear the style of dress of the Tudor period.

**Yew,** an evergreen tree, the wood of which was in former days in very great demand for bow-making.

**Yezdegird,** the name of the old Persian era which began in 632, when Yezdegird was made King of Persia. The Parsees of India still use the term.

**Yezidees,** a sect of devil worshippers inhabiting certain parts of Mesopotamia.

**Yoga,** a section of the Hindu philosophy which proclaims the emancipation of the soul through a junction with the universal spirit. The Yogis are a Saivavite sect, founded by Gorakanatha. They have a temple at Gorakhpore.

**Yoghourt,** a form of soured milk fermented by Bacillus Bulgaricus and recommended by Prof. Mechnikov as an aid to longevity. Much used by Eastern nations, and now consumed in England in the popular restaurants and sold in the leading dairies. It is a very healthy food.

**York Minster,** one of the oldest and finest of English cathedrals, is 524 feet long, its nave is 240 feet broad, and the central tower is 216 feet high. The present edifice, in parts, dates back to the 12th century, but a church stood on the site in the 7th century. In 1829 it was set on fire by a lunatic named Jonathan Martin, and the destruction that then took place cost £60,000 to restore.

**Young England Party,** a term applied to a number of young Tory politicians of the Corn Law days, who not only opposed the repeal of the Corn Laws, but proposed to bring about a closer relationship between the upper and the lower classes.

**Young Men's Christian Association** was founded in 1844 largely by the efforts of Mr. George (later Sir George) Williams. It has to-day over 116,000 members in England, Ireland and Wales, and the World's Alliance, constituted in 1855, comprises more than 50 national movements, over 10,000 local centres and over 1¼ million men and boys. The London Central Y.M.C.A. is in Great Russell St., W.C.

**Young Women's Christian Association,** formed on the lines of the Y.M.C.A., has a British membership of nearly 100,000. The new headquarters were built in Great Russell St., W.C.1, in 1931.

**Yttria,** a metallic oxide found in combination with cerium, erbium, didymium, and gadolinite in Sweden and Norway. It is a grey-white powder.

**Yuga,** one of the periods into which, in Hindu chronology, the history of the world is divided. There are four :—the Satya Yuga, which contained 1,728,000 years; the Treta Yuga, 1,296,000 years; the Dwapara Yuga, 864,000; and the Kali Yuga, now in progress. This began about B.C. 3094, and will extend to 432,000 years in all, according to the Hindu beliefs.

## Z

**Zabra,** the name of a small coasting vessel used in the Mediterranean and elsewhere.

**Zaccheans,** an obscure sect of Gnostics.

**Zalophus,** a genus of eared seals, in which is included the common sea-lion of the Californian coast.

**Zamboni's Pile,** a dry volcanic battery, invented by Zamboni, retaining potentiality for a long time.

**Zanzaleens,** a Syrian sect of the 6th century-followers of Zanzallee who opposed water baptism, and urged baptism by fire, or by the application of hot iron; at one time very numerous.

**Zebra,** an African quadruped of whitish-grey colour, with regular black stripings, perhaps the most beautiful member of the Equine family. Rather larger than an ass, and smaller than the horse, it has a tufted tail, is of light build, wild, and fleet of foot; there are several species, and the Quagga and Burchell's Zebra (ground colouring yellow), as well as the True Zebra, belong to the group.

**Zebu,** a species of oxen having a large hump on the shoulder and short horns. In India and some parts of Africa these animals are domesticated and used as beasts of burden. They are of a light grey colour and very docile. Their flesh makes good food-meat; the Hindus, however, do not slay them but regard them with much veneration.

**Zemindar,** a class of revenue-farmers once common in India, but now to a great extent superseded.

**Zemstvo,** a local territorial assembly in Russia for dealing with matters of taxation, schools, roads, etc., under the control of the provincial governors.

**Zenana,** the portion of a dwelling in India where the female members of the family are kept, and to which strangers are not admitted.

**Zend-Avesta,** the name given to ancient sacred books of the Zoroastrians or Parsees. They originally numbered twenty-one, but only three survive.

**Zenith**, the highest point in the heavens above an observer's head, the opposite pole to the Nadir.

**Zeolites**, a class of mineral found in volcanic rocks. Crystalline substances which melt under heat, they are composite silicates of alumina and alkalies.

**Zeriba** (or **Zareeba**), a military enclosure of prickly brushwood, used by the British in Egypt in 1884.

**Zero**, the cypher signifying nothing in Arabic numbers. For the Zero line on a thermometer see illustration in Office Compendium Section.

**Zeta**, the name given in former times to the closet or room, above a church porch, where the sexton lived and guarded the documents of the church.

**Zinc**, a familiar metal, known to the ancients, and used by them in the making of brass. It occurs in sulphide or carbonate of zinc and other forms. The ores of zinc are crushed and roasted. In combination with copper it constitutes the familiar alloy called brass, and zinc itself is much used for roofing and other protective purposes.

**Zionists**, the name given to a body of Jews whose object is to re-establish their race in Palestine. The movement has been largely taken up, and already numerous settlements of Zionists have been formed in the Holy Land. The chief aim is to form agricultural settlements and to redeem the desert, but a Jewish University has been established at Jerusalem and schools of all sorts throughout the country. The settlements, a large number of which were made by Russian and Polish Jews, are of very varied character; some are communistic, others socialist, others co-operative and so on. Great friction has arisen between the Jews and Arabs, and immigration into the country has been restricted. In the summer of 1929 there was a series of outbreaks which led to the whole situation being investigated by a special Imperial Commission.

**Zippeite**, a mineral found at Joachimsthal, in Bohemia, as an alteration product of uraninite; it is essentially a hydrated sulphate, shaded yellow of sesquioxide of uranium.

**Zirconium** was discovered in the sand of the rivers of Ceylon in 1789, and is the metallic base of Zirconite. It appears generally in the form of a black powder, after chemical modification.

**Zither**, a stringed musical instrument of the dulcimer kind, having strings of metal which are played upon with the right hand with a plectrum.

**Zodiac**, the belt of the firmament enclosing the circuit over which the principal planets travel. It is divided into 12 equal spaces of 30 degrees each, comprising respectively the 12 signs of the Zodiac—Aries, Taurus, Gemini, Cancer, Leo, Virgo, Libra, Scorpio, Sagittarius, Capricornus, Aquarius, and Pisces. For Signs see *Office Compendium*.

**Zoetrope**, an optical instrument of a cylindrical shape, exhibiting pictures in such a form that the figures in them seem to be endowed with motion.

**Zollverein**, a commercial federation of German States, dating from 1818, for the maintenance of uniform duties and tariffs as against foreign countries and of Free Trade between themselves.

**Zone**, an imaginary geographical belt encircling the earth. There are five zones—the Torrid Zone, from tropic to tropic; two Temperate Zones, from the tropics to the Polar Circles; and two Frigid Zones, from the Polar Circles to the North and South Poles respectively.

**Zoolatry**, animal worship, which in ancient times prevailed among the Egyptians and other primitive races. The zebu is still an object of adoration amongst the Hindus, and snake-worship survives on the African west coast.

**Zoological Gardens** of London were opened in 1827, and belong to the Zoological Society of London. They contain one of the largest and most varied collection of living animals in the world.

**Zoology**, the science of animal biology, treating of the structure, classification, and distribution of the various members of the animal kingdom.

**Zoomorphism**, characteristic exhibition of the forms of the lower animals, as distinct from man, an element entering largely into classic mythology.

**Zoophyte**, the name given to a class of organisms combining the nature of both plants and animals, such as corals, sponges, sea anemones, etc.

**Zorilla**, a small African quadruped of the Skunk order, usually striped or spotted, and possessing the power of ejecting a noxious odour.

**Zouaves**, a body of French soldiers first organised in Algeria, and then consisting exclusively of Berber natives. As now constituted, the Zouave regiment are almost exclusively French.

**Zulus**, a native African people occupying Zululand, now included in the colony of Natal. They are a brave race, and in a war with Great Britain in 1879 inflicted severe defeats upon our troops. The Zulu King, Cetewayo, was finally defeated and taken prisoner, and his country annexed.

**Zymoscope**, an instrument for testing the fermenting power in yeast, invented by Zenneck.

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# WATCH AND TIME REGULATIONS ON SHIPS.

A ship's crew is mustered in two divisions; the Starboard (right side, looking forward) and the Port (left). The day commences at noon, and is thus divided:—

| | | |
|---|---|---|
| Afternoon *Watch* | . . | Noon to 4 p.m. |
| First Dog | ,, . . | 4 p.m. to 6 p.m. |
| Second Dog | ,, . . | 6 p.m. to 8 p.m. |
| First | ,, . . | 8 p.m. to midnight. |
| Middle | ,, . . | 12 a.m. to 4 a.m. |
| Morning | ,, . . | 4 a.m. to 8 a.m. |
| Forenoon | ,, . . | 8 a.m. to Noon. |

This makes seven WATCHES, which the crew keep alternately, the *Watch* which is on duty in the forenoon one day having the afternoon next day, and the men who have only four hours' rest one night have eight hours the next. This is the reason for *Dog Watches*, which are made by dividing the hours between 4 p.m. and 8 p.m. into two *Watches*.

Time is kept by means of "Bells." Two strokes of the clapper at the interval of a second, then an interval of two seconds, then two more strokes with a second's interval apart, then a rest of two seconds, thus:—

BELL, ONE SECOND; B., TWO SECS.; B. s.; B. ss.; B. s.; B. ss.; B.

1 Bell is struck at 12.30, and again at 4.30, 6.30, 8.30 p.m.; 12.30, 4.30, and 8.30 a.m.

2 Bells at 1 (struck with an interval of a second between each—B. s, B.), the same again at 5, 7, and 9 p.m., 1, 5, and 9 a.m.

3 Bells at 1.30 (B. s, B. ss, B.), 5.30, 7.30, and 9.30 p.m.; 1.30, 5.30, and 9.30 a.m.

4 Bells at 2 (B. s, B. ss, B. s, B.), 6, and 10 p.m.; 2, 6, and 10 a.m.

5 Bells at 2.30 (B. s, B. ss, B. s, B. ss, B.) and 10.30 p.m.; 2.30, 6.30, and 10.30 a.m.

6 Bells at 3 (B. s, B. ss, B. s, B. ss, B. s, B.) and 11 p.m.; 3, 7, and 11 a.m.

7 Bells at 3.30 (B. s, B. ss, B. s, B. ss, B. s, B. ss, B.), and 11.30 p.m.; 3.30, 7.30, and 11.30 a.m.

8 Bells (B. s, B. ss, B. s, B. ss, B. s, B. ss, B. s, B.) at noon, at 4 p.m., 8 p.m., midnight, 4 a.m., and 8 a.m.

# CLASSICAL MYTHOLOGY

PEARS—THE PURE SOAP

*For particulars of Pears Famous Toilet Preparations turn to end of Book*

# Pears' Dictionary of Classical Mythology

*A knowledge of the Classics may not be a necessity to success in business, or in any other sphere except a purely scholastic one. At the same time, it greatly adds to one's enjoyment of literature, art, and conversation to possess some acquaintance with the imaginary characters, places and incidents of the ancient mythology which has been such an inspiring influence to writers of all ages. Few people outside literary and educational workers have opportunity or leisure sufficient to acquire or keep up a knowledge of this particular branch of learning. Thus, it may be useful to present in dictionary form the stories in brief of the Classic gods, goddesses, heroes, and heroines of the old Grecian and Roman literature. It will help to a better understanding of the countless references which are made from time to time in the literature of the day to Classic subjects. It is a great wonderland of poesy and romance, and forms a realm all its own.*

## A

**Abderus,** armour-bearer to Hercules. He was torn to pieces by the mares of Diomedes.

**Absyrtus,** a son of Æetes, King of Colchis, murdered by his sister Medea when she fled with Jason.

**Acamas,** son of Theseus and Phædra, went with Diomedes to demand Helen from the Trojans, and afterwards took part in the Trojan war.

**Acantha,** a nymph loved by Apollo, and transformed into the acanthus.

**Acarnas and Amphoterus,** sons of Alcmæon and Callirrhoe.

**Acestes,** King of Drepanum, assisted Priam at Troy, and entertained Æneas on his voyage.

**Achæi,** descendants of Achæus, one of the chief divisions of the ancient Greeks.

**Achæmenides,** son of Adramastus, abandoned by Ulysses, on the coast of Sicily, and found by Æneas.

**Achates,** friend of Æneas, renowned for his fidelity, whence the term *fidus Achates*.

**Acheloides,** the Sirens, daughters of Achelous.

**Achelous,** son of Oceanus and Tethys, god of the river Achelous, in Epirus. Contending with Hercules for Dejanira, he changed himself into a serpent, and then into an ox, when Hercules broke one of his horns and defeated him.

**Archeron,** a son of Ceres, changed into a river in Tartarus for supplying the Titans with water in their battle with the gods. Over this river Charon ferried the souls of the dead.

**Acherusia,** a lake near Memphis, over which the bodies of the dead were ferried by Charon.

**Achilles,** son of Peleus and Thetis; when an infant, was plunged by his mother into the Styx, and made invulnerable, except in the heel, by which she held him. Was the most famous Grecian hero in the Trojan war, but, quarrelling with Agamemnon about Briseis, refrained from fighting till the death of his friend Patroclus. He then slew Hector in battle at the Scæan Gate, and achieved other deeds of valour, but ultimately was slain, being wounded with an arrow in his vulnerable heel by Paris.

**Achillides,** Pyrrhus, son of Achilles.

**Acis,** a Sicilian shepherd, son of Faunus and Simaethis, loved by Galatea, crushed to death by his rival Polyphemus with a rock, but changed by Galatea into a stream on Mount Ætna.

**Acœtes,** pilots of the ship which carried off Bacchus when asleep, and were changed into sea-monsters for ridiculing the gods.

**Aconteus,** a hunter changed into stone by Medusa's head at the nuptials of Perseus and Andromeda.

**Acrisius,** son of Abas and Ocalea, and father of Danaë. *See* **Danaë.**

**Actæon,** son of Aristæus and Autonoë, changed into a stag, and devoured by his own dogs for watching Diana at her bath.

**Admeta,** daughter of Eurystheus, and priestess of Juno's temple at Argos. Hercules presented her with the girdle of the Queen of the Amazons.

**Admetus,** son of Pheres and Clymene, king of Pherae, in Thessaly, married Theone, daughter of Thestor, and, on her death, Alcestis, daughter of Peleus. Apollo served Admetus for nine years as shepherd, and the Fates granted him that Admetus should never die if another person laid down his life for him, which Alcestis did. Admetus was one of the Argonauts, and was present at the hunt of the Calydonian boar.

**Adonis,** son of Cinyras by Myrrha and beloved by Venus. Was killed by a wild boar while hunting, and changed by Venus into the anemone. The gods of the underworld allowed him to spend six months of every year on earth with Venus.

**Adrastus,** king of Sicyon and leader of the Seven against Thebes (*see* **Eteocles**), of whom he alone survived. Ten years later he led the Epigoni, sons of the Seven, to destroy Thebes.

**Æacus,** son of Jupiter and Ægina. His people being destroyed by pestilence, Jupiter transformed ants into men, who became his subjects, and Æacus called them *Myrmidones*. Æacus became judge of hell with Minos and Rhadamanthus.

**Æetes,** king of Colchis, and father of Medea, Absyrtus and Chalciope. Killed Phrixus, who had fled to his court on a golden ram, to gain the fleece, which the Argonauts regained.

**Ægeus,** king of Athens, who consulted the oracle about children, and on his return rested at the court of Pittheus of Trœzene, whose daughter Æthra he married. He told her if she had a son, to send him to Athens as soon as he could lift a stone unde which Ægeus had concealed his sword. A so was born, Theseus, who went to Athens where Ægeus was living with Medea; the latter tried to kill Theseus, but he escaped and revealed himself by the sword to Ægeus. When Theseus returned from Crete, after the death of the Minotaur, he forgot to hoist, as agreed on, the white sails as a signal of success, and Ægeus, concluding he was dead, threw himself from a high rock into the sea.

**Ægis,** the shield of Jupiter, bearing the Gorgon's head in the centre.

**Ægisthus,** king of Argos, son of Thyestes and Pelopea. Thyestes was told he could avenge himself on his brother Atreus only by a son by himself and his daughter, whom he consecrated to Minerva in order to preserve her, but afterwards not recognising her, he had a son by her. Pelopea who had married Atreus, sent Ægisthus to murder Thyestes; but recognising him from his own sword, which Pelopea had kept, Thyestes sent him to murder Atreus, after which Ægisthus ascended the throne of Mycenæ, and banished the Atreidæ—Agamemnon and Menelaus—who fled to Polyphidus of Sicyon, and thence to Œneus of Ætolia. They married the daughters of Tyndarus, king of Sparta, to whom Menelaus succeeded, while Agamemnon went to claim Argos. But Ægisthus became reconciled to the Atreidæ, and was made guardian of Agamemnon's kingdom and his wife Clytæmnestra during his absence at Troy.

He fell in love with her, and they murdered Agamemnon on his return, but both were subsequently killed by Orestes, son of Agamemnon.

**Ægyptus.** (*See* Danaus.)

**Æneades,** descendants of Æneas.

**Æneas,** a Trojan prince, son of Anchises and Venus, reared by a Nymph, and taught by Chiron. Fought in the Trojan War with Diomedes and Achilles, and rescued his mother, Anchises, and the household gods from the flames of Troy, and led his son Ascanius, leaving Creusa, his wife, to follow. Retiring to Ida he built twenty ships and visited Polymnestor in the Thracian Chersonesus, Delos, the Strophades, Crete, and Epirus, and then King Acestes at Drepanum, in Sicily, where he buried his father. Hence he sailed for Italy, but was driven to Africa, and was entertained by Queen Dido of Carthage, who became enamoured of him, but Æneas left suddenly, by order of the gods, and Dido killed herself. He was then driven to Sicily and went thence to Cumæ, where the Sibyl conducted him to the lower world. After a voyage of seven years and the loss of thirteen ships he reached the Tiber, where King Latinus promised him his daughter, Lavinia, betrothed to Turnus by her mother, Amata. Turnus declared war, and in a combat with Æneas was killed. Æneas then married Lavinia, and in her honour built Lavinium: he succeeded Latinus, and after a short reign was killed in war with the Etrurians or drowned in the Numicus. The Cæsars traced their origin to Æneas, and his wanderings form the subject of the *Æneid* of Virgil.

**Æolus,** son of Hippotes, made king of the winds in Æoliæ; presented Ulysses, on his return from Troy to Ithaca with all the adverse winds in bags; but his companions from curiosity opened them, and Ulysses was driven out of his course.

**Aërope,** wife of Plisthenes and mother of Agamemnon, Menelaus, and Anaxibia. After the death of Plisthenes she married her father-in-law, Atreus.

**Æsacus,** son of Priam by Alexirrhoe, or by Arisba. Enamoured of Hesperia, he pursued her into the woods, when she flung herself into the sea and was made a bird. Æsacus being at the same time changed into a cormorant.

**Æsculapius,** the god of healing, son of Apollo, was physician to the Argonauts, but was struck by Jupiter with his thunderbolt for restoring men to life.

**Æson,** son of Cretheus, and brother of Pelias, succeeded his father in Iolchus, but was deposed by Pelias, *see* Jason. One story says that Æson killed himself during the absence of Jason to avoid the persecution of Pelias, but according to Ovid he was rejuvenated by Medea.

**Agamemnon,** king of Mycenæ and Argos, brother of Menelaus, and son of Plisthenes. On the death of Atreus, Thyestes seized Argos and removed Agamemnon and Menelaus. Agamemnon married Clytæmnestra and Menelaus Helen, daughters of Tyndarus, king of Sparta, who helped them to recover their father's kingdom; Agamemnon established himself at Mycenæ, and Menelaus succeeded Tyndarus at Sparta. When Paris carried off Helen, Agamemnon assumed command of the forces against Troy and showed great valour. After the capture of Troy, Cassandra prophesied his murder by Clytæmnestra, but disregarding her he returned to Argos, where, as he was leaving the bath, Clytæmnestra and Ægisthus murdered him.

**Agenor,** king of Phœnicia, son of Neptune and Libya, married Telephassa, by whom he had Cadmus, Phœnix, Cilix and Europa. Ancestor of Dido.

**Aglaia,** or **Pasithea,** one of the Graces.

**Ahenobarbus,** so named because his beard was changed to bronze by Castor and Pollux for refusing to believe in the victory at Lake Regillus.

**Ajax: I.** the son of Telamon and Peribœa. The most famous fighter of the Greeks next to Achilles. Sought to gain possession of the arms of Achilles at the latter's death, and on their being gained by Ulysses, he slaughtered a flock of sheep under the impression that they were the sons of Atreus; he then stabbed himself, and the blood from his wound changed into the hyacinth. **II.** son of Oileus, and swiftest of the Greeks after Achilles. Wrecked on his return from Troy, and drowned by Neptune for boasting when he escaped from the wreck.

**Albion,** Neptune's son by Amphitrite. Founded Britain and introduced astronomy and shipbuilding.

**Alcathous,** son of Pelops, who, being accused of slaying his brother Chrysippus, escaped to Megara, where, killing a lion that had destroyed the king's son, he succeeded to the kingdom.

**Alcestis,** daughter of Pelias and Anaxibia, and wife of Admetus, who won her by coming in a chariot drawn by wild beasts. She offered to die in place of Admetus, and did so, but was restored to life by Hercules.

**Alcimede,** mother of Jason by Æson.

**Alcinous,** son of Nausithous and Peribœa, king of Phæacia. Married his niece, Arete, by whom he had several sons and a daughter, Nausicaa.

**Alcithoe,** daughter of Minyas, changed into a bat, and her spindle and yarn into a vine and ivy, for ridiculing Bacchus.

**Alcmæon,** son of Amphiaraus and Eriphyle. Was driven mad for slaying his mother, but was cured, and married Arsino. He left her for Callirrhoë, and the brothers of Arsino killed him.

**Alcmene,** daughter of Electryon of Argos, was promised to Amphitryon on condition that he would revenge on the Teleboæ the death of her brothers. In Amphitryon's absence Jupiter assumed his form, and became by Alcmene father of Hercules, who was born at the same birth with Iphiclus, her son by Amphitryon.

**Alectryon,** a youth placed on guard by Mars when visiting Venus, to warn him of the approach of Phœbus. Transformed into a cock for falling asleep.

**Alpheus,** a river of Arcadia, whose god fell in love with Arethusa, changed by Diana into a fountain in Ortygia, a small island near Syracuse, where the Alpheus was supposed to rise again after passing under the sea.

**Althæa,** daughter of Thestius and Eurythemis, married King Œneus. (*See* Meleager.)

**Amalthæa,** daughter of King Melissus, of Crete. She fed the infant Jupiter with goat's milk.

**Amata,** wife of King Latinus, espoused the claims of Turnus, to whom she had betrothed Lavinia before Æneas's arrival. On Æneas succeeding, she destroyed herself.

**Amazons,** a mythical race of warlike women, dwelling in Asia Minor, who came to the help of Troy in the Trojan war.

**Ambrosia,** the food of the gods, which gave immortality to its consumers.

**Ammon,** a name assumed by Jupiter in Libya, where he appeared as a ram to Hercules and revealed a fountain, nine days' journey from Alexandria. Here a temple was erected which had a famous oracle.

**Amphiaraus,** son of Oecleus, or of Apollo, by Hypermnestra: figured in the hunt of the Calydonian boar, and in the Argonautic expedition. He was a great prophet, and though he foresaw the fatal end, he was persuaded by his wife Eriphyle to join the expedition of Adrastus against Thebes, where the earth swallowed him up before his enemies could kill him.

**Amphinomus** and **Anapius,** two brothers who saved their parents on their shoulders when Catana was burning, and for their bravery were placed by Pluto in Leuce after death.

**Amphion,** the twin brother of Zethus, born to Jupiter by Antiope on Mount Cithaeron, whither she had fled to avoid the wrath of Dirce. A shepherd succoured the infants, and Amphion became a great musician. Amphion and Zethus besieged Lycus in Thebes, and put him to death, and tied his wife Dirce to a wild bull, which dragged her over precipices till she died. Amphion became king of Thebes and husband of Niobe, and the stones of the city wall moved into position of their own accord at his playing.

**Amphitrite,** the daughter of Oceanus and Tethys, and mother of Triton, by Neptune.

**Amphitryon,** king of Thebes, who, as avenger of the deaths of the sons of Electryon was offered the latter's crown and daughter Alcmena. Jupiter appeared in the form of Amphitryon, and Alcmena bore Hercules.

**Amycus,** son of Neptune, became king of Melia,

and had great skill at boxing. Was killed by Pollux at this sport.

**Amyntor**, king of Argos, blinded his son Phœnix for insulting Clytia, his concubine.

**Amyone**, daughter of Danaus and Europa. Married to Enceladus, and killed him on the marriage night. She was the only one of the fifty Danaides absolved from the duty of filling the leaky vessel in hell because of having supplied Argos with water in a drought. Neptune falling in love with her carried her off, and she bore him Nauplius.

**Anaxibia**, sister of Agamemnon, wife of Nestor.

**Ancæus**, an Argonaut, son of Neptune and Astypalæa, acted as pilot of the *Argo*. Was king of Ionia, and married Samia, daughter of the Mæander, by whom he had four sons, Perilas, Enudus, Samus, Allthersus, and a daughter Parthenope. While behaving cruelly to a slave, the latter turned scornfully and told his master he would never taste the wine. Ancæus angered pressed the grapes into his cup, when the servant exclaimed "There's many a slip 'twixt the cup and the lip." The next moment a wild boar rushed into the vineyard and Ancæus was killed in attempting to drive the beast away.

**Anchises**, the son of Capys by Themis, and so beautiful that Venus paid court to him on Mount Ida, and bore him Æneas. For boasting of this he was struck by lightning and blinded.

**Anchurus**, the son of Midas. When the oracle declared that a certain gulf in the earth would never cease to swallow up what was above until what Midas held most dear was thrown into it, he leapt in and was never seen again. Midas erected an altar of stones on the spot, which was changed to gold after Midas became possessed of his fatal gift.

**Androcles**, a Roman slave who was thrown into the arena to the lions, but was saved by being recognised by one of the animals, Androcles having once extracted a thorn from its foot in an African cave. He was pardoned and given the lion, which he used to lead about with him.

**Androgynæ**, a mythical race of hermaphrodites, who lived in the region of Africa beyond the Nasamones.

**Andromache**, daughter of King Eetion of Thebes, and wife of Hector. The scene in Homer's *Iliad*, describing her taking leave of Hector on his going forth is one of the best known passages in the poem. After Hector's death and the fall of Troy, Andromache became the prize of Pyrrhus. Still later she married Helenus.

**Andromeda**, daughter of Cepheus, king of Æthiopia, by Cassiope, having been promised as a bride to Phineus, her uncle, became the victim of Neptune's anger, by reason of the boast of her mother that she was more beautiful than the Nereids. The sea-god visited the country with an inundation and sent a huge sea monster to ravage the land. To appease Neptune, Andromeda, at the command of the oracle of Ammon, was chained to a rock and given up to the monster. Perseus came to the rescue with Medusa's head, turned the dragon to stone and liberated and married Andromeda. After her death she was placed in heaven as a constellation.

**Anius**, son of Apollo, was king of Delos, and father of Œno, Sperma and Elais, to whom Bacchus gave the power of changing whatever they pleased into wine, corn and oil. He afterwards transformed them into doves to prevent Agamemnon carrying them off to Troy to supply the Greek forces with provisions. According to another story, they actually did supply the Greeks for the first nine years of the war.

**Antæus**, a Libyan giant, son of Terra and Neptune, fought with Hercules, by whom he was finally vanquished, Hercules holding him in the air away from the earth, whose touch gave him strength, and squeezing the life out of him.

**Antenor**, one of the wisest of the Trojans, who went to Italy after the fall of Troy, where he built Padua.

**Antigone**, daughter of Œdipus by Jocasta. When Creon forbade the body of her brother Polynices to be buried, she defied him, and was therefore shut up in a cave, where she killed herself.

**Antilochus**, son of Nestor and Eurydice, killed at Troy by Memnon.

**Antimachus**, a Trojan who conspired with Paris to oppose Helen, when Menelaus and Ulysses came as ambassadors.

**Antiope**, daughter of King Nycteus, of Thebes, was wooed by Jupiter, and to escape her father's anger fled to Mount Cithæron, where she bore the twins Amphion and Zethus. After many other lovings, marryings, and wanderings, she finally became the wife of Phocus, son of Ornytion.

**Antiphus**, son of Priam, killed by Agamemnon.

**Aon**, son of Neptune, became king of Bœotia, after whom the Bœotians were called Aones, and the country Aonia.

**Aphrodite**, the Greek name of Venus.

**Apollo**, the son of Jupiter and Latona, born on the Isle of Delos, which Neptune raised from the bottom of the sea as a refuge for Latona, who was persecuted by Juno. When Jupiter killed Apollo's son Æsculapius by his thunderbolt, Apollo killed Cyclops, who had forged the bolt, for which Jupiter banished Apollo from heaven. Then Apollo went to Thessaly, and served nine years as a shepherd. He aided Neptune to build the walls of Troy, and on King Laomedon refusing him his promised reward, he destroyed the inhabitants with a pestilence. Apollo was the god of music and the arts, of flocks and herds, and of protection and punishment; but his two chief connections were with colonisation and prophecy. His oracle at Delphi was revered throughout the ancient world. Among his other names were Pythius, Phœbus, Cynthius, Lycius, Clarius, Ismenius, Vulturius, Smintheus, etc. His oracles were at Delphi, Delos, Claros, Tenedos, Cyrrha, and Patara. Apollo was later identified with the Sun and introduced at Rome, but he was not originally a Roman god.

**Arachne**, daughter of Idmon of Colophon, a dyer in purple. She was so expert with her needle that she challenged Minerva. The goddess could find no fault with her work, and tore it up in fury, whereupon Arachne hanged herself in despair. But Minerva took pity on her and changed the rope into a cobweb and Arachne into a spider.

**Arcas**, son of Jupiter and Callisto, who ruled over Pelasgia, which was called Arcadia after him.

**Ares**, the Greek name for Mars.

**Arethusa**, a nymph who was pursued by the river god Alpheus in the Peloponnese and changed by Diana into a fountain which flowed under the sea and reappeared near Syracuse.

**Argia**, daughter of Adrastus, married Polynices, and was put to death by Creon for burying her husband against Creon's orders.

**Argiphontes**, a name given to Mercury after killing the hundred-eyed Argus.

**Argo**, the ship of Jason.

**Argonautæ**, the companions of Jason on the *Argo*. Among them were Hercules, Theseus, Æsculapius, Nestor, Orpheus, Castor and Pollux. (*See* Jason.)

**Argos**, the capital of Argolis, built by seven Cyclopes. Agamemnon was king of Argos during the Trojan war.

**Argus**, possessed of a hundred eyes, of which only two slept at a time. Juno set him to watch Io, but Mercury slew him; afterwards his eyes were put on the tail of Juno's sacred peacock.

**Ariadne**, the daughter of Minos of Crete. Falling in love with Theseus she gave him a clue to extricate himself from the labyrinth where he was in danger of being destroyed by the Minotaur. Theseus slew the monster and married Ariadne, but deserted her later at Naxos. Bacchus gave her a crown of seven stars, which was turned into a constellation.

**Arion**, a famous musician who, when returning from Sicily to Corinth with rich prizes, was threatened with murder by the sailors. He leapt into the sea, but a dolphin, charmed by his playing, carried him safely to land.

**Aristæus**, son of Apollo and Cyrene, born in Libya, reared by the Seasons, and fed on nectar and ambrosia. Married Autonoe by whom he had Actæon. Later he pursued Orpheus's wife Eurydice, who died from being stung by a serpent. He was the first to teach men the management

of bees, and after his death he was deified, and looked on as the protector of the olive.

**Arne**, daughter of Æolus, wooed by Neptune in the form of a bull.

**Artemis**, the Greek name of Diana.

**Aruntius**, a Roman made drunk by Bacchus for ridiculing his rites, and killed by his daughter Medullina for insulting her.

**Ascalaphus**, son of Acheron, being appointed by Pluto to watch Proserpine in the Elysian fields, testified that the goddess had eaten pomegranates. For this Proserpine changed Ascalaphus into an owl.

**Ascanius**, son of Æneas and Creusa and founder of Alba Longa.

**Astarte**, a Syrian goddess, corresponding to the Greek Venus.

**Asteria** was the daughter of Cœus, the Titan, and bore the celebrated Hecate. Zeus paid court to her in the form of an eagle, and she threw herself into the sea, where she was changed into an island, later called Delos.

**Astræa**, daughter of Astræus, or, according to others, of Titan, was the goddess of Justice, and lived during the Golden Age. Disgusted with the wickedness of mortals, she returned to heaven, and was made into the constellation Virgo, and is represented as holding a pair of scales in one hand, and a sword in the other.

**Astræus**, husband of Aurora, and one of the Titans.

**Astyanax**, son of Hector and Andromache, who was thrown from the walls of Troy by the victorious Greeks.

**Atalanta**, a swift-footed Arcadian huntress, who took part in the hunt of the Calydonian boar, and was awarded the prize of victory by Meleager. She refused to marry, and insisted that all suitors should run a race with her in which the penalty of defeat was death. At last Milanion (or, according to the Bœotian legend, Hippomenes), favoured by Venus, had three golden apples from the garden of the Hesperides given him, and as he ran he threw them down one after another. Atalanta fascinated by them stopped to pick them up and thus Milanion won the race and married her.

**Ate**, the goddess of infatuation who led men into rash actions.

**Athamas**, king of Orchomenos, and son of Æolus. He married Nephele, who bore him Phrixus and Helle. Later he divorced her and married Ino, by whom he had Learchus and Melicerta. Ino was jealous of Nephele's children and persuaded an oracle to predict that a pestilence then raging could only by their sacrifice be arrested. On being led to the altar they fled to Colchis through the air on a golden ram, whose fleece was later sought by Jason, but Helle fell off into the sea, hence called the Hellespont. Juno despatched the fury Tisiphone to torture Athamas to madness. In this condition he killed Learchus, whereon Ino threw herself into the sea, and was changed into a sea-deity.

**Athena**, the Greek goddess corresponding to the Roman Minerva.

**Atlantiades**, a name given to the descendants of Atlas, including Mercury and Hermaphroditus.

**Atlantides**, the seven daughters of Atlas—Maia, Electra, Taygeta, Asterope, Merope, Alcyone, and Celæno, called Hesperides, after their mother Hesperis, and at death changed into Pleiades.

**Atlantis**, a legendary island in the Atlantic, west of Gibraltar. It was once rich and powerful and blessed with every beauty, but was later swallowed up in the ocean owing to the increasing wickedness of its inhabitants.

**Atlas**, the son of Iapetus and Clymene, married Hesperis, who bore him the seven Atlantides. After vanquishing the Gorgons, Perseus sought refuge with Atlas, who refused him help; whereon Perseus produced Medusa's head, and changed him into the Atlas mountain, which is so lofty as to have given rise to the notion that Atlas carried the heavens on his shoulders.

**Atreus**, son of Pelops by Hippodamia, was king of Mycenæ. Suspected of the murder of his half-brother Chrysippus, he fled to Argos and succeeded Eurystheus as king, marrying his daughter Aërope, who bore him Agamemnon and Menelaus. Thyestes, the brother of Atreus, who had been banished for seducing Aërope, sent Plisthenes, Atreus's eldest son by a former wife, Cleola, to murder his own father, but Atreus killed the youth, in ignorance of his origin. On learning the truth he slew the two sons of Thyestes and served them up to their father at a banquet. For this crime Atreus and his house were cursed by the gods, and he himself was finally killed by Ægisthus.

**Atrides**, any descendant of Atreus, but especially Agamemnon or Menelaus.

**Atropos**. (*See* **Parcæ**.)

**Attis**, or **Atys**, a beautiful youth worshipped in conjunction with Cybele.

**Augias**, king of Elis. He had enormous stables which had never been cleaned, and Hercules was set to clean them as one of his labours, for which he was to receive a tenth of the herds of Augias. Hercules diverted the waters of the Alpheus into the stables, but Augias regarding this as a trick refused the reward. Hercules then conquered Elis and killed Augias.

**Aurora**, daughter of Hyperion and Thia, and goddess of dawn, who rose from the couch of her husband Tithonus at the end of each night, and is depicted as a veiled figure in a rose-coloured chariot drawn by white horses opening the gates of Day.

**Auster**, a south-west wind that brought rain and fogs in winter and a dry wind in summer.

**Autolycus**, son of Mercury, was an Argonaut. He was a robber of flocks whose marks he changed, but Sisyphus, son of Æolus, got the better of him by putting his marks under the feet of his oxen.

**Automedon**, son of Dioreus, was charioteer to Achilles, and afterwards to Pyrrhus.

**Avernus**, a lake between Cumæ and Puteoli, the waters of which were so fatal that no birds could live near it. It was one of the entrances to Tartarus.

## B

**Bacchanalia** were Roman festivals in honour of Bacchus and were marked by wild revelry

**Bacchantes**, priestesses of Bacchus who danced and threw themselves about in barbaric abandonment at the Bacchanalian orgies.

**Bacchus**, to the Greeks Dionysus, the god of wine, son of Jupiter and Semele, the daughter of Cadmus. Juno was jealous of Semele and compassed her death before Bacchus was born, but the child was saved by Jupiter's protection, and nursed by Ino. While being brought up by the nymphs of Mt. Nysa he made wine from the grape, and afterwards made expeditions to many lands to teach the use of the vine, the tilling of the earth, and the art of collecting honey, and was raised to the rank of a divinity. He is generally represented crowned with vine and ivy-leaves. Bacchus married Ariadne after she was deserted by Theseus at Naxos.

**Baucis**, an old Phrygian woman who lived with her husband, Philemon, in a hut and was visited by Jupiter and Mercury in disguise. As a reward for the hospitality extended to them, Jupiter transformed the cottage into a splendid temple. The couple lived to a ripe old age and at death were changed into trees before the temple's doors.

**Bellerophon**, son of Glaucus, king of Ephyra, and named Bellerophon after slaying Bellerus. After many other adventures, he set out to subdue the Chimæra at the instigation of Iobates, who had been asked to kill Bellerophon by Proteus, whose wife accused Bellerophon of insulting her. Aided by Minerva he achieved his task, afterwards marrying Cassandra. When he tried to fly to heaven on the back of Pegasus, Jupiter sent a gadfly to sting the horse, which threw Bellerophon to earth, and he wandered about blind for the rest of his life.

**Bellona**, the goddess of war, daughter of Phorcys and Ceto, and companion or sister of Mars. Her priests, called Bellonarii, inflicted wounds on themselves when offering sacrifices.

**Bergion** and **Albion**, two giants, sons of Neptune, were killed with stones from heaven when opposing Hercules crossing the Rhone.

**Beroe**, the nurse of Semele, whose shape Juno assumed in approaching Semele.

**Bistón**, son of Mars and Callirrhoë and founder of Bistonia in Thrace.

**Bomonicæ,** youths who were whipped at the altar of Diana Orthia during her festivals, the one who cried out the least being awarded a prize.

**Bona Dea,** the Roman goddess of chastity, who was sister, wife or daughter of Faunus. The Vestals celebrated her festival on 1st May, when no male was permitted to be present.

**Boreas,** the north-east wind. He is said to have been the son of Astræus and Aurora, and carried away Orithyia to Mount Hæmus in Thrace. He was worshipped as a deity, and is said to have possessed twelve mares of such fleetness that they could cross the sea without wetting their feet.

**Branchus,** son of Smicrus of Miletus, and loved by Apollo, who gave him power of prophecy. He delivered oracles at Didyme.

**Briareus,** a colossal giant with a hundred hands and fifty heads, son of Cœlus and Terra, who helped the Olympians against the Titans.

**Briseis,** a beautiful woman who was part of the spoils appropriated by Achilles on the conquest of Lyrnessus. Later Agamemnon claimed her, causing Achilles to withdraw from the Trojan war. After the death of Patroclus she was given back to Achilles.

**Bucephalus,** favourite horse of Alexander the Great, which died in India.

**Busiris,** king of Egypt and son of Neptune and Libya. When Hercules was in Egypt Busiris had him bound hand and foot and carried to the altar; but Hercules freed himself and slew both Busiris and his courtiers.

## C

**Caballinus Fons,** the Hippocrene fountain on Mount Helicon dedicated to the Muses, the water being made to gush from the ground by a blow from the hoof of Pegasus.

**Cacus,** the giant, was a son of Vulcan and Medusa, and lived on Mount Aventine. He stole some of the herds of Hercules and dragged them by the tails to his cave. Hercules heard them low, however, when passing, and attacked and strangled Cacus.

**Cadmus,** son of Agenor, king of Phœnicia, who, while searching for his sister Europa, who had been carried off by Jupiter, was told by the Delphic oracle to follow a certain cow and to found a city where the cow should sink to the grass. This city was Thebes, and when Cadmus had killed a dragon which lived near by, and sown its teeth in the ground, the armed men who sprang up formed the original population. Cadmus married Harmonia, daughter of Venus, and after death they were turned into snakes.

**Caduceus,** the magic wand of Mercury with which he conducted the souls of the dead across the Styx and could raise the dead to life.

**Cæneus,** a maiden changed into a man by Neptune, who took part in the Argive expedition and Calydonian hunt. Was later transformed into a bird, but in Elysium once more became a maiden.

**Calchas,** the Greek soothsayer and high priest. Was chosen to go with the Greeks against Troy, but declared that the fleet could not sail until Iphigenia was sacrificed; that the plague could not be stopped till Chryseis was restored to her father; and that Troy could not be taken without Achilles' aid, nor without a ten years' siege.

**Calliope,** the Muse of poetry, and daughter of Jupiter and Mnemosyne. She was mother to Orpheus by Apollo.

**Callirrhoë,** daughter of Scamander, married Tros, and became the mother of Ganymede and Assaracus. Coresus fell in love with her, but she scorned him. This angered Bacchus, whose priest Coresus was, and the god sent a pestilence, whereupon the oracle demanded that Callirrhoë should be sacrificed. Coresus, compelled to lead the nymph to the altar, stabbed himself. Callirrhoë fled to Attica, and on the brink of a fountain there, killed herself.

**Callisto,** an attendant of Diana, and a daughter of King Lycaon of Arcadia. She bore a son, Arcas, to Jupiter, who changed her into a bear and placed her in the sky among the stars.

**Calydon,** a city of Ætolia devastated by a boar sent by Diana in revenge for the neglect of her divinity. This gave rise to the famous Hunt of the Calydonian Boar, in which many noted princes took part. Meleager succeeded in slaying the animal, and presented its head to Atalanta.

**Calypso,** the goddess of silence, was queen of Ogygia. She offered Ulysses hospitality on his being shipwrecked, then entreated him to make her his wife, and on his refusal detained him seven years.

**Camenæ,** nymphs belonging to the religion of ancient Italy, later identified with the Greek Muses.

**Camilla,** a warlike Volscian heroine, who was killed in the war between Æneas and Turnus.

**Capaneus,** one of the Seven against Thebes, son of Hipponous and Astinome, and husband of Evadne. Having vowed to take Thebes in spite of Jupiter, the god killed him with a stroke of lightning, and on hearing the news Evadne committed suicide.

**Cassandra,** daughter of Priam and Hecuba, and beloved by Apollo, who granted her the gift of prophecy, but, when she resisted him, ordained that no one should believe her. After the fall of Troy she became the captive of Agamemnon, who took her to Mycenæ, where Clytæmnestra put her to death.

**Cassiopea.** (*See* **Andromeda.**)

**Castalia,** a fountain on Parnassas, sacred to Apollo and the Muses.

**Castor.** (*See* **Dioscuri.**)

**Cecrops,** reputed first king of Attica and founder of Athens.

**Celæno,** daughter of Atlas, loved by Neptune.

**Centaurs,** a race half horses and half men, who inhabited Mount Pelion. They engaged in the famous contest with the Lapithæ, but in the end the greater part of them were killed by Hercules, and the rest driven to Mount Pindus.

**Cerberus,** the many-headed dog which kept watch over the gates of Hades. It was one of the "labours" of Hercules to bring Cerberus to earth, and his hardest task.

**Ceres,** in the Roman mythology, called Demeter by the Greeks, was the goddess of the earth's produce, especially of corn. When her daughter Persephone, or Proserpine, was carried away by Pluto, the goddess in her anger caused the earth to withhold its fruits, and was only appeased when Persephone was brought back. But as she had eaten a pomegranate seed in Hades, Persephone had to spend a third of each year in the lower world.

**Chaos,** the unfathomable void from which the world and its first occupants, gods, men, and all things of the earth, were gradually shaped.

**Charon,** son of Erebus, whose duty it was to ferry the souls of the dead over the waters of the Styx and Acheron to the infernal regions, receiving an *obolus* for each ferrying; hence the old Roman custom of putting an *obolus* into the mouth of a corpse before interment.

**Charybdis.** (*See* Scylla and Charybdis.)

**Chimæra,** a monster shaped like a lion in front, a dragon behind, and a goat in the middle, which devastated Lycia until killed by Bellerophon.

**Chiron,** the most famous of the Centaurs, killed by an arrow from the bow of Hercules.

**Chryseis,** a daughter of a priest of Apollo, taken prisoner by Achilles and given to Agamemnon. Her father asked for her release, but Agamemnon refused, whereupon Apollo sent a plague upon the Greek. To free them from this Agamemnon had to surrender Chryseis.

**Circe,** daughter of Helius and Perseis, gained fame as a sorceress, and after putting to death the Prince of Colchis, her husband, was banished to the Island of Æea. It was to this Island that Ulysses and his companions were driven, and, drinking of Circe's magic cup, they were turned into swine, Ulysses himself being saved by partaking of a herb that made the magic potion powerless. Circe was then forced to give his companions back their former shape.

**Clio.** (*See* **Muses.**)

**Clotho.** (*See* **Parcæ.**)

**Clytæmnestra,** daughter of Tyndareus and Leda, sister of Castor, Pollux and Helen. She was wife of Agamemnon, and while he was at Troy she lived with Ægistheus in adultery. On Agamemnon's return she murdered him, but was later slain by her son, Orestes.

**Clytie,** a water-nymph with whom Apollo fell in love, but because of her revengeful conduct

towards Leucothoë, who had deserted her, Apollo transformed her into a sunflower, so that it might always be turned towards him in his daily journey across the heavens.

**Comus**, the god of revelry and feasting.

**Coriolanus**, a Roman exiled because of his haughty bearing towards the people. He joined the Volsci and led them against Rome, but finally his mother and wife, at the head of the Roman matrons, persuaded him to retreat without attacking the city.

**Cornucopia**, the horn of plenty, was supposed to have its origin as the gift of Jupiter to Amalthea, in return for her having fed him while young with goat's milk.

**Creon**, king of Thebes, who gave up the throne to Œdipus and later resumed it. His harshness to Antigone caused the suicide of his son Hæmon, her lover.

**Cronus.** (*See* Saturn.)

**Cupid**, god of love, by the Greeks called Eros. He was the son of Venus by Jupiter (or, as some represent, Mercury). (*See* Psyche.)

**Cybele**, mother-goddess of Phrygia.

**Cyclopes**, a race of shepherds of gigantic stature, with only one eye, in the middle of the forehead. They lived near Mount Etna, and assisted Vulcan at his forges. (*See* Polyphemus.

## D

**Dædalus**, a cunning craftsman, who flew from Crete to Italy with his son Icarus by means of wings fastened to their shoulders with wax. Dædalus arrived safely, but Icarus flew too near the sun, which melted the wax, so that he fell into the sea.

**Danaë**, who was visited by Jupiter in a shower of gold, was the mother of Perseus, Jupiter being the father. Before the birth of Perseus, an oracle predicted that the son that would be born would kill his grandfather, Acrisius, king of Argos, and father of Danaë. To avoid that calamity the mother was immured in a brazen tower, and after the birth of Perseus, she and the child were put in a chest and thrown into the sea, but drifted to the shore of Seriphus and were saved. The oracle's prediction was afterwards fulfilled, Acrisius being accidentally slain by Perseus.

**Danaus**, son of Belus, king of Tyre, and twin brother of Ægyptus. Ægyptus had fifty sons, Danaus had fifty daughters, and Danaus, to escape his brother and his sons, fled with his daughters to Argos and became king. Hearing of this the sons of Ægyptus betook themselves to Argos, and demanded their uncle's daughters for wives. Their aims were frustrated, however, by each wife killing her husband on the wedding night, with a dagger provided by their father. One only escaped, Lynceus, who killed Danaus. Another version says that the uncle and nephew were reconciled, and reigned together for many years.

**Daphne**, a nymph who was changed into a laurel when being pursued by Apollo. The laurel thus became his favourite tree.

**Daphnis**, a Sicilian shepherd famous as a flute-player. He was struck with blindness for faithlessness to a Naiad.

**Dardanus**, son of Jupiter and Electra, was the founder of Troy and ancestor of the Trojans. It is his name that is commemorated in the Dardanelles.

**Deianira.** (*See* Hercules.)

**Delphi**, in Central Greece, famous for the temple and oracle of Apollo.

**Demeter.** (*See* Ceres.)

**Deucalion**, a son of Prometheus, and his wife Pyrrha, were the only persons saved when Jupiter destroyed Greece by a deluge. To effect the re-peopling of the earth, they were ordered to throw behind them the bones of their mother, so picking up some stones from "mother earth," they flung them from them. The stones cast by Deucalion were transformed into men, and those by Pyrrha into women.

**Diana** (called Artemis by the Greeks), the chaste goddess of hunting, daughter of Jupiter and Latona, and twin sister of Apollo. She was also the goddess of light, and was worshipped in various guises chiefly in Arcadia, Ephesis, and Tauris.

**Dido**, founder and queen of Carthage, who fled thither from Tyre. Virgil makes her fall in love with Æneas and kill herself when he left.

**Diomedes**, king of Argos, and one of the champions of the Grecian army in the Trojan War. He contended even with gods, and is one of the most prominent fighting figures of the Iliad.

**Dionysus.** (*See* Bacchus.)

**Dioscuri**, the name given to Castor and Pollux, twin sons of Tyndareus and Leda. They rescued their sister Helen from Theseus, took part in the Argonautic expedition and performed many great deeds while on earth. Pollux was famed for his skill in boxing, Castor for the management of horses, and they were looked on as the patrons of seafarers. Castor was killed by Idas, but at the request of Pollux, Jupiter allowed them to share alternate days in heaven and the underworld.

**Dirce**, wife of Lycas. Because of her cruelty her step-sons caused a wild bull to drag her about till she died, and then threw her body into a fountain in Bœotia.

**Dryades**, the nymphs of the trees, were supposed to have their birth with and die with the trees, over which they were the divinities.

## E

**Echo**, a sportful nymph, who diverted the attention of Juno while Jupiter made love to other nymphs. When Juno discovered the deception, she transformed the deceiver into an echo, depriving her of the power of speaking except when spoken to. Subsequently Echo pined away for the love of Narcissus, until only her answering voice remained to perpetuate her name.

**Electra**, daughter of Agamemnon, seeing the danger that her brother Orestes was in after the murder of her father by her mother Clytæmnestra, had him sent away to Phocis, where he was protected by King Strophius In revenge for this, Clytæmnestra compelled Electra to marry a peasant, but the peasant never sought to be more than husband in name, so that when later Orestes returned, Clytæmnestra was put to death, and Electra became the wife of her brother's friend, Pylades.

**Elysium**, the abode of the shades of the blessed.

**Endymion**, a beautiful youth whom Selene, the moon-goddess, put into perpetual sleep on a Carian mountain-side that she might kiss him without his knowledge.

**Eos.** (*See* Aurora.)

**Erato.** (*See* Muses.)

**Erebus**, the son of Chaos, and one of the deities of Hades. The name is also used as a synonym for darkness, referring to the region through which departed souls pass to Hades.

**Eros.** (*See* Cupid.)

**Eteocles**, a son of Œdipus and Iocasta. After his father's death, he and his brother Polynices agreed to rein in alternate years, Eteocles, as the elder, taking the first turn. At the end of his year he refused to relinquish the crown to Polynices, and Adrastus, king of Argos, was appealed to. Adrastus, whose daughter had become the wife of Polynices, sent an army and seven of his bravest generals (the Seven against Thebes) to his son-in-law's aid, and a severe conflict ensued. In the end the two brothers agreed to settle their differences by single combat, and both were slain.

**Eumenides**, or Furies, were the avenging deities, three hideous winged maidens who pursued and punished the guilty.

**Euphrosyne**, one of the three Graces.

**Europa**, daughter of Phœnix and beloved of Jupiter, who assumed the shape of a white bull and carried her off to Crete, where she became the mother of Minos, Sarpedon, and Rhadamanthus.

**Eurydice.** (*See* Orpheus.)

**Eurystheus.** (*See* Hercules.)

**Euterpe.** (*See* Muses.)

**Evander**, son of Mercury, who led a colony from Arcadia to Italy, which was later incorporated in Rome. He taught his neighbours the blessings of peace.

## F

**Faunus**, an old Italian deity, protector of agriculture and shepherds. He was later identified with the Greek Pan.

**Flora**, the goddess of flowers (Greek Chloris).

**Furies.** (*See* Eumenides.)

## G

**Galatea.** (*See* Acis.)

**Ganymede**, Jupiter's cup-bearer, a mortal youth of such grace and beauty that the god had him carried off to Olympus on the back of an eagle.

**Genius Loci**, the special divinity allotted to a particular place or building.

**Glaucus**, a Boeotian fisherman, who was made a sea deity by Oceanus, and carried off Ariadne from Naxos. Apollo granted him the gift of prophecy.

**Golden Fleece** (The) forms one of the most entrancing of the legends of mythology. The fleece was that of the ram Chrysomallus and was deposited on a tree at Colchis, being guarded by a terrible dragon. (*See* Athamas and Jason.

**Gorgons**, three hideous maidens, whose heads were covered with snakes instead of hair. (*See* Medusa.)

**Graces** (Greek Charites) were three in number, Euphrosyne, Aglaia, and Thalia, and represented the perfection of grace and beauty of body and mind. They were daughters of Jupiter and are usually shown as attendants on Venus.

## H

**Hades**, or **Pluto**, was the god of the underworld, son of Saturn, brother of Jupiter and Neptune, and husband of Proserpine. In classical depictions the god is represented seated on a throne, Cerberus lying at his feet. Hades is also the name given to the infernal regions.

**Haemon**, son of Creon and lover of Antigone. He killed himself on hearing of her death.

**Hamadryads**, tree-nymphs.

**Harpies**, greedy monsters with female heads and long claws and wings, who were used by the gods to torment mortals.

**Hebe**, cupbearer to Jupiter and the gods, and daughter of Jupiter and Juno. She is represented as the goddess of youth, and by the Romans was named Juventas.

**Hecate**, often represented with three heads, was supposed to preside over magic and enchantments, and her dominion extended over hell, heaven, earth, and sea. In heaven she was Luna, on earth Diana, and in Hades Proserpine or Hecate. She dwelt particularly at cross roads and was associated with the howling of dogs.

**Hector**, son of King Priam and Hecuba, and husband of Andromache, was captain of the Trojan forces and the most valiant of them all. After repeated victories over Grecian leaders he was last slain by Achilles, whom he provoked to fight again by killing Patroclus, and his body was dragged in triumph three times round the walls of Troy. Jupiter interposed and ordered the body to be given up to Priam, after which the warrior was buried with great pomp.

**Hecuba**, wife of Priam was a dignified and much-enduring mother, whose lot it was to see her husband and her favourite sons killed by the enemy. After the fall of Troy she fell to the lot of Ulysses and accompanied the conquerors on the voyage back to Greece, but while halted in the Thracian Chersonesus, after trying to avenge the murder of her son, Polydorus, she cast herself into the sea at Cyneum.

**Helen**, daughter of Jupiter and Leda, famed for her beauty. In her youth she was carried off to Attica by Theseus and Pirithous, but rescued by her brothers Castor and Pollux. Among her suitors were the most celebrated princes of the age, but she ultimately became the wife of Menelaus, King of Lacedæmon. After three years of happiness, Paris, son of Priam, king of Troy, came on a visit to the court of Menelaus, and persuaded Helen to follow him to Troy. To avenge this outrage the Trojan war was begun. When Paris was killed, in the ninth year of the war, she married Deiphobus, but afterwards betrayed him in order to regain the favour of Menelaus, which she succeeded in doing, and remained with him until his death. Of her own fate there are numerous varying accounts.

**Helenus**, son of Priam and Hecuba, famous for his prophetic powers, who deserted from the Trojans to the Greeks. After the Trojan war he settled in Epirus and married Andromache.

**Helicon**, a range of mountains in Boeotia, sacred to Apollo and the Muses.

**Helius**, or **Sol**, the god of the sun, who daily drove his four-horsed chariot across the sky.

**Helle.** (*See* Athamas.)

**Hephæstus**, the Greek name for Vulcan.

**Hera**, the Greek name for Juno.

**Heraclidæ**, the name given to the descendants of Hercules, who were said to have led the Dorians in the invasion of Peloponnesus.

**Hercules** (Greek, Heracles), son of Jupiter and Alcmena, is the personification of physical strength, and the most wonderful stories are related of his exploits. Even while in his cradle he strangled two serpents which Juno had sent to destroy him. At eighteen he killed the lion of Mount Cithæon. Afterwards, having been rendered mad by Juno, he killed his own children and those of his brother, and on recovering was so plunged in grief that he exiled himself and went to consult the oracle of Apollo at Adelphi. He was commanded to serve Eurystheus for twelve years, during which period he was to perform twelve "labours." The gods equipped him for his tasks and he carried them through successfully. The first was to kill the lion of Nemea, which he choked to death; the second was to destroy the seven-headed Lernean hydra, which he killed with his club of brass, the gift of Vulcan; the third was to capture the Arcadian stag, which he caught in a trap; the fourth to destroy the wild boar of Erymanthus; the fifth, to clean the Augean stables; sixth, to kill the carnivorous birds of Stymphalis; seventh, to capture the wild bull of Crete; eighth, to capture the mares of Diomedes; ninth, to obtain the girdle of the Queen of the Amazons; tenth, to capture the oxen of Geryon; eleventh, to obtain some golden apples from the garden of the Hesperides; and twelfth, to bring to earth Cerberus, the three-headed dog of Hades. He was now free from service to Eurystheus and returned to Thebes. He married Deianira, daughter of Œneus of Calydon, and when Nessus, a Centaur, tried to outrage her, Hercules shot him with a poisoned arrow. The dying Nessus told Deianira to keep his blood, as it would always preserve her husband's love. Later, fearing that she was being supplanted by Iole, Deianira sent Hercules a garment soaked in the blood of Nessus, and it poisoned him. On his death he was carried to Olympus and endowed with immortality.

**Hermes**, Greek name for Mercury.

**Hero** and **Leander.** (*See* Leander.)

**Hesperides**, the three daughters of Atlas and Hesperis, appointed to protect the golden apples which Earth gave to Juno at her marriage to Jupiter. The hundred-headed dragon, Ladon, was always on guard at the foot of the tree, but was slain by Hercules when he seized the apples.

**Hesperus**, the evening star.

**Hippocrene**, a fountain at the foot of Mount Helicon, originally set flowing by the ground being struck by the hoofs of Pegasus, the winged horse. It was dedicated to the Muses.

**Hippolytus**, son of Theseus, who was accused by Phædra, his stepmother, of attempting to dishonour her. He was accordingly cursed by Theseus and killed in his chariot through the agency of Neptune, but his innocence was later discovered, and Phædra slew herself.

**Horatius**, a Roman who, with two others, defended the bridge over the Tiber against the whole Etruscan army while the citizens were cutting it down. When the bridge was destroyed he sprang into the river and swam safely back.

**Hyacinthus**, a beautiful youth, killed by accident by Apollo while playing quoits. From his blood sprang the hyacinth.

**Hydra**, a monster of seven or more heads, each of

which grew again when cut off. It was killed by Hercules.

**Hygeia**, the goddess of health.

**Hylas**, a beautiful youth loved by Hercules, whom he accompanied on the Argo. When on shore drawing water he was carried off by the Naiads.

**Hyllus**, son of Hercules and Delanira.

**Hymen**, the god of marriage.

**Hyperion**, one of the Titans, was father by Thea of the Sun (Helios), the Moon (Selene), and the Dawn (Eos). His father was Heaven (Uranus), his mother Earth (Ge).

## I

**Icarus.** (*See* Dædalus.)

**Io**, a princess of Argos, whom Jupiter loved and changed into a heifer for fear of Juno. But Juno was aware of the change and put Argus to watch Io. When Argus was killed by Mercury Juno tormented the animal with a gadfly from place to place until she reached the Nile, where Io recovered her form and bore a son to Jupiter.

**Iphigenia**, daughter of Agamemnon and Clytemnestra. At the outbreak of the Trojan War it was proclaimed by the priest of Apollo that the wrath of the gods, aroused by the killing of the sacred stag by Agamemnon, could not be appeased except by the sacrifice of Iphigenia, and contrary winds detained the fleets until this was performed. Just as the knife of the priest was uplifted, Artemis carried off Iphigenia to Tauris, and a goat that appeared in her place was immolated instead of her. The Greeks then proceeded against Troy. Iphigenia became a priestess, and was afterwards instrumental in saving the life of her brother Orestes when he was about to be sacrificed.

**Iris**, messenger of the gods and goddess of the rainbow.

**Ixion**, king of Thessaly, and husband of Dia, to whose father Deioneus he promised a valuable gift, but being unable to obtain the gift, he put his father-in-law to death to get out of his promise. Jupiter, after a long period of expiation, summoned him to Olympus and placed him at the table of the gods. Afterwards Ixion began to make love to Juno, but Jupiter substituted a cloud of the shape of the goddess, and from this the Centaurs were born. Then as a punishment Ixion was condemned to be bound to a fiery wheel that never ceased to roll through Hades.

## J

**Janus**, an old Italian god with two faces, facing opposite ways. He was the god of doors, because every door looks both ways. He had a temple at Rome that was open in time of war and closed during peace.

**Jason**, son of Æson and Alcimede. When Æson was driven from the throne of Iolcus by his half-brother Pelias, Jason was saved and brought up by the Centaur Chiron. When grown up he demanded his father's kingdom, and Pelias promised to hand it over if Jason would bring him the Golden Fleece (*see* Athamas) which was kept by King Acetes of Colchis in the custody of a dragon. Accordingly Jason gathered a band of heroes and set out in the ship *Argo*. Acetes agreed to surrender the Fleece if Jason would perform various seemingly impossible feats—yoking the fire-breathing oxen and sowing the dragon's teeth. Medea, daughter of Acetes fell in love with him, and with her aid he performed the tasks and returned home with the Fleece, taking Medea with him. Medea then tricked the daughters of Pelias into killing their father. For a time Jason and Medea lived happily, but then Jason deserted her for Glauce or Creusa, whereupon Medea killed her children by Jason, sent Glauce a poisoned garment which burned her up, and fled to Athens. Jason slew himself in grief.

**Juno** (Greek Hera), daughter of Saturn and Rhea, sister and wife of Jupiter, and queen of heaven. She was an exacting and jealous wife, and avenged herself with severity upon the numerous mortal maidens of whom Jupiter became enamoured as well as upon their offspring. She was the mother of Mars, Hebe, Lucinia, and Vulcan. She aided the Greeks in the Trojan war.

**Jupiter** (Greek Zeus), son of Saturn and Rhea, was the lord of heaven and presumed father of gods and men. He was brought up in a cave on Mount Ida to hide him from his father, who had eaten the rest of his children, and while a child conquered the Titans. Thus he became master of the world, and after giving the empire of the sea to Neptune, and that of the infernal regions to Pluto, installed himself king of heaven. The story of his adventures and amours occupies a chief part of the mythological legends, and are referred to under the distinctive names of the personages or places concerned. He is usually depicted seated on a throne, with thunderbolts in one hand ready to be hurled against his enemies, and a sceptre of cypress in the other, and wearing a wreath of olive or myrtle.

## L

**Lachesis.** (*See* Parcæ.)

**Laertes**, King of Ithaca and father of Ulysses.

**Laocoon**, priest of Apollo, and son of Priam. For the part he took in opposing the entrance into Troy of the wooden horse of the Greeks, Minerva caused two gigantic serpents to issue from the sea and engage Laocoon's two sons in their toils. The father rushed to the rescue of his sons, and the next moment all three were in the grasp of the serpents, and were crushed to death.

**Laodamia**, wife of Protesilaus, in answer to whose prayers her husband was restored to life for three hours. When he died a second time, Laodamia died with him.

**Laomedon**, father of Priam, for whom Neptune built the walls of Troy. Laomedon refused to give the promised reward, so Neptune sent a monster to plague the city. It was killed by Hercules, but when Laomedon again broke his word, he was slain by the hero.

**Lapithæ.** (*See* Pirithous.)

**Lares**, the spirits of dead ancestors, who watched over a house.

**Latona**, or **Leto**, daughter of a Titan, loved by Jupiter and persecuted by Juno. She wandered from place to place till Jupiter gave her a refuge on Delos, where she bore him Apollo and Diana.

**Leander**, a youth of Abydos, who swam nightly across the Hellespont to visit Hero, a priestess in Sestos, guided by a lamp which Hero hung out from a tower. The light being blown out one wild night Leander lost his way and was drowned, on discovering which Hero threw herself into the sea.

**Leda**, wife of Tyndarus, king of Sparta, who was loved by Jupiter in the form of a swan, and brought forth two eggs, from one of which sprang Helen, and from the other Castor and Pollux.

## M

**Mars** (Greek Ares), the god of war, son of Jupiter and Juno, and lover of Venus.

**Medea.** (*See* Jason.)

**Medusa**, one of the Gorgons, killed by Perseus, whose face turned the gazer to stone.

**Meleager**, son of Œneus, king of Ætolia, and Althæa, was one of the Argonauts, and led the chase after the Calydonian boar. It had been decreed by the Fates that he should live as long as a certain firebrand should not be burned up, and his mother snatched the brand from the fire and jealously guarded it. When Althæa heard of Meleager's slaying of the boar she went to the temple to return thanks, but on the way she saw the bodies of her brothers whom Meleager had slain because they protested against the skin being given to Atalanta. This so incensed Althæa that she cast the fatal firebrand on the fire, and when it was consumed Meleager died.

**Melpomene.** (*See* Muses.)

**Menelaus**, king of Sparta and brother of Agamemnon, was the husband of Helen, and after she left him for Paris, he entered upon the Trojan war, in which he bore himself with great bravery. After the war he forgave Helen and

took her back, but they did not reach Sparta until eight years later.

**Mentor,** the friend of Ulysses, who, during the latter's absence at Troy, saw to the education of Ulysses's son Telemachus, which he did so well that the term Mentor has become proverbial for a wise guide.

**Mercury** (Greek Hermes), son of Jupiter and Maia, was Jupiter's messenger, and patron of travellers, shepherds, traders, and robbers, and god of merchandise. Many of his exploits turn upon thievery or mischief. He wore a winged cap and had wings to his feet, and could transport himself from place to place with the speed of the wind.

**Midas,** king of Phrygia, who having done Bacchus some service was permitted to choose his reward. So he asked that whatever he touched might be turned into gold, and his prayer was granted. But the things he ate, the clothes he wore, the water he washed in, turned into gold, and he soon asked for the gift to be revoked. For giving the opinion that Pan made better music than Apollo he was given ass's ears, but his barber was the only man to find out. He could not keep the discovery to himself, but whispered it into a hole in the earth. Later reeds grew up and as they were shaken by the wind they murmured the words: "King Midas has ass's ears," and so revealed the secret.

**Minerva,** the goddess of wisdom, war, and the liberal arts (Greek, Athena, also Pallas), was the daughter of Jupiter, and sprang full-grown from her father's brain. She was impervious to the passion of love and is depicted as wearing a helmet, and carrying a shield. She was patron goddess of Athens, which she won in a contest with Neptune. He produced the horse and she the olive. The gods considered the latter the more useful, and so awarded her the land.

**Minos,** king of Crete. (*See* Minotaur.)

**Minotaur** was half bull, half man, and was the offspring of Pasiphaë and a bull. This came about by Minos's refusal to sacrifice a white bull to Neptune, whereupon the latter caused Pasiphaë to become enamoured of a beautiful bull. The Minotaur was confined in a labyrinth by Minos, and every year the monster devoured seven youths and seven maidens, which the king compelled the Athenians to send. Ultimately the Minotaur was slain by Theseus, with Ariadne's help.

**Morpheus,** son of Somnus, was the god of sleep and dreams. He is generally represented as a chubby, winged child, holding poppies in his hand.

**Muses,** nine divinities presiding over the arts. Their names and attributes were: Clio, history; Euterpe, lyric poetry; Thalia, comedy; Melpomene, tragedy; Terpsichore, dance; Erator, erotic poetry; Polymnia, religious song; Urania, astronomy; Calliope, epic poetry.

## N

**Naiads,** water nymphs.

**Narcissus,** a beautiful youth, son of the river god Cephisus. The nymph Echo fell in love with him, but he did not return her passion. To avenge this offence, Venus caused him to become enamoured of his own reflection in the waters of a fountain, and he pined away until he was changed into a flower.

**Nemesis,** a Greek goddess who meted out happiness and misery to mortals, and abased those who were too fortunate.

**Neoptolemus,** or **Pyrrhus,** son of Achilles. He fought at Troy and later settled in Epirus, where he was killed by Orestes.

**Nephele.** (*See* Athamas.)

**Neptune** (Greek Poseidon) was the son of Saturn and Rhea and brother of Jupiter and Pluto. He was king of the sea and also god of horses. He made love to Amphitrite as a dolphin, and assumed other shapes for other like deceptions. He is usually represented with a trident in his hand being drawn across the sea in a chariot by brazen-hoofed horses, attended by tritons and nymphs.

**Nereus,** a sea deity, son of Oceanus and Terra, and husband of Doris, by whom he had fifty daughters called the Nereides. He was gifted with prophecy, and lived in the Ægean Sea.

**Nessus.** (*See* Hercules.)

**Nestor,** king of Pylos, and grandson of Neptune. When Hercules slew Nestor's father Neleus, and eleven brothers, Nestor was saved because his tender age detained him at home. He joined the Greeks in the Trojan war, although an old man, and did more good service by wise counsel than many of the heroes by force of arms.

**Niobe,** daughter of Tantalus, and wife of Amphion, by whom she had seven sons and seven daughters. Intense pride in her offspring caused her to sneer at Latona, who had only two children, Apollo and Diana, and, to avenge this insult, all Niobe's sons were killed by Apollo's darts, and all her daughters, except Chloris, were destroyed by Diana, while Niobe herself was transformed by Jupiter into stone, which in summer shed incessant tears.

**Nisus,** king of Megara and father of Scylla. When Minos was besieging Megara, Scylla fell in love with him, and pulled out the lock of purple hair on which her father's life depended. Nisus died, but Minos was so disgusted with Scylla's conduct that he sailed away without her. She leapt into the sea after him, but Nisus, who had been changed into a sea-eagle, pounced on her, whereupon she became a fish.

**Notus,** the south or south-west wind, also called Auster.

**Nymphs,** female deities with whom the Greeks peopled the whole of nature. There were (1) Sea nymphs, both Oceanides and Nereides; (2) Naiads, who were fresh-water nymphs; (3) Dryads and Hamadryads, tree nymphs; (4) Oreades, mountain nymphs.

## O

**Oceanus,** god of the water which surrounded the earth, from which the sun and stars rose, and father of all river gods and water nymphs.

**Odysseus,** Greek name of Ulysses.

**Œdipus,** son of Laius, king of Thebes, and Jocasta. It was predicted before Œdipus was born that Laius would perish by the hands of his son, so as soon as the boy was born he was ordered to be destroyed, but Jocasta gave the child to a servant who carried him to a mountain and left him there. He was discovered by a shepherd and educated as his own child. When grown to manhood he had an accidental meeting with Laius. The latter was driving along in his chariot, and the road being narrow the king ordered Œdipus to make way for him. Œdipus refused and in the encounter that ensued Laius was slain by his son, as the oracle had predicted. Proceeding to Thebes, Œdipus found the population in the power of the Sphinx sent by Juno to lay waste the country, everyone who failed to answer the riddle the Sphinx propounded being destined to death. The kingdom and the hand of the queen were offered to whomsoever would answer the riddle and free the people from the monster. Œdipus solved the riddle, and the Sphinx killed itself in mortification. Œdipus became king and married his own mother by whom he had Eteocles, Polynices, Antigone, and Ismene. Later, Thebes was overrun by a plague and the oracle announced that the epidemic would not stop until the murderer of Laius was discovered. In the end, Œdipus was made aware of his true position and identity, and the revelation caused Jocasta to hang herself, and Œdipus to tear his eyes out. Afterwards he wandered forth with his daughter Antigone and died at Colonos, near Athens.

**Œnomaus,** a son of Mars by Sterope, the daughter of Atlas. He was king of Pisa, in Elis, and father of Hippodamia.

**Œnone.** (*See* Paris.)

**Olympus,** a mountain of Macedonia and Thessaly (now Lacha). The ancients supposed that its top reached the heavens, and from that developed the idea of its being the abode of the gods.

**Omphale,** queen of Lydia, and daughter of Jardanus. She desired to see Hercules, and her wish was gratified. After the murder of Eurytus, Hercules fell sick, and was ordered to be sold as a slave, that he might recover his health and senses. Omphale bought him out of slavery, and he became enamoured of the queen, who bore him a son.

**Oreades,** nymphs of the mountains.

**Orestes** (*see* **Electra**), son of Agamemnon and Clytæmnestra, who avenged his father's murder by killing his mother and Ægistheus. After that deed the Furies haunted him and he fled from one country to another. He afterwards, by Apollo's command, submitted himself to the court of the Areopagus at Athens, and being acquitted returned to Argos and ascended the throne. (*See* **Iphigenia.**)

**Orion,** a famous giant and hunter. When he demanded the hand of Merope, daughter of Œnopion, king of Chius, her father set him the task of clearing the island from wild beasts as the price of betrothal. This deed Orion easily achieved, but Œnopion, on the pretence of complying, intoxicated Orion, and when he was asleep put his eyes out. Afterwards he recovered his eyesight by turning his vacant eyes to the rising sun, and at once revenged himself upon the king. After death, Orion was placed in heaven, where one of the constellations bears his name.

**Orpheus,** son of Œagrus and Calliope, had a lyre given to him by Apollo, and played upon it so exquisitely that all things inanimate as well as animate were charmed. He was one of the heroes of the Argonautic expedition, and on his return married Eurydice. Later Eurydice died from the sting of a serpent, when Orpheus followed her to Hades and charmed Pluto and his associates so much that his wife was allowed to accompany him back to earth, on condition that he did not look upon her until the borders of Hades had been passed. The temptation was too great: he looked, and lost her for ever. In grief for her he spurned the Thracian women, who tore him to pieces in a Bacchic orgy.

**Ossa.** (*See* **Pelion.**)

## P

**Palamedes,** a Greek hero in the Trojan war, who incurred the enmity of Ulysses. By a trick the latter got the Greeks to kill Palamedes as a traitor.

**Palladium,** an image of Pallas at Troy on which the safety of the town depended; it was stolen by Ulysses and Diomedes.

**Pallas,** or **Pallas Athene,** the Greek goddess identified with Minerva.

**Pan,** the god of shepherds, huntsmen, and rural people, said to have been the son of Mercury. He is represented with two small horns, a flat nose, and the lower limbs of a goat. He was full of tricks and mischief, loved music, and danced with the nymphs.

**Pandora,** the first woman on earth. When Prometheus stole fire from heaven, Jupiter in revenge ordered Vulcan to make a woman out of the earth, who was also called Pandora, and endowed with every gift. She married Epimetheus, and gave her husband a box which she had brought with her from heaven. When this box was opened, there issued from it every kind of human ill and distemper, which spread themselves over the world. Hope alone remained at the bottom of the box to shed its influence in easing the troubles of life.

**Parcæ,** the three Fates—Clotho, who held the distaff upon which the thread of life was spun; Lachesis, who turned the spindle and decided the actions and events of life; and Atropos, who held the scissors to cut the thread of life.

**Paris,** son of Priam, was brought up as a shepherd, and married Œnone, a nymph of Mt. Ida. At the marriage of Peleus and Thetis, the goddess of discord threw an apple among the assembly, inscribed "For the Fairest." Each of the goddesses present claimed the apple, and when the claimants had been reduced to three—Juno, Venus, and Minerva—Paris was called upon to give judgment, and decided in favour of Venus, who rewarded him with Helen. (*See* **Helen.**) When Paris was wounded he returned to Œnone, but she refused to heal the wound, and Paris died. Œnone thereupon killed herself.

**Parnassus,** a mountain of Phocis, dedicated to the Muses, and to Apollo and Bacchus.

**Pasiphaë,** a daughter of Helius, wife of Minos, and mother of Ariadne and the Minotaur.

**Pasithea,** or **Aglaia,** one of the Graces.

**Patroclus,** the intimate friend of Achilles, whom he followed to Troy. When Achilles refused to fight, Patroclus borrowed his famous armour and helped the Greeks when they were hard pressed. But he was killed by Hector, and the desire to avenge him brought Achilles again into the field.

**Pax,** goddess of peace.

**Pegasus,** the winged horse which sprang from the blood of Medusa after Perseus had cut off her head. He was given to Bellerophon to conquer the Chimæra, and after the task was completed, Bellerophon wanted to scale the heavens on the back of Pegasus, but the animal threw him, and flew up to Olympus alone, and was placed among the constellations by Jupiter.

**Peleus,** son of Æacus, who married the Nereid Thetis. (*See* **Paris.**) Achilles was their son.

**Pelias,** the twin brother of Neleus, and the son of Neptune by Tyro. His birth was concealed by his mother, and he was exposed in the woods, but his life was saved by shepherds and he received the name Pelias from a spot of the colour of lead on his face. After the death of Cretheus, Tyro's second husband, he seized the kingdom, expelling Æson, the son of Cretheus and Tyro. (*See* **Jason.**)

**Pelion,** a mountain of Thessaly. In their wars against the gods, the giants placed Mount Ossa on Pelion, to scale the heavens with greater ease.

**Pelops,** son of Tantalus, who was cut up by his father and served up to the gods, but then restored to life. He won Hippodamia as his bride, by defeating her father Œnomaus in a chariot race in which death awaited the conquered. For the misfortunes of his family, *see* **Atreus** and **Thyestes.**

**Penelope.** (*See* **Ulysses.**)

**Pentheus,** king of Thebes, killed by his mother Agave and her sisters in Bacchic fury.

**Penthesilea,** queen of the Amazons, killed at Troy by Achilles.

**Persephone.** (*See* **Ceres.**)

**Perseus,** son of Jupiter and Danaë, who was set the task of obtaining Medusa's head by Polydectes, who wished to get rid of him, and marry Danaë. Obtaining Pluto's helmet, which rendered him invisible, and other aids from other gods and goddesses, he flew to the land of the Gorgons. Finding them asleep, he was able to cut off Medusa's head, and flew away with it, reaching the court of Polydectes in time to save his mother Danaë from falling into his toils. (*See* **Andromeda.**)

**Phædra.** (*See* **Hippolytus.**)

**Phæthon,** son of Helius, who was killed when trying to drive his father's chariot across the sky.

**Philemon.** (*See* **Baucis.**)

**Phœbus,** a name of **Apollo.**

**Phrixus.** (*See* **Athamas.**)

**Pirithous,** king of the Lapithæ in Thessaly. At his wedding to Hippodamia a drunken Centaur stole the bride, and this caused the celebrated battle between Lapithæ and Centaurs, which the former won.

**Pleiades,** the seven daughters of Atlas, who being pursued by Orion appealed to the gods for succour and were transformed into doves and placed among the stars.

**Plisthenes,** son of Atreus and husband of Aërope, by whom he had Agamemnon, Menelaus, and Anaxibia.

**Pluto.** (*See* **Hades.**)

**Pollux.** (*See* **Dioscuri.**)

**Polynices.** (*See* **Eteocles.**)

**Polyphemus,** son of Neptune and chief of the Cyclops. He lived in a cave near Mount Ætna. Ulysses and twelve companions entered this cave, and six of them were devoured by the monster. Then he fell asleep and Ulysses put his one eye out and escaped. (*See* **Acis.**)

**Poseidon,** Greek name for Neptune.

**Priam,** son of Laomedon, king of Troy, husband of Hecuba and father of Hector, Paris, and forty-eight other sons. At the fall of Troy he was killed by Neoptolemus.

**Priapus,** god of fertility.

**Prometheus,** a Titan, who was the benefactor of men in spite of Jupiter. He stole fire for them from heaven, and taught them useful arts. For this he was chained to a rock, with an eagle tearing at his ever-renewed liver, until Hercules rescued him.

**Proserpine.** (*See* **Ceres.**)

**Proteus**, a soothsayer who lived in a cave on the island of Pharos, and who could only be made to utter his prophecies when caught asleep, as while awake he had the power of changing his shape so as not to be recognised.

**Psyche**, a nymph whom Cupid married and visited nightly, concealing his features from her and leaving before dawn. She contrived to see him one night, however, as he slept, by lighting her lamp, and was enraptured with his beauty. He was awakened by the falling upon him of a drop of oil and fled. After that she wandered in search of him, but incurred the hatred of Venus, who tried to thwart the lovers. Psyche was ultimately united to Cupid, however, and endowed with immortality.

**Pygmalion**, a sculptor who carved a statue in ivory of a woman, and appealed to Venus to breathe life into it. The goddess did, and he married the animate statue, who bore him Paphos.

**Pylades**, friend of Orestes and husband of Electra.

**Pyrrhus**, another name of Neoptolemus.

**Pyrrha.** (*See* Deucalion.)

**Python**, the famous serpent of the caves of Mount Parnassus. It was born from the mud left by the Deucalion deluge. Apollo slew the monster.

## R

**Remus.** (*See* Romulus.)

**Rhadamanthus**, son of Jupiter and Europa, who lived such a life of rectitude that at his death he was appointed one of the three judges of Hades, Minos and Æacus being the other two.

**Rhea**, goddess of the earth, wife of Saturn and mother of Jupiter.

**Romulus**, twin brother to Remus, son of the vestal virgin Sylvia. The mother was condemned to be buried alive and the children thrown into the Tiber, but the boys were rescued and suckled by a she-wolf. Afterwards they founded a city, but quarrelled as to its situation, and Remus was killed. Romulus then founded Rome.

## S

**Sarpedon**, king of Lycia, killed by Patroclus at Troy.

**Saturn**, the oldest divinity of Roman mythology, and supposed to be the god of agriculture. With him is identified the Greek Cronus, a son of Uranus and Terra, who usurped his father's kingdom, his brothers assenting on condition that he did not bring up any male children. Saturn therefore always devoured his sons as soon as they were born, but his wife, Rhea, concealed from her husband her sons Jupiter, Neptune, and Pluto, and gave him large stones to swallow instead of her male offspring. It was this that led to the Titans making war upon Saturn, and his ultimate overthrow by his son Jupiter.

**Satyrs**, rustic deities addicted to sensual pleasures and associated with the worship of Bacchus.

**Scylla and Charybdis.** Scylla was a dangerous rock near the Italian coast in the Strait of Messina. This rock was a peril to mariners, but in avoiding it they were often drawn into the Charybdis whirlpool on the opposite side.

**Selene**, goddess of the moon.

**Semele**, daughter of Cadmus and mother of Bacchus. Hera, being jealous of Jupiter's love for her, persuaded Semele to ask him to come to her in his true shape. He did so, and Semele was killed by the lightning, but gave birth to Bacchus whom Jupiter saved by closing him up in his thigh till he was due to be born.

**Sibyls were** women with the gift of prophecy, one of whom compiled the Sibylline books which were kept at Rome.

**Silenus**, a jovial old Satyr, companion of Bacchus.

**Sirens**, sea nymphs who lured to death by their songs all who heard them.

**Sisyphus**, son of Æolus, who was punished in the underworld by having to roll uphill a huge rock, which as soon as it reached the top always rolled down again.

**Somnus**, god of sleep.

**Styx**, chief river of the underworld.

## T

**Tantalus**, a son of Jupiter. For revealing his father's secrets he was punished with a raging thirst and the water and fruits that he saw close at hand always receded from his grasp.

**Tartarus**, the depths of Hades.

**Telemachus**, son of Ulysses and Penelope.

**Telephus**, son of Hercules, wounded by Achilles and then cured by him, as without his aid the Greeks could not capture Troy.

**Tereus**, a Thracian king, who married Procue, daughter of Pandion of Athens but put her away to marry her sister Philomela, whose tongue he cut out. But the sisters communicated with each other, and Procue killed her son Itys and served his flesh up to Tereus. They then fled, pursued by Tereus, and the gods changed them into birds. Procue became a swallow, Philomela a nightingale, and Tereus a hawk.

**Terpsichore**, the Muse of Dancing.

**Tethys**, daughter of Uranus and wife of Oceanus.

**Thalia**, the Muse of Comedy.

**Themis**, the goddess of law and justice, and wife of Jupiter.

**Theseus**, son of Ægeus, the king of Athens, and legendary hero of Attica. His most famous exploit was the slaying of the Minotaur. He went to Crete as one of the youths whom the Athenians sent annually to Minos, but Ariadne, daughter of Minos, fell in love with him, and with her help he slew the Minotaur and escaped from the labyrinth. He took Ariadne away with him, but deserted her on Naxos. Other exploits of his were his battle with the Amazons, whose queen he seized, and the carrying off of Helen from Sparta to Athens, whence she was rescued by Castor and Pollux.

**Thetis.** (*See* Peleus.)

**Thisbe**, a maiden beloved by Pyramus. Their parents opposed their union and they appointed to meet at the tomb of Ninus. Thisbe reached the place first, but seeing a lion ran away, letting her garment fall in her flight. Pyramus seeing this when he came thought she had been murdered and killed himself. Then Thisbe returned and at the sight of her dead lover put an end to her own life.

**Tiresias**, one of the most famous prophets of antiquity. He was a Theban, and blind.

**Titans** were a race of giants who waged a ten years' war with Jupiter, but were ultimately conquered and imprisoned in a cavern near Tartarus.

**Tithonus**, son of Laomedon and brother of Priam. He was loved by Aurora, who secured him immortality, but not eternal youth, so that in his old age he shrivelled up.

**Triton**, a sea deity, son of Neptune, who calms the waves with his trumpet.

**Turnus**, an Italian prince, killed by Æneas, whose settlement in Italy he resisted.

**Tyndareus**, husband of Leda.

## U

**Ulysses** (Greek Odysseus), son of Laertes, husband of Penelope, father of Telemachus, and king of Ithaca. He was the wiliest of the Greek leaders at Troy, and inventor of the wooden horse. His wanderings on the way home from Troy form the subject of Homer's *Odyssey*. They lasted 20 years, but finally he returned home, and killed the suitors by whom Penelope had been surrounded during his absence, and whom she had constantly put off.

**Uranus**, god of Heaven, husband of Earth, dethroned by his son Saturn.

## V

**Venus** (Greek Aphrodite), the goddess of love, daughter of Jupiter and Dione, but according to later legend born of the foam of the sea. She received the prize of beauty in the judgment of Paris. Cupid was her son.

**Vesta**, the goddess of the hearth.

**Vulcan** (Greek Hephæstos), the god of fire, and son of Jupiter and Juno. He made the armour of the gods and had his workshops in volcanic mountains.

## Z

**Zephyrus**, the W. wind.

**Zeus**, Greek name for Jupiter.

# STUDENTS' COMPENDIUM

PEARS—THE PURE SOAP

*For particulars of Pears Famous Toilet Preparations turn to end of Book*

# Pears' Students' Compendium

## DAILY WANTS DICTIONARY

### CALENDAR NOTES (1932).

**Bank Holidays:** March 17 (Ireland only); Good Friday, March 25; Easter Monday, March 28; Whit Monday, May 16; July 12 (N. Ireland only); August 1; December 25 and 26.
Scotland: January 1; March 25; May 2; August 1; December 26.
**Easter Day,** 1932, March 27. Fixed Easter, when in force, will be the Sunday after the second Saturday in April.
**Summer Time** begins, 1932, April 17 and ends Oct. 2.
**Longest Day,** June 21.
**Shortest Day,** Dec. 22.
**Saints' Days:** St. David, March 1; St. Patrick, March 17; St. George, April 23; St. Andrew, Nov. 30.
**Empire Day,** May 24.
**King** born, June 3 (1865).
**Prince of Wales** born, June 23 (1894).

### HISTORICAL DATES.

Crimean War, 1854–6.
Gunpowder Plot, Nov. 5, 1605.
Indian Mutiny, 1857.
Magna Carta, 1215.
Peace Treaty signed at Versailles, June 28, 1919
Spanish Armada, 1588.
Trafalgar, Oct. 21, 1805.
Transvaal War, 1899–1902.
War declared on Germany, Aug. 4, 1914.
Waterloo, June 18, 1815.

### USEFUL INFORMATION.

Badminton Court, 44 ft. by 20 ft.
Battalion, 8 companies, 1,096 strong.
Cricket Pitch, 22 yds. Popping Crease, 4 ft. from wicket. Bowling Crease, 8 ft. 8 in. long.
Degree = 60 geographical miles or 69·121 English miles (60 mins.).
Driving Licence: Motor Car or Cycle, 5*s*. Minimum Age, Car, 17 years; Cycle, 16 years.
Fathom = 6 feet.
Football (Assoc.) Field, 100 to 130 yds. by 50 to 100 yds.; (Rugby) max., 110 yds. by 75 yds.
Gallon of water (fresh) weighs 10 lbs.; (salt) 10 272 lbs.
Hockey Field, 100 yds. by 55 to 60 yds.
Knot, a nautical measurement of speed.
Lacrosse, goals not less than 100 yds. and not more than 130 yds. apart.
Motor Car Lic., Electrically propelled, £6. Other forms of propulsion, £1 for every unit of h.p., with minimum duty £6.
Motor Cycle Lic., not exceeding 224 lb. unladen, £1 10*s*.; exceeding 224 lb. unladen, £3; with side car, £4.
Mile, 1,760 yds. (1⅘ kilometres).
Ream, 20 quires, 480, 500, or 516 sheets.
Rupee, 16 annas, 1*s*. 6*d*.
Tennis Court, 78 ft. by 36 ft.
Taxicab Fare, ⅛ mile or 7½ min., 6*d*.; then ⅛ mile or 3½ min., 3*d*.
Thermometer Freezing Pt.: 32° Fahrenheit; 0° Reaumur or Centigrade.
Water boils 212° Fahr.; 100° Cent.; 80° Reau. To convert from one to the other:—
Fahr. = $\frac{9}{5}$ (C + 32)
Cent. = $\frac{5}{9}$ (F − 32)
Fahr. = $\frac{9}{4}$ (R + 32)
Reau. = $\frac{4}{5}$ (F − 32)
Wireless Licence, 10*s*.

## CAREERS

**Navy.**—Royal Naval College, Dartmouth, no nomination required. At age 12½ apply to the Private Secretary of the First Lord of the Admiralty. Entry is three times a year, January, May and September according to age, which should be between 13·4 and 13·8 on the 1st December, 1st April, or 1st August immediately preceding the above. Application should be sent in by October 16th for January entrance, January 16th for May entrance, and May 16th for September entrance. Appointments are made from candidates selected by the Committee, subject to Medical Examination and Qualifying Examination in Educational subjects. Exams. are held in December, March and July, in English, History, Geography, Arithmetic, Algebra, Geometry, French, Latin. Copies of papers set may be obtained from the Cambridge University Press, or from Gieves, Ltd., 21, Old Bond Street, W.

**Special Entry of Naval Cadets.**—Naval Cadetships offered for competition are notified in the Press from time to time. Two examinations annually, in June and November. Ages between 17½ and 18½ on the 1st July and 1st November respectively. Apply Secretary, Civil Service Commission, Burlington Gardens, London, W. 1, about three months before the date of Exam. Candidates must be of pure European descent and sons of British subjects. Each candidate will be interviewed by a Committee, when his Headmaster's report will be examined. Medical exam. compulsory. Candidates from the Colonies and the Dominions make their application through their own Government. Candidates admitted to compete will be examined by the Civil Service Commissioners. A candidate may present himself at the same time for admission to Sandhurst, Woolwich, Royal Marines or R.A.F., but he must express his order of preference before the Exam. He should also state whether he wishes for a Naval Cadetship in the Executive or Engineering Branch. The subjects for examination are (obligatory): English, General Knowledge and a Modern Language, or General History, or Everyday Science, or Elementary Mathematics; (optional): an additional language, Lower Mathematics, Higher Mathematics, Modern History, Physics-plus-Chemistry, Biology. Also Freehand Drawing or Geometrical Drawing.

**Paymaster Cadetships.**—Royal Navy Examinations in June and November. Ages between 17 and 18 on the 1st September following June, and 1st January following November examinations. Medical examination necessary. Candidates admitted to compete will be examined by the Civil Service Commissioners. A candidate may present himself at the same time for admission to Woolwich, Sandhurst, Royal Marines or R.A.F., or for Special Entry as a Naval Cadet, but he must express his order of preference before the Exam. Pay is on the same scale as that for the Executive Branch. The subjects for examination are (obligatory): English, General Knowledge, and a Modern Language, or General History, or Everyday Science or Elementary Mathematics; (optional): any two of following: Latin, Greek, French, German, Modern History, Lower Mathematics, Higher Mathematics, Physics, Chemistry, Biology. Additional: Freehand Drawing or Geometrical Drawing. Mathematics must be included. No candidate may offer similar subjects in Parts I and II.

**Army.**—Age 18 to 19. Woolwich or Sandhurst, application forms from the Civil Service Commissioners, Burlington Gardens, W. 1. Exams. are held usually in June and November. Applications should be made at least two months before date of Exam. Those holding certificate A (O.T.C., a Secondary School or a recognised Territorial Unit) will be allowed to add to their aggregate 25% of the marks obtained at the Certificate Exam. Medical Exam. (in London). Usual Exam. subjects. Changes in the form of Exams. may occur, and intending candidates should apply for information to the Civil Service Commissioners.

All candidates, other than those nominated by the Army Council, will be required to possess a school certificate, A or B, by passing: the O. and C. School-Certificate; or the Oxford or Cambridge Local Certificate; or the School Certificate of the Universities of Bristol, Durham, Northern University Joint Matric.; or General School Exam., London; or the Senior Certificate Exam. of the Central Welsh Board—Scottish and Northern Ireland candidates are to show equivalent qualifications.

**Royal Air Force.**—*Methods of Entry.—Commissioned Service.*—Through the Royal Air Force College at Cranwell for a permanent commission.—Entry age 17½ to 19½ years. Two-year course. Competitive examinations held in June and November. Apply Civil Service Commissioners, Burlington Gardens, W. 1, about 3 months before examination. (Detailed information given in Air Publication 121, price 3*d.* net, obtainable from H.M. Stationery Office or through any bookseller.)

Through a recognised university for a permanent commission.—Entry age 20 to 25 years. Entry is by selection. Candidates must have completed three years' residence and have graduated. Apply Secretary, Air Ministry. (Detailed information given in Air Publication 904, price 4*d.* net, obtainable from H.M. Stationery Office or through any bookseller.)

By direct entry, Short Service Commission—five years' active service and four years' reserve service.—Entry age 18 to 25 years. Entry is by selection. Apply Secretary, Air Ministry. (Detailed Information given in Air Ministry Pamphlet 13, price 3*d.* net, obtainable from H.M. Stationery Office or through any bookseller.)

*Non-Commissioned Service.*—Aircraft Apprentices.—Entry age 15 to 17 years. Three-year course. Competitive examinations held periodically. Instruction is given in one of the skilled trades required in the Royal Air Force. Airmen entered under this scheme are eligible for promotion to warrant and non-commissioned ranks and in a very limited number of cases for promotion to Cadetships and to commissioned rank. (Detailed Information given in Air Ministry Pamphlet 15, obtainable from Air Ministry.)

**Civil Service Examinations.**—*Administrative Class, Junior Grade.* No fixed dates. Age limits 22–24 years. Examination of Univ. Hons. standard. *Indian Civil.* Age 21–24. Examination of University standard. Commencing salary about 600 rupees a month. *Diplomatic Service and Foreign Office.* Age limits 22–25. Exam. of Univ. Hons. standard. Commencing salary £200 a year. Nominations by Selection Board necessary. *Levant and Far Eastern Consular Service.* Age limits 21–24. Exam. of University standard. Commencing salary £300 a year. Nomination required. *Indian Forests.* Ages 21–24. Hons. degree desirable. *Student Interpreters.* Age limits 21–24. *Eastern Cadetships in Colonial Service.* Age 22–24 for Ceylon and Hong-Kong; 21–24 for Malaya. Exams. of University standard. Commencing salary about £400 a year. *Asst. Inspectors of Taxes.* Age 21–24. Commencing salary about £160 a year. *Prob. Assistant Engineers to Post Office.* Age 20–25. Engineer's Exam. of University standard. Commencing salary, London £180, Prov. £165, a year. *Probationary Inspectors of P.O. Engineering Dept.* Age 17–23. Exam. based on Mathematics and Science mainly, of about Inter-B.Sc. standard. Commencing salary, London £180, Prov. £165. *Traffic Asst. Superintendents of Telegraph and Telephone Service.* Age 18–23. General Exam. with optional Telegraphy and Telephony. Commencing salary about £120 a year. *Museum Assistants.* Age 22–26. At British and Victoria and Albert Museums. Commencing salary about £250 according to age. *Officers of Customs.* Age 19–21. Commencing salary £120. *Executive Classes.* Age 18–19. Exam. of Secondary School-leaving standard. Commencing salary £100. *Clerical Classes.* Age 16–17. Exams. of Secondary School Intermediate standard. Commencing salary £60. Most of the salaries mentioned above receive additional bonus. N.B.—The particulars given above are liable to alteration, and prospective candidates are advised to apply to the Civil Service Commissioners, Burlington Gardens, W. 1.

**Indian Police.**—Competitive Exam., usual subjects, held concurrently with Army Entrance. Medical and riding tests (age 19–21). Salary Rs. 450 a month to about 1600.

**Colonial Police.**—(Ceylon). Same Exam. as for above (age min. 19). Pay varies according to State, from £350 a year. Hong-Kong, Malaya by selection.

**West Indian Constabulary.**—By selection. Apply Colonial Office (age min. 19). Pay about £250, rising.

**East and West African Police Forces.**—Age 22–35. Medical Exam. only. Pay varies from £250 up, according to State. Maximum about £1000. Apply Colonial Office.

**Municipal Services.**—Many posts are to be obtained under Municipal Councils connected with finance, education, markets, tramways, gas, electricity, town planning, libraries, etc. Pay and prospects vary and inquiry should be made locally. The L.C.C. employs General Grade Clerks (ages 17–18) who, on examination, may become Major Clerks (21–23). Apply L.C.C., County Hall, London, S.E.

**Merchant Service.**—The usual entry into the Merchant Service is either through H.M.S. *Conway* (Rock Ferry, Birkenhead), H.M.S. *Worcester* (Greenhithe), the Nautical College, Pangbourne, and the New Zealand Shipping Co. Ltd. Ages of admission to *Worcester* 11–16, to *Conway* 13–16. The normal course is two years, counting as one year at sea. At Pangbourne the age of entry is 13–15½. The Common Entrance Examination will admit. Board of Trade Eyesight Certificate is necessary. For admission to Cadetships and Apprenticeships, apply to the principal Shipping Firms. Additional training can be had at the Nautical Colleges of Poplar, Liverpool, Leith, and at the Royal Technical College, Glasgow. Commander C. B. Fry runs the Training Ship *Mercury* at Southampton for the training of boys for higher naval ratings and for entry as Cadet-Apprentices in the Merchant Service. Prospects in the Merchant Service vary. The pay is usually from £20 a month as Third Officer holding Master's Certificate, to Command posts at from £400 to £1500 a year.

Engineer Officers may often train at the great Engineering and Shipbuilding firms of Newcastle, Glasgow, Hartlepool, Barrow and Southampton. Technical training, accepted by the Board of Trade, is also to be had at the principal London and Provincial Universities, the Royal Technical College, Glasgow, Heriot Watt College, Edinburgh, Bradford and Sunderland Technical Colleges, Faraday House Engineering College, City and Guilds College, etc. This training leads to the post of Assistant Engineer on board a ship at pay from £10 to £18 a month. Certificates of Second-class Engineer and First-class Engineer must then be obtained with pay graduating up to £800 a year.

**Agriculture, Farming Abroad, etc.**—Apply to the London Agents of the various Colonies. Some Colonial Governments, notably S. Africa, are prepared to help young men of the right type. Many Colonial farmers and settlers take pupils.

For Home and Colonial Farming, training may be had at Royal Agricultural College, Cirencester; Midland Agricultural College, Derby; South-Eastern Agricultural College, Wye; Seal Hayne Agricultural College, Newton Abbot; Harper Adams College, Newport; East of Scotland and North of Scotland Agricultural Colleges, Aberdeen; and at the Departments of Agriculture of the principal Universities and University Colleges of Great Britain.

# PROFESSIONS

**Accountants.**—The profession is ruled by the Institute of Chartered Accountants, the Society of Incorporated Accountants, and, in Scotland, by the Institute of Accountants and Actuaries and the Corporation of Accountants, Glasgow, and the Society of Accountants in Edinburgh. Three Exams. are usually held: Preliminary, Intermediate, Final. Articled pupils are received at age 16 upwards. Usual subjects for entrance, except for candidates who possess the usual School Exam. Certificates. The normal period of articled service is five years; a premium is required. The

prospects are good, qualified men receiving from £500 to £2000 a year.

**Architecture** is ruled by the Royal Institute of British Architects. Intending Members become Probationers on passing the Preliminary Exam.; Students on passing the Intermediate; and Associates on passing the Final. Articles are entered into; further practical training is required after graduation.

**Art** students may receive training at the Art Centres of the great English and Scottish provincial towns, and, in London, at the Slade School, the Royal College of Art and the Royal Academy Schools. Scholarships are offered by the British School at Rome.

**Music.**—The principal centres for instruction in Music are the Royal Academy of Music, the Royal College of Music, Trinity College of Music, the Guildhall School of Music, all in London. In the Provinces and Scotland at the Royal Manchester College of Music and the chief Universities.

**Analytical Research and Works Control Chemists** are usually trained at the Universities, also at the Royal College of Science; the Manchester College of Technology; Heriot Watt College, Edinburgh; Armstrong College, Newcastle; Bradford Technical College; Wigan Technical College; Loughborough College, and others. A boy, on leaving school, may take the Exam. for registering as a student of the Institute of Chemistry.

**Pharmaceutical Chemists** take the Exam. of the Pharmaceutical Society of Great Britain; training may be obtained at the School of Pharmacy, Bloomsbury Square, and at private establishments. Preliminary Exam., with exemption for those holding the usual certificates. Salaries as Assistants, up to £300 a year; as Managers from £300 upwards, according to responsibility

_____y.—Entrance age, 16–18 usually. Medical and Entrance Exams. of the usual School-leaving standard. Apply to the Bank. Salaries begin at about £80 and rise, for clerks, to £600 a year. Branch Managers receive from £350–£800. Much higher salaries for the higher posts.

**Insurance.**—Conditions of entry to Junior Clerkships are merely Public School or Secondary School education. Matriculation is useful. University men would obtain higher commencing salaries. To become an Actuary, with its high emoluments, an advanced knowledge of Mathematics is necessary.

**Clergy.**—Candidates for Holy Orders should have a University Education, though that is not compulsory. They may train at a Theological College, such as Wycliffe Hall, Oxford; Ridley Hall, Cambridge; Egerton Hall, Manchester; Ely and Wells Theological Colleges. Non-graduates are received at St. Aidan's, Birkenhead; St. David's, Lampeter; Lichfield and Mirfield Theological Colleges; St. John's Hall, Highbury, and others.

**Civil Engineering** is governed by the Institution of Civil Engineers. Training may be had at the Universities, followed by practical experience; or by admission to Works where practical instruction can be supplemented by evening classes in the necessary subjects. In addition to the Universities, the City and Guilds College, S. Kensington, and the numerous Technical Colleges throughout the country, supply all that is required in the theory of Engineering. Students may select Mechanical Engineering, Electrical Engineering, Mining, Automobile, Marine, etc. Government and Municipal Engineers command salaries of from £200 a year as Junior Assistants to £2000 and more as Chief Engineers.

**Trade** apprentices are taken on by responsible firms and go through a period of indentured training for a few years before qualifying as skilled hands. Technical apprentices, with a good Secondary Education, rank higher, entering at 16–18 and being indentured for three or four years. A premium is sometimes required.

**Marconi Wireless Telegraph Co.** receives boys for training. Good secondary education required. Age 16–17. Premium required. Entrance Exam. in Geography, English, _____, French (or equivalent certificate, _____ as Matric.). Training lasts 18 months; a _____ is paid during the second nine months to _____ r pupils. Qualified Probationers are _____ l to the Junior Operating Staff. Apply Operating Controller, Marconi W.T. Co., Radio House, Wilson Street, E.C. 2.

**Barristers.**—Intending Barristers enter as students at one of the four Inns-of-Court. The Preliminary Exam. is of the Matriculation or of the School Certificate standard. Application should be made to each Inn. Twelve Law Terms are to be kept, followed by an Exam., after passing which a student is duly called to the Bar. Certain Scholarships are available.

The Scottish Bar is ruled by the Faculty of Advocates, Scotland, and the Irish Bar by the Hon. Society of King's Inn, Dublin.

**Solicitors.**—Intending Solicitors are articled for five years to established firms upon passing a Preliminary Exam. of the usual Secondary School standard. An articled Clerk must attend a Law School for at least one year during training. The premium varies from about £250 upwards.

**Doctors.**—The prospective Medical Practitioner enters a British University or the Medical School attached to one of the great Hospitals or General Infirmaries. A five years' course is compulsory following on a Preliminary Exam. in general subjects and a Medical Exam. in Chemistry and Physics (this latter may be taken while still at a Public or Secondary School).

**Dentists.**—The Dental profession offers good prospects. Training follows a Preliminary Exam. in the usual subjects (including a Special Exam. in Chemistry and Physics). Most Hospitals and provincial Universities have Dental Schools attached, and there is the Royal Dental School in Leicester Square, London. In Scotland, the Edinburgh, the Glasgow and the Dundee Dental Hospitals are available. The course lasts four or five years.

**Veterinary Surgeons** are trained at the Royal Veterinary College, London, or at Edinburgh, Glasgow and Liverpool. Admission to the training course is upon passing an Exam. in general education, of the usual School-leaving standard, Science being essential. Excellent prospects await the qualified man, whether in private practice or in the Public Service.

## NOTES ON SOME EXAMINATIONS.

**London Matric.**—Usually held 2nd Tuesday in Jan., 1st Tuesday in June, 2nd Tuesday in Sept. For regulations, forms of entry, provincial centres, etc., apply: The External Registrar, London University, S.W. 7.

**College of Preceptors.**—Senior, Junior and Prelim. Certif. Exams., also Lower Forms Exams., are usually held at Midsummer and Christmas. For dates of entry, local centres, etc., apply: The Secretary, Bloomsbury Square, W.C. 1.

The Professional Prelim. Exams. are usually held in March and Sept. Apply as above.

**Oxford Locals.**—School Certif. Exams. are usually held in March, July and Dec.; the Junior in July and Dec. only. For dates of entry, local centres, etc., apply: The Secretary of Local Exams., Merton Street, Oxford.

The Higher Certif. Exam. is usually held in July. Apply as above.

**Cambridge Locals.**—Usually held in July and Dec. Higher Certif. in July. Apply: The General Secretary, Syndicate Buildings, Cambridge.

The Exam. for the Oxford and Cambridge Joint Board Higher Certif. is usually held in July. For the School Certif. the Exam. is usually held in July and Dec. For the Lower Certif. in July. The Secretaries' addresses are: Joint Board, 61a, St. Andrew's Street, Cambridge, and Examinations Schools, Oxford.

**University of Durham.**—School Certif. Exams. are usually held in June and Sept. For dates of entry, etc., apply: The Secretary, Schools Exams., Armstrong College, Newcastle-upon-Tyne.

**The Universities of Manchester, Liverpool, Leeds, Sheffield and Birmingham** usually hold their Matric. Exams. in July and Sept. Address, The Secretary to the Board, 315, Oxford Road, Manchester.

**The University of Wales** usually holds its Matric. Exam. in Jan. and June. For all particulars apply: The Registrar, University Registry, Cathays Park, Cardiff.

**The London Chamber of Commerce.**—Exams. are usually held in the Winter, Spring, Summer and Autumn of each year. Entries are usually

made through a recognised Local Centre. For list, etc., apply: London Chamber of Commerce (Commercial Education Dept.), 97, Cannon Street, London, E.C. 4.

**The City and Guilds (Engineering) College** usually holds its Matric. Exam. in April or May (Scholarship and Entry) and Sept. (Entry only). Apply the Dean, City and Guilds (Engineering) College, Exhibition Road, London, S.W. 7.

**The Institute of Chartered Accountants** usually holds its Prelim. Exams. in May and November, in London, Birmingham, Manchester and Newcastle-upon-Tyne. Apply at The Institute, Moorgate Place, London, E.C. 2, or at one of the Branch Libraries, in the provinces.

**The Society of Incorporated Accountants and Auditors** usually holds its Prelim. Exams. in May and November. For particulars of entry, fees, etc., apply: The Secretary, Victoria Embankment, London, W.C. 2.

**The Chartered Accountants of Scotland** hold their Examinations in May and December. For particulars apply to The Chartered Accountants of Scotland, 190, West George Street, Glasgow.

**The Corporation of Accountants** holds its Exams. in June and December. Apply to the Secretary, 121, West George Street, Glasgow, C.2.

**The Institute of Actuaries** usually holds its Exams. in May. For all particulars, apply: The Secretary, Staple Inn Hall, Holborn, London, W.C.

**Architects.**—Applicants wishing to qualify as Probationers of the Royal Institute of British Architects must produce evidence of a good general education. The Prelim. Exam. is no longer held. Apply: The Secretary, 9, Conduit Street, Regent Street, W. 1.

**Civil Engineers.**—For particulars of admission to the Prelim. Exams. of the Institute of Civil Engineers (usually held in April and October), application should be made to the Secretary, Great George Street, Westminster, S.W. 1.

**The Law Society** usually holds its Prelim. Exams. in Feb., July and Oct. For dates of entry, etc., apply: The Secretary, Law Society's Hall, Chancery Lane, W.C. 2.

**Medical and Dental.**—Applicants for registration as Medical and Dental Students should apply to The Registrar, Medical Council Office, 44, Hallam Place, Portland Place, W. 1.

The London County Council has set up Commercial Institutes, in all districts of London, which provide instruction in subjects likely to be of use to boys seeking commercial positions. Preparation is also given for entrance to the Professions. A fee of 15s. per session is charged to those over 18; half fee for those under 18 (special fees for City of London College and Regent Street Polytechnic, apply to the Secretaries). The curriculum includes Languages, Mathematics, English, Economic History, Accounting and Auditing, Advertising, Banking, Book-keeping, Commerce, Commercial Arithmetic and Geography, Economics, Railway Administration, Salesmanship, Shorthand, Type-writing, Secretarial Practice and some Non-Commercial subjects. The addresses of these Institutes may be obtained from the Education Officer (T.4.D. County Hall, Westminster Bridge, S.E.1.) Students may enrol at the Junior Schools immediately on leaving day-school, in which case they may be admitted without payment of fee. Attendance in day-schools is arranged to permit students who are already employed to follow courses during special hours with their employers' permission. The Evening Classes provide also Trade Courses in Building, Electrical, Mechanical and Motor Engineering, Gas-fitting, Plumbing, Instrument-making, Tailoring and the Chemical Trades.

There are, in addition, a number of Evening Institutes in London and the Provinces which provide Commercial Courses, especially for boys under 18.

## TABLE OF LATIN VERBS

| PRESENT. | INFIN. | PERFECT. | SUPINE. | ENGLISH. | PRESENT. | INFIN. | PERFECT. | SUPINE. | ENGLISH. |
|---|---|---|---|---|---|---|---|---|---|
| abdo | —ĕre | abdĭdi | abdĭtum | hide | concutio | —ĕre | concussi | concussum | shake together |
| aboleo | —ēre | abolevi | abolĭtum | destroy | condo | —ĕre | condĭdi | conditum | found, hide |
| abolesco | —ĕre | abolēvi | — | decay | congruo | —ĕre | congrui | — | come together |
| acuo | —ĕre | acūi | acūtum | sharpen | conniveo | —ēre | conixi | — | wink |
| addo | —ĕre | addĭdi | additum | add | consulo | —ĕre | consului | consultum | consult |
| adnuo | —ĕre | adnui | — | nod | cŏquo | —ĕre | coxi | coctum | cook |
| adolesco | —ĕre | adolēvi | adultum | grow up | crēdo | —ĕre | crēdĭdi | crēditum | believe |
| affligo | —ĕre | affixi | afflictum | smite down | crĕpo | —ĕre | crepui | crepitum | creak |
| ăgo | —ĕre | ēgi | actum | do | cresco | —ĕre | crēvi | crētum | grow |
| algeo | —ēre | alsi | — | be cold | cŭbo | —āre | cubui | cubitum | lie down |
| alo | —ĕre | alui | altum | nourish | cūdo | —ĕre | cudi | cusum | stamp |
| amicio | —īre | {amixi / amicui} | amictum | clothe | cŭpio | —ĕre | cupīvi | cupītum | desire |
| amplector | —i | amplexus sum | — | embrace | curro | —ĕre | cucurri | cursum | run |
| ango | —ĕre | — | — | pain | decet | —ēre | decuit | — | it is becoming |
| aperio | —īre | aperui | apertum | open | dēdecet | —ēre | dedecuit | — | it is unbecoming |
| apiscor | —i | aptus sum | — | acquire | dēleo | —ēre | delēvi | deletum | blot out |
| arceo | —ēre | arcui | — | ward off | dēmo | —ĕre | dempsi | demptum | take away |
| arcesso | —ĕre | arcessīvi | arcessītum | send for | dīco | —ĕre | dixi | dictum | say |
| ardeo | —ēre | arsi | — | burn (*intrans.*) | diligo | —ĕre | dilexi | dilectum | love |
| arguo | —ĕre | argui | argutum | prove | disco | —ĕre | didĭci | — | learn |
| assentior | —īri | assensu sum | — | agree | dīvido | —ĕre | divisi | dīvīsum | divide |
| audeo | —ēre | ausus sum | — | dare | dō | —āre | dĕdi | dātum | give |
| augeo | —ēre | auxi | auctum | increase (*trans.*) | dŏceo | —ēre | docui | doctum | teach |
| bibo | —ĕre | bibi | bibitum | drink | dŏmo | —āre | domui | domĭtum | tame |
| blandior | —īri | blanditus sum | — | flatter | dūco | —ĕre | duxi | ductum | lead |
| | | | | | ēdo | —ĕre | ēdĭdi | ēditum | give forth |
| | | | | | ĕdo | —ĕre | ēdi | ēsum | eat |
| cădo | —ĕre | cĕcĭdi | cāsum | fall | ĕmo | —ĕre | ēmi | emptum | buy |
| caedo | —ĕre | cĕdĭdi | caesum | beat, kill | enĕco | —āre | enecui | enectum | kill |
| cănc | —ĕre | cĕcini | cantum | sing | eo | īre | ivi *or* ii | ĭtum | go |
| capesso | —ĕre | capessīvi | capessītum | take in hand | excello | —ĕre | excellui | — | excel |
| căpio | —ĕre | cēpi | captum | take | expergiscor | —i | experrectus sum | — | waken |
| carpo | —ĕre | carpsi | carptum | pluck | expĕrior | —īri | expertus sum | — | try |
| caveo | —ēre | cāvi | cautum | beware | exstinguo | —ĕre | exstinxi | exstinctum | quench |
| cēdo | —ĕre | cessi | cessum | yield | exuo | —ĕre | exui | exutum | put off |
| —cendo | —ĕre | —cendi | —censum | kindle | facio | —ĕre | fēci | factum | make |
| censeo | —ēre | censui | censum | deem, vote | fallo | —ĕre | fĕfelli | falsum | deceive |
| cerno | —ĕre | crēvi | crētum | sift, discern | fateor | —ēri | fassus sum | — | confess |
| cieo | —ēre | civi | citum | stir up | fătiscor | —i | fessus sum | — | grow weary |
| cingo | —ĕre | cinxi | cinctum | surround | faveo | —ēre | fāvi | fautum | favour |
| clango | —ĕre | — | — | clash | —fendo | —ĕre | —fendi | —fensum | strike |
| claudo | —ĕre | clausi | clausum | shut | fĕro | ferre | tŭli | lātum | bear |
| cognosco | —ĕre | cognōvi | cognĭtum | know | ferveo | —ēre | {ferbui / fervi} | — | be hot |
| cŏlo | —ĕre | colui | cultum | till, worship | fido | —ĕre | fisus sum | — | trust |
| comperio | —īre | comperi | compertum | find | | | | | |
| como | —ĕre | compsi | comptum | adorn | | | | | |
| compesco | —ĕre | compescui | — | restrain | | | | | |

| PRESENT. | INFIN. | PERFECT. | SUPINE. | ENGLISH. | PRESENT. | INFIN. | PERFECT. | SUPINE. | ENGLISH |
|---|---|---|---|---|---|---|---|---|---|
| **figo** | —ĕre | fixi | fixum | fix | neglĕgo | —ĕre | neglexi | neglectum | neglect |
| **findo** | —ĕre | fĭdi | fissum | cleave | neo | —ĕre | nevi | — | spin |
| **fingo** | —ĕre | finxi | fictum | feign | ninguit, ningit | —ĕre | ninxit | — | it snows |
| **fio** (fieri) | | factus sum | — | am made, become | nītor | —I | (nīsus, nixus) sum | — | strive |
| **flecto** | —ĕre | flexi | flexum | bend | nōlo | nolle | nōlui | — | be unwilling |
| **fleo** | —ēre | flevi | fletum | weep | nosco | —ĕre | nōvi | nōtum | know |
| **fluo** | —ĕre | fluxi | fluctum | flow | nūbo | —ĕre | nupsi | nuptum | marry |
| **fŏdio** | —ĕre | fōdi | fossum | dig | obliviscor | —I | oblītus sum | — | forget |
| **fŏveo** | —ēre | fōvi | fotum | cherish | obsolesco | —ĕre | obsolēvi | — | grow out of use |
| **frango** | —ĕre | frēgi | fractum | break (*tr.*) | | | | | |
| **frĕmo** | —ĕre | fremui | fremitum | bellow | | | | | |
| **frico** | —āre | fricui | (frictum, fricatum) | rub | occŭlo | —ĕre | occului | occultum | hide |
| | | | | | operĭo | —re | operui | opertum | cover |
| **frigeo** | —ēre | frixi | — | freeze | oportet | —ēre | oportuit | — | it behoves |
| **frigo** | —ĕre | frixi | frictum | roast | oppĕrior | —īri | oppertus sum | — | wait for |
| **fruor** | —I | fructus sum | — | enjoy | | | | | |
| **fŭgio** | —ĕre | fūgi | fugitum | fly | ordior | —īri | orsus sum | — | begin |
| **fulcio** | —re | fulsi | fultum | prop | ŏrior | —īri | ortus sum | — | arise |
| **fulgeo** | —ēre | fulsi | — | shine | păciscor | —I | pactus sum | — | bargain |
| **fundo** | —ĕre | fūdi | fusum | pour | paenitet | —ēre | paenituit | — | it repents |
| **fungor** | —I | functus sum | — | perform | pando | —ĕre | pandi | (pansum, passum) | open, spread |
| **gaudeo** | —ēre | gāvīsus sum | — | rejoice | | | | | |
| **gĕmo** | —ĕre | gemui | gemitum | groan | pango | —ĕre | (panxi, pĕgi) | pactum | fasten |
| **gĕro** | —ĕre | gessi | gestum | carry on | | | | | |
| **gigno** | —ĕre | genui | genitum | produce | parco | —ĕre | pĕperci | parsum | spare |
| **grădior** | —I | gressus sum | — | step | părio | —ĕre | pĕpĕri | partum | bring forth |
| **haereo** | —ēre | haesi | haesum | stick | partior | —īri | partitus sum | — | divide |
| **haurio** | —īre | hausi | haustum | drain | | | | | |
| **ico** | —ĕre | ici | ictum | strike | pasco | —ĕre | pāvi | pastum | feed (*trans.*) |
| **imbuo** | —ĕre | imbui | imbutum | tinge | păti or | —I | passus sum | — | suffer |
| **incesso** | —ĕre | incessivi | — | attack | păveo | —ēre | pāvi | — | quake |
| **indulgeo** | —ēre | indulsi | — | indulge | pecto | —ĕre | pexi | pexum | comb |
| **induo** | —ĕre | indui | indutum | put on | pello | —ĕre | pĕpŭli | pulsum | drive |
| **intellego** | —ĕre | intellexi | intellectum | understand | pendeo | —ēre | pĕpendi | pensum | hang (*intrans.*) |
| **irascor** | —I | iratus sum | — | be angry | | | | | |
| **jăcio** | —ĕre | jēci | jactum | throw | pendo | —ĕre | pĕpendi | pensum | hang |
| **jŭbeo** | —ēre | jussi | jussum | command | percello | —ĕre | percŭli | perculsum | thrill |
| **jungo** | —ĕre | junxi | junctum | join | perdo | —ĕre | perdĭdi | perditum | lose |
| **jŭvo** | —āre | jūvi | jūtum | help | pergo | —ĕre | perrexi | perrectum | proceed |
| **labor** | —I | lapsus sum | — | glide | paget | —ēre | paguit | — | it vexes |
| **lăcesso** | —ĕre | lacessivi | lacessītum | provoke | pingo | —ĕre | pinxi | pictum | paint |
| **laedo** | —ĕre | laesi | laesum | hurt | pinso | —ĕre | (pinsui, pinsi) | pistum | beat, pound |
| **largior** | —īri | largitus sum | — | bestow | | | | | |
| **lăvo** | —āre | lāvi | (lautum, lōtum) | wash | plaudo | —ĕre | plausi | plausum | applaud |
| | | | | | —pleo | —ēre | —plevi | —pletum | fill |
| **lego** | —ĕre | lēgi | lectum | choose, read | plĭco | —āre | (—plicavi, plicui) | (—plicatum, —plicitum) | fold |
| **libet** | —ēre | libuit | — | it pleases | | | | | |
| **licĕor** | —ēri | licitus sum | — | bid in auction | pluo | —ĕre | (plui, pluvi) | — | rain |
| **licet** | —ēre | licuit | — | it is lawful | | | | | |
| **lino** | —ĕre | (lēvi, livi) | litum | smear | pollūceo | —ēre | — | pollūctum | make a feast |
| | | | | | pōno | —ĕre | posui | positum | place |
| **linquo** | —ĕre | liqui | —lictum | leave | posco | —ĕre | pōposci | — | demand |
| **liquor** | —I | — | — | melt | possum | posse | potui | — | can |
| **lŏquor** | —I | locutus sum | — | speak | pŏtior | —īri | potitus sum | — | acquire |
| **lūceo** | —ēre | luxi | — | shine | prandeo | —ēre | prandi | pransum | lunch, dine |
| **lūdo** | —ĕre | lusi | lusum | play | prĕhendo | —ĕre | prehendi | prehensum | grasp |
| **lūgeo** | —ēre | luxi | — | mourn | prĕmo | —ĕre | pressi | pressum | press |
| **luo** | —ĕre | lui | —lutum | wash, atone | prōdo | —ĕre | prŏdi li | prŏditum | betray |
| **mālo** | malle | mālui | — | prefer, wish rather | proficiscor | —I | profectus sum | — | set out |
| **mando** | —ĕre | mandi | mansum | chew | prŏmo | —ĕre | prompsi | promptum | bring out |
| **maneo** | —ēre | mansi | mansum | remain | psallo | —ĕre | psalli | — | play on strings |
| **mĕdeor** | —ēri | — | — | heal | | | | | |
| **mĕreor** | —ēri | meritus sum | — | deserve | pudet | —ēre | pudŭit | — | it shames |
| **mergo** | —ĕre | mersi | mersum | drown | pungo | —ĕre | pŭpŭgi | punctum | prick |
| **mētior** | —īri | mensus sum | — | measure | pūnior | —īri | punitus sum | — | punish |
| **mĕto** | —ĕre | messui | messum | reap | quaero | —ĕre | quaesīvi | quaesītum | seek |
| **mĕtuo** | —ĕre | metui | — | fear | quătio | —ĕre | quassi | quassum | shake (*trans.*) |
| **mico** | —āre | micui, micavi | —micatum | glitter | quĕror | —I | questus sum | — | complain |
| | | | | | quiesco | —ĕre | quiēvi | quietum | rest |
| **—miniscor** | —I | —mentus sum | — | have in mind | rădo | —ĕre | rasi | rasum | scrape |
| **mĭnuo** | —ĕre | minui | minutum | lessen | răpio | —ĕre | rapui | raptum | seize |
| **misceo** | —ēre | miscui | (mistum, mixtum) | mix | reddo | —ĕre | reddĭdi | redditum | restore |
| | | | | | reor | —ēri | rātus sum | — | think |
| | | | | | repĕrio | —īre | repperi | repertum | discover |
| | | | | | rĕpo | —ĕre | repsi | reptum | creep |
| **misĕreor** | —ēri | (miseritus, misertus) sum | — | have pity on | retundo | —ĕre | rettŭdi | retusum | beat back |
| | | | | | rideo | —ēre | risi | risum | laugh |
| **misĕret** | misĕrēre | miseruit | — | it moves to pity | rōdo | —ĕre | rosi | rosum | gnaw |
| | | | | | rumpo | —ĕre | rūpi | ruptum | break |
| **mitto** | —ĕre | misi | missum | send | ruo | —ĕre | rui | (rūtum, ruitum) | rush, fall |
| **mōlior** | —īri | molitus sum | — | contrive | saepio | —īre | saepsi | saeptum | hedge in |
| **mŏlo** | —ĕre | molui | molitum | grind | sălio | —īre | salui | — | dance |
| **mordeo** | —ēre | mŏmordi | morsum | bite | sancio | —īre | sanxi | sanctum | hallow |
| **morior** | —I | mortuus sum | — | die | săpio | —ĕre | sapīvi | — | be wise |
| **mŏveo** | —ēre | mōvi | motum | move (*trans.*) | sarcio | —īre | sarsi | sartum | patch |
| **mulceo** | —ēre | mulsi | mulsum | soothe | scalpo | —ĕre | scalpsi | scalptum | scratch |
| **mulgeo** | —ēre | mulsi | — | milk | scando | —ĕre | scandi | scansum | climb |
| | | | | | scindo | —ĕre | scĭdi | scissum | tear |
| **nanciscor** | —I | (nactus, nanctus) sum | — | obtain | scio | —ire | scivi | scitum | know |
| | | | | | scrĭbo | —ĕre | scripsi | scriptum | write |
| | | | | | sculpo | —ĕre | sculpsi | sculptum | carve |
| **nascor** | —I | natus sum | — | be born | sĕco | —āre | secui | sectum | cut |
| | | | | | sĕdeo | —ēre | sēdi | sessum | sit |
| **necto** | —ĕre | (nexi, nexui) | nexum | bind | sentio | —īre | sensi | sensum | feel |
| | | | | | sĕpĕlio | —īre | sepelivi | sepultum | bury |

| Present. | Infin. | Perfect. | Supine. | English. | Present. | Infin. | Perfect. | Supine. | English. |
|---|---|---|---|---|---|---|---|---|---|
| sĕquor | —ī | secutus sum | — | follow | tondeo | —ēre | tŏtondi | tonsum | shear |
| sĕro | —ĕre | sēvi | sătum | sow | tŏno | —āre | tonui | tonitum | thunder |
| sīdo | —ĕre | sīdi | — | settle | torqueo | —ēre | torsi | tortum | twist |
| sĭno | —ĕre | sīvi | situm | allow | torreo | —ēre | torrui | tostum | scorch |
| sisto | —ĕre | —stĭti | —stātum | make to stand | trādo | —ĕre | trādidi | trāditum | deliver |
| sŏleo | —ēre | sŏlitus sum | — | be wont | trăho | —ĕre | traxi | tractum | draw |
| solvo | —ĕre | solvi | solutum | loosen, pay | trĕmo | —ĕre | tremui | — | tremble |
| sŏno | —āre | sonui | sonitum | sound | tribuo | —ĕre | tribui | tributum | assign, render |
| sorbeo | —ēre | sorbui | — | swallow | trūdo | —ĕre | trusi | trusum | thrust |
| sortior | —īrī | sortitus sum | — | take by lot | tueor | —ērī | tuitus sum | — | protect |
| spargo | —ĕre | sparsi | sparsum | sprinkle | tundo | —ĕre | tŭtŭdi | {tūsum / tunsum} | bruise |
| sperno | —ĕre | sprēvi | sprētum | despise | | | | | |
| spondeo | —ēre | spŏpondi | sponsum | pledge | turgeo | —ēre | tursi | — | swell |
| spuo | —ĕre | spui | sputum | spit | ulciscor | —ī | ultus sum | — | avenge |
| statuo | —ĕre | statui | statutum | set up | unguo | —ĕre | unxi | unctum | anoint |
| sterno | —ĕre | strāvi | strātum | strew | ungo | | | | |
| sternuo | —ĕre | sternui | — | sneeze | ūtor | —ūti | ūsus sum | — | use |
| stō | —āre | stĕti | stātum | stand | urgeo | —ēre | ursi | — | press |
| strĕpo | —ĕre | strepui | strepitum | roar | ūro | —ĕre | ussi | ustum | burn (*trans.*) |
| strideo | —ēre | stridi | — | creak | vādo | —ĕre | (in) vasi | (in) vasum | go (attack) |
| stringo | —ĕre | strinxi | strictum | bind | vĕho | —ĕre | vexi | vectum | carry |
| struo | —ĕre | struxi | structum | build | vello | —ĕre | velli (vulsi) | vulsum | rend |
| suādeo | —ēre | suasi | suasum | advise | vendo | —ĕre | vendidi | venditum | sell |
| subdo | —ĕre | subdidi | subditum | substitute | vēnio | —īre | vēni | ventum | come |
| suesco | —ĕre | suēvi | suētum | grow accustomed | vĕnor | —āri | venātus sum | — | hunt |
| sūgo | —ĕre | suxi | suctum | suck | vereor | —ērī | veritus sum | — | fear |
| sūmo | —ĕre | sumpsi | sumptum | take | verro | —ĕre | verri | versum | sweep |
| suo | —ĕre | sui | sutum | sew | verto | —ĕre | verti | versum | turn (*trans.*) |
| surgo | —ĕre | surrexi | surrectum | arise | vescor | —ī | — | — | feed on |
| taedet | —ēre | taeduit | — | it wearies | vĕto | —āre | {vetui / vetavi} | vetitum | forbid |
| tango | —ĕre | tĕtigi | tactum | touch | | | | | |
| tĕgo | —ĕre | texi | tectum | cover | video | —ēre | vidi | visum | see |
| —temno | —ĕre | —tempsi | —temptum | despise | vincio | —īre | vinxi | vinctum | bind |
| tendo | —ĕre | tĕtendi | {tentum / tensum} | stretch | vinco | —ĕre | vīci | victum | conquer |
| | | | | | viso | —ĕre | visi | visum | visit |
| tĕneo | —ēre | tenui | tentum | hold | vivo | —ĕre | vixi | victum | live |
| tergeo | —ēre | tersi | — | wipe | vŏlo | velle | vŏlŭi | — | am willing |
| tĕro | —ĕre | trīvi | tritum | rub | volvo | —ĕre | volvi | volutum | roll (*trans.*) |
| texo | —ĕre | texui | textum | weave | vŏmo | —ĕre | vomui | vomitum | vomit |
| tingo | —ĕre | tinxi | tinctum | dye | vŏveo | —ēre | vōvi | votum | vow |

## PRINCIPAL FRENCH IRREGULAR VERBS

| Infinitive. | Present Indicative. | Imperfect. | Preterite. | Future. | Present Subjunctive. | Participles. | Notes. |
|---|---|---|---|---|---|---|---|
| absoudre | j'absous | absolvais | (*none*) | absoudrai | absolve | absolvant | |
| *to absolve* | ns. absolvons | | | | | absous—te | |
| acquérir | j'acquiers | acquérais | acquis | acquerrai | j'acquière | acquérant | |
| *to acquire* | ns. acquérons | | | | ns. acquérions | acquis | |
| | ils acquièrent | | | | ils acquièrent | | |
| aller* | je vais | allais | allai | irai | j'aille | allant | *Imperative:* va |
| *to go* | tu vas | | | | ns. allions | allé | |
| | il va | | | | ils aillent | | |
| | ns. allons | | | | | | |
| | ils vont | | | | | | |
| assaillir | assaille | assaillais | assaillis | assaillirai | assaille | assaillant | |
| *to assail* | | | | | | assailli | |
| s'asseoir* | je m'assieds | asseyais | assis | assierai | asseye | asseyant | |
| *to sit down* | ns. ns. asseyons | | | | | assis | |
| atteindre | j'atteins | atteignais | atteignis | atteindrai | atteigne | atteignant | |
| *to reach* | ns. atteignons | | | | | atteint | |
| battre | je bats | battais | battis | battrai | batte | battant | |
| *to beat* | ns. battons | | | | | battu | |
| boire | je bois | buvais | bus | boirai | je boive | buvant | |
| *to drink* | ns. buvons | | | | ns. buvions | bu | |
| | ils boivent | | | | ils boivent | | |
| bouillir | je bous | bouillais | bouillis | bouillirai | bouille | bouillant | |
| *to boil* | ns. bouillons | | | | | bouilli | |
| ceindre | je ceins | ceignais | ceignis | ceindrai | ceigne | ceignant | |
| *to gird on* | ns. ceignons | | | | | ceint | |
| clore | je clos | (*none*) | (*none*) | clorai | close | (*none*) | |
| *to close* | il clôt | | | | | clos | |
| | *no plural* | | | | | | |
| conclure | je conclus | concluais | conclus | conclurai | conclue | concluant | |
| *to conclude* | ns. concluons | | | | | conclu | |
| conduire | je conduis | conduisais | conduisis | conduirai | conduise | conduisant | |
| *to lead* | ns. conduisons | | | | | conduit | |
| connaître | je connais | connaissais | connus | connaîtrai | connaisse | connaissant | *always* i *before* t |
| *to know* | ns. connaissons | | | | | connu | |
| conquérir | *see* acquérir | | | | | | |
| *to conquer* | | | | | | | |
| construire | construis | construisais | construisis | construirai | construise | construisant | |
| *to construct* | | | | | | construit | |
| contraindre | je contrains | contraignais | contraignis | contraindrai | contraigne | contraignant | |
| *to constrain* | ns. contraignons | | | | | contraint | |
| coudre | je couds | cousais | cousis | coudrai | couse | cousant | |
| *to sew* | ns. cousons | | | | | cousu | |
| courir | je cours | courais | courus | courrai | coure | courant | |
| *to run* | ns. courons | | | | | couru | |
| couvrir | je couvre | couvrais | couvris | couvrirai | couvre | couvran | |
| *to cover* | | | | | | couvert | |
| craindre | *see* contraindre | | | | | | |
| *to fear* | | | | | | | |

* conjugated with "être."

| INFINITIVE. | PRESENT INDICATIVE. | IMPERFECT. | PRETERITE. | FUTURE. | PRESENT SUBJUNCTIVE. | PARTICIPLES. | NOTES. |
|---|---|---|---|---|---|---|---|
| croire<br>*to believe* | je crois<br>ns. croyons<br>ils croient | croyais | crus | croirai | je croie<br>ns. croyions<br>ils croient | croyant<br>cru | |
| croître<br>*to grow* | je crois<br>ns. croissons | croissais | crûs | croîtrai | croisse | croissant<br>crû | *always* î *before* t |
| cueillir<br>*to gather* | je cueille | cueillais | cueillis | cueillerai | cueille | cueillant<br>cueilli | |
| cuire<br>*to cook* | je cuis<br>ns. cuisons | cuisais | cuisis | cuirai | cuise | cuisant<br>cuit | |
| détruire<br>*to destroy* | je détruis<br>ns. détruisons | détruisais | détruisis | détruirai | détruise | détruisant<br>détruit | |
| dire<br>*to say* | je dis<br>ns. disons<br>vs. dites<br>ils disent | disais | dis | dirai | dise | disant<br>dit | |
| dissoudre<br>*to dissolve* | *see* absoudre | | | | | | |
| dormir<br>*to sleep* | je dors<br>ns. dormons | dormais | dormis | dormirai | dorme | dormant<br>dormi | |
| écrire<br>*to write* | j'écris<br>ns. écrivons | écrivais | écrivis | écrirai | écrive | écrivant<br>écrit | |
| s'enquérir*<br>*to enquire* | *see* acquérir | | | | | | |
| envoyer<br>*to send* | j'envoie<br>ns. envoyons | envoyais | envoyai | enverrai | j'envoie<br>ns. envoyions | envoyant<br>envoyé | |
| faillir<br>*to miss* | je faux (*rare*)<br>ns. faillons | faillais (*rare*) | faillis | failliral | (*none*) | faillant (*rare*)<br>failli | *a good rendering is "very nearly"* |
| faire<br>*to make* | je fais<br>ns. faisons<br>vs. faites<br>ils font | faisais | fis | ferai | fasse | faisant<br>fait | |
| falloir<br>*to be necessary* | il faut | il fallait | il fallut | il faudra | il faille | (*none*)<br>fallu | |
| feindre<br>*to feign* | *see* ceindre | | | | | | |
| fleurir<br>*to flourish* | fleuris | fleurissais<br>(*or*) florissais | fleuris | fleurirai | fleurisse | fleurissant<br>(*or*) florissant<br>fleuri | |
| fuir<br>*to flee* | je fuis<br>ns. fuyons<br>ils fuient | fuyais | fuis | fuirai | je fuie<br>ns. fuyions<br>ils fuient | fuyant<br>fui | |
| haïr<br>*to hate* | je hais<br>ns. haïssons | haïssais | haïs | haïrai | haïsse | haïssant<br>haï | *Imperative* hais<br>haïssons haïssez |
| instruire<br>*to instruct* | *see* cuire | | | | | | |
| introduire<br>*to introduce* | *see* cuire | | | | | | |
| joindre<br>*to join* | je joins<br>ns. joignons | joignais | joignis | joindrai | joigne | joignant<br>joint | |
| lire<br>*to read* | je lis<br>ns. lisons | lisais | lus | lirai | lise | lisant<br>lu | |
| luire<br>*to shine* | je luis<br>ns. luisons | luisais | (*none*) | luirai | luise | luisant<br>lui | |
| maudire<br>*to curse* | je maudis<br>ns. maudissons | maudissais | maudis | maudirai | maudisse | maudissant<br>maudit | |
| mentir<br>*to lie* | je mens<br>ns. mentons | mentais | mentis | mentirai | mente | mentant<br>menti | |
| mettre<br>*to put* | je mets<br>ns. mettons | mettais | mis | mettrai | mette | mettant<br>mis | |
| moudre<br>*to grind* | je mouds<br>ns. moulons | moulais | moulus | moudrai | moule | moulant<br>moulu | |
| mourir*<br>*to die* | je meurs<br>ns. mourons<br>ils meurent | mourais | mourus | mourrai | je meure<br>ns. mourions<br>ils meurent | mourant<br>mort | |
| mouvoir<br>*to move* | je meus<br>ns. mouvons<br>ils meuvent | mouvais | mus | mouvrai | je meuve<br>ns. mouvions<br>ils meuvent | mouvant<br>mû | |
| naître*<br>*to be born* | je nais<br>ns. naissons | naissais | naquis | naîtrai | naisse | naissant<br>né | *always* î *before* t |
| nuire<br>*to harm* | *see* luire | | nuisis | | | | |
| offrir<br>*to offer* | j'offre | offrais | offris | offrirai | offre | offrant<br>offert | |
| ouïr<br>*to hear* | (*none*) | (*none*) | ouïs | (*none*) | (*none*) | (*none*)<br>ouï | |
| ouvrir<br>*to open* | *see* couvrir | | | | | | |
| paître<br>*to graze* | je pais<br>ns. paissons | paissais | (*none*) | paîtrai | paisse | paissant<br>(*none*) | *always* î *before* t |
| paraître<br>*to appear* | je parais<br>ns. paraissons | paraissais | parus | paraîtrai | paraisse | paraissant<br>paru | *always* î *before* t |
| partir*<br>*to depart* | je pars<br>ns. partons | partais | partis | partirai | parte | partant<br>parti | |
| peindre<br>*to paint* | *see* ceindre | | | | | | |
| plaindre<br>*to pity* | je plains<br>ns. plaignons | plaignais | plaignis | plaindrai | plaigne | plaignant<br>plaint | |
| plaire<br>*to please* | je plais<br>il plaît<br>ns. plaisons | plaisais | plus | plairai | plaise | plaisant<br>plu | |
| pleuvoir<br>*to rain* | il pleut | il pleuvait | il plut | il pleuvra | il pleuve | pleuvant<br>plu | |
| pourvoir<br>*to provide* | je pourvois<br>ns. pourvoyons<br>ils pourvoient | pourvoyais | pourvus | pourvoirai | je pourvoie<br>ns. pourvoyions<br>ils pourvoient | pourvoyant<br>pourvu | |

| Infinitive. | Present Indicative. | Imperfect. | Preterite. | Future. | Present Subjunctive. | Participles. | Notes. |
|---|---|---|---|---|---|---|---|
| pouvoir<br>*to be able* | je puis (peux)<br>il peut<br>ns. pouvons<br>ils peuvent | pouvais | pus | pourrai | puisse | pouvant<br>pu | |
| prédire<br>*to foretell* | *see* dire | *except* vous | prédisez | | | | |
| prendre<br>*to take* | je prends<br>ns. prenons<br>ils prennent | prenais | pris | prendrai | je prenne<br>ns. prenions<br>ils prennent | prenant<br>pris | |
| prévoir<br>*to foresee* | *see* voir | *except future* | | prévoirai | | | |
| réduire<br>*to reduce* | *see* cuire | | | | | | |
| se repentir*<br>*to repent* | *see* mentir | | | | | | |
| résoudre<br>*to resolve* | je résous<br>ns. résolvons | résolvais | résolus | résoudrai | résolve | résolvant<br>résolu | |
| rire<br>*to laugh* | je ris<br>ns. rions | riais | ris | rirai | rie | riant<br>ri | |
| savoir<br>*to know* | je sais<br>ns. savons | savais | sus | saurai | sache | sachant<br>su | |
| séduire<br>*to seduce* | *see* cuire | | | | | | |
| sentir<br>*to feel* | *see* mentir | | | | | | |
| servir<br>*to serve* | je sers<br>ns. servons | servais | servis | servirai | serve | servant<br>servi | |
| sortir*<br>*to go out* | je sors<br>ns. sortons | sortais | sortis | sortirai | sorte | sortant<br>sorti | |
| souffrir<br>*to suffer* | *see* couvrir | | | | | | |
| suffire<br>*to suffice* | je suffis<br>ns. suffisons | suffisais | suffis | suffirai | suffise | suffisant<br>suffi | |
| suivre<br>*to follow* | je suis<br>ns. suivons | suivais | suivis | suivrai | suive | suivant<br>suivi | |
| se taire*<br>*to be silent* | je me tais<br>ns. ns. taisons | taisais | tus | tairai | taise | taisant<br>tu | |
| tenir<br>*to hold* | je tiens<br>ns. tenons<br>ils tiennent | tenais | tins | tiendrai | tienne | tenant<br>tenu | |
| traire<br>*to milk* | je trais<br>ns. trayons<br>ils traient | trayais | (*none*) | trairai | je traie<br>ns. trayions<br>ils traient | trayant<br>trait | |
| vaincre<br>*to overcome* | je vaincs<br>il vainc<br>ns. vainquons | vainquais | vainquis | vaincrai | vainque | vainquant<br>vaincu | |
| valoir<br>*to be worth* | je vaux<br>ns. valons | valais | valus | vaudrai | vaille | valant<br>valu | |
| venir*<br>*to come* | *see* tenir | | | | | | |
| vêtir<br>*to clothe* | je vêts<br>ns. vêtons | vêtais | vêtis | vêtirai | vête | vêtant<br>vêtu | |
| vivre<br>*to live* | je vis<br>ns. vivons | vivais | vécus | vivrai | vive | vivant<br>vécu | |
| voir<br>*to see* | je vois<br>ns. voyons<br>ils voient | voyais | vis | verrai | voie<br>voyions<br>voient | voyant<br>vu | |
| vouloir<br>*will* | je veux<br>ns. voulons<br>ils veulent | voulais | voulus | voudrai | veuille<br>voulions<br>veuillent | voulant<br>voulu | |

## THE METRIC SYSTEM

1 metre = $\frac{1}{40000000}$ of Earth's circumference.
1 gram = mass (*or* weight) of a cubic centimetre of distilled water at 4° C
1 are = area of a square Dekametre.
1 litre = capacity of a cubic decimetre.
1 tonne = 1000 Kilograms. [1 quintal = 100 Kgm.]
1 Megametre = 1000 Kilometres.

| | | | |
|---|---|---|---|
| Deka— | = 10 times. | deci— | = $\frac{1}{10}$ of. |
| Hekto— | = 100 ,, | centi— | = $\frac{1}{100}$ of. |
| Kilo— | = 1000 ,, | milli— | = $\frac{1}{1000}$ of. |

For brevity, initial letters may be used (denoting multiples by capitals, and submultiples by small letters), and also m.², Dm.², m.³, cm.³, etc., for square metre, square Dekametre, cubic metre, cubic centimetre, etc.

## LEGAL EQUIVALENTS. [B. of T. Act, 1897.]

1 metre = 39·370113 inches.
1 Kilogram = 15432·3564 grains.
1 gallon = 4·54596 31 litres. (This is unreliable, the gallon not being scientifically determined.)

## SIMPLE EQUIVALENTS

1 inch = 2·54 cm. — error of less than 1 per million.
1 grain = 6·48 cgm. — error of less than 2 per 100,000.
1 litre = 0·22 gall. + error of less than 2 per 10,000.

## ROUGH CHECKS. (Percentage error given.)

| | | | |
|---|---|---|---|
| 12 yd. | = 11 m. ($\frac{1}{2}$ %). | 11 lbs. | = 5 Kgm. ($\frac{1}{2}$ %). |
| 1 chain | = 20 m. ($\frac{1}{2}$ %). | 2 cwt. | = 1 quintal (1$\frac{1}{2}$ %). |
| 5 miles | = 8 Km. ($\frac{1}{2}$ %). | 1 ton | = 1 tonne (1$\frac{1}{2}$ %). |
| 1 acre | = 4 Dekares ($\frac{1}{2}$ %). | 7 quarts | = 8 litres (1 %). |
| 6 sq. yd. | = 5 m.² ($\frac{1}{2}$ %). | 4 cu. yd. | = 3 m.³ (2 %). |

## USEFUL DATA. (Approximate.)

Length of cricket pitch (or 1 chain) = 20 metres.
Express speed (62$\frac{1}{2}$ mls. per hr.) = 100 Km. per hr.
Man's weight (11 stone) = 70 Kilograms.
Velocity of light = 300 Megametres per second.

## MEASURES OF ANGLES.

60 seconds (60″) make 1 minute (1′).
60 minutes ,, 1 degree (1°).
90 degrees ,, 1 right angle or quadrant.
4 quadrants ,, 1 circumference.

## MEASURES OF NUMBER.

| | |
|---|---|
| 12 units | make 1 dozen. |
| 20 units | ,, 1 score. |
| 5 score | ,, 1 hundred. |
| 6 ,, | ,, 1 gt. hundred. |
| 12 dozen | ,, 1 gross. |
| 12 gross | ,, 1 great gross. |
| 24 sheets of paper | ,, 1 quire. |
| 20 quires | ,, 1 ream. |
| 10 reams | ,, 1 bale. |

## USEFUL FACTORS

$(a+b)^2 = a^2+2ab+b^2$
$(a-b)^2 = a^2-2ab+b^2$
$a^2-b^2 = (a+b)(a-b)$
$a^3+b^3 = (a+b)(a^2-ab+b^2)$
$a^3-b^3 = (a-b)(a^2+ab+b^2)$
$x^4+x^2y^2+y^4 = (x^2+xy+y^2)(x^2-xy+y^2)$
$a^3+b^3+c^3-3abc = (a+b+c)(a^2+b^2+c^2-ab-bc-ca)$
$a^2(b-c)+b^2(c-a)+c^2(a-b) = -(a-b)(b-c)(c-a)$
$bc(b-c)+ca(c-a)+ab(a-b) = -(a-b)(b-c)(c-a)$
$a(b^2-c^2)+b(c^2-a^2)+c(a^2-b^2) = (a-b)(b-c)(c-a)$

## ARITHMETICAL PROGRESSION

Last term $= a + (n-1)d$

Sum to $n$ terms $= \frac{n}{2}[2a + (n-1)d]$

## GEOMETRICAL PROGRESSION

$p$th term $= ar^{p-1}$

Sum to $n$ terms $= a\frac{r^n-1}{r-1}$ or $a\frac{1-r^n}{1-r}$

Sum to infinity when $r<1$ $= \frac{a}{1-r}$

## PERMUTATIONS AND COMBINATIONS

$${}^nP_r = n(n-1)(n-2)\ldots\ldots(n-r+1) = \frac{\lfloor n}{\lfloor n-r}$$

$${}^nC_r = \frac{n(n-1)(n-2)\ldots\ldots(n-r+1)}{\lfloor r} = \frac{\lfloor n}{\lfloor r\ \lfloor n-r}$$

## BINOMIAL THEOREM

$$(a+x)^n = a^n + na^{n-1}x + \frac{n(n-1)}{1\cdot 2}a^{n-2}x^2 + \ldots + {}^nC_r a^{n-r}x^r + \ldots\ldots + x^n$$

## MENSURATION FORMULÆ

**LINES**
- Pythagorean Theorem $a^2 = b^2 + c^2$
- Circumference of circle $= 2\pi r$

**PLANE AREAS**
- Parallelogram $= bh$
- Triangle $= \frac{1}{2}bh$
- Trapezium $= \frac{1}{2}(a+b)h$
- Circle $= \pi r^2$
- Ellipse $= \pi ab$

**CURVED SURFACES**
- Cylinder = circum. base × height.
- Cone $= \frac{1}{2}$ circum. base × slant.
- Conical Frustum $= \pi(R+r)s$
- Sphere $= 4\pi r^2$

**VOLUMES**
- Prism (or Cylinder) = area base × height
- Pyramid (or Cone) $= \frac{1}{3}$ area base × height
- Prismoid $= \frac{h}{6}(A + B + 4C)$
- Sphere $= \frac{4}{3}\pi r^3$

## TRIGONOMETRY

(a) $\pi = 3{\cdot}14159\ldots$. [approximations are $\frac{22}{7}$ and $\frac{355}{113}$

A Radian $= 57° 17' 44{\cdot}8''$ nearly.

(b) $\sin^2\theta + \cos^2\theta = 1$

(c)

| Degrees . | 0° | 30° | 45° | 60° | 90° |
|---|---|---|---|---|---|
| Radians . | 0 | $\frac{\pi}{6}$ | $\frac{\pi}{4}$ | $\frac{\pi}{3}$ | $\frac{\pi}{2}$ |
| Sine . . | 0 | $\frac{1}{2}$ | $\frac{1}{\sqrt{2}}$ | $\frac{\sqrt{3}}{2}$ | 1 |
| Cosine . | 1 | $\frac{\sqrt{3}}{2}$ | $\frac{1}{\sqrt{2}}$ | $\frac{1}{2}$ | 0 |
| Tangent . | 0 | $\frac{1}{\sqrt{3}}$ | 1 | $\sqrt{3}$ | 8 |

(d) $\sin(-\theta) = -\sin\theta$; $\cos(-\theta) = \cos\theta$
$\sin(90°-\theta) = \cos\theta$; $\cos(90°-\theta) = \sin\theta$
$\sin(90°+\theta) = \cos\theta$; $\cos(90°+\theta) = -\sin\theta$
$\sin(180°-\theta) = \sin\theta$; $\cos(180°-\theta) = -\cos\theta$
$\sin(180°+\theta) = -\sin\theta$; $\cos(180°+\theta) = -\cos\theta$

(e) If $\sin\theta = \sin\alpha$, then $\theta = n\pi + (-1)^n\alpha$
If $\cos\theta = \cos\alpha$, then $\theta = 2n\pi \pm \alpha$
If $\tan\theta = \tan\alpha$, then $\theta = n\pi + \alpha$

(f) $\sin(A+B) = \sin A\cos B + \cos A\sin B$
$\cos(A+B) = \cos A\cos B - \sin A\sin B$
$\sin(A-B) = \sin A\cos B - \cos A\sin B$
$\cos(A-B) = \cos A\cos B + \sin A\sin B$

$$\sin C + \sin D = 2\sin\frac{C+D}{2}\cos\frac{C-D}{2}$$

$$\sin C - \sin D = 2\cos\frac{C+D}{2}\sin\frac{C-D}{2}$$

$$\cos C + \cos D = 2\cos\frac{C+D}{2}\cos\frac{C-D}{2}$$

$$\cos D - \cos C = 2\sin\frac{C+D}{2}\sin\frac{C-D}{2}$$

$2\sin A\cos B = \sin(A+B) + \sin(A-B)$
$2\cos A\sin B = \sin(A+B) - \sin(A-B)$
$2\cos A\cos B = \cos(A+B) + \cos(A-B)$
$2\sin A\sin B = \cos(A-B) - \cos(A+B)$

$$\tan(A+B) = \frac{\tan A + \tan B}{1 - \tan A\tan B}$$

$$\tan(A-B) = \frac{\tan A - \tan B}{1 + \tan A\tan B}$$

$\sin 2A = 2\sin A\cos A$
$\cos 2A = \cos^2 A - \sin^2 A = 1 - 2\sin^2 A = 2\cos^2 A - 1$

$$\sin 2A = \frac{2\tan A}{1+\tan^2 A};\quad \cos 2A = \frac{1-\tan^2 A}{1+\tan^2 A}$$

$$\tan 2A = \frac{2\tan A}{1-\tan^2 A}$$

$\sin 3A = 3\sin A - 4\sin^3 A$
$\cos 3A = 4\cos^3 A - 3\cos A$

$$\tan 3A = \frac{3\tan A - \tan^3 A}{1 - 3\tan^2 A}$$

$$\sin\frac{A}{2} = \pm\sqrt{\frac{1-\cos A}{2}};\quad \cos\frac{A}{2} = \pm\sqrt{\frac{1+\cos A}{2}}$$

$$2\sin\frac{A}{2} = \pm\sqrt{1+\sin A} \pm \sqrt{1-\sin A}$$

$$2\cos\frac{A}{2} = \pm\sqrt{1+\sin A} \pm \sqrt{1-\sin A}$$

(g) $\log_a mn = \log_a m + \log_a n$

$$\log\frac{m}{n} = \log_a m - \log_a n$$

$\log_a m^n = n\log_a m$
$\log_a m = \log_b m \times \log_a b$

(h) $$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$

$$\cos A = \frac{b^2+c^2-a^2}{2bc}, \ldots$$

$$\sin\frac{A}{2} = \sqrt{\frac{(s-b)(s-c)}{bc}}, \ldots\ldots \cos\frac{A}{2} = \sqrt{\frac{s(s-a)}{bc}}, \ldots$$

$$\tan\frac{A}{2} = \sqrt{\frac{(s-b)(s-c)}{s(s-a)}}, \ldots\ldots$$

$$\sin A = \frac{2}{bc}\sqrt{s(s-a)(s-b)(s-c)}, \ldots\ldots$$

$a = b\cos C + c\cos B, \ldots\ldots$

$$\tan\frac{B-C}{2} = \frac{b-c}{b+c}\cot\frac{A}{2}, \ldots\ldots$$

$$\triangle = \sqrt{s(s-a)(s-b)(s-c)} = \tfrac{1}{2}bc\sin A = \tfrac{1}{2}ca\sin B = \tfrac{1}{2}ab\sin C$$

(i) $$R = \frac{a}{2\sin A} = \frac{b}{2\sin B} = \frac{c}{2\sin C} = \frac{abc}{4\triangle}$$

$$r = \frac{\triangle}{s} = (s-a)\tan\frac{A}{2} = \ldots = \ldots$$

$$r_1 = \frac{\triangle}{s-a} = s\tan\frac{A}{2}$$

Area of a quadrilateral inscribable in a circle.
$= \sqrt{(s-a)(s-b)(s-c)(s-d)}$

$$\frac{\sin\theta}{\theta} = 1, \text{ when } \theta \text{ is very small.}$$

$\sin\alpha + \sin(\alpha+\beta) + \sin(\alpha+2\beta) + \ldots$ to $n$ terms

$$= \frac{\sin\left\{\alpha + \frac{n-1}{2}\beta\right\}\sin\frac{n\beta}{2}}{\sin\frac{\beta}{2}}$$

$\cos\alpha + \cos(\alpha+\beta) + \cos(\alpha+2\beta) + \ldots$ to $n$ terms

$$= \frac{\cos\left\{\alpha + \frac{n-1}{2}\beta\right\}\sin\frac{n\beta}{2}}{\sin\frac{\beta}{2}}$$

## CONSTANTS

1 metre = 100 cm. = 1000 mm. = 0·001 Km.
1 yard = 3 ft. = 36 in. = 0·9144 metre.
1 mile = 8 fur. = 320 po. = 1760 yards.

1 Hectare = 100 ares = 10,000 sq. metres.
1 acre = 4 roods = 4840 sq. yds. = 0·4047 Hectare.
1 litre = 1 c. dm. = 100 cl. = 0 01 Hl. = 0·001 c. metre.
1 gallon = 4 qt. = 8 pt. = 0·1606 c. ft. = 4·546 litres.
1 quarter = 8 bush. = 32 pk. = 64 gal.
1 Kilogram = 1000 g. = 0·001 tonne.
1 lb. = 16 oz. = 7000 grains = 453·6 grammes.
1 ton = 20 cwt. = 80 qr. = 2240 lbs.
1 litre of water weighs 1 kg.; 1 c. ft. of water weighs 62·3 lbs.
1 gallon of water weighs 10 lbs.
A circle of a radius $r$ has a circumference of length $2\pi r$ and has an area of $\pi r^2$, where $\pi = 3\cdot1416$, $\frac{1}{\pi} = 0\cdot3183$, $\pi^2 = 9\cdot8696$.
Base of natural logarithms is $e = 2\cdot7183$.
The acceleration of a falling body is 32·2 feet per sec. per sec., or 981 cms. per sec. per sec.
1 Kilowatt = 102 Kilogram-metres per second.
1 horse-power = 550 foot pounds per second.
1 atmosphere = 760 mm. of mercury (30 in.) = 1·03 Kg. per sq. cm. = 14·7 lbs. per sq. inch = 1010 millibars.

## MECHANICS

$v = u + ft$
$s = ut + \frac{1}{2}ft.^2$
$v^2 = u^2 + 2fs$
$P = mf$
or $P = \frac{w}{g}f$

Time of swing of Pendulum—

$$t = 2\pi\sqrt{\frac{l}{g}}$$

## COINS AS WEIGHTS

½ oz. (avoir.) = one halfpenny and one threepenny piece.
¼ ,, ,, = two halfpennies and one farthing.
1 ,, ,, = three pennies (or five halfpennies).
2 ,, ,, = six pennies (or ten halfpennies).

| | | |
|---|---|---|
| Threepenny piece | = | 21·8 grains. |
| Sixpenny | = | 43·6 ,, |
| Shilling | = | 87·2 ,, |
| Florin | = | 174·6 ,, |
| Half-crown | = | 218 ,, |

## AREAS AND VOLUMES

$\pi = 3\cdot14159$

| | |
|---|---|
| Circumference of circle | $= 2\pi r$ |
| Area of circle | $= \pi r^2$ |
| Vol. of sphere | $= \frac{4}{3}\pi r^3$ |
| Surface of sphere | $= 4\pi r^2$ |
| Vol. of cylinder | $= \pi r^2 h$ |
| Vol. of cone | $= \frac{1}{3}\pi r^2 h$ |

## PHYSICAL AND CHEMICAL CONSTANTS*

* Average values are given where materials may vary in quality.

| | *Young's Modulus.* | *Ultimate Strength.* | *Modulus of Rigidity.* |
|---|---|---|---|
| Brass | 5,700 | 11 | 2000 |
| Steel | 13,500 | 28—32 | 5200 |
| Iron (wrought) | 13,000 | 20—28 | 5000 |
| ,, (cast) | 6,000 | 8—11 | 3000 |

All the above are in tons per square inch.

*Gravity*—"g" at lat. 45° 980 6 | Poles 983 2
Equator 978·0 | Greenwich 981 17

*Specific Gravity*—

| | | | |
|---|---|---|---|
| Copper | = 8 95 | Silver | = 10 5–10 3 |
| Iron | = 7 84 | Calcite | = 2 71 |
| Glass | = 2·4–2 6 | Marble | = 2 714 |
| Brass | = 8·1–8 6 | Turps (Oil) | = 0 870 |
| Methd. Alcohol | = 0·825 | Weight of 1 litre of air | = 1·293 grms. N.T.P. |
| Paraffin Wax | = 0·916 | Mercury | = 13 596 |
| Ice | = 0·9167 | | |

*Earth*—Height of its atmosphere (supposed homogeneous) at Greenwich = $7\cdot988\times10^5$ cm.
Mean Diameter $12\cdot7418\times10^8$ cm. = say 7918 miles.
Distance from Sun = 93,000,000 miles.
Mean Density = 5·58.
Mass = $6067\times10^{18}$ tons.

*Sun*—Diameter = 866,400 miles.

*Moon*—Distance from Earth = 238,840 miles,
Diameter = 2,162 miles.

## HEAT

*Coefficient of expansion per degree C.* (cubic)—

| | |
|---|---|
| Gases = 0·00366 | Brass = 0·000053–0·000057 |
| Glass = 0·000022 | Iron = 0·000033–0·000044 |
| Hg. = 0·0001815 | Copper = 0 000051 |
| | Platinum = 0·000027 |

*Specific Heat*—

| | | | |
|---|---|---|---|
| Iron | = 0·105–0·114 | Sulphur | = 0·16–0·24 |
| Brass | = 0 093 | Marble | = 0·210 |
| Copper | = 0 091–0·095 | Carbon | = 0·147 |
| Glass | = 0·19 | Meth. Spt. | = 0·615 |
| Calcite | = 0 205 | Turps | = 0·426 |
| Quartz | = 0 190 | Mercury | = 0·033 |
| | | Air | = 0·238 |

*Latent Heat* (*Calories*)— Water = 80
Steam = 536·6
Lead = 6

## TABLE OF MELTING-POINTS

| | | | |
|---|---|---|---|
| Platinum | 1757–1855° C. | Glass (about) | 1100° C. |
| Wrought Iron | 1500–1600° C. | Borax (about) | 1100° C. |
| Gold | 1035–1093° C. | Cane Sugar | 160° C. |
| Cast Iron | 1100–1300° C. | Sulphur | 114·5° C. |
| Copper | 1054–1097° C. | White Wax | 68° C. |
| Silver | 954–986° C. | Paraffin | 54° C. |
| Zinc | 415·3–433·3° C. | Spermaceti | 44° C. |
| Lead | 322–334° C. | Phosphorus | 44–44·5° C. |
| Cadmium | 315–321·7° C. | Butter | 33° C. |
| Bismuth | 260–270·5° C. | Lard | 33° C. |
| Tin | 228·5–235° C. | Ice | 0° C. |
| Sodium | 90–98·5° C. | Bromine | −7·3° C. |
| Potassium | 58–62·5° C. | Mercury | −40·5° to −38·5° C. |

## TABLE OF BOILING-POINTS at 760 mm. PRESSURE

| | |
|---|---|
| Nitrous Oxide | −87·9° C. |
| Carbonic Anhydride | −78·2° C. |
| Ammonia | −33·5° C. |
| Chlorine | −33 6° C. |
| Sulphurous Anhydride | −10 0° C. |
| Ether | 35·0° C. |
| Sulphide of Carbon | 46 2° C. |
| Chloroform | 60 2° C. |
| Alcohol | 78·3° C. |
| Benzene | 80·4° C. |
| Distilled Water | 100 0° C. |
| Spirits of Turpentine | 130 0° C. |
| Oil of Turpentine | 159·1° C. |
| Phosphorus | 287·3° C. at 762 mm. |
| Linseed Oil | 316 0° C. |
| Sulphuric Acid | 325·0° C. |
| Mercury | 357 25° C. |
| Sulphur | 444·7° C. |

## CRITICAL TEMPERATURE

| | | | |
|---|---|---|---|
| Carbon Dioxide | 30·92° C. | Nitrogen | −146° C. |
| Hydrogen | −243 to −241° C. | Sulphur Dioxide | 155° C. |
| Oxygen | −118° C. | Chlorine | 141° C. |

## WATER VAPOUR PRESSURE

| t. | f. mm. of Hg. | m. gm. per cub. m. | t. | f. mm. of Hg. | m. gm. per cub. m. |
|---|---|---|---|---|---|
| −10° C. | 2·0 | 2·1 | 10° C. | 9·1 | 9·4 |
| − 9 | 2·2 | 2·4 | 11 | 9·8 | 10·0 |
| − 8 | 2·4 | 2·7 | 12 | 10·4 | 10·6 |
| − 7 | 2·6 | 3·0 | 13 | 11·1 | 11·3 |
| − 6 | 2·8 | 3·2 | 14 | 11·9 | 12·0 |
| − 5 | 3·1 | 3·5 | 15 | 12·7 | 12·8 |
| − 4 | 3·3 | 3·8 | 16 | 13·5 | 13·6 |
| − 3 | 3·6 | 4·1 | 17 | 14·4 | 14·5 |
| − 2 | 3·9 | 4·4 | 18 | 15·4 | 15·1 |
| − 1 | 4·2 | 4·6 | 19 | 16·3 | 16·2 |
| − 0 | 4·6 | 4·9 | 20 | 17·4 | 17·2 |
| 0° | 4·6 | 4·9 | 20° | 17·4 | 17·2 |
| 1 | 4·9 | 5·2 | 21 | 18·5 | 18·2 |
| 2 | 5·3 | 5·6 | 22 | 19·7 | 19·3 |
| 3 | 5·7 | 6·0 | 23 | 20·9 | 20·4 |
| 4 | 6·1 | 6·4 | 24 | 22·2 | 21·5 |
| 5 | 6·5 | 6·8 | 25 | 23·6 | 22·9 |
| 6 | 7·0 | 7·3 | 26 | 25·0 | 24·2 |
| 7 | 7·5 | 7·7 | 27 | 26·5 | 25·6 |
| 8 | 8·0 | 8·1 | 28 | 28·1 | 27·0 |
| 9 | 8·5 | 8·8 | 29 | 29·8 | 28·6 |
| 10 | 9·1 | 9·4 | 30 | 31·6 | 30·1 |

## CONDUCTIVITIES

| Substance. | Absolute Conductivity. K | Substance. | Absolute Conductivity. K |
|---|---|---|---|
| | *C.G.S. units.* | | *C.G.S. units.* |
| Silver | 0·974 | Lead | 0·083 |
| Copper | 0·918 | Platinum | 0·166 |
| Gold | 0·700 | German Silver | 0·070 |
| Brass | 0·260 | Palladium | 0·168 |
| Zinc | 0·258 | Bismuth | 0·0194 |
| Tin | 0·155 | Ice | 0·0052 |
| Iron | 0·164 | Roll Sulphur | 0 0006 |
| Steel | 0·158 | Coal | 0 0003 |

*Mechanical Equivalent.*
= 1390 ft. lb. in lb. ° C. units.
= 4·2 × 10⁷ Ergs in grm. ° C. units.

## SOUND

*Pitch* (Philharmonic), 1890—
A = 439 at 68° F.

| *Diatonic Scale*— | C | D | E | F | G | A | B | C |
|---|---|---|---|---|---|---|---|---|
| *Intervals*— | 1 | 9/8 | 5/4 | 4/3 | 3/2 | 5/3 | 15/8 | 2 |

*Velocity* per sec.—

| | | |
|---|---|---|
| Air at 0° C. | 1,090 *ft.* | 331 metres. |
| Water | 4,758 ,, | 1,445 ,, |
| Carbon Dioxide | 850 ,, | |
| Coal gas | 1,680 ,, | |
| Hydrogen | 4,160 ,, | |
| Oak | 13,500 ,, to 14,500 | |
| Mahogany | 13,500 ,, to 15,500 | |
| Deal | 16,000 ,, to 16,500 | |
| Brass | 12,000 ,, | |
| Glass | 16,000 ,, to 17,000 | |
| Pitch Pine | 1,250 | |

*Limits of Audition*—30 vibrations to about 40,000.

## OPTICS

### REFRACTIVE INDICES

| | | | |
|---|---|---|---|
| Diamond | 2·60 | Hydrochloric Acid | 1·41 |
| Flint Glass | 1·57 | Alcohol | 1·36 |
| Quartz | 1·54 | Ether | 1·36 |
| Rock Salt | 1·54 | Water | 1·33 |
| Canada Balsam | 1·54 | Hydrogen | 1·00014 |
| Crown Glass | 1·51 | Oxygen | 1·00027 |
| Plate Glass | 1·52 | Air | 1·00029 |
| Iceland Spar | 1·66 | Nitrogen | 1·00030 |
| Alum | 1·45 | Nitric Oxide | 1·00029 |
| Ice | 1·31 | Carbonic Oxide | 1·00034 |
| Carbon disulphide | 1·63 | Ammonia | 1·00038 |
| Olive Oil | 1·47 | Carbonic Acid Gas | 1·00045 |
| Oil of Turpentine | 1·48 | Nitrous Oxide | 1·00050 |
| Sulphuric Acid. | 1·43 | Chlorine | 1·00077 |

Velocity of Light in air = 180,000 miles per sec.

## ELECTRICITY AND MAGNETISM

*Specific Resistance*—

| | |
|---|---|
| Platinoid (German Silver + 1% Tungsten) | = 0 00004 |
| Copper | = 0 0000017 |
| Mercury | = 0 0000958 |

*Temperature Coefficient*—
Copper = 0 0043 | Platinoid = 0·0003
1 Watt = 1 Volt ampere per sec. = 10⁷ Ergs. per sec.
746 Watts = 1 H.P.
Board of Trade Unit (B.T.U.) = 1 Kilowatt—hour.

## WAVE LENGTHS

(IN TEN-MILLIONTHS OF A MILLIMETRE)

| Name of Line. | Colour. | Salts used. | Wave lengths = λ. |
|---|---|---|---|
| Lithium | Red | Lithium chloride or nitrate | 6708 |
| Lithium | Orange | Lithium chloride or nitrate | 6104 |
| D | Yellow | Sodium chloride or bicarbonate | 5893 |
| "Little b" | Green | Magnesium ribbon | 5173 |
| Strontium | Blue | Strontium chloride or metal | 4607 |
| Calcium | Blue | Calcium nitrate or chloride | 4227 |
| Potassium | Violet | Potassium chloride | 4046 |

## CHEMICAL NAMES OF COMMON SUBSTANCES

| | |
|---|---|
| Alcohol | = Ethyl Alcohol ($C_2H_5OH$). |
| Alum | = Potassium Aluminium Sulphate ($K_2SO_4.Al_2[SO_4]_3.24H_2O$). |
| Aqua fortis | = Nitric Acid ($HNO_3$). |
| Bi-Carbonate of Soda | = Sodium Hydrogen Carbonate ($NaHCO_3$). |
| Blue Vitriol (Blue Stone) | = Copper Sulphate ($CuSO_4.5H_2O$). |
| Boracic Acid | = Boric Acid ($H_3BO_3$). |
| Borax | = Sodium Borate ($Na_2B_4O_7$). |
| Chalk | = Calcium Carbonate ($CaCO_3$). |
| Common Salt | = Sodium Chloride (NaCl). |
| Corrosive Sublimate | = Mercuric Chloride ($HgCl_2$). |
| Epsom Salts | = Magnesium Sulphate ($MgSO_4.7H_2O$). |
| Fire Damp | = Methane ($CH_4$). |
| Glauber Salts | = Sodium Sulphate ($Na_2SO_4$). |
| Green Vitriol | = Ferrous Sulphate ($FeSO_4.7H_2O$). |
| Hypo | = Sodium Thiosulphate ($Na_2S_2O_3.5H_2O$). |
| Lime | = Calcium Oxide (CaO). |
| Oil of Vitriol | = Sulphuric Acid ($H_2SO_4$). |
| Plaster of Paris | = Calcium Sulphate ($CaSO_4)_2H_2O$. |
| Red Lead | = Triplumbic Tetroxide ($Pb_3O_4$). |
| Sal Ammoniac | = Ammonium Chloride ($NH_4Cl$). |
| Sal Volatile | = Impure Ammonium Carbonate ($[NH_4]_2CO_3$). |
| Saltpetre | = Potassium Nitrate ($KNO_3$). |
| Salts of Lemon | = Potassium Hydrogen Oxalate ($KHC_2O_4$). |
| Spirit of Salt (Muriatic Acid) | = Hydrochloric Acid (HCl) |
| Sugar of Lead | = Lead Acetate ($Pb[C_2H_3O_4]_2$) |
| Verdigris | = Basic Copper Acetate ($-Cu[C_2H_3O_2]_2.Cu[OH]_2$). |
| Vinegar | = Dilute Acetic Acid ($C_2H_4O_2$). |
| Washing Soda | = Crystalline Sodium Carbonate ($Na_2CO_3.10H_2O$). |
| White Lead | = Basic Lead Carbonate ($2PbCO_3.Pb[OH]_2$). |

## ATOMIC WEIGHTS

| Chemical Element. | Symbol. | Atomic Weight. O = 16 | Chemical Element. | Symbol. | Atomic Weight. O = 16 | Chemical Element. | Symbol. | Atomic Weight. O = 16 |
|---|---|---|---|---|---|---|---|---|
| Aluminium | Al | 26·97 | Fluorine | F | 19 | Niton | Nt | 222 |
| Antimony | Sb | 121·76 | Gold | Au | 197·2 | Nitrogen | N | 14·008 |
| Argon | A | 39·94 | Helium | He | 4·002 | Oxygen (St) | O | 16 |
| Arsenic | As | 74·93 | Hydrogen | H | 1·008 | Phosphorus | P | 30·98 |
| Barium | Ba | 137·4 | Indium | In | 114·8 | Platinum | Pt | 195·2 |
| Bismuth | Bi | 209 | Iodine | I | 126·93 | Potassium | K | 39·10 |
| Boron | B | 10·83 | Iridium | Ir | 193 | Selenium | Se | 79·2 |
| Bromine | Br | 79·91 | Iron | Fe | 55·84 | Silicon | Si | 28·08 |
| Cadmium | Cd | 112·4 | Lead | Pb | 207·2 | Silver | Ag | 107·88 |
| Calcium | Ca | 40·09 | Lithium | Li | 6·94 | Sodium | Na | 23 |
| Carbon | C | 12·003 | Magnesium | Mg | 24·30 | Strontium | Sr | 87·63 |
| Chlorine | Cl | 35·457 | Manganese | Mn | 54·95 | Sulphur | S | 32·06 |
| Chromium | Cr | 52·04 | Mercury | Hg | 200·6 | Tin | Sn | 118·7 |
| Cobalt | Co | 58·95 | Molybdenum | Mo | 96 | Zinc | Zn | 65·38 |
| Copper | Cu | 63·57 | Nickel | Ni | 58·69 | | | |

# WIRELESS




## PEARS—THE PURE SOAP

*For particulars of Pears Famous Toilet Preparations turn to end of Book*

# Pears' Dictionary of Wireless

## By G. J. Freshwater and H. J. Dyer of the Marconiphone Co.

**Radio.**—The origin of Radio is, of course, deep-rooted in the development of Electrical Science generally. The enormous service which Electricity as we know it to-day gives to mankind has its origin, as in the case of so many of the world's arts and sciences, in the remote and obscure civilisation of the East.

For instance, we know that 2000 or 3000 years B.C. the Chinese had found a stone which had magnetic properties and which they utilised for the direction-finding purposes of the modern compass. This stone, of course, was undoubtedly iron ore. Later, in the early days of Western civilisation, we learn that the Greeks were curious regarding certain phenomena, and that 600 years B.C. the wise men of Greece were writing regarding the attraction properties of warmed amber. Later Aristotle discovered curious properties in a certain fish which we now know as a fish capable of giving an electric shock to those who touch it.

Electrical Science, however, in the modern meaning of the term, made practically no progress from the time of the Greeks until the sixteenth and seventeenth centuries, when scientists in various European countries began to devote particular attention to the mysterious phenomena that had been noticed. From then onwards a number of brilliant scientists of all nationalities devoted themselves increasingly to the problems of Electricity, and valuable contributions were made at frequent intervals by many countries.

The extensive study which was evidently being given at this time to Electricity is obvious from a study of the nationalities of the great electrical discoverers. For instance, Volta, Italian; Galvani, Italian; Coulomb, French; Ampère, French; Ohm, German; Joule, English; Watt, Scottish; Faraday, English; Franklin, American; Davy, English; Rontgen, Scandinavian; Edison, American; Hertz, German; Fleming, De Forest, etc.

The development of Radio knowledge in particular dates probably from the days when Hertz made his discoveries, proving the existence of Electrical Waves, although the existence of these waves was predicted some years previously by an Englishman, James Maxwell. Even after Hertz' first experiments, some years elapsed before knowledge developed on a practical basis.

In 1895 Electro-Magnetic Waves, in the discovery of which lies the secret of modern Radio knowledge, were little more than a scientific curiosity, but about this period a new personality appeared in the world of Radio study, namely Guglielmo Marconi, a young Italian experimenter.

Marconi had been studying the new Electro-Magnetic Waves at Bologna in Italy, and from the knowledge he had gained had actually constructed Radio sets which he had been able to use in a small way at home. However, his conceptions of Radio development were extremely bold, and it soon appeared to him that his amateur signalling had great commercial possibilities. Some connections on his mother's side with Britain and his appreciation of Britain's commercial enterprise led him to bring his knowledge to this country.

Thus in June 1896 we find the first Wireless patent was filed here, and in July 1897 the first Wireless Signalling Company was actually formed. Demonstrations were arranged with the Army, Navy and Post Office, and in spite of early scepticism developments began to follow rapidly. Before long, messages had been broadcast and picked up over a distance of 14 miles, an achievement which interested the whole world. By 1899 reception had been increased to nearly 200 miles. The sceptics were being confounded and intelligent people were beginning to realise that discoveries had been made which offered enormous possibilities. At the beginning of the twentieth century the first big wireless contract was signed with the British Navy, and in April 1900 the Marconi's Wireless Telegraph Company of to-day first came into being.

To definitely establish his theories, Marconi decided to attempt transmission across the Atlantic from what was then the world's only high-powered station, Poldhu in Cornwall. He took with him two assistants—Kemp and Paget—to Newfoundland for the purpose of picking up this first trans-Atlantic transmission. The Receiving Aerial used was raised by kites, and it was arranged with Poldhu that they should send the letter 'S' at regular intervals from December 11th, 1901, onwards for some days. On December 12th, Marconi succeeded in picking up quite distinctly the three dots of the letter 'S,' and thus the Atlantic itself had been bridged by this new power.

Naturally these achievements definitely set Radio development upon its legs. The whole world had to acknowledge that a new era in communication was at hand. By 1903 it was possible for the President of the United States to send a wireless message to the King of England, and during the same year *The Times* published the first Radio Press message. It is now just over 23 years since the first Telegraphic Service was started across the Atlantic, and during those 23 years the modern wonders of broadcasting and wireless communication generally have become possible.

Marconi applied himself consistently to the development of the problems he had gone so far already to solve. His improved Magnetic Detector increased the range of reception enormously, and he discovered also that signals travel better by night than by day.

A tremendous impetus was given to Radio when it first came to the assistance of man in emergencies at sea. For instance, in 1909, when the s.s. *Republic* was sunk in the Atlantic, over 200 lives were saved through wireless appeals. Again, in 1912, in the case of the *Titanic* catastrophe there was a similar saving of life through the service rendered by Marconi's Electro-Magnetic Waves system of signalling.

Many names are associated with the development of Radio in recent years, and naturally a subject of such vast importance attracts the interest of many brilliant men throughout the world. Perhaps the men to whom the world owes most for its Radio knowledge are Hertz for his early and somewhat theoretical discoveries; Edison for his invention of the Glow Lamp (1883), which was in fact the first Wireless Valve ever made, although it was not actually made for that purpose; Marconi for his many contributions and tremendous application to the subject in its practical developments; to Fleming, who in 1904 first applied a Valve consisting of a hot filament and plate to the detection of wireless waves, and to De Forest, who first introduced the Triode Valve.

Some idea of the rapid development of the science will be gathered from the fact that the modern wireless service can handle messages of more than 400 words per minute to practically any corner of the earth, and this by the eminent men of the industry is regarded as but a mere beginning.

Modern broadcasting entertainment is, of course, but one side of a great subject. It is now possible on an ever-improving scale to broadcast pictures, and complete letters, documents, photographs, etc. can now be transmitted

by Radio. Ten years ago public broadcasting was unknown—now there are roughly four million Receiving Sets in homes throughout the country regularly in use.

A sound knowledge of Radio can only be acquired with a fairly complete understanding of the science of Electricity itself, upon which it is, of course, fundamentally based, and even for a reasonable understanding of the subject some knowledge of the elements of Electricity is essential. The notes which follow are written with this in mind. It is impossible to treat the subject adequately in so limited a space. Indeed a proper treatise of so vast a subject would require many volumes. It has been assumed, therefore, that an elementary knowledge of Electricity is possessed, sufficient for the understanding of the elementary Radio facts contained in these notes.

**What Wireless Means.**—The term "Wireless" has come to be accepted to-day as meaning the transmission of intelligible signals over distances by electrical means, without the intervention of wires between the transmitting and receiving points.

Fundamentally, wireless as we know it to-day depends on the existence of electrical waves, and the development of wireless, once the existence of these waves had been discovered and established by Maxwell and Hertz, has been broadly along the lines of extending and improving the methods whereby the waves could be utilised.

First it is necessary to have some idea of what a wireless wave (Fig. 1) is, and how it can be sent from a suitable transmitting station and made to affect a receiver which may be thousands of miles away. As a first step, one must grasp the fact that these wireless waves are electrical vibrations forming part of a series of waves, all of which give rise to various well-known physical phenomena. Heat and light are the two most familiar manifestations of these waves, while *X*-rays form another group in this large family of electrical vibrations.

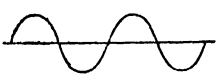

FIG. 1.

All these waves are similar in character, but differ in their length and the speed at which they vibrate, the wireless waves being the longest of the series.

**How the Waves Travel.**—The wireless waves must have some medium through which they are conveyed from place to place, in the same way that a wave which is started at one end of a pond travels through the water until it either reaches the opposite side or dies out on the way. The medium through which these electrical waves travel is the æther.

What the æther is has never been definitely determined, but it can be likened to a kind of very finely constituted gas, which permeates the entire universe. The necessity for such a universal medium can be easily understood by the fact that wireless waves are transmitted everywhere, and can penetrate through ordinary solid matter which is impervious to light and sound. Ordinary solid matter can move about without creating any disturbance in the æther, but electricity, when suitably controlled—as, for example, in a wireless transmitter—is capable of causing the æther to vibrate, and the æther in its turn conveys these vibrations to the receiving apparatus.

All these æther vibrations or waves travel at the same speed, namely, 186,000 miles per second, or—since the decimal system is employed for scientific measurement—300,000,000 metres per second.

We have seen, however, that the different classes of waves—wireless, heat, light, and so on—differ in their lengths, and hence in the rate at which they vibrate. For example, if a wireless wave travelling at 300,000,000 metres per second has a wave-length of say, 300 metres, at the end of one second's radiation it will have executed 300,000,000 divided by 300—or 1,000,000 vibrations. In other words, the frequency is equal to the velocity of the wave divided by the wave-length. Thus we see that the longer the wave-length the slower is the rate of vibration—or, to put it slightly more technically, the lower is its frequency; and conversely, the shorter the wave-length, the higher is the frequency. In Fig. 2, AB represent the wave-length measured from one crest to the next, while CD represent one complete oscillation or cycle.

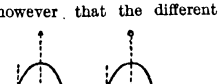

FIG. 2.

Coming now to the practical application of these phenomena, we see that to make broadcasting possible we must have some means of translating sound into electricity which shall be capable of setting up æther vibrations, and some means of collecting or receiving these vibrations and conveying them to an apparatus which will reconvert them into a replica of the original sounds.

Since in this article we are concerned mainly with the receiving end, it is not considered necessary to treat the question of transmitting in anything more than general outline.

The first step in the transmission of wireless waves is to set up the particular kind of æther vibrations which are called wireless waves. Since these waves vibrate or oscillate at a particular frequency which is determined by their wave-length, it is necessary to employ, in conjunction with the source of the vibrations, a circuit which first of all can be made to oscillate, and secondly can be made to oscillate at the desired frequency in order to obtain wireless waves which shall possess the particular wave-length and frequency required. Such a circuit consists fundamentally of an inductance, which for practical purposes is usually a coil of wire; and a condenser, which consists of two electrical conductors (usually sheets of metal) separated by a layer of insulating material.

The various commercial forms of inductances and condensers will be considered later, but whatever their construction, the principles they embody are the same.

In a modern transmitter the fundamental oscillating circuit, which we have already briefly described, is energised by a series of valves. The waves set up by the oscillating valve circuits are at a very high frequency, so high as to be inaudible to the human ear, and they are also continuous. They are conveniently referred to as the carrier-wave, and sounds of speech or music are made to modulate or cause fluctuations in the carrier-wave. The effect of this modulation is to increase or decrease the amplitude of the carrier-wave exactly in accordance with the characteristics of the particular sound which is being transmitted. Thus, although the frequency of the carrier-wave remains constant it has impressed on it variations which correspond in amplitude and frequency with the original sounds. The resultant wave form is represented by the diagram in Fig. 3, which shows a modulated carrier-wave.

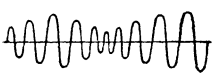

FIG. 3.

This modulation is carried out by means of a microphone, which is a device capable of converting sound into electricity by causing variations in the current flowing through it which are in accordance with the sounds falling on it.

The wave-length and frequency of the waves emanating from any particular station are governed by careful adjustment of the inductance and capacity in the oscillating circuits, and these are constant irrespective of the variations impressed on the waves by the microphone current.

Translating this theory into practical terms, the carrier-wave is called the high or radio frequency wave and, as was mentioned earlier, is incapable of being heard by the human ear, which can only respond to frequencies up to about 20,000 per second. The variations caused by the microphone current take place at low or audio-frequency.

**What a Wireless Receiver does.**—It should be easily understood now that the problem with which we are concerned in the receiver is that of receiving the modulated carrier-wave, separating the high and low frequency components,

eliminating the former and reconverting the latter back again into sound.

The first thing to be done with the receiver is to make it respond to the particular wave we want to receive, and only to that wave. The next thing we have to do is to sort out the low-frequency modulations from the high-frequency carrier-wave. It may then be necessary (and in practice it usually is) to amplify the low-frequency current in order to make it powerful enough to operate successfully the device which converts it into sound—the loud-speaker or headphones.

It is also to be noted here that if the strength of the wave as originally received from a distant transmitting station is very small, it may be necessary to amplify it before an attempt is made to separate it into its two component parts.

In order to effect the tuning of a radio receiver we require an oscillating circuit which is capable of being made to respond to the vibrations or oscillations of the distant transmitter when these are communicated to it.

**The Principle of Tuning.**—Here we employ what is known as the principle of resonance, which plays a very important part in wireless practice. It may be illustrated in this way. If a tuning-fork be struck and held near the strings of a piano, it will be found that one particular string will immediately vibrate in sympathy with the tuning-fork. Tuning-forks of different notes will cause different strings to vibrate. The string responds to the tuning-fork because its natural rate of vibration or frequency is the same as that of the fork, and when the two are vibrating in sympathy they are said to be in resonance.

If, then, the receiver can be so adjusted that it is in resonance with the particular transmitting station we want, it will respond to that station to the exclusion of any others. Going back for a moment to our remarks on transmitters, we saw that it was necessary to employ an oscillating circuit consisting of inductance and capacity adjusted to oscillate at the required frequency.

Exactly similar principles are employed in the receiver. Inductance is provided by one or more suitably wound coils of wire, and capacity by one or more condensers.

Resonance is obtained by adjusting either the value of the inductance or the capacity.

**Condensers.**—In all modern receivers tuning is effected by means of a coil of fixed inductance in conjunction with a condenser of variable capacity. It was remarked earlier in this article that a condenser consists in principle of two electrical conductors separated by a layer of non-conducting or insulating material. The capacity of a condenser is determined by the area of the overlap of the conductors, the distance they are apart, and the nature of the insulating material between them. In practice, the amount of capacity required would need conductors of unwieldy size if only two were used, so a large number of metal plates is used, arranged in such a way that one set of them (representing one conductor of the condenser) is fixed, while the other set of plates (representing the other conductor) can be rotated so that it interleaves to any desired extent with the fixed set of plates. The insulating material between the plates is usually air, although in certain cases thin sheets of insulating material are used instead.

In current radio practice, the log-law condenser has largely superseded the earlier types. This name is derived from the fact that the plates are designed to follow a logarithmic law, in order that the same relative movement of the dial at any part of the scale shall provide the same relative increase of the existing capacity. This is an essential requirement of modern single control sets, in which several circuits are simultaneously tuned by one knob and in which the scale is marked directly in wave-lengths. This, of course, is much more convenient from the user's point of view, since there is only one control to handle, and since the receiver can be set directly to any desired wave-length without having first to ascertain what wave-lengths are represented by an arbitrary scale of degrees.

**Tuning Coils.**—The question of coil efficiency is a fundamental one, and with the great improvements in the design of valves, it became important that the increased efficiency obtainable from the better valves should not be sacrificed by avoidable losses in the coils.

Another point that has to be considered in this connection is that of selectivity, which we can define as the ability of a receiver to single out the one station which it is desired to receive without interference and overlapping from any others.

Present-day conditions, with a large number of stations sending out very powerful transmissions on wave-lengths which must inevitably be close together (since there are not enough wave-lengths to accommodate comfortably all the broadcasting stations), have made it very necessary that a modern receiver shall possess a high degree of selectivity.

Coil design is in itself a very big subject, and a detailed consideration of it is outside the scope of a work of this nature, which must aim at covering in general lines a large amount of ground, rather than going closely into one part of the subject at the expense of the whole. It must suffice to say that modern coils are designed to secure maximum selectivity and signal strength together with ease of changing over from one wave-band to another. In passing, it may be remarked that the trend of modern design, using screen-grid valves, is to aim at a moderate stage gain and to build up sensitivity by using several screen-grid stages, gaining at the same time additional selectivity.

Although the coils themselves play a very big part in the efficiency of the tuning of a receiver, the way in which they are used is also highly important. Although we have said that a circuit arrangement consisting of a coil and condenser can be tuned to respond to a particular frequency, it is not within the bounds of practical possibility to make it so that it will not respond in some measure to a limited band of frequencies on either side of the principal frequency. Nor indeed would this feature be desirable, even if it were possible, since the modulations which are impressed on the carrier-wave actually extend over a small band of frequencies on either side of the carrier frequency, and to cut them out in a receiver would mean a deterioration in the quality of reproduction due to the fact that some of the notes would not be properly reproduced.

Since in practice we cannot obtain from one tuned circuit the exact degree of selectivity required by modern conditions, the latest practice is to employ two or even more such circuits, coupled together in such a way that they respond accurately to the band of frequencies comprised by the carrier and the modulations on either side of it, but not to any other frequencies lying outside that band. This arrangement goes under the name of "band pass tuning," the meaning of which is obvious from the explanation which has just been given.

**The Process of Detection.**—The next stage of the receiver with which we have to deal is that part of it which sorts out the low-frequency modulations (which we want to convert into sound) from the high-frequency carrier-wave, which has now done its work and must be eliminated, since if it gets into the other parts of the receiver it is liable to become a nuisance. This sorting out of the wireless wave is effected by what is popularly called the detector, but which is more accurately described as the rectifier.

Before attempting to explain how the rectifier works, we must go back and consider the nature of the original wireless wave (Fig. 1). We saw that the wave set up by the oscillating valve circuits of the transmitter was a continuous wave oscillating, that is, vibrating first in one direction and then in the other, at a very high frequency—so high that neither the human ear nor wireless headphones and loud-speakers can respond to it.

Although it is oscillating at the high frequency to which it is tuned, it also has imposed on it other frequencies of music and speech which cause the high-frequency wave to fluctuate in its amplitude at a rate equivalent to the frequencies of the sounds of the music and speech which are being transmitted (Fig. 2). If then we can somehow remove the high-frequency carrier-wave, we can make use of the music and speech frequencies and translate them back into actual sounds.

It has long been known that certain crystals possess the peculiar property of allowing an

electric current to pass through them in one direction, while preventing any current from flowing in the reverse direction, and this principle was obviously what was wanted for radio reception.

If, therefore, we take a suitable crystal and connect it to our coil and condenser circuit, the oscillation produced in that circuit by the waves from the transmitter will be applied to the crystal. Now these waves are oscillating—that is, flowing first in one direction and then in the other—at a very high rate and they are, moreover, continuous. When they reach the crystal, the first half of the wave is allowed to proceed on its way, but when the second half of the wave, which is oscillating in the opposite direction, arrives at the crystal, it is promptly stopped.

Thus we get a series of current impulses which are all flowing in the same direction and which are still varying in degree in sympathy with the original sounds of the speech or music. This may

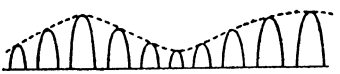

FIG. 4.

be pictured as in Fig. 4, which shows the waveform of the low-frequency modulations after the carrier-wave has been removed by the process of detection.

If now a pair of headphones be connected to the crystal, no effect will be produced by the series of half-waves (which is all that is left of the original high-frequency carrier-wave), but the low-frequency fluctuations which are still present will combine to produce a movement of the diaphragms of the headphones equivalent to the mean, or average, value of each group of fluctuations.

Since the fluctuations were originally caused by a sound, it follows (provided they have not been distorted by any of the intervening processes and that the headphones respond accurately to them) that the movement they cause in the diaphragms will be such as to recreate the original sound.

But this is not the end of the story by any means. A crystal set, even though it can perform what is almost a twentieth-century miracle, is still very limited in its scope. The wireless waves applied to it must be of a certain strength, otherwise they—or, rather, half of them—could not get through the crystal, or even if they managed that, would not have enough strength left to make the phone diaphragms vibrate. Since wireless waves get gradually weaker the further they travel from the transmitting aerial, we can see that a crystal set can only be used up to a certain distance from a broadcasting station if we are to get workable (and therefore enjoyable) results.

Again, the output from a crystal set (unless it be situated quite close to a powerful station) is nothing like sufficient to work a loud-speaker, which requires very much more current than even several pairs of headphones.

It is no exaggeration to say that the perfection of the thermionic valve revolutionised radio practice. In fact, without it broadcasting as we know it to-day would have been impossible.

**The Theory of the Valve.**—Credit for the discovery of the valve is mainly due to Sir J. A. Fleming, one of the most notable of contemporary scientists, although the very first discovery of the fundamental principle on which the valve is based was made by Edison. For some reason, however, he never followed up the line of research suggested by what came to be known as the "Edison effect" in the early types of electric lamps, and it was left to Fleming to establish the fact that the heated filament of an electric lamp actually gave off a constant stream of electric particles known as electrons.

Without going into the intricacies of the electron theory, which might only tend to mystify non-technical readers, besides occupying too much space, it will suffice to say that electrons are the component parts of the atom—itself the smallest particle into which a substance can be divided. They are, therefore, almost infinitely small.

Some substances have in their atoms a relatively large number of "free" electrons which, by suitable means, can be detached. (These substances are for convenience classed as "conductors" of electricity.) Other substances have in their atoms either a very small number, or even no free electrons, and these are classed as non-conductors of electricity, or insulators. An electric current can therefore be imagined as a stream of electrons in motion.

These free electrons are regarded as being "negative" (in the electrical sense), and it is a fundamental law of electricity that likes repel, while unlikes attract. It is also another fundamental law that, where different electrical pressures (or potentials) exist, they will always try to equalise each other by an interchange of electrons. A potential is merely an accumulation of electrons, and in the case of two different potentials, the lower of the two is regarded as being negative with respect to the higher, which is therefore positive. It is important to remember that positive and negative are relative terms, and denote a deficiency or an excess of electrons.

This may seem to be rather aside from the consideration of the radio valve, but it is essential if we are to understand the way in which the valve works.

Fleming, having discovered that the heated filament gave off a flow of electrons, then inserted in the bulb a metal plate which was given a relatively high potential by being connected to a high-voltage battery. The plate (which is also called the "anode") therefore became positive with respect to the filament and attracted the negative electrons given off by the latter, which thus formed an invisible bridge over the space between plate and filament and enabled the valve to act as a conductor of electricity in one direction only.

This valve is fundamentally identical with the crystal detector previously discussed. It will be evident that if the plate (or anode) is maintained at its steady positive potential, the current or electron flow is uni-directional—from filament to anode only. Thus our valve will replace the crystal in an oscillatory circuit and will rectify the incoming waves in the same manner.

Since it contained a filament and a plate or anode, this type of valve was known as a "two-electrode" valve, but it did not come into extensive use, since it was not greatly superior to a crystal in its effect. Shortly afterwards, a big step forward was made by Lee de Forest in America, who introduced into the valve a third electrode known as the "grid"—as it consists usually of an open spiral of wire. The construction and arrangement of the grid and filament are clearly shown in Fig. 5.

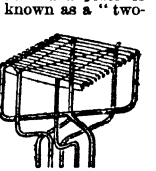

FIG. 5.

The effect of the grid is to enable the valve to be used as an amplifier as well as a detector, and also as a source of oscillations for transmitting purposes and for certain special types of receivers. Its action is as follows.

It has already been explained that the high positive potential on the plate attracts the negative electrons from the filament. The grid is interposed between the filament and the plate, and the electrons therefore have to pass between the turns of the grid on their way to the plate. The plate, owing to its high positive potential, attracts the negative electrons from the filament. If, now, the grid is also made positive with respect to the filament, the attraction is increased and a greater electron flow from the filament is thus set up. Since, however, the plate is always *more* positive than the grid, the electrons, having reached the grid, continue on towards the plate.

If, on the other hand, the grid is made *negative* with respect to the filament, it tends to repel the negative electrons from the filament, reducing the electron stream to the plate and thus decreasing the flow of current through the valve. If the grid were made sufficiently negative, it would stop the electron flow altogether, although in practice we adjust the potentials on the grid and anode so that there is always a certain amount of current flowing through the valve.

The three-electrode valve, therefore, has the great advantage over the two-electrode type in that it can be made to amplify by using the incoming oscillations received in the aerial to control a comparatively large source of power derived from local batteries or from the electric light mains. Two-electrode valves are, however, still used in radio apparatus which works from alternating current mains; their function here is to "rectify" the alternating current, that is, convert it into direct current which can be used to operate the valves in the receiver. Further consideration will be given to this point in the section dealing with mains apparatus.

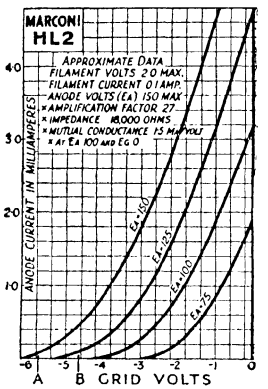


FIG. 6.

**Valve Curves.**—Let us look more closely into the behaviour of a three-electrode valve. Fig. 6 shows a family of curves relating to a well-known modern valve—the Marconi HL2. Curves are apt to look rather formidable to those who are not used to them, but they are really quite easily understood. This particular curve shows the relationship between grid volts and anode current for the valve in question. The horizontal line represents the potential of the grid with respect to the filament, while the left-hand vertical line represents the current flowing through the valve, which is known as the anode current. The general shape of each curved line shows how the filament-to-plate current of the valve alters as the grid voltage is changed. It is necessary to obtain this curve for various plate voltages, since the current increases in sympathy with this voltage. Hence, several curves are shown, those corresponding to the higher voltages being on the left of the diagram.

Let us start by putting on the grid a negative voltage which, with a particular anode voltage, will just prevent the flow of anode current. In the case of the HL2 valve with an anode voltage of 150, this turns out to be six volts. If we then reduce it to 4½ volts, we get an anode current of 0·45 milliampere (abbreviated into milliamps or denoted by the symbol ma). We then mark the point where the lines corresponding to these two values intersect. Let us now reduce the grid voltage to three, and we find at once that, due to the fact that the grid cannot repel the electron stream so strongly, more of them are reaching the plate and thus causing an increased anode current of 1·8 milliamps to flow. Again we mark the point where the lines corresponding to these figures intersect. We can continue to reduce the grid voltage in steps, obtaining an increased anode current each time and marking the appropriate point on the chart.

Finally, we reach a point where successive changes in grid voltage will have reduced the grid to the same potential as the filament. If we wish to increase the electron flow still further, we can only do so by making the grid positive with respect to the filament and thus assisting the electrons on their journey. We shall find, however, that at about this point, changes in grid voltage produce little further increase in anode current. This point, known as the "saturation point" of the valve, is reached when the filament will supply no more electrons.

When all the points marked on our chart are joined together, we get a curve marked A in Fig. 6. If we alter the plate voltage and then repeat the above process, we get a similar curve marked B, but since with a lower anode voltage we get a smaller anode current, it requires less negative potential on the grid to reduce the anode current to nearly zero, and thus give us the starting-point for our curve. Or—to put it in another way—with higher anode voltages we can use a wider range of voltages on the grid between the points corresponding to minimum and maximum anode current. We can now consider how this action of the valve is utilised in radio reception.

The filament is heated by an accumulator of 2, 4 or 6 volts, depending on the type of valve used. A high-tension battery (so called because it has a voltage up to about 150 volts for ordinary valves, as compared with the 2 to 6 volts of the accumulator or low-tension battery) has its positive terminal connected to the plate of the valve and its negative terminal connected to the negative side of the filament accumulator. A grid bias battery is connected with its negative terminal to the grid and its positive terminal to the negative side of the filament accumulator. It should be noted here that the voltages applied to the anode and grid are always determined with reference to the negative end of the filament; hence the connection of the H.T. negative and the grid bias positive terminals to the negative side of the filament battery. Depending on the value of the H.T. positive and grid bias negative values, we shall get a certain steady anode current.

**The Valve as an Amplifier.**—Now let us connect to the grid and filament of the valve a suitable circuit which is oscillating in tune with the oscillation of the station we want to receive. The incoming wave flows first in one direction and then in the other. The positive swing or half-cycle of the wave tends to make the grid *less* negative than the steady value, and the anode current is therefore momentarily increased. Then comes the negative swing or half-cycle,

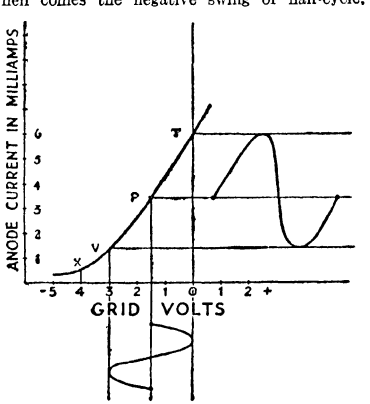


FIG. 7.

which makes the grid *more* negative than the steady value, and the anode current is thus momentarily decreased.

Refer to Fig. 7. Here we have a typical valve curve, and we have fixed the voltages of H.T, and grid bias applied to the valve so that we get a steady anode current, corresponding to the point P on the curve. The positive half-cycle of the incoming wave reduces the voltage on the grid to zero, at which point the normal anode current has risen to a value corresponding to the point T. The negative half-cycle makes the grid still more negative, and the anode current drops to the point V. By projecting these three points down-

wards below the horizontal line of the curve, we can draw in the slope and size of the incoming wave. By drawing out horizontally the corresponding values of anode current and drawing in the shape and size of the wave after it has been through the valve, we can see at once that it is exactly the same shape as the original wave, but is at the same time considerably bigger.

Thus we have amplified the incoming wave without altering in any way its shape or character. Two or three valves can be connected together, each one amplifying still further the waves passed on to them from the preceding one. The extent of the difference in amplitude between the incoming and the outgoing wave depends on the amplification factor of the valve—the higher this is, the greater is the difference in amplitude between the wave fed into the valve and that passed out by it.

In cases such as this, where the valve is used immediately after the tuning circuit, it is amplifying the high-frequency wave before it is passed on to the detector, and a receiver using one or more H.F. amplifying valves will respond efficiently to distant transmissions which otherwise would be too weak to operate the detector.

**The Valve as a Detector.**—Now we come to the valve used as a detector. For this purpose it can be used in one of two different ways. The original method and one which is still very popular in commercial practice is known as the "leaky grid" method. In this case the detector valve is connected to the preceding valve (or to the aerial circuit if no H.F. amplifying stages are used) through a small fixed condenser and a high resistance, known as a grid leak. The fixed condenser is exactly the same in principle as the variable condenser described earlier in this article, but differs in construction in that its capacity cannot be varied.

A condenser, whether variable or fixed, has the property of allowing alternating or oscillating currents to pass through it, while acting as a barrier to direct currents. The oscillating currents from the aerial circuit or the preceding H.F. valve therefore pass through the condenser on to the grid of the detector valve, but as the valve will only allow a current to pass in one direction, half the oscillations (the positive half-cycles) are allowed to go on, but the negative half-cycles are trapped, and caused to pile up on the side of the condenser connected to the grid.

The grid is thus given an increased negative charge, which causes a decrease in the anode current of the valve. We have already seen that the negative half-cycles are varying in amplitude in sympathy with the sound imposed on them, so that the decrease in the anode current corresponds in value to the average or mean of the low-frequency variations of the rectified carrier-wave. Reference back to Fig. 4 will help to explain this point. The dotted line represents this mean value of decrease in anode current. It may be as well to point out here that the diaphragms of the headphones are actuated by *variations* in the current, and they respond equally whether the current is increased or decreased. During the periods when no signals are arriving at the detector valve, the current passing through the headphones is the steady anode current, which, because it is steady, produces no movement of the diaphragm and therefore no sound.

The purpose of the grid leak mentioned in connection with the grid condenser is to allow the accumulated negative charge on the grid to leak away as soon as it has done its work, and thus leave the condenser clear to deal with the next series of oscillations when they arrive.

The other method of valve detection is known as the anode bend principle, and it possesses a certain advantage over the more usual leaky grid method in that it is less liable to cause distortion of the wave form and thus can be made to give better quality of reproduction. A disadvantage of the anode bend method is that it is considerably less sensitive than the leaky grid, and therefore needs a greater input before it will operate successfully. Recently a modification of the leaky grid principle has been adopted. Known as power detection, it involves the use of a grid condenser and leak having lower values than those formerly considered desirable in conjunction with a rather more powerful type of valve than was generally employed for the older method. Power detection can be made to give quality every bit as good as the anode bend detector, while still retaining the great advantage of sensitivity.

To understand how the anode bend detector works, let us go back to Fig. 7. When, at an earlier stage, we were considering the state of affairs represented by this diagram, the valve was being used as an amplifier, and we arranged the grid bias to give an anode current corresponding to a point half-way along the straight portion of the curve of the valve. We saw then that each half-cycle of the incoming wave produced an equal change in grid volts and a corresponding equal change in anode current in each direction. If now we arrange the grid volts to give an anode current corresponding to the point X on the bottom bend of the curve, we get an entirely different result.

The positive half-cycle, as before, makes the grid less negative, and therefore causes a big increase in the anode current. The negative half-cycle, also as before, makes the grid more negative, but now we get only a very small decrease in the anode current. The process of detection is thus complete; all the oscillations in one direction produce changes in the anode current having a value equal to the mean of the low-frequency variations of the incoming wave, while the oscillations in the other direction produce a negligible change in the anode current and therefore have no effect in the headphones.

We have now dealt in brief outline with the principles underlying the use of the valve as a high-frequency amplifier and as a detector. It is usually desirable to amplify again the signals after they have passed through the detector valve; in fact, if a loud-speaker is to be used it is practically essential. In theory, the action of a valve used as a low-frequency amplifier is exactly the same as in the case of a high-frequency amplifier. It is necessary, however, to use quite a different type of valve, because the signals are now very much stronger than when they were originally received from the aerial and are capable of effecting quite big changes in the grid volts of the low-frequency amplifying valve. We must therefore use a valve which can accommodate big variations of grid voltage without going off the straight portion of its characteristic curve, which would thereby introduce distortion owing to the fact that the changes in anode current would not be symmetrical with the changes in grid volts. Such a valve gives a fairly heavy anode current, the variations of which are also large, and since, as we have seen, the movements of the diaphragms of headphones or loud-speakers—and therefore the volume of sound produced—depend on the current variations, a valve of this type enables us to produce a satisfactory volume of sound from the loud-speaker.

**Screen-Grid Valves.**—Up to this point we have dealt only with the three-electrode valve. A few years ago there was perfected a class of valve which represented as great an advance for certain purposes over the three-electrode valve as the latter did over the original two-electrode type. This new valve, which rather revolutionised the design of the high-frequency amplifier portion of a receiving set, is known as the screen-grid valve and figures in practically every good modern receiver.

It will be obvious that, to amplify a weak signal received in the aerial, we want a valve having a large amplification factor, and in theory the higher we can make this property of the valve, the stronger can we make the signals before passing them on to the detector. Unfortunately, the three-electrode valve in practice possesses a very definite limit to the amount of amplification which can be used, for this reason:

The oscillations applied to the grid of a valve are amplified by the valve, and are reproduced in the anode circuit as exactly similar but much larger oscillations, having the same frequency and therefore being exactly in step with those in the grid circuit. If a portion of the energy in the anode circuit be transferred back to the grid circuit, the result will be to augment the oscillations in the grid circuit, which, after further amplification by the valve, cause correspondingly greater increases in the oscillations in the anode circuit. This is the principle of reaction, and as

long as it can be controlled, it is a very useful thing, enabling us to boost up the amplification obtainable from the valve.

Now in every three-electrode valve there exists an unwanted but unavoidable path—represented by the capacity existing between the grid and the plate and their respective connecting wires—whereby the oscillations in the anode circuit can find their way back into the grid circuit. This they are only too anxious to do as soon as they become powerful enough to overcome the resistance of this narrow path, and if we make the amplification factor of the valve too high, the powerful anode oscillations thus created start rushing back to the grid, where they build up the grid oscillations, which are again amplified and which make the anode oscillations still more powerful, so that more of them rush back to the grid, and so the valve gets completely out of hand and starts oscillating violently on its own.

In the screen-grid valve, an extra grid is interposed between the ordinary control grid and the anode and is kept at a steady positive potential lower than that of the anode, although fairly high with respect to the filament. This extra grid completely screens the ordinary grid from the anode, thus closing the path and stopping the anode oscillations from getting back into the grid circuit. With the screen-grid valve it is possible to develop an amplification many times greater than could ever be done with a three-electrode valve, and yet keep the whole thing perfectly stable.

**Pentode Valves.**—More recently there has been developed another type of valve containing five electrodes, and known therefore as the pentode. The particular function of this valve is to combine a large power output with a very high amplification factor, and it can be said that for practical purposes one pentode valve will develop as much power in the loud-speaker as two three-electrode power valves working on the same input. A pentode is therefore particularly useful for increasing the volume obtainable from a set having only one low-frequency amplifying stage. The pentode is gradually becoming more and more popular, especially in receivers where cost of production must be a consideration.

So far we have dealt with the general principles of radio practice, the sequence of events in transmitting and receiving technique, and with valves. We have not hitherto said very much about circuit arrangements, and we can only do so now in broad outline, as the number of possible variations and combinations of circuit details is almost unlimited.

**Typical H.F. Circuits.**—When one or more high-frequency amplifying stages are used, some form of coupling must be employed to pass on the amplified oscillations from one stage to the next. Moreover, each of the high-frequency couplings is usually tuned to the frequency of the waves which are to be received, because, as has already been explained, the maximum effect is obtained when the circuits are in resonance with the circuits at the transmitting station.

A form of H.F. coupling which was exceedingly popular before the advent of the screen grid valve, and which with modifications is still largely used to-day, is the tuned anode circuit. It comprises a coil connected between the anode of the valve and H.T. positive, with a variable condenser in parallel with it. This forms a circuit which can be tuned to the frequency of the incoming oscillations in the same manner as the simple coil in our crystal set. When thus tuned, it can, for practical purposes, be regarded as a high resistance, across which the high-frequency voltage is developed and transferred to the grid of the next valve through a fixed condenser. The grid leak is provided to allow any charge which may accumulate on the condenser to leak away to earth. It may be remarked that the condenser has to be used in order to prevent the passage of current from the H.T. battery to the grid of the valve, a condenser as we have seen acting as a barrier to the direct H.T. current, but presenting no obstacle to the oscillating high-frequency current developed across the tuned anode circuit.

A variation of the tuned anode method of coupling, and one which offers several advantages, is the tuned grid circuit. Here we connect a high-frequency choke between the anode of the valve and H.T. positive, and take the oscillations developed across the choke to the grid of the next valve through a fixed condenser, as in the previous case. Across the grid and filament of the second valve is connected a tuned circuit consisting of a coil and variable condenser. The high-frequency choke offers very great opposition to the passage of the high-frequency current, which is therefore forced to take the other path via the fixed condenser to the grid circuit of the next valve, and since this is tuned to resonance with the incoming waves, oscillations at the desired frequency are set up across the grid and filament of this valve.

Another method of H.F. coupling which is fairly largely used is the transformer with tuned secondary. A transformer makes use of the principle of induction—a very useful function of alternating current. It means that if a coil of wire carrying an alternating—and therefore rapidly changing—current is placed in close proximity to another coil of wire, alternating currents are induced in the second coil, even though there is no electrical connection between the two. By suitably proportioning the two coils, the relationship between the voltages induced by the first coil into the second can be varied.

For example, if the primary winding consists of a relatively small number of turns compared with the secondary, a much higher voltage will be induced in the secondary winding, and conversely, if the secondary has a smaller number of turns than the primary winding, a lower voltage will be induced. Thus we can have a transformer giving either a step-up or a step-down effect, the ratio of which can be varied by altering the proportions of the number of turns in the two windings.

The high-frequency transformer is generally of the step-up type, with the secondary tuned, which provides good selectivity at the expense of only a slight drop in the theoretical amplification.

**Typical L.F. Circuits.**—Similarly, with the low-frequency amplifying stages some form of coupling must be employed to pass on the low-frequency current variations from one valve to the next. The most popular form of low-frequency coupling is undoubtedly the transformer, which is based on exactly the same principle as the high-frequency transformer previously described, although it differs in its construction in that the windings are wound over an iron core. This iron core increases considerably the induction effect, and therefore makes the transformer more efficient. An iron core cannot be used in high-frequency transformers because they are carrying currents oscillating at very high frequencies, so high that the currents induced in the iron core could not move quickly enough to keep pace with their extremely rapid variations.

In the low-frequency stages the rate of variation of the currents is very much slower, and the iron cored transformer can therefore be used to good effect. And, of course, there is no need to tune the low-frequency couplings, since the high-frequency carrier-wave has been eliminated by the detector, and the rate of the low-frequency variations is determined by the modulations caused by the original sound.

A more modern method of utilising a low-frequency transformer is analogous to the high-frequency tuned grid coupling. Here, instead of connecting the transformer primary directly in the plate circuit of the first valve (which may be either the detector valve or one of the series of low-frequency amplifying valves), a high resistance is connected in its place, and the current variations are fed through a fixed condenser (which must have a much larger capacity than is required in a high-frequency circuit) to the primary of the transformer. The secondary is connected in the grid circuit of the following valve.

This method of coupling possesses the advantage, among others, that the steady anode current of the valve does not flow through the transformer winding, which is of very fine wire and might break down under the heavy anode current delivered by modern power valves. Even if there were no risk of a break-down in the winding, this comparatively heavy steady current would produce undesirable effects in the transformer.

Another method of coupling which achieved a large measure of popularity before transformers reached their present state of efficiency is the

resistance capacity coupling. A resistance is connected in the anode circuit of the first valve, while the anode is connected through a fixed condenser to the grid of the next valve, with another resistance connected between the grid and filament of the latter valve. The variations in the anode circuit of the first valve set up varying voltages across the resistance, which pass through the condenser and set up corresponding variations in voltage across the resistance in the grid circuit. They are thus applied to the grid of the valve for further amplification.

**Loud-speaker Couplings.**—We now come to the last valve in the set. If all the operations have been properly carried out in the preceding stages, we should get from the last valve a fluctuating current which is a replica of the current flowing in the microphone circuit in the broadcasting studio, and which is also of such a magnitude as to work a loud-speaker efficiently.

The loud-speaker can be connected directly in the anode circuit of the last valve, although this is not usually done nowadays, as the heavy anode current of modern power valves is likely to produce harmful effects in the loud-speaker windings. In most modern sets, therefore, the loud-speaker is connected either through a transformer or through a choke filter circuit.

The transformer used for this purpose is similar to a low-frequency transformer except that its ratio is proportioned to effect a balance between the valve and the loud-speaker. Where the electrical characteristics of the latter are approximately the same as those of the valve, a 1–1 ratio is employed. If the loud-speaker is of the low resistance type, a step-down ratio must be used, in order to match up the loud-speaker with the valve. In both cases the action of the transformer is the same. The steady anode current passes through the primary winding, but because it is a steady current it produces no effect in the secondary. The fluctuations in the current due to the signals induce similar currents in the secondary winding, which are then passed on to the loud-speaker.

The choke filter circuit is an alternative method of keeping the steady anode current out of the loud-speaker winding, but it will be appreciated that it cannot be used with a low-resistance type of speaker unless the choke is tapped in order to provide a step-down effect. The action of this circuit is as follows. The choke allows a steady current to pass through it, but offers a definite barrier to the rapidly fluctuating speech and music currents. These are therefore diverted to the loud-speaker and pass easily through the condenser, which is connected between the valve and the speaker. The steady anode current, on the other hand, cannot get past the condenser and is confined to the path offered by the choke.

It may be noted in passing that some loud-speakers incorporate a suitable transformer, and in these cases the use of an output transformer or choke filter in the set is unnecessary. The last valve is then connected directly to the primary of the loud-speaker transformer.

**Utilising the Electric Mains.**—So far we have not dealt with the very important question of using the electric light mains as a source of power for operating radio receiving sets. This is a development which has grown apace during the last few years, and there is little doubt that ultimately, when the universal distribution of electric power over the whole country has been completed, the battery type of receiver will be practically obsolete. We have confined our considerations to battery operated sets up to this point simply on the score of simplicity and convenience of explanation; the principles underlying mains operated radio apparatus are exactly the same as in the case of battery working. The practical differences between the two types are concerned with the adaptation of the mains supply to the particular needs of radio practice.

There are two types of supply mains—alternating current mains and direct current mains. In the case of the former the current is continually fluctuating or oscillating first in one direction and then in the other. It is, in fact, of a similar nature to the oscillating wireless waves we have described earlier, except that the frequency of the oscillations is very much lower—usually of the order of 50 per second instead of the hundreds of thousands per second of wireless waves. In the second case the current—as its name implies—flows steadily in one direction only.

The only part of a receiving set where alternating current can be used is the filament of the valve; the anode of the valve requires a steady voltage and current, while for grid bias the voltage must also be steady, although actually hardly any current is required for this purpose. It would therefore appear on the face of it as though D.C. mains would be much better for our purpose than A.C. mains, which have to be converted into direct current before they can be used to work the receiver.

Actually this is not the case, because the slight disadvantage of having to convert A.C. into D.C. is more than counterbalanced by the ease with which A.C. can be transformed from the voltage of the mains to practically any voltage we may happen to need in the receiver. With D.C. mains no such transformation is possible; we cannot increase the voltage of the mains, and we can only reduce it by putting it through resistances—a procedure which is inevitably wasteful, as the unwanted voltage is merely dissipated in the form of heat.

We have already studied the action of a transformer, and we have seen that, by suitably proportioning the ratio of the number of turns in the primary and secondary windings, we can obtain practically any step-up or step-down effect we like. If, for example, the voltage of the mains is 240 (quite a usual value) and we want only four volts for the filament of a valve, we can connect the primary of a suitable transformer to the mains and get four volts from the secondary winding. If we require 400 volts for the plate of a big super-power valve, we can connect another transformer to the mains and get 400 volts from its secondary. This, perhaps, sounds rather like getting something for nothing. Actually we do not, because if we increase the voltage we automatically reduce the current, as it is impossible to get out of any electrical or mechanical device more than is put into it.

**A.C. Mains Valves.**—Let us deal first with the application of A.C. mains, and see how we can adapt them for use in a radio receiver.

The current passed through a valve filament is merely used as a convenient means of heating it in order to make it give off a stream of electrons. It plays no other part in the set, and provided the electron stream is maintained at a fairly steady value it does not matter whether the heating current is alternating or direct. In practice it would not be entirely satisfactory to heat the filament of an ordinary valve by A.C., as the very fine filament would tend to cool down and heat up again in sympathy with the alternations of the supply, thus giving rise to a low-pitched hum which would be reproduced in the loud-speaker.

Special types of valves have therefore been introduced in which the filament proper is used merely as a heater and is surrounded by a tube of material capable of emitting electrons when it is warmed by the heater filament. Once this tube has attained its correct working temperature (which takes about 20 seconds after the current is switched on) it maintains a steady stream of electrons unaffected by the fluctuations of the current in the heater filament.

Apart from this practical difference, A.C. valves and battery valves are the same in principle, but as economy in current consumption need not be considered when the mains are used, it is possible to make A.C. valves much more efficient than the corresponding types of battery valves.

Modern A.C. valves require four volts for their heater filaments, so that we can operate them from A.C. mains merely by interposing a transformer which will deliver four volts from its secondary winding.

When it comes to anode and grid voltages, however, we have to do more than just transform the voltage of the A.C. mains to the value required. It has to be rectified, or converted into direct current. This is very conveniently carried out either by means of a rectifying valve or by a device known as a metal rectifier.

A rectifying valve, although different in construction from the three-electrode type of receiving valve, depends on exactly the same principle,

namely, that an electron stream passes from the heated filament to the anode and thus permits a current to pass through the valve in one direction only. A full-wave rectifying valve has two anodes, each of which looks after half of the alternating current wave, so that the whole of it is converted into D.C. If there were only one anode, one half of the alternating current wave would be rectified, but the other half would be suppressed, and we should get a direct current only half as great as the original alternating current.

Grid bias is usually obtained by tapping off through a resistance some of the H.T. voltage, and in most main sets designed for ordinary domestic use this works very well and obviates the need for a separate rectifier for the grid bias supply.

Metal rectifiers depend for their action on the fact that certain metals or metallic compounds, when placed in contact with each other, possess the property of allowing a current to pass through them in one direction but not in the other. In the best-known commercial form of metal rectifier, a series of copper and copper oxide washers are arranged alternately and bolted together, and by suitably connecting together several groups of these rectifying units, either half- or full-wave rectification can be obtained as desired.

We have now obtained from our A.C. mains a direct current of a suitable value and at the correct voltage to feed the anodes of the receiving valves. As, however, this current is really composed of a series of impulses it is not yet quite smooth enough for our purpose, and so it is passed through a smoothing circuit consisting of one or more low-frequency chokes and large capacity condensers. As we have already seen, a choke has no objection to a steady current but does not like ripples or fluctuations, while the condensers act in this case as reservoirs, accepting the slightly irregular inflow of current and allowing it to flow out in a smooth steady stream.

In the case of D.C. mains there is, of course, no need to rectify them, they merely require smoothing in exactly the same way as the rectified A.C. current. As has been previously pointed out, it is not as a rule an economical proposition to make use of D.C. mains for heating the valve filaments, since this necessitates wasting such a large amount of electrical energy in order to break down the voltage of the mains to a suitable value for the valve filaments.

Before concluding we must refer briefly to loud-speakers and gramophone pick-ups.

**Loud-speakers.**—The types of loud-speakers in general use to-day are the reed-driven or moving iron; the balanced armature and the moving coil.

In the case of the reed type, the movement consists of a horse-shoe-shaped permanent magnet with a coil of fine wire wound around each pole. A light soft iron reed is mounted so that it lies close to the magnet poles, and the cone or diaphragm is rigidly attached to the reed. The small permanent magnet exercises a steady pull on the reed, but as soon as the speech currents from the receiver are passed through the two coils, they cause the pull of the magnet to vary in sympathy with them. The reed is thus made to vibrate, and its vibrations are communicated to the diaphragm which is attached to it, setting up in the air sound waves in accordance with the vibrations caused by the speech currents.

In the balanced armature type of instrument, the reed, instead of being arranged across the magnet poles so that it is alternately pulled towards them and allowed to spring away, is pivoted in between them. When the pull of the magnet is varied by the speech currents, the reed or armature is alternately pushed and pulled at each end, and in this way its movements or vibrations constitute a more accurate reflection of the effect of the speech current than is the case in the reed-driven type of speaker. The balanced armature instrument is therefore capable of better quality of reproduction than the reed or moving iron.

The moving-coil speaker reverses the process employed in the other two types. In this instrument we have first of all a very powerful magnet which is known as the field magnet, as its purpose is to create a strong magnetic field across a small circular gap in its face. A cylindrical coil of very fine wire is suspended so that it is free to slide in and out of the gap, and the cone or diaphragm is attached to this coil and suspended at its outer edge so as to impose as little restraint as possible on the free movement of the coil.

Instead of passing the speech currents around the magnet and so causing it to vary its pull, they are passed through the fine wire coil, the magnetic field remaining constant. The effect of these currents in the coil is to set up a little field of their own which reacts with the steady field of the magnet, and so causes the coil to slide in and out of the gap in sympathy with the speech currents. Since the coil and diaphragm move as one unit, their vibrations are communicated to the air in the form of sound waves. The moving-coil instrument gives a quality of reproduction greatly superior to either the balanced armature or reed types of speaker.

The strong magnetic field required by the moving-coil speaker may be derived from an electro-magnet, which requires a separate source of current—either from a battery or from the mains; or from a special type of permanent magnet, which is, of course, independent of any external source of power. The permanent magnet type of speaker is now being rapidly developed, and so great an efficiency has been achieved with it that it will inevitably replace the electro-magnetic type.

With the increasing improvement in the quality of reproduction yielded by modern sets and loud-speakers, more attention has been given to the question of reproducing gramophone records by electrical means instead of by the older-fashioned acoustic method. After all, since they are now recorded electrically, it would seem the more logical plan to reproduce them electrically, and it is also the better plan, as a good amplifier and loud-speaker will give a much finer and more realistic reproduction, greater volume, and the facility of controlling the volume at will from maximum to a whisper.

The device by which records are reproduced electrically goes under the somewhat hybrid name of "gramophone pick-up," which is at any rate more or less explanatory of its function. Internally it is very similar in construction to the movement of a small reed-driven loud-speaker without the diaphragm, but it works in the opposite way. Instead of a current passing through the coils on the magnet, so varying their pull and causing the reed to vibrate, the needle of the pick-up is caused to vibrate by the grooves in the record, and as the needle-holder forms a part of the reed, this latter vibrates in unison with the needle. The movements of the reed in the magnetic field cause currents to flow in the coils which vary in amplitude and frequency in sympathy with the vibrations of the reed. If these currents are fed into an amplifier to which a loud-speaker is connected, we shall get a reproduction of the original sounds which caused the grooves to be made in the record.

For this purpose we need use only the low-frequency stages of the receiver, since the currents set up in the pick-up are themselves of the frequencies of speech and music. With most pick-ups, two L.F. stages will give adequate volume for all ordinary domestic requirements. With receivers having only one L.F. stage, the pick-up output can be fed into the detector valve, providing arrangements are made for altering at the same time the grid bias to a value suitable for using the valve as an amplifier.

Practically all modern radio receivers incorporate the necessary connections for using a pick-up in conjunction with them. Thus the owner of such a set, with a good pick-up and loud-speaker, is in a position to enjoy in his own home entertainment to suit his every mood and taste. The broadcasting programmes bring to him the cream of the world's talent in all spheres of human activity, and make him a privileged participator in the leading state, political, national and sporting events; records give him the power to recreate his favourite performances whenever he wishes. Truly is radio described as the greatest, the most varied, and the cheapest force in home entertainment ever given to mankind

# THE TOILET

## PEARS—THE PURE SOAP

*For particulars of Pears Famous Toilet Preparations turn to end of Book*

# Pears' Dictionary of the Toilet

BY DOROTHY OWSTON BOOTH

(*Beauty Editress*, Weldon's Publications)

The following pages are arranged in alphabetical order for the convenience of our readers, and contain the most healthful and up-to-date information concerning beauty and the toilet. This section represents very thorough and practical knowledge, and will be of real assistance in helping everyone to make the most of their appearance.

**Ankles.**—Much can be done to make ankles slim and shapely with exercise and massage. Feet and ankles should be bathed, first, in hot water with a good lather of PEARS' SOAP. After drying, massage gently, with the hands sprinkled with boracic acid powder. If the ankles are *too thin*, massage with warm olive oil. Raise the foot to be massaged and rest it firmly on a low chair, or cross the foot over the other. Massage first with stroking movements from the toes to about halfway up the calf; then, rub firmly in circular movements all round the ankle; and finish by kneading downwards, using the palms as well as the fingers.

For *slimming* or *strengthening* the ankles the best exercise is tiptoe walking. Do this with the feet bare or clad only in flat shoes or stockings. For a second exercise, sit on a fairly high chair and raise both feet off the floor; stretch the toes up and down as much as possible. Then, rotate each foot in turn, at first very slowly, and then quickly. Finish the exercises by more tiptoe walking.

The ankles cannot be perfectly beautiful unless one's footwear is chosen very wisely. Tight ill-fitting, high-heeled shoes will produce thick ankles more surely than anything else. (*See* **Feet.**)

To relieve *aching ankles* after prolonged exercise, or in hot weather, bathe them in water with a little carbolic disinfectant added. Then, after drying well, rub thoroughly with white iodine ointment, camphor ice, or a good cold cream.

**Arms.**—*To whiten* the arms when too red or sallow, scrub them, first, lightly, with a good lather of PEARS' SOAP in warm water. Rinse well, in lukewarm water, and dry briskly with a rough towel. Now rub the whole of the arms with a piece of clean soft rag dipped in a saucer containing a teaspoonful each of lemon juice and rose-water. Allow this to dry. Then massage with cold cream. Finish with a dusting of PEARS' TALC POWDER. Continue this treatment every other night. For *bleaching sunburnt arms see* **Sunburn.** *To prevent the arms becoming sunburnt*, when playing outdoor games, coat the arms with a calomel lotion and powder well with PEARS' TALC POWDER.

*For keeping the skin of the arms fine and smooth* there is nothing better than this lotion. Into a small basin put a quarter of an ounce of powdered tragacanth, half an ounce of pure glycerine, half a pint of elderflower water, and ten drops of tincture of benzoin. Stand the basin in a shallow pan of hot water and stir until ingredients are melted. When cold, strain, and put into a clean bottle. Rub a little of the lotion on the arms every night, after all other treatment is done.

The woman who has to do her own housework is lucky; for the exercise given in making beds, sweeping, dusting, washing clothes, and kneading bread all helps to make *shapely arms*. Those who do not do housework can improve the shape of their arms by kneading a thick cushion, daily, for a few moments. Swimming makes shapely arms; and the swimming movements of the arms should be practised every day. Stretching the arms above the head as though just waking from sleep is excellent. And clenching movements of the hands help to fatten the upper arms.

The growth of hair on the forearms can be made less noticeable by frequent application of peroxide of hydrogen. This should be used in the ten vols. strength, and must be diluted with rose-water, elderflower water, or plain cold water for use, in the proportion of two parts of peroxide to one of water, or in an equal quantity with ammonia.

**Astringents.**—Astringent lotions for toilet purposes are used for tightening skin which is relaxed. Enlarged pores may be toned up by their aid. The best skin astringents in general use are tincture of benzoin, witch hazel, glycerine and the unbeaten white of egg. Of these, only the last-named can be used undiluted. Benzoin has a very drying effect on the skin and only a few drops may be used in any lotion. Witch hazel should be diluted with half its amount of rose-water; and glycerine with twice its own amount of rose-water. Recipes for astringent lotions are given under the headings **Enlarged Pores** and **The Skin.**

**Baldness.**—The baldness which is the result of decaying of the hair roots through age or an inherited tendency cannot, unluckily, be cured. *Thinning of the hair*, and *temporary baldness*, however, can be cured by daily scalp massage with pure vaseline or paraffin. The latter, the quickest and most reliable hair-promoter, *must* be used away from open flame or light. An odourless kind can be obtained. Another good hair promoter is made by mixing together one drachm of glycerine, two ounces of rosemary, half an ounce of distilled vinegar, two drachms of tincture of nux vomica, and three drachms of cantharides. Another excellent old-fashioned tonic is a mixture of equal parts of strained juice of Spanish onions and well-beaten egg yolk. When well mixed, add as much cod-liver oil as the amount of the two former together. Whisk for five minutes. Add perfume to disguise the unpleasant smell. Keep the pomade in an air-tight jar.

**Baths.**—If a daily bath is not possible, the whole of the body must be washed, every day, with warm water and PEARS' SOAP. It is impossible to be thoroughly healthy if this is neglected. And without health, beauty is difficult to acquire *and* keep. *The temperature of the bath* must *not* be too great to be borne with complete comfort immediately on entering the water. Very hot baths lower the vitality, weaken the heart, and dry the skin, causing it to wrinkle and age.

*The bath water may be softened by the addition* of a little borax, bran, ammonia, oatmeal or almond meal, or pure **Bath Salts.** (*See* **Water Softeners.**) The most important aid to the bath, and to the general health, is a pure wholesome soap specially prepared to be beneficial even to the most sensitive skin, and, at the same time, to be an efficient cleanser. The value of PEARS' SOAP for the health and beauty of the skin has been proved for over a century. It is declared, by eminent scientific authorities, to be unsurpassed. After a good soaping, a cool shower or spray is helpful, if available. No one should remain in the bath for longer than twenty minutes. Brisk rubbing with warm Turkish towels should follow; and a few simple exercises may be done, before dressing, with advantage. Efficient ventilation of the bathroom, during the taking of a bath, is absolutely necessary. The window must be open several inches, especially if a gas geyser is used for heating the water. **Cold Baths** should only be taken by those who know they are perfectly robust. **Turkish Baths** and **Vapour Baths**

may be taken, occasionally, for special skin cleansing and slimming purposes. But they should never be taken by those with weak hearts or any other organic weakness. They can, of course, only be enjoyed at specially equipped places under supervision. A special **Beauty Bath** may be taken, once a week or so, for softening, whitening, and invigorating the skin. Into a bag of fine muslin put a dessertspoonful each of course oatmeal, finely shaved PEARS' SOAP, orris root powder, borax, and chopped lemon rind. Steep the bag in the bath and use it also for rubbing the body.

**Bathing, Sea.**—Only hardened, "all-the-year-round" bathers should remain in the water for long at a time or bathe several times a day. Twenty minutes is usually long enough. Never stay in the sea after you begin to shiver or feel cold. Never go out of your depth unless you are a strong swimmer; and always take the trouble to find out about tides and beach shelving at each resort you visit. Never dry in the sun with the sea salt still on the body, unless the skin has been anointed with almond and olive oils before entering the sea. Dry by brisk towelling, and take a walk and warm drink if feeling cold.

**Baths, Sea-Salt.**—Sea brine can be bought at the chemist's and used in a warm bath or cold plunge occasionally. It is very refreshing and invigorating. Dissolve a handful in the bath water.

**Beautifying Drinks.**—Pure fresh cold water is Nature's finest drink for health and beauty. An adult needs at least two or three pints of fluids a day; and, of this amount, pure water should form a considerable part. A glass of water, hot or cold, should be taken first thing in the morning and last thing at night. Fruit drinks—pure lemon or orange juice—are next in value. Milk is partly food and, therefore, not a pure beverage; but it is helpful towards a good complexion. Tea and coffee should be taken only in moderation and in weak form. (*See also* **Diet.**)

**Beautifying Foods.** (*See* **Diet.**)

**Blackheads.**—This condition of the skin, the first stage of **Acne**, is usually found in those with greasy skins. The sebaceous glands are too active, and become relaxed. To *prevent blackheads*, warm water should be used for washing, a lather of PEARS' SOAP should be given, and the face rinsed in cold water. After drying thoroughly, an astringent lotion should be used, such as a mixture of equal parts of witch hazel and PEARS' EAU DE COLOGNE. To *cure blackheads:* lather the face thoroughly, rinse in warm water, then give the affected parts good friction with a rough towel. Afterwards use a lotion made by dissolving a teaspoonful each of flowers of sulphur and glycerine, and a dessertspoonful of witch hazel, in a pint of rose-water. Keep bottled and shake before use. In *obstinate cases*, the blackheads must be pressed out, after the skin has been softened with hot water and PEARS' SOAP. This is done with the fingers, covered with soft clean rag. The pressing must be gentle, as pimples may form if the skin is roughly handled. After all the blackheads have been removed, the skin should be well massaged with the following ointment:—resorcin, fifteen gr., zinc oxide, thirty gr., white vaseline, one ounce. Allow some of the ointment to remain on all night, and repeat the massage (gently) for several nights afterwards. Each morning the face must be well washed and dabbed with the above astringent. If the blackheads form again, they must be removed after an interval of several weeks, then again after a similar interval. The process will gradually overcome them. Cases that do not yield to treatment must have the attention of a skin specialist, for neglected acne may lead to unsightly pimples and scars.

**Brassières.**—The modern, softly-rounded, feminine figure demands well-chosen brassières which *hold* the figure and do not restrict it. They should be made of soft silk, artificial silk or lace, and have firm elastic insets at sides or back. In some cases, a corselet, which combines corset and brassière, is worn. (*See* **Corseting.**)

**Breathing.**—Correct breathing is absolutely essential to health and, therefore, to beauty. It is useless to perform breathing exercises for five minutes a day and breathe wrongly all the rest of the day. *All* breathing *must* be deep and must use the whole of the lungs down to the waistline. In addition to doing regular deep-breathing exercises, one must form a habit of breathing deeply always. All inspiration of breath must be by means of the nose, for there are fine hairs in the nostrils to filter the air and lengthy passages in which the air is warmed before reaching the lungs. Deep breathing in itself is useless unless the air breathed is pure and oxygenated. There *must* be ventilation in all rooms, by day and by night. Outside, fresh air must be freely admitted, and inside, stale air be allowed out through an opening in the upper part of the room. This cannot be too strongly urged. (*See also* **The Nose.**)

**Breathing Exercises.**—At night and morning, and whenever feeling tired during the day, deep-breathing exercises should be performed at, or near, an open window or in the open air. Stand erect, with the head held up well. Raise the arms until on a level with the shoulders in front. Breathe in, through the nostrils, parting the arms at the same time until they are as far back at the sides as possible. Hold the breath for a moment or two, then let it out through nostrils or mouth, bringing the arms back to the front again. Repeat nine or ten times. Next, place the hands flat on the body at the waist. Breathe deeply and feel the whole of the lower lungs expanding into the hands. Let the breath out quickly. Now take several deep breaths with the hands held right up overhead. Do not continue breathing exercises when feeling tired. Gradually increase the number of repetitions as the body becomes accustomed to the exercise.

**Breath Sweeteners.**—If the teeth, stomach, and bowels are in perfect health there should be no unpleasantness of the breath. Liquorice is the finest breath-sweetener, when one is required. Cloves, peppermint, cinnamon are also useful, but are rather too assertive for general use. An aromatic or an antiseptic mouth-wash should, however, be used after cleaning the teeth, for the health of the mouth and gums. (*See* **Mouth-Washes.**)

**Brilliantine.**—A touch of brilliantine is needed to give a lovely natural gloss to the hair and to help it to remain attractively arranged, especially if the hair is dry. It also helps to feed the hair and make it naturally healthy and full of sheen. Rub the bristles of a clean hair brush lightly over a tin of PEARS' SOLID BRILLIANTINE, and smooth them over the hair. If applied lightly it will not take out artificial waves and curls as heavier hair oils may do.

**Brow, The.**—For treatment for curing and preventing wrinkles on the brow or forehead *see* **Wrinkles.** To make the brow as attractive as possible, in addition to eradicating lines, care must be taken in choosing a style of hair-dressing. A very high forehead needs to have the hair slightly drooped over it in parts; and, usually, a centre-parting should be avoided, the hair being parted slightly to one or the other side. A very low brow is often improved by brushing the hair straight back off the face; and the hair, if parted at all, should be parted in the centre.

**Carriage.**—A good carriage is essential to make a woman attractive and full of charm. She cannot hope to be entirely attractive if she slouches and walks badly, however lovely her features may be. In any gathering, the woman who attracts the most admiration and attention is always the one who holds herself with a "regal" upright carriage and who walks well. To gain a good carriage, one must practise standing, sitting, and walking before a long mirror. The Victorian method of teaching correct walking by means of a book carried on the head is excellent. The book must be held on the head, without being touched by the hands, as one walks about the room, practising the long swinging walk which is so graceful. It is quite possible to cultivate a perfect carriage without the help of a book, if one merely remembers to hold the head high with chin drawn well in, *always*, when walking, standing and sitting. Concentration on the correct deportment must be given until a habit of good carriage is formed. Fewer backaches and headaches will be suffered then. In walking, hold the shoulders still, the head well up, and let the movements be from the hips. The centre, or ball, of the foot must touch the ground first; and the feet should be kept in an almost straight line. Toes turned out too

much are as ugly as those which turn inwards. *Daily exercises will keep the hips and knees supple.* (*See* **Exercises.**)

**Catarrh.**—Catarrh of the head must not be *neglected, as it may lead to many ills. When it persists and the cause is unknown, a doctor should* be consulted. There must be irritation or inflammation causing the flow of mucus. This cause must be removed before a cure can be effected. In mild, or intermittent, catarrh, great relief is obtained by sniffing salt water up the nostrils. Dissolve a large pinch of table salt in an egg-cup of cold water. This, if done regularly, daily, will prevent catarrh being produced by dust in the air, and will also, often, prevent colds.

**Chapped Hands.**—If the skin is sensitive or over-dry, the hands will become chapped in cold weather. Care must be taken to dry them thoroughly after washing. Very hot water must never be used; and a good soap, such as PEARS', is essential. Every night the hands must be well rubbed with either glycerine and rose-water, or any good skin-softening cream. Very bad chaps can be cured in a night with this excellent old-fashioned remedy: Scrape half an ounce of best yellow bees'-wax into fine shreds. Put in a small basin with an equal amount of olive oil, and stand in a larger basin of hot water until the wax is dissolved. Stand aside to set. Another good cream is made by warming an ounce of well-clarified mutton fat with an ounce of white wax, half an ounce of lanolin, and half an ounce of oil of sweet almonds. Beat together until formed into a thick cream. Keep in a closed jar.

**Cheeks, Hollow.**—When the cheeks are thin and there is no ill-health causing this, *gentle* massaging with circular movements, with the finger-tips moistened with slightly warmed cocoa butter, will often improve their contour. A fattening diet should be taken, including small doses of cod-liver oil and malt. Facial exercises will also help. These should consist in smiling and straightening the face alternately; pretending to blow out a candle; and opening and closing the mouth, slowly, and then quickly.

**Chin, The.**—There must be a clear-cut line under the chin, if the face is to be attractive and youthful-looking. Holding the head well up without "slumping" will do much towards keeping the chin clear-cut. Massage and exercise must be given in addition. For the massage, use firm strokes beginning with the finger-tips meeting in the centre of the chin immediately under the bone and pressing downwards and back towards the ears. The fingers should be moistened with very cold water or with an astringent lotion, such as half an ounce of spirits of camphor in two ounces of rose-water. After massaging, do the following exercises: First, push out the chin as far forward as possible, and then draw it back, lifting the head upwards and backwards until bent as far back as it will go, drawing the chin in all the time. Next should follow head bending movements in all directions—down, up, right and left. Spend two or three minutes on these exercises; then massage the chin again, holding the head up all the time. If this treatment is followed out regularly, every day, any tendency to "double chin" will be checked. It is a good thing to bandage the chin, after exercise and massage, to prevent the throat becoming flabby after the reducing. Soak a pad of cotton wool in the camphor and rose-water lotion, or in one made by mixing together half an ounce of glycerine, half a dram of alum, an ounce of Eau de Cologne and half an ounce of elderflower water. Spread the pad under the chin; and tie it firmly in place with a soft scarf tied over the top of the head.

**Chiropody.**—Few people realise that there is a distinct connection between corns and other foot ailments and the complexion. A painful corn will cause one to walk badly and throw the whole of the spinal column and the internal organs out of place. Nervous disorders, indigestion, and other troubles follow, resulting in sallowness of the skin and dullness of the eyes. Then, too, the pain from corns and bunions causes lines on the face which are difficult to eradicate. Any corns, bunions, and other growths or malformations of the feet, therefore, should have immediate expert attention. *Simple corns* and bunions can be cured at home; but long-continued trouble demands the attention of a qualified chiropodist. To treat a simple corn at home, soak the foot first in hot water with a very *plentiful lather of* PEARS' SOAP *to soften the growth.* Several different methods may next be followed. A small piece of washing soda, dipped in lukewarm water, may be rubbed on the corn for a few moments. The corn may be painted with a mixture of seven grains of salicylic acid and one drachm of flexible collodion. A solvent powder made by blending together one part of salt sorrel and two of potash may be spread over the corn and covered over with a small bandage of fine soft muslin. Or, an excellent and homely remedy is a small slice of tomato laid over the corn and bound on with soft thin rag. In the two latter cases, the remedy should be left on all night and the bandages removed in the morning. Continued use of any one of these treatments will be necessary for about a fortnight, when the corn will be found to have disappeared or be ready to pull out quite easily with the fingers. To alleviate pain in the corn during the day, while under treatment, a thin plaster should be worn over the corn. A small soft corn can be cured by regular painting with lemon juice. Or a tiny pad of cotton-wool saturated in camphorated oil may be bound over the soft corn. Relief from the pain of *small bunions* can be obtained by cold compresses and resting the foot. Troublesome bunions must be seen by a chiropodist or doctor. To *prevent corns and bunions* reappearing, well-fitting shoes must be worn. (*See* **Feet.**)

Clay Packs.—Clay packs, used occasionally, are excellent for special cleansing and for toning up the skin generally. There are many different packs on the market, and careful instructions are given on the method of using them. An excellent pack can be made, very easily and cheaply, by mixing two tablespoonfuls of PEARS' FULLER'S EARTH to a firm paste with lukewarm water. This should be spread over the face, and left on for twenty minutes. It should then be rinsed off with lukewarm water, followed by a cold rinse. Another splendid pack is made by mixing a tablespoonful of fine oatmeal with the same quantity of PEARS' FULLER'S EARTH, and making into a paste with equal parts of milk and water. This is used in the same way as the former pack.

**Clothes, The Care of.**—To achieve that much-desired appearance of perfect grooming it is necessary to take great care with one's clothes. No garments should be put away without being first shaken and brushed. They must be brushed again before being put on the next time. The final task, when dressed, should always be another brushing to remove unsightly loose hairs or powder from the clothing. Dresses and coats should always be hung on dress-hangers and should be aired after wearing by hanging in a current of air, outside the wardrobe or cupboard. The underclothes should be hung up, when taken off, and not folded up in the fashion so beloved of our Victorian grandmothers. Every garment needs to be aired, and this cannot be done if folded tightly. The clothes should be hung over the backs of chairs, on the bedrail or on hangers on hooks or on the outside of the wardrobe. In these days of thin, simple underwear of silk or artificial silk and fine wool, it is easy to have constant change of underclothes; and this helps, greatly, in making the modern woman feel, as well as look, "bien soignée." Lingerie collars and cuffs on dresses must be spotless and changed as soon as soiled in the slightest degree. Muslin, georgette, silk, or crêpe de Chine accessories can be quickly cleaned by washing or by dipping in benzine or petrol, though this latter process *must* be done out-of-doors and *right away from any open flame.* A light collar that is fixed to a dress, or coat, should be lightly brushed over, every time the garment is taken off, with a piece of clean rag moistened with benzine. Dark suits, dresses and coats can be freshened up with plentiful brushing and shaking, followed by a quick, light rub with a sponge wrung out of warm vinegar. Small stains, except those caused by tea, coffee, egg, or strong acid, can usually be removed by rubbing, lightly, from the outer edge of the stain inwards, with clean rag moistened with either ammonia and water or peroxide of hydrogen diluted with cold

water. Tea and coffee stains can usually be removed from white or coloured material with glycerine, any excess glycerine being afterwards removed with methylated spirits. Grease spots are best removed with a fairly hot flat-iron over clean thick blotting-paper. Stains which do not yield to glycerine or ammonia may often be cleared away with eucalyptus oil. A slice of raw potato will remove stains left by mud on black material. And a soft rag dipped in turpentine will freshen up black cloth. Ribbon bands on hats should be removed and cleaned in benzine when stained or spotted. Stockings must be washed after every day's wear. Shoes, of course, must be kept spotlessly clean and heels must never be allowed to get worn down at the edge. Above all, remember to air and press clothes after cleaning, and to inspect one's appearance carefully in a long mirror when dressed.

**Clothing, Hygienic.**—It is commonly known that wool, however thin, should be worn next to the skin. Mixtures of silk, or artificial silk, and wool are next in value; while pure silk, or artificial silk, is better for "next-to-the-skin" clothing than cotton. Cotton holds moisture too readily and allows heat of the body to be lost through its texture. All clothing should be loose; and quality of material is far more important than quantity in number of garments. All underwear must be easy to launder, as frequent change is essential to health and appearance.

**Cold Cream.**—This is one of the most necessary articles of the toilet. It is valuable for cleansing the skin, for feeding the tissues, and as a foundation for powder. A good cream can be made cheaply from the following recipe: Shred an ounce of white wax, half an ounce each of cocoa butter and spermaceti together into a small basin. Stand in a larger basin with some hot water in, until all ingredients are dissolved. Add an ounce of almond oil, two ounces of rose-water, and a few drops of attar of roses. Take out of the hot water and beat, lightly, until formed into a smooth cream. Put into closed jars when cool.

**Colours for Health.**—The choice of colours for surroundings must vary with the individual. Some people find blue and green inspiring and helpful to a happy atmosphere; while others feel at their best when surrounded by soft yellows or pinks. As a general rule, doctors are agreed that green, blue, and yellow are the "healthiest" colours, and that red and dark brown are injurious to health, especially to the health of nervous subjects.

**Colours to Wear.**—Broadly speaking, blondes should wear pale shades of any colour and darker shades of only cool colours such as green and blue. Brunettes look well in deep tones of all warm colours, such as red, rose-pink, browns and yellows. It is impossible to prescribe the exact colours suitable to every type; for each member of each type is a little different in colouring from her sister. It is a wise rule, therefore, to match up the colour of the eyes or hair as far as possible; at any rate, the colour that brings out the beauty of the eyes should be the best choice. Blondes of all types look well in pastel tints, in white, black, beige, grey, and most blues and greens; but they should, usually, avoid bright colours, except scarlet, which is generally becoming to the fair-haired, especially if combined with white. Medium-haired women and brunettes do not look their best in pastel tints, except for evening wear. They *can* wear bright shades, however, and should do so when possible. For them, black should be slightly relieved with white, beige, cream, palest pink, flesh, or oyster. And "off-white" tints will suit them better than dead white. They look well in all pinky shades, and should choose warm browns and beige tints in preference to cold ones; and almost any shade of yellow will become them. The auburn-haired will find their best choice in green, certain blues, black, white, pale yellow, and various shades of brown, but not grey.

**Combs.**—The best combs for the hair are those with blunted teeth which will not tear the hair and scalp. Those made of bone or of fire-proof celluloid are, therefore, much better than those of metal. The comb must be kept scrupulously clean, if the hair is to be glossy and healthy. It should be washed daily, or every other day, in hot water, with plenty of soap lather and a few drops of ammonia.

**Complexion, The Care of the.**—Utter cleanliness is the first essential in the care of the complexion. Soap and water are still Nature's own special cosmetics. *But* the soap *must* be the purest and most emollient soap obtainable to cleanse the skin without injury and to make the water sufficiently soft to keep the complexion beautiful. PEAR'S SOAP is guaranteed to be the purest, most emollient, and most soothing of all toilet soaps and is, therefore, ideal for making, and keeping, the complexion beautiful. The face must be washed in warm, not hot, water, with a light lather of PEARS' SOAP, and a rinse in cold water to follow, every night. The morning wash may be with warm or cold water as preferred, but cold is good for toning up the skin ready for going out into the outdoor atmosphere. The nightly wash should follow a light cold creaming to remove any powder and vanishing cream. After the wash, a light patting with cold cream or with a good astringent lotion—(*see* **Enlarged Pores and The Skin**)—may be given, and any superfluous cream should be wiped off before getting into bed, so that the skin does not become clogged during the night. In the morning, if there is a tendency to sallowness or clogged pores, use a light astringent lotion, such as equal parts of witch hazel and elderflower water, before using vanishing cream and powder. (*See* **Make-up.**)

A dull or sallow complexion can be helped by bathing the face nightly with milk in which a little flowers of sulphur have been steeped for an hour. A mixture of equal parts of lemon juice and milk is also excellent. In either of these treatments, mix a small quantity in a saucer and use with a pad of cotton wool or cleansing tissue.

Plenty of rest and sleep is essential to a good clear pink-and-white complexion. There must be fresh air in the bedroom; and the bedclothes must be light in weight. (*See also* **Rest and Relaxation,** and **Sleep.**)

To *improve* the *colour* of the *complexion*, bathe the face alternately with fairly warm water and cold. Add a small quantity of PEARS' EAU DE COLOGNE to the cold water. Dry by gentle rubbing with a soft towel. Then, with a very fine scent spray filled with PEARS' EAU DE COLOGNE, spray the cheeks lightly from a short distance. This will tone up the skin and bring a healthy colour to the surface.

Fresh air and exercise play an enormous part in the beauty of the complexion. Fresh air is as necessary in the home and business premises as out-of-doors. It is useless to go for walks to "get the air" if one spends the rest of one's time shut in airless, unventilated rooms. Windows *must be* open, night and day. Stale air produces sallow complexions very readily. (*See also* **Exercise.**)

*Diet* has an important connection with the complexion. Simple food, varied, and comprising plenty of vegetables, salads, and raw ripe fruit, and including the drinking of much cold water and fruit drinks, is vital to a clear complexion and a good healthy, beautiful colouring. Fresh, well-washed watercress is one of Nature's finest complexion beautifiers and should be eaten at least at one meal a day. (*See* **Diet** and **Beautifying Drinks.**)

For protecting the complexion from the sun, and for clearing the skin after sunburn, *see* **Sunburn** and **Sun-Tan.**

First and foremost, however, in all matters of the complexion, remember the testimony and commendation of the late Madame Adelina Patti, that "PEARS' SOAP is matchless for the complexion."

**Corns.**—*See* **Chiropody** for treatment of corns, and **Feet** for advice on preventing corns by wisely chosen footwear.

**Corseting.**—Modern corsets are works of art and designed, by experts, to *mould* the figure into natural, attractive, feminine lines. There is no tight-lacing and restriction; but, owing to its careful cut, the corset of to-day merely provides a foundation garment to accentuate the normal waistline and give a perfect figure contour under chic dresses. The success of the corset depends on its correct shaping to the figure of the wearer, on the elasticity of the material of which it is made, on the support given, by shaping, to the

vital organs of the body, and upon its correct size as to waist and hip measurement. It is necessary, therefore, to be fitted by an expert corsetière, and this service can be obtained at any good store. With a well-fitting corset must be worn a good brassière, cut on hygienically correct lines for moulding and holding the figure. (*See* **Brassières.**) If preferred, a corselet can be worn which combines corset and brassière in one garment. This covers the whole figure and should be so shaped as to give support wherever needed. Some corselets are made with under-belts of surgical elastic and straps designed to give support to the abdomen. These are excellent for women who stand or walk a great deal, as they prevent any painful dropping of the abdomen. They also ensure the correct flatness of the lower half of the body. In selecting a corset or corselet, be sure to get one made of material that will wash satisfactorily. Two garments exactly the same in shape, size and material should, indeed, be purchased at a time. This will allow for regular laundering, an important feature in a garment worn near the skin. Even the very slim woman is well advised to wear a good modern corset and *keep* her figure slender and supple.

**Cosmetics.**—As has already been said, soap and water are Nature's first and best cosmetics. And the purity of PEARS' SOAP makes it an indispensable cosmetic on the toilet table of every woman who is determined to be healthy and attractive. A good cold cream and a reliable vanishing cream come next in importance. A recipe for the former has been given under **Cold Cream.** *Astringent lotions, complexion tonics,* and *skin foods* are dealt with under their own headings. PEARS' VIOLET POWDER and TALC POWDER should have their place on every toilet table. They are soothing and safe. *Rouge* is dealt with under **Make-up,** and *lip salves* under their own headings. *Lotions* and *creams* for the *hands* and for the *hair* are also dealt with in their own place. In buying any cosmetics, it must be remembered always that purity is the first and last essential.

"**Crowsfeet.**"—(*See* **Wrinkles and The Face.**)

**Curling Fluids.**—When the hair is curled artificially, it is helpful to moisten the hair with a fluid which will fix the curl or wave and make it last, even in damp or hot weather. One old-fashioned curling fluid is made by boiling a tablespoonful of bruised quince seeds in a pint of water until the amount of fluid is reduced to three gills. Strain the decoction when cold and add to it a tablespoonful each of PEARS' EAU DE COLOGNE and either alcohol or bay rum. Keep bottled. Shake before use. Another good recipe merely requires half an ounce of gum tragacanth to be dissolved in a teacup of warm water. Allow to stand until of the consistency of syrup. The more difficult the hair is to curl, the thicker the syrup needs to be. If too thick, it can be thinned with water, rose-water or bay rum. It is quite harmless and will not make the hair sticky. Moisten each strand of hair slightly before curling.

**Curling the Hair.**—Before deciding to curl or wave straight hair a considered judgment should be formed. Many women really look far more attractive with glossy, well-groomed, daintily-arranged straight hair than with it artificially curled or waved. If it must be curled, a decision must also be made as to whether a permanent wave, a regular Marcel wave, or a home curling with soft curlers or irons is best or most suitable to the pocket. A permanent wave can be given for as low a price as twenty-five shillings up to three or four guineas. It lasts for about six months; but the wave must be carefully "set" after each shampoo. It should not harm the hair; but, as hair varies in texture and type, the advice of a hair specialist should be obtained before deciding to have a permanent wave. Certain hair will not take the wave and only becomes frizzy. A Marcel wave does not harm the hair at all if done by an expert. It remains in the hair for a period varying from ten days to a month or even more. Home curling can be done well by means of soft silk-covered, or rubber, curlers; but this, of course, only curls up the ends of the hair and does not produce a "wave" close to the head. Curling fluids, recipes for which are given above, are helpful in home curling.

**Cuticles and Cuticle-Removers.**—The cuticles should be pressed back with the towel, every time the hands are washed and dried. If this is done consistently, as a matter of habit, the cuticles will never grow up over the nails and look unsightly. If they have been allowed to grow, it is unwise to use any acid cuticle-remover, as this irritates the skin round the nails, making it split. Also, the cuticles grow more quickly after acid is used. A cuticle-cream is always to be preferred. There are many good makes on the market, or one can be made by mixing together a teaspoonful each of lanolin, olive oil, oil of Portugal, and clear honey. Blend the ingredients well, and keep in a well-corked bottle. Paint a little round the cuticles after soaking the fingers in hot soapy water and drying them well, pushing back the cuticles. Leave the cream on until dried into the skin. (*See also* **Manicure.**)

**Cysts, Surface.**—Small cysts, or hard lumps, on the face, neck, hands, or body should never be neglected. As they cause no pain, they are apt to be treated as of no account and left, until, through some disorder or injury, they may become septic or "malignant." They may never be troublesome at all; but there is always a slight danger. A doctor's advice must be sought, as there is no amateur way of dealing with them.

**Dandruff.**—Simple dandruff or scurf is merely the natural wearing away of the scarf or surface skin of the scalp. This is easily removed by plentiful brushing and scalp massage. More serious dandruff, with great irritation of the scalp and an excessive amount of scurf, is sometimes caused through debility or through rheumatic or gouty tendency and should be treated internally under medical orders. Before consulting a doctor, however, external treatment may be tried and may be found satisfactory. The scalp should be well massaged, every night, with the fingers well moistened with a mixture of equal parts of olive oil and lime-water well shaken together, and mixed only in small amounts at a time. When there is no irritation but merely excessive scurf, it is well to try a tonic made of one drachm of spirits of wine, half a drachm of glycerine, half an ounce of rosemary, half a teaspoonful of spirits of ammonia, and three ounces of rose-water. Rub plenty of this into every part of the scalp nightly. When dandruff persists, shampoo the hair at least once a week with a thick lather of spirit soap—or use two parts of green soap and one part of spirits of wine—rinsing several times in warm water. A hot olive oil massage of the scalp, twenty minutes before shampooing, also helps considerably.

**Dentifrices.**—Only dentifrices guaranteed to be pure and free from injurious acids and grit should ever be used. PEARS' DENTAL PASTE fulfils all the requirements of a perfect dentifrice. It is made of the purest materials under the supervision of skilled chemists. It is antiseptic and strengthens teeth and gums. For those who specially prefer a tooth-powder, the best is a mixture of equal parts of precipitate of chalk, powdered cuttle-fish, and powdered charcoal, with one-twelfth part of cream of tartar. Blend well. Use alternately with PEARS' DENTAL PASTE.

**Deodorants.**—A simple home-made deodorant is in the form of powder. Bake some lump alum, on a tin plate, in a very slow oven. When chalky in appearance, cool slightly, and crush to a fine powder. Keep in air-tight tins. Dust on to the affected parts, after washing, and follow with a dusting of PEARS' PEAR-BLOSSOM TALCUM. If a *liquid* deodorant is preferred, mix half an ounce of powdered borax, three-quarters of an ounce of powdered alum, the juice of a large lemon, and a quart of boiling water. When cold and well mixed, bottle. If there is persistent, excessive, and objectionable perspiration bathe the parts with very hot water and then lather well with formalin soap, allowing it to dry well into the skin. Dust, afterwards, with PEARS' TALCUM POWDER. A five per cent. solution of tannin also makes a good deodorant.

**Depilatories.**—Unfortunately there is no satisfactory and absolutely permanent hair-remover. To be of lasting use, a depilatory must contain injurious acids. Much can be done with superfluous hairs, however, by pulling them out with small surgical tweezers, where the hairs are not too prolific. Bathe the part, afterwards, with a mixture of equal parts of peroxide of hydrogen and rose-water to bleach any remaining small

hairs. This mixture, or one of ammonia and peroxide in equal parts, will bleach unwanted hair and, in time, rot the roots. Electrolysis is said to be a reliable hair-remover. It can only be given by an expert. (*See* **Electrolysis.**)

**Diet.**—Diet is of tremendous importance to the appearance. To obtain, and keep, a clear attractive complexion and a slender figure, one must omit all rich, greasy, highly-flavoured foods, rich cakes, and pastries. Meals should be, as far as possible, at regular times; and no food should be taken in between. Three meals a day are sufficient. If afternoon tea is taken, it should be merely tea to drink, with a biscuit or small piece of plain home-make cake, unless only a light supper is taken later. Only one meat meal a day is necessary. The amount of meat taken should be small; and fat meat should be omitted. The rest of the diet should consist of brown bread in preference to white always; butter; eggs, or white fish, or cheese; fresh salads, especially tomatoes, watercress, and raw carrots; cooked vegetables, but not large amounts of potatoes or turnips; fresh ripe fruit when possible in preference to cooked; simple milk puddings or very light steamed ones in small quantities; small amounts of prepared cereals with milk; weak tea; weak coffee. If there is any tendency to indigestion, raw vegetables and raw fruit should never be taken at the same meal. Cooked fruit should have very little sugar with it. Brown sugar, honey, or treacle should take the place of white sugar. Brown sugar is specially good for any nervous trouble and can be taken in spoonfuls or on brown bread-and-butter. It is not fattening.

All vegetables should be cooked in very little water and as quickly as possible to preserve the vitamins and salts. Lemon and orange juice should be taken daily. One to two of each a day will provide sufficient of the essential vitamins. Plenty of fresh water should be taken between meals and first thing in the morning. Finally, it is essential to masticate all food thoroughly. "Bolted" food quickly produces indigestion and sallow complexions.

**Ears, The.**—To keep the ears as flat to the head as possible, children's hats must not be allowed to press on the tops of the ears or behind them. Any tendency to sticking out should be checked by the wearing of a special cap or a scarf tied round the head over the ears, at night.

**Egg Packs.**—These are excellent for preventing or curing wrinkles and for closing enlarged pores. After washing, smear the whole face with slightly-beaten white of egg. Allow to dry; and then give a second coat. When this has dried on, smear the face with yolk of egg, also lightly beaten. This should remain on for fifteen minutes, and the face should then be washed in tepid water and PEARS' SOAP. Dry very gently. Give this treatment once every two or three weeks, or as required.

**Egg Shampoos.**—For occasional special cleansing of the hair and toning the scalp, beat up, stiffly, the white of a fresh egg. Lather this all over the head, rubbing it well into the scalp. Then rinse off in warm water with a good soap-jelly lather. For instructions on making soap-jelly *see* **Shampooing.** Rinse several times in lukewarm water. For dark hair, the whole egg may be used if liked.

**Elbows.**—For special softening and whitening of the elbows, massage with warm cocoa butter, after a good rubbing with lemon juice and hot water, in equal parts. (*See also* **Arms.**)

**Electrolysis.**—This can only be given by a qualified expert. It is used for removing hair, small surface growths, and scars, under medical advice. It also gives relief in neuralgic affections.

**Enlarged Pores.**—Repowdering over old powder and cream, or the use of too hot water for washing, are the most common causes of enlarged pores. To cure them, therefore, use only lukewarm water and finish with cold; and always remove powder and cream before renewing the make-up. A good astringent lotion must be used, night and morning. A mixture of equal parts of witch hazel and rose-water, or witch hazel and PEARS' EAU DE COLOGNE, or witch hazel and elderflower water, are all excellent for the purpose. Keep a small quantity of the lotion ready mixed in a bottle. Dab the skin plentifully, after washing, and, whenever possible, before making-up. Do not leave cream on the face all night, but wipe it off before getting into bed, having left it on as long as possible after washing. If the skin is dry in addition to having enlarged pores, use this lotion instead of the ones mentioned above. Stir a quarter of a teaspoonful of boracic acid powder into a quarter of a teacup of boiling milk. Add two teaspoonfuls of elderflower water, a teaspoonful of glycerine, and eight drops of benzoin. Keep in well-corked bottle, and shake before use.

**Exercise.**—Though regular exercise is necessary for health and good appearance, too much or too strenuous exercise should not be indulged in except by those training for some sport or physical work. Walking is one of the best exercises, as it uses most of the muscles of the body and invigorates the blood flow; but excessive walking is not good for those unused to it. In this, as in everything else, moderation is wise. Daily physical exercises should be done, on rising, and when wearing few and light clothing. They must be done in a well-ventilated room. They must not be continued when feeling fatigued. *Sufficient* exercise will reduce superfluous weight and will also increase to the normal those who are under weight. *But excessive* exercise of any kind may injure the health and enlarge some muscles, destroying the symmetry of the normal figure which everyone desires to possess.

**Exercises for Health and Beauty.**—Stretching is one of the finest exercises. Stretch the whole body to the utmost before getting out of bed in the morning. Then, standing, stretch again, raising the arms above the head and stretching the fingers as high as possible. Then, standing near the open window, do the *breathing exercises* given under that heading above. Next should follow head turning and bending movements to beautify the neck—bend the head forward and downward, then stretch it up and bend backward, bend to the left and right alternately, keeping the body quite still all the time. Now do alternate head turning to right and left, keeping the shoulders rigid. Body bending exercises should follow, and the best of these is the familiar bending from the waist "to touch the toes." Stand with feet firmly together, heels touching, toes very slightly apart. Raise the hands above the head. Now bend forward and downward from the waist until the fingers touch the toes or the ground in front of them. Stretch up again to the normal position. Repeat this several times. This exercise is splendid for slimming the hips and waistline. Exercises for the ankles and legs should follow; these, including tiptoe walking, are given under the heading **Ankles.** For further hip slimming, the trunk bending sideways exercise can follow next. In this, place hands firmly on the hips, keep the head rigidly in line with the shoulders, and bend alternately to the right and to the left as far as possible. Finish by more deep breathing. These exercises are quite enough for all ordinary general purposes. More elaborate ones may be done by those who feel special need. The great virtue of any exercises, however, lies in doing them regularly, every day, not just now and then.

**Expression.**—No face can be beautiful, however perfect the features and colouring may be, if the expression is hard, bored, peevish, or discontented. No one admires the gushing woman or the woman who gives way, visibly, to every passing emotion, on the other hand. But the face that attracts most admiration is the one which looks *vital*, which indicates the owner's interest in life and people, and which shows her to be kindly, intelligent, and tolerant. Every woman should cultivate an interesting smile, not a smirk or a fixed grin, but a kindly, intelligent smile ready to flit across her face at the right moment. And to cultivate such, as well as the happy interested expression already referred to, it is necessary to make oneself interested in life and people around one. It is necessary to learn to push one's own feelings and worries into the background and to take intelligent interest in the doings and happiness of those one meets. Popularity and beauty will follow quickly if one masters these habits of mind.

**Eyebrows.**—The beauty of the eyebrows lies in their neat appearance. Their line should be clear-cut and very neatly arched. When the brows are very full and heavy, it is sometimes necessary to pluck some of the hairs out in order to give a neat line. This is, of course, rather a

painful proceeding and must be continued from time to time. When plucking is not desirable, much can be done to shaping the eyebrows by regular brushing. A proper eyebrow brush can be bought, or a tiny soft tooth-brush can be kept for the purpose. Brush the brows always after powdering to remove powder from the hairs. *For darkening the eyebrows*, brush them every night with a mixture of sage tea and castor oil. To make sage tea, boil a handful of dried sage in a pint of water for half an hour. Strain when quite cold. Dilute as required with an equal part of toilet castor oil, mixing carefully. *For making the brows grow thick and glossy*, brush nightly with warmed vaseline, or with a mixture of equal parts of olive oil and almond oil. After brushing, press the eyebrows into a good shape by placing the thumbs under, and the finger-tips over, the brow and running them firmly along from the centre outward.

**Eyelashes.**—The lashes can be made thick and curling by regular pressing upwards with the finger-tips. They should be brushed, very lightly, with the same lotion that is being used for the eyebrows. Close the eye tightly, and brush the edges of the lids with a soft camel's hair paint-brush or the eyebrow brush. Brush the lashes, after powdering, with the brush moistened with rosewater. When the brush is not available, moisten the finger-tips and remove powder with them

**Eyelids.**—To show up the beauty of the eyes, and keep a youthful appearance, the skin of the eyelids must be unwrinkled and a clear colour. A good astringent skin food will do this. Here is a good recipe: Mix together a teaspoonful each of boracic acid powder, almond oil, elderflower water, glycerine, and well-beaten white of egg. Keep in a covered jar, and mix a fresh supply every ten or twelve days. *Pat* a small amount of this into the eyelids and the skin round the eyes, at night, after washing. Do *not* massage, as you may stretch the skin. If the lids are sallow, add an equal quantity of lemon juice to the other ingredients. Sufficient sleep is also essential to keep the eyelids youthful. (*See* **Sleep.**)

**Eyes.**—The colour of the eyes matters little so long as they are bright, youthful, clear, with bluish "whites" and not dull yellowish ones. This means that the eyes *must* mirror good health of body and of mind. A regular life, sufficient sleep, fresh air, exercise, plain food, and rest are absolutely necessary. A sluggish liver, bad digestion, and lack of air soon show dull eyes with yellow "whites."

The eyes need bathing and an occasional tonic, just as does the face. An eye-cup is a necessary article of the toilet. One can be bought for six-pence or less. Fill it, freshly for each eye, to the brim with a boracic lotion; and lower the eye into the bath, which must be held close to the face. Open and close the eye while under the surface of the lotion in the cup. To make the lotion, dissolve a teaspoonful of boracic acid powder in half a pint of boiling water. When cold, put into a clean bottle and keep well-corked. It will keep any length of time, so larger quantities may be made if liked. Another good eye lotion is made by adding a teaspoonful of rose-water and six drops of witch hazel to a quarter of a pint of cold water. This is sufficient for one bathing of both eyes.

Protect the eyes from the strain of working in a bad or flickering light. Avoid reading in a moving vehicle. Shade the eyes from strong sunlight, and, whenever possible, rest them by looking fixedly at something green, at intervals while doing eye-tiring jobs. Eye exercises are good for keeping the eyes youthful and for strengthening the sight. The eyes should be rolled round, slowly and quickly. Next they should be closed while counting ten, then opened quickly and turned to stare at a bright light for ten counts. This should be repeated nine or ten times. Then, practise in looking as far to each side without turning the head should be done.

**Face Cleansing.**—As has already been said, perfect cleanliness of the face, obtained by means of washing in soft water with a pure soap, such as PEARS', is imperative if the skin is to be beautiful. Steaming gives an extra cleansing occasionally. Before washing, and before re-powdering, the face must always be cleansed of powder, cream and dust with soft cleansing tissues, which are bought very cheaply in hygienic packages at any good chemist's, or with pads of cotton-wool, moistened with cold cream. Throw away tissue or wool after use. Other details of face cleansing are given under the **Care of the Complexion** and **Enlarged Pores.**

**Face Massage.**—Unless one has been taught exactly how to massage correctly, it is advisable to leave definite face massage severely alone. Wrong massage will only produce more ills than it sets out to cure, by stretching and wrinkling the tender membranes of the face. Substitute *patting* for massage, therefore, in every case, and visit a masseuse, occasionally, for special treatment. Pat skin foods and lotions gently into the skin. A *very gentle* circular rubbing may be given to the cheeks, now and then, to invigorate the skin and improve the colour.

**Falling Hair.**—The average life of an individual hair of the head is about four years. Some hair must, therefore, be constantly falling out as its life ends. Usually, this fall takes place in the autumn; and new hair grows quickly to take its place. Excessive falling of the hair, then, or at other times of the year, should be given immediate attention. Often it is caused by general ill-health and necessitates a tonic, to obtain which the doctor should be consulted. At the same time, a scalp tonic should be massaged into the skin with the finger-tips, nightly, after plentiful brushing. *See* Baldness for special tonic recipes, the best of which, it will be noticed, is paraffin or pure vaseline. For method of use *see* **Baldness.** For toning up the scalp where there is slight falling of the hair a good tonic can be made from a mixture of one drachm of red lavender, one drachm of tincture of cantharides, half an ounce of oil of lemon, and two ounces of rosemary. The old-fashioned mixture of bay rum, cantharides, and rosemary is also excellent. This can be obtained from the chemist mixed in the right proportions. The regular use of PEARS' SOLID BRILLIANTINE will also help towards strengthening the hair and preventing undue falling.

**Fat, Superfluous.**—A great deal can be done towards reducing unwanted fat by daily performance of exercises, such as those given under the heading **Exercises for Health and Beauty,** and by care with diet. This should be very simple, but nourishing, and must include vegetables, fruits, salads, lean meat, eggs, brown bread, a little butter, and small quantities of prepared cereals and simple milk puddings. All rich, fatty foods must be left out. The juice of two lemons, but not more, should be taken, one first thing in the morning, and one last thing at night. And at least half a pint of hot water should be sipped, morning and night, and occasionally between meals.

Fat in definite spots can be removed by regular use of one or other of the patent rubber rollers on the market. If, after care on all these counts, the weight still continues to be greatly in excess of the normal for the height and age, it is wise to consult a doctor. A little simple treatment will generally tone up the gland which controls the fat and remedy the trouble.

**Fatigue.**—(*See* **Rest** and **Sleep.**)

**Feet, The.**—To be perfectly comfortable and healthy, the feet must be fitted carefully with shoes of the correct size. Very narrow toes and high heels cramp the feet, harm the nerves, and, through causing incorrect walking, throw the backbone and all internal organs out of gear. This means indigestion and all its attendant ills of sallow skin, dull eyes, unhealthy hair, and so on. The shoes must *fit the feet* without any restriction or pressure. They must be pliable yet firm, and the soles must be sufficiently thick to form a protection between the feet and hard hot pavements.

The feet must be bathed at least once a day. This is best done at night, though they may be bathed again in the morning as well, if possible. Warm water, with a generous lather of PEARS' SOAP, must be used. When the feet are extra tired, sore and aching, a little carbolic disinfectant in the water or a handful of sea-brine will be found helpful. The feet must be dried thoroughly, especially between the toes. If much walking, standing, dancing or outdoor game playing is to

be done, it is a good plan to massage the feet and ankles with vaseline at night, and with methylated spirits in the morning. After either application, dust the feet well with boracic acid powder and then with PEARS' VIOLET POWDER. This will make them smooth and comfortable. Stockings must be clean each day if the feet are to be perfectly comfortable.

*See also* **Chiropody** for treatment for corns and bunions, and **In-growing Toe-nail** for correct method of cutting the toe-nails, etc.

**Figure, The.**—(*See* **Corseting, Brassières, Diet, Gait, Exercise,** and **Thinness.**)

**Flat Feet.**—Through the strain of standing much, or walking a great deal in ill-fitting shoes, the arches of the feet may give way, the foot loses its spring, and the owner walks with the feet flat on the ground instead of on the ball of the foot. This may cause swelling of the ankle, and a great deal of nervous disorder and backache through the spinal cord being jerked and twisted by the incorrect walk. There may also be pains in the ankle and legs. *To cure* the trouble, rest is imperative. Special artificial supports should be obtained to go inside the shoes, which should be broad in the toe and with medium heels. Feet exercises should be done consistently, including plenty of tiptoe walking and rapid feet movements. A tight strap of wide elastic round the instep will often give relief from pain.

**Flushing.**—This is either the outcome of nervousness, indigestion, or hurrying. If from the first cause, a nerve tonic should be taken and the subject should practise self-control and force herself to a general self-confidence. This can be done with perseverance and determination. When indigestion causes hot flushes, the diet must be adjusted and more quiet exercise taken. The drinking of hot liquids should be stopped, cool lemon or orange drinks being largely substituted for tea and coffee.

**Freckles.**—The owners of these "sunkisses" seem anxious always to get rid of them, being extremely self-conscious of their existence. As a matter of fact, they are considered beautiful, if the skin on which they occur is clear and healthy. Dabbing the freckled skin with a mixture of equal parts of lemon juice and milk will help to bleach them. Buttermilk is also said to be good. Twenty-five grains of sulphate of zinc finely powdered mixed with an ounce of elderflower ointment is an established old-fashioned remedy. And dabbing the skin with milk in which freshly-grated horse-radish has been steeped for twelve hours is also most efficacious.

Large freckles or brown blotches which occur on the limbs and body, though the skin is covered with clothing, are quite a different matter. These are caused by a derangement of the liver and need medical attention.

**Gait.** (*See* **Carriage.**)

**Games.**—Like everything else, games are excellent when indulged in in moderation. *Too much* golf, hockey, and tennis-playing tend to overdevelop certain muscles at the expense of others and coarsen the figure and limbs. But played in moderation, all outdoor games are excellent for the general health and appearance. (*See also* **Exercise.**)

**"Goose Flesh."**—When this is only temporary as a result of sudden chilling of the skin it does not need local treatment. Warm clothing should be put on and a warm drink taken, at once, in case the chill should affect a vital organ. Constant "goose flesh" condition of the arms, however, needs the special arm treatment given under the heading **Arms, The.** When washing the arms, scrub them lightly with a soft nail-brush. Rub them with the lotions prescribed in the paragraph on arms. Above all, only use a good pure emollient soap for the arms, such as PEARS' ORIGINAL TRANSPARENT SOAP OR PEARS' GOLDEN GLORY.

**Grey Hair.**—The grey hair caused by the lack of colour pigment in old age cannot be cured. Premature greyness can, however, be arrested if treated in good time. Often ill-health is a contributory cause and medical advice should be obtained. Vibro-massage and ultra-violet ray treatments are used with good results; but they must be given only by a qualified hair specialist and under his advice. If the scalp is kept in good health, with a regular oil massage to assist the natural oiliness of the scalp, there is little likelihood of premature greyness. Throughout life, therefore, once or twice a week, the scalp should be rubbed with a good hair-oil. Equal parts of castor oil and PEARS' LAVENDER WATER, well mixed, make a splendid tonic for this purpose. Any dyeing of the hair must be done by an expert, at any rate in the first instance. Suitable amounts for subsequent dyeing will then be given to the client and careful instructions for its use included. No one should attempt dyeing or bleaching of the hair without expert advice. Some dyes contain lead and are extremely dangerous to the general health. It is advisable to give considered thought to the matter before deciding to dye the hair, as prematurely white hair is now deemed a beauty. It usually shows up the youthfulness of the face and skin and is extremely attractive. When hair of this kind is dyed, it often emphasises signs of age in the face and makes the skin look sallow. If it must be dyed, care should be taken to match up the dye to the original colour of the hair. Careless use of **henna,** for instance, has produced some strange effects on hair that had previously no traces of red in it.

**Hair, The Health of the.**—This depends on the general health of the body, on the regular brushing and scalp massage given, and on the perfect cleanliness of both hair and scalp. Brushing, by invigorating the skin, brings nourishing blood to the surface and the hair is fed by it. Scalp massage helps this, especially if a tonic or oil is used occasionally. And if the general health is built up by exercise, fresh air, good, nourishing, plain food, and sufficient sleep, the hair should be bright, glossy and healthy. Cleanliness is an utter necessity to hair health; and, as a general rule, the hair should be washed at least once a fortnight. There are people who say that frequent washing ruins the hair. But it has never yet been proved that perfect cleanliness has ever harmed anything! In fact, it is as impossible for the hair to be in good condition if it is dirty as it is for the face itself. (*See* **Shampooing.**)

**Hair, Dry.**—As dry hair is liable to turn grey sooner than greasy, it is important that plenty of massaging with oil tonics should be given. A very good oil for dry hair is made by mixing together four ounces of oil of almonds, fifteen drops each of oil of rosemary and oil of origanum, eight drops of oil of nutmeg, one ounce of olive oil, and two drops of oil of musk. A very small quantity of this should be well rubbed into the scalp every other night. Another good recipe is that for Crystallised Pomade, made by heating together four ounces of olive oil, and three-quarters of an ounce of spermaceti. When melted and well blended, add fifteen drops of essence of bergamot and eight drops each of the oils of verbena, rosemary, and lavender. Pour into a wide-mouthed bottle and stand aside, without moving the bottle at all, until quite cold. This is used in the same way as the other oil.

**Hair, Greasy.**—Greasy hair is frequently caused by internal derangement. Diet should be very simple, but nourishing, and should include plenty of fresh, well-washed watercress and other salads, and ripe raw fruit. Cold water should be taken night and morning and between meals. The hair must be washed once a week, and brushed nightly with a soft clean brush. Care should be taken in selecting a shampoo. An ammonia and soap jelly is often found satisfactory. (*See* **Shampooing.**) After washing, and while the hair is still wet, massage the scalp vigorously with a mixture of a teaspoonful of witch hazel, four drops of tincture of benzoin, and a tablespoonful of PEARS' EAU DE COLOGNE. Shake well and keep bottled for use. This amount is sufficient for four or five shampooings. Every night, or every other night if the hair is not too excessively greasy, rub a very little rosemary, bay rum, and cantharides tonic into the roots of the hair. This tonic can be bought ready mixed at any chemist's. For excessively greasy hair use alternately with this tonic one made by dissolving thirty drops of ammonia in three ounces of rose-water.

**Hair, Tonics for the.**—These are dealt with under the sections for different types of hair—**Dry Hair, Greasy Hair, Grey Hair** and **Falling Hair.** For keeping normal hair in its healthy condition, an occasional course of the bay rum, rosemary, and cantharides mixture is quite the

best. It can be obtained ready mixed at any chemist's. If a slightly more oily tonic is needed, especially for dark hair, ask the chemist to add a small quantity of glycerine to the above mixture. This is excellent for keeping the hair in good condition and for preserving the colour.

**Hair, Superfluous.** (*See* **Depilatories.**)

**Hands, The.**—Though the actual shape of the hands cannot be materially altered, much can be done with massage and exercise to improve them, and modify any excessive plumpness or thinness of the fingers. Regular care will make them attractively smooth and white; and the nails can be made beautiful with daily attention.

*For slimming or fattening the fingers* stretch and bend the fingers, daily, as much as possible. Open and close the hands vigorously a dozen times; do grasping movements; and work each finger about with the other hand. Press the palms of the hands together and try to bend the fingers back away from each other. Link a finger of each hand together in turn and try to pull them apart without undoing them. Finish by stretching out the fingers and trying to separate them in all ways. These exercises will make fingers and wrists supple as well as shapely. When rubbing cream of any kind on the hands, massage each finger in turn to help improve the shape, working the finger downwards from the tip to the hand.

*For making the hands smooth and white*, use lukewarm water instead of very hot water whenever possible. Never use coarse or cheap highly-scented soaps; but keep to PEARS' ORIGINAL TRANSPARENT SOAP or PEARS' GOLDEN GLORY. Glycerine and rose-water, or glycerine and limes, are among the finest softening and whitening agents for the hands. A good cream can also be made by dissolving half an ounce of gum tragacanth in two ounces of warm water. Strain through muslin and add two ounces of glycerine, two ounces of almond oil, and ten drops of tincture of benzoin. Mix well. As this is quickly absorbed into the skin, this lotion may be used during the day as well as at night. For other excellent recipes for softening the skin see **Chapped Hands.** Camphor ice is a good simple remedy for rough hands. A good "hurry-up" method of cleaning and softening the hands is a thorough rubbing all over with lemon juice or the inner rind of a used lemon, first; then, with this left on, rub in a teaspoonful of castor sugar; follow, finally, with a large teaspoonful of olive oil. Work the whole well into the skin all over for three or four minutes. Wash off in warm water with PEARS' SOAP, rinse in cold water, and dry thoroughly. This makes the hands white and as smooth as satin.

When doing housework, wear rubber gloves as much as possible, or rub olive oil or cold cream into hands and nails before doing dirty work or much washing. This prevents the skin round the nails breaking and makes the cleaning of the hands much easier.

*Stains on the hands* can be removed quickly with a paste made of equal parts of powdered pumice, coarse oatmeal and lemon juice. This must be smeared over the hands and washed off with warm water and a good soap lather. The pumice-stone, dipped in lemon juice, will remove stains well. Dry mustard rubbed on the hands, and then washed off in warm water, will remove both the stain and smell of onions and the stains of most vegetables.

After washing-up dishes, always rinse the hands in lukewarm water with a little PEARS' SOAP to remove the soiled and greasy water. This will do much towards keeping the hands in good condition even if often in dirty water.

*For care of the nails* see **Manicure.**

**Hats, Choosing.**—It is wise to choose a new hat when tired or out-of-sorts, for if it suits one well then, it will be even much more attractive when one is looking one's best! Before finally deciding upon a hat, insist on seeing the whole effect in a long mirror. It is important to suit the figure as well as the face. If one is short and plump, large hats will not look well; and the same applies if one is very tall and thin. The woman with a short neck should never choose a hat with a wide down-turned brim; but this kind of hat will be helpful to the woman whose neck is rather long. The effect of the hat from every view and angle should be considered before the final choice; and the matching of the hat to the coat, or dress, or accessories *must* be obtained. It is false economy to buy a hat, however, attractive or however great a bargain, if it does not match anything else in one's wardrobe! And, finally, *don't* be misled by plausible shop assistants into buying a "constrast"!—This is rarely successful. A match *can* be obtained if one takes sufficient trouble.

**Headaches.**—As this subject will be dealt with in the section on **Health**, it is not necessary here to say more than this—that it is foolish to continue to endure headaches without finding the cause and then the remedy. No woman can expect to look attractive when she suffers from continual headaches, for these show that there is some definite disorder of health—either eye-strain, indigestion, liver, anæmia, or so forth.

**Heat Rashes.**—Skin eruptions caused by too much sun-bathing will be dealt with in the paragraph called **sunburn.** Other rashes due to heat are usually very transitory and are cured by small doses of carbonate of soda in water—a quarter of a small teaspoonful of the soda in half a glass of cold water should be sipped. A slight heat rash may occur through drinking cold liquids when the body is very hot. If thirsty after much activity, or when extremely hot, either allow time in which to cool before drinking or suck slices of lemon. Small doses of magnesia, according to directions on the bottle, will relieve, and prevent, simple heat rashes.

**Indigestion.**—Serious indigestion needs special medical advice founded upon the cause of the individual case. A good deal of simple indigestion, however, can be relieved by taking the juice of a lemon in a glass of lukewarm water, without sugar, half an hour before a meal. Nothing should be drunk with the meal; but any other fluid necessary should be taken an hour or so after the meal. Plenty of cold water should be taken between-meals. (*See also* **Diet.**)

**In-Growing Toe-Nail.**—When the flesh grows over the side of the nail and causes ulceration, the nail is said to be "in-growing." This condition is caused by tight shoes pressing on the side of the toe, the nail of which has been cut round at the corners. *To prevent* the trouble, all toe-nails *must* be cut *straight* across without the corners being trimmed off. *To cure* the condition, wrap up the toe with thick packings of antiseptic gauze wrung out of very hot water, every night, after washing the feet. Allow the packings to remain on for as long as possible, renewing them as they cool. Allow the nail to grow up well above the toe and then cut it straight across.

**Joints, Enlarged.**—The joints of the fingers sometimes become enlarged through the hands being constantly in water. To remedy this, massage them well, every night, up and down and in circular movements, with warm olive oil. Other enlargements of the joints are usually due to rheumatism or other disorder and must be treated under medical care.

**Lines.**—(*See* **Wrinkles.**)

**Lips.**—The skin on the lips is the most delicate and sensitive of the whole body. A regular use of softening cream, and a good lip-stick, are essential, especially in cold weather. Night and morning, rub the lips with glycerine and rose-water, camphor ice, or a good cold cream, taking care not to get the latter on the upper part of the upper lip, as it may induce hair-growth. When completing the toilet and make-up, shape the lips prettily with PEARS' LIP-STICK. This is made in cream for those whose lips are naturally a good colour and only need a salve to keep them so, and in red for those whose lips need a slight addition of natural colour. PEARS' LIP-STICKS are perfectly pure and attractively natural.

**Lip-Sticks** and **Lip-Salves.**—(*See* **Lips.**)

**Light: Sunlight.**—(*See* **Ultra-Violet Rays** and **Sun-tan.**)

**Make-up.**—It is unwise to begin making-up when young and the complexion is naturally beautiful; though even then a touch of powder and lip-stick is permissible if necessary. When a full make-up is desired for day-time, it is essential to remember that a good foundation is most important. If there is any tendency to enlarged pores, a good astringent must be used first. (*See* **Astringents** and **Enlarged Pores.**) Next, a good

cold cream or, if the skin is greasy, a vanishing cream, must be patted well into the skin. A good pure, reliable powder, such as PEARS' FULLER'S EARTH or VIOLET POWDER must be dusted thoroughly over the cream with a soft, clean puff. Use the puff lightly so as not to grind the powder into the pores of the skin. If the cheeks are too pale, rub a little liquid rouge or block powder rouge well into the skin, softening the edge so that no hard line appears where the rouge finishes off. Use a tone of rouge to suit your particular type of colouring. For all except very pale blondes, a "brunette" rouge is generally the most attractive. After applying the rouge, dust again, very lightly, with powder. Next use your eyebrow brush to remove powder from lashes and brows, following with a touch of eyebrow darkening liquid, if necessary. Finally, use your PEARS' LIP-STICK to give the lips a pretty shape and a good natural red colour.

**Manicure.**—If the cuticles are kept pressed down well, when drying the hands—(*see* **Cuticles**)—it will make the manicuring much simpler. When giving the nails their daily—or at least every-other-daily—manicure, soak the finger-tips first in lukewarm water with a small knob of borax dissolved in it. Dry very thoroughly with a soft dry towel, pressing the cuticles down. Run an orange stick round the cuticles to finish this process. Then twist a tiny pad of cotton-wool on an orange stick, dip in a mixture of equal parts of olive oil and lemon juice, and run this round under the tip of the nail to clean it and give that attractive opaque white rim. Now you are ready for your polish. Whether this is liquid or wax depends entirely upon personal preference. Liquid is easier to use and gives a much quicker and more lasting polish; but it is not good for nails that are very brittle. The wax suits these nails better, for the oil in the wax feeds them. (*See also* **Nails** for remedies for brittle nails.) After applying the polish, finish with a brisk rub with a clean chamois pad, or a clean soft silk handkerchief. Renew the chamois on the pad frequently. It can be washed in cold water and methylated spirits in equal parts, or washed in warm soapy water. If liquid polish is used, it must be removed each time it needs renewing. The remover can be bought when the polish is purchased.

**Massage, General.**—Properly carried out massage is excellent for toning relaxed muscles, for restoring plumpness, for slimming, and for removing wrinkles. On the face, however, massage *must only be done by an expert.* (*See* **Face Massage.**) Other massaging can be done with quite good results. Advice is given under headings **Arms, Ankles, Hollow Cheeks, The Chin, The Neck, Wrinkles,** and **The Hands.**

**Moles.**—It is best to leave moles alone, unless they are at the corner of the mouth, eye, or nose. In these positions they are liable to be rubbed and may become septic, or even cancerous. The only method of removal is by an operation; so medical advice should be sought, should it be thought desirous to remove any. Small moles in any other position can only be removed surgically also, and are best left untouched, as scars are almost certain to remain. No application treatment at all should ever be used.

**Mouth, The.**—(*See* **Lips, Mouth-Washes,** and **The Teeth.**)

**Mouth-Washes.** Not only are the teeth kept healthy by regular use of antiseptic mouth-washes; but, also, it is possible to avoid infectious illnesses by their regular use. Influenza, for instance, rarely attacks those who keep mouth and nostrils regularly washed antiseptically and the general health good. The simplest mouth-wash is made by dissolving two or three crystals of permanganate of potash in half a glass of cold water. A more elaborate wash is made from a quarter of an ounce of carbolic acid, an ounce of glycerine, and a quarter of an ounce of methylated chloroform. Of this, five to eight drops should be used in half a tumbler of water. A drop of any good carbolic disinfectant may also be used in cold water—a drop being the exact medical drop, or a quantity described for the purpose on the wrapper of the particular make of disinfectant. When there is any trace of ulceration of the gums, the following mouth-wash should be used several times a day, two teaspoonfuls being used at a time: One drachm of chlorate of potash, one scruple of hyposulphite of soda, half an ounce of honey, and water to make up to four ounces. At the same time, a little magnesia or bicarbonate of soda should be taken internally. *To harden soft gums* which have a tendency to bleed when the teeth are brushed, a mild astringent mouth-wash, such as a small teaspoonful of PEARS' EAU DE COLOGNE in a wineglass of cold water is needed. A stronger astringent, for severe cases of *soft and spongy gums*, is a mixture of half an ounce each of tincture of myrrh and water, added to a quarter of an ounce of borax and an ounce of honey of roses. *To keep the gums hard*, it is a good plan to use the eau de Cologne mouth-wash every other day, alternately with a little cold water with a large pinch of carbonate of soda added. The use of PEARS' DENTAL PASTE will help to make the gums firm and keep the teeth and mouth healthy. (*See* **Dentifrices.**) The gums should also be massaged daily with the side of the finger, downward for the gums of the upper jaw, and upward for those of the lower jaw. (*See also* **The Teeth.**)

**Mud Packs.**—(*See* **Clay Packs.**)

**Nails, The.**—*For curing brittle nails*, and preventing them breaking, there is nothing better than steeping the nails in warm olive oil or medicinal paraffin. Sufficient warm oil should be placed in a small basin, and the finger-tips immersed in the oil for three or four minutes. Afterwards, the oil must be wiped off with a soft clean towel or cloth and the cuticles pushed down well. (*See also* **Cuticles.**) If a nail breaks, do not cut it right off leaving an ugly blank on the finger-tip. Stick a tiny piece of adhesive tape—the transparent kind—over the tear; and paint well over nail and tape with liquid nail polish. Let this dry, and then give a second coat.

If the nails are regularly filed, it will not be necessary to use the scissors on them. Filing strengthens them, and shapes them more prettily. (*See also* **Manicure.**)

**Neck, The.**—That a "woman is as old as her neck" is a very true saying in that a wrinkled, sallow, "old-looking" neck can add years to one's age. Lemon-juice-and-milk is the best neck-whitener. At night, after washing in lukewarm water with PEARS' SOAP, bathe the neck with a piece of soft sponge dipped in a saucer containing about a tablespoonful of warm milk and a dessertspoonful of lemon juice. Allow this to dry on the skin. Then lightly dust with a large soft powder puff dipped in PEARS' FULLER'S EARTH, or sprinkled with PEARS' VIOLET POWDER. Cold milk, in which flowers of sulphur have been steeped for twenty-four hours, may be used, once or twice a week, instead of the milk and lemon. The correct proportions are a heaped teaspoonful of the sulphur stirred into three tablespoonfuls of boiling milk and allowed to stand in a saucer.

For improving the contour of the upper part of the neck, exercises and massage are needed. (*See* **The Chin.**) The beauty of the lower part of the neck lies in its softly rounded contour, which can be acquired through regular deep-breathing exercises—(*see* **Breathing Exercises**)—and by massage with olive oil, or with a mixture of vaseline with an equal part of almond oil. To make the latter, warm both ingredients before mixing. Either of these fattening oils must be well patted or massaged into the neck to cure hollows. If the neck be too fat, plentiful massage, with the finger-tips frequently dipped in cold water, will help considerably to reduce the unwanted fat. A scraggy neck usually means that the rest of the body is too thin as well. If this is so, in addition to massage and exercise, a twice-daily dose of cod-liver oil and malt is most necessary.

**Nose, The.**—The shape of the nose can be altered, very slightly, by persistent pinching and shaping, in the desired way, with the fingers. The nostrils can be shaped and prevented from getting too wide by the same method, and by regular exercises in deep breathing through the nostrils. (*See also* **Breathing.**) Before doing breathing exercises, the nasal passages must be made absolutely clear by blowing the nose. This must be done with the handkerchief held an inch or so away from the nostrils. If the latter are held by the handkerchief while blowing the nose, it is impossible to clear the passages properly,

and, also, it is liable to cause the mucus to be driven backwards instead of forwards and down the nostrils. If driven back, it gets into other passages and may cause serious deafness and adenoids. Sniffing slightly salted water up the nostrils, night and morning, for a week or so at a time, is of great help in clearing the passages of catarrh and preventing colds. Use a large pinch of salt—rough salt is best—in about a wineglass of lukewarm water. Sniff cold water afterwards.

**Obesity.**—(*See* Superfluous Fat.)

**Old Age.**—It is natural to dread the onset of old age; but it is wise to accept the inevitable with a calm mind. Fretting and fidgeting about one's age and appearance will only hasten all the ageing details that are most to be dreaded. A healthy life, with plenty of fresh air, exercise, simple foods, a minimum of alcohol and all stimulants, a sufficiency of sleep and other quiet rest, and a deliberate cultivation of a happy, contented mind will do a very great deal towards helping one to "grow old gracefully." Dress should be simple and unostentatious and suitable to the age of the person; though, nowadays, there is but little difference between the clothes for a woman of forty and one of sixty. It is wise, however, to choose quieter colours and soft shades which will not show up tell-tale wrinkles and grey hairs. Any harsh colours, or hard lines in design, will merely emphasise age. The joints should be regularly rubbed with olive oil or a good embrocation to make up the deficiency of natural oils in age. This will do a great deal towards keeping one supple, especially if simple daily exercises are continued at the same time. The "hump" on the back of the neck which often appears in women past their youth can be removed by careful massage and regular head exercises. (*See* Exercises.) The woman who has followed out the simple advice given under the headings of Beautifying Drinks, Diet, the Carriage, the Chin, the Care of the Complexion, Corseting, Exercises for Health and Beauty, The Eyes, The Health of the Hair, Sleep, and Wrinkles, and who has remembered the value of simple, pure cosmetics and PEARS' SOAPS need not fear old age!

**Perfumes.**—These should be used sparingly, their purpose being to give a lingering fragrance, a refreshing suggestion of a flower-garden. Such an effect cannot be obtained by the use of heavy, exotic, "factory" perfumes. Only the best natural scents, made from fresh flowers and essential oils, are in good taste. The most refreshing and most refined for all purposes and for all women are PEARS' EAU DE COLOGNE and PEARS' LAVENDER WATER, which are delicious, subtly fragrant, and lasting. They do not get stale; and they blend delightfully with the slight perfume of PEARS' SOAPS and VIOLET POWDER and FULLER'S EARTH. A touch of the chosen perfume should be put in the palms of the hands, behind the ears, and on the parting of the hair. This ensures that a delicate fragrance emanates from the wearer the whole time and not only just when her handkerchief is used.

**Perspiration.**—The discharge of perspiration, or sweat, from the surface of the skin is a purely natural and necessary process. The sweat glands of the skin aid the kidneys in the discharge of waste matters from the body. Thus, for perfect health, the surface of the skin must be free to give off perspiration. Regular daily washing of the whole body aids these important glands and removes the waste matter from the surface of the skin. If this is not done, the glands become blocked up, and, in time, ill-health results. Exercise and heat stimulate the sweat glands and make them work more rapidly and discharge greater quantities of perspiration. This is the reason for the benefit of a warm bath after much exercise of any kind. Unpleasant odour of the perspiration usually only occurs after certain illnesses, such as rheumatic fever, or in parts of the body where there cannot be close contact with fresh air, such as in the armpits. To counteract this odour, deodorants may be employed in conjunction with daily, night and morning, washing or bathing. (*See* Deodorants.)

**Pimples.**—These are associated with blackheads or *Acne*, and must be locally treated according to instructions given under the heading Blackheads. In addition, great care must be taken with diet, which must be simple and free from rich fatty foods. No sugar should ever be taken with fruit, cooked or fresh, as this sets up an acidity which contributes to the trouble. Vinegar and pickles must be omitted; but lemon juice, without sugar, may be taken fairly freely. A regular daily dose of olive oil or medicinal paraffin should be taken and a glass of hot water must be sipped first thing in the morning. Plenty of cold water should be drunk during the day, between meals, and brown sugar instead of white.

**Poise.**—The woman who has poise will always be one of the most noticeable, most attractive women in any gathering. And poise can be cultivated by every woman who determines to do so. It depends, of course, upon good health, upon careful attention to details of the toilet and clothes, to a serene state of mind—in fact, to a feeling of assurance that everything about one is well under one's own control and is as attractive as care can make it. Do not allow yourself to get into nervous, fidgety ways—restless movements of the hands, feet, or head—for these are an immediate sign of lack of poise. But practise graceful poses and cultivate a perfect carriage. (*See* Carriage.)

**Powder.**—Face powder not only improves the appearance of the skin, but it also acts as a protection from dust, cold wind, and sun. One objection raised to the use of powder is that it clogs the pores of the skin. It should not do so if the old powder and cream are removed before repowdering. And the face should, of course, be left free of powder and cream all night. The powder will not clog the pores if it is a good fine powder made only of purest ingredients sifted to the finest condition possible. Only such fine powders should ever be used. PEARS' VIOLET POWDER and PEARS' FULLERS' EARTH can be recommended because they are the finest, purest powders made. A very small amount of a coloured powder, of a guaranteed pure make, may be blended with PEARS' FULLER'S EARTH to give a soft tone of powder to blend with different complexions. A touch of ochre and rachel is needed for the brunette; naturelle and a touch of peach make a good blend with the FULLER'S EARTH for the woman of medium colour; cream or flesh help to make the most suitable colour for the pure blonde; and the woman with a very high colour will probably find that a tiny touch of green with a slight flesh tint will mix with the FULLER'S EARTH to tone down the redness of her skin.

**Powder Puffs.**—Whether swansdown, lamb's wool, beaver, or a smooth silk caracoul forms the powder puff is purely a matter of choice. The important thing is that the puff is spotlessly clean. It must be washed frequently; or tiny pads of cotton-wool, which are thrown away after each use, must be used instead. Powder puffs should never be borrowed or lent.

**Razors, The Care of.**—For the removal of hair in the armpits, if depilatories are not desired, a curved safety razor is necessary. After washing the armpits well, a good lather with PEARS' SHAVING STICK should be made; and the parts then shaved, gently, with the safety razor. Wipe the hollow of the arm; bathe with lukewarm water; and dust first with boracic acid powder and then with PEARS' PEAR BLOSSOM TALCUM or VIOLET POWDER. Take the razor to pieces and wipe each part carefully on a perfectly dry towel until quite clean and dry. Put together again ready for the next use. Ordinary razors must, also, be kept *absolutely* dry. The blade must never be touched by the fingers, as the slightest moisture from the skin may cause rust. It is most dangerous to use a rusty razor. To sharpen these razors, wipe the edge of the blade up and down a leather strop, at about an angle of thirty degrees, taking great care not to let the actual edge touch the strop when turning.

**Red Hands.**—(*See* The Hands.)

**Red Nose.**—This is usually due either to indigestion or to an imperfect circulation. In either case, one of the most helpful remedies is plenty of outdoor exercise. Too much indulgence in hot tea, curries, vinegar, and all condiments may also cause the trouble. And a form of *Acne* is occasionally responsible, but in this case there are usually tiny red pimples under the red skin. To treat this, see Blackheads and Pimples. If

the cause is a bad circulation, get more exercise, wear thin wool next to the skin always, and do not drink hot fluids before going into the cold. Wear thick shoes and have wool soles to stockings. If indigestion is the cause, care must be given to the diet.

**Rest and Relaxation.**—Nothing is so quickly destructive of beauty as getting over-tired constantly. Old age is hurried on by incessant rush, without sufficient rest, daily. It is useless to sit down or lie down to rest if the nerves and muscles are working all the time. Every woman should endeavour to get from five to twenty minutes a day when she can lie as flat as possible and relax every muscle and nerve. The mind should be made as blank and restful as possible. On rising, afterwards, stretch for a few minutes. (*See also* **Sleep.**)

**Rouge.**—(*See* **Make-up.**)

**Rough Skin.**—The best cure for this is cold cream patted into the skin, night and morning. An extra covering of cold cream should be used before powdering as a protection against the weather. No other soap but PEARS' should be used, as this is the most soothing for a sensitive skin.

**Salt Baths.**—(*See* **Baths, Sea-Salt.**)

**Salt in Beauty Treatments.**—Two tablespoonfuls of salt in the first rinse water, when the hair is washed, will help prevent the hair falling out. A mixture of equal parts of finest table salt, PEARS' VIOLET POWDER, and starch powder makes a good dry shampoo for occasional use. A handful of salt in the bath is very refreshing and good for the skin. A hot salt foot bath soothes tired feet. And salt water should be sniffed up the nostrils to prevent colds.

**Scalp, The.**—(*See* **The Hair, The Health of.**)

**Scent.**—(*See* **Perfumes.**)

**Scent Sachets.**—A scent sachet which will give a dainty fragrance to the clothes and also prevent moths attacking them is made by grinding up together an ounce of cloves, nutmeg, mace, carraway seeds, cinnamon, Tonquin beans, and dried lavender. When ground finely, mix with an equal amount of orris-root powder and sprinkle with twenty drops of sandalwood oil. Keep in a closed tin for a day or two. Then fill small muslin or fine silk bags with the powder. Lay these in drawers, and hang them up in cupboards and wardrobes. Sachets only required for perfuming the clothes can be made by mixing together equal amounts of dried rose petals, dried lavender, orris-root powder, and PEARS' VIOLET POWDER. Sprinkle with a few drops of attar of roses and PEARS' LAVENDER WATER. Allow to stand in closed tin before putting into bags.

**Scorched Legs.**—The scorch marks made by sitting too near a fire can be removed by daily bathing the legs with a mixture of equal parts of peroxide of hydrogen and rose-water. Mix a little in a saucer, each time required, and dab on with cotton-wool. Allow to dry into the skin.

**Shampooing.**—The basis of every shampoo should be a good soap jelly. Make one by shredding about four tablespoonfuls of PEARS' TRANSPARENT SOAP. Put the shreds in a stone jar or jug. Pour on enough boiling water to cover, and allow to stand until cold and set. When required for washing the hair, two to three tablespoonfuls of the jelly should be dissolved in about a pint of hot water and lathered on the head and hair. It can be used plain, or for an *egg shampoo* beat a fresh egg up with two tablespoonfuls of soap jelly before adding water. Lather this straight on to the scalp and then rinse off with warm water. For a *camomile shampoo for blonde hair*, add half a pint of camomile infusion to the soap jelly and half a pint of boiling water to make a thick lather. To make camomile infusion, steep a handful of dried camomile flowers in a quart of boiling water and bottle and strain when cold. *For a cocoanut oil shampoo*, which is good for dry hair and for very dark hair, add a dessertspoonful of cocoanut oil to the soap jelly before adding hot water. *For a carbolic shampoo for fair or medium-coloured hair*, add twenty drops of carbolic solution to the soap-jelly lather. *For very greasy hair*, add ten to twelve drops of spirits of ammonia or household ammonia to the warm lather.

After lathering well and washing every scrap of scalp and hair, rinse in several lukewarm waters, adding a tablespoonful of lemon juice to the final rinse for fair hair and the same amount of vinegar for dark hair. Dry by plentiful rubbing with warm towels, and finish in the sun, if possible, but *not* near the fire.

*Dry shampoos* are not advisable, unless in emergency. The best of these is a mixture of equal parts of starch powder and PEARS' VIOLET POWDER. It must be sprinkled on the head and hair and brushed out with a clean brush. Another good way of cleaning the hair, when a wash is not possible, is by rubbing the scalp well with soft muslin dipped in equal parts of sal volatile and cold water, or PEARS' EAU DE COLOGNE neat.

**Shoes.**—(*See* **The Feet.**)

**Shoulders, The.**—The shoulders will look after themselves if it be remembered to carry the head well up. This will put the shoulders in their correct position.—(*See also* **Carriage, and The Neck.**)

**Skin, The.**—This has been dealt with comprehensively under the headings **Astringents, Baths, Blackheads, Clay Packs, The Care of the Complexion, Cosmetics, Egg Packs, Enlarged Pores, Face Cleansing, Face Massage, Freckles, Make-up, Moles, The Neck, Pimples, Powder, Rough Skin,** and **Scorched Legs.**

**Skin Foods.**—The finest tissue-building skin food is cold cream, or a mixture of equal parts of lanolin and cocoa butter, which must be warmed to blend well. For other recipes *see* **Cold Cream.**

**Skin Tonics.**—These come under the heading of **Astringents.** A simple tonic for a skin in normal health, designed merely to keep it in condition and intended for use once or twice a week, can be made by mixing a teaspoonful of powdered milk to a thick paste with rose-water and two drops of tincture of benzoin. Dab this well over the face and allow to remain on for a few minutes. Bathe the face in cool water afterwards. Mix this tonic as required, each time. Another simple tonic is made by mixing well a teaspoonful of finest oatmeal and half a teaspoonful of boracic acid powder to a smooth paste with PEARS' EAU DE COLOGNE and cold water in equal parts. This is used in the same way as the former tonic paste.

**Skin Blemishes.**—(*See* **Freckles, Pimples, and Moles.**)

**Sleep.**—*The amount of sleep required* varies with individual temperaments and with the kind of work performed. For a general rule, however, it is found that most adults need from seven to eight hours a night, adolescents need nine to ten hours, children under fourteen nine to eleven hours, and children under six at least twelve to fourteen hours. Babies, of course, sleep the greater part of the twenty-four hours.

The sleep must be as deep as possible; and, for some as yet unknown reason, sleep before midnight is deeper and more restful than that in the early morning. There must be constant ventilation in the sleeping-room, with at least one window open always, whatever the weather, except when very foggy. The bed-clothing should be light in weight. Low pillows are advisable, except for those with heart troubles. High pillows produce wrinkles and restless sleep. To induce sleep, it is unwise to drink hot milk; for insomnia is usually due to some or other form of indigestion or nervous disorder, and milk is too heavy to be digested by such people at night while lying down. A malted drink, made with milk and water, is better. Or hot water, sipped slowly, or a hot lemon drink with a large dose of glucose added, is often very beneficial. Glucose and brown sugar are excellent for feeding tired nerves and will induce sleep, if taken last thing. The sugar may be spread on brown bread-and-butter, merely eaten as it is, or taken in any liquid.

**Soap.**—For the health and beauty of the skin, only the finest, purest soap is allowable. PEARS' TRANSPARENT SOAP and PEARS' GOLDEN GLORY are genuinely "matchless" for every type of skin. (*See* **Complexion.**)

**Sunburn.**—Over-exposure of the skin to the sun's rays, during the hot midday hours, in summer, may cause serious sunburn and sun rashes. *The best cure* is to smear the skin well with a calomel lotion, cold cream, olive oil, or with a smooth paste made with finest oatmeal and fresh dairy cream. Calomel lotions can be obtained at any chemist's. Renew the applications

frequently. *To prevent sunburn*, shade the skin from direct rays of the sun during the hot hours of the day. Smear it well with equal parts of olive and almond oils, and powder well with PEARS' VIOLET POWDER before exposure at any time.

**Sun-Tan.**—A healthy coat of sun-tan is attractive, and the value of sun is great; but the precautions mentioned in above paragraph *must* be observed. Those who usually live out-of-doors can sun-bathe longer and more frequently than those who live mostly indoors. Sun-bathing must be done by degrees—first feet and legs, then the arms, and then the upper part of the body. Several days should be given to each section before a full sun-bath. The face and the back of the neck should never be exposed to direct sun.

**Teeth, The.**—The value of perfectly healthy teeth cannot be too strongly stressed. To keep them in good health, visits should be paid to the dentist every six months at least. Utter cleanliness is, of course, also essential; and, ideally, the teeth should be cleaned after every meal. If this is impossible, they *must* be cleaned night and morning, and after meals whenever possible. *See* **Dentifrices** and **Mouth Washes** for all information on the best cleansing agents for teeth, gums and mouth. Massage of the gums for the *prevention of pyorrhœa* is also given under **Mouth Washes.** If there is the slightest suspicion of *pyorrhœa*—and to prevent it—rub the gums, back and front, with a piece of clean sponge dipped in a saucer containing a dessertspoonful of peroxide of hydrogen of ten vols. strength, and the same amount of cold water. A very soft tooth-brush could be used for the same purpose if preferred. It is essential to see that the whole of the gums is well bathed with the mixture.

Diet plays an important part in the health and beauty of the teeth. Hard foods such as crusts of bread should be taken for teeth exercise; but brittle articles, such as toffee, should be avoided. Regular daily fruit juices, especially those of lemon and orange, are declared by experts to *prevent pyorrhœa.*

**Thinness.**—Though every woman aims at a slender figure, the over-thin, scraggy figure is not attractive. When too thin, cod-liver oil and malt should be taken, for a month or two, in the dose most easily assimilated. A teaspoonful, three times a day, after meals, is usually sufficient. Exercises will also help to develop thin limbs and figures. (*See* **Exercises** and **The Neck.**) A generous diet must be taken, including milk, cream, butter, brown bread, potatoes, eggs, fat and lean meat, vegetables both raw and cooked, plenty of fresh ripe fruit, and cocoa. Constipation must be avoided; and a daily dose of a dessertspoonful of olive oil or medicinal paraffin should be taken. Plenty of cold water should be taken between meals. Extra sleep should be obtained when possible; and a rest after meals should be indulged in when convenient.

**Tooth-brushes.**—These must be firm, guaranteed not to lose bristles, and hygienic. Rinse always in hot and then in cold water after use, and hang in a current of air. Once a week, soak in a solution of permanganate of potash and cold water.

**Tooth-Powders** and **Pastes.**—(*See* **Dentifrices.**)

**Ultra-Violet Rays.**—These rays are largely used in the treatment of various forms of skin and blood disorders, for nervous troubles, and for debility. They must, of course, only be used under medical advice; though the substitution of vita-glass for ordinary window glass is advisable wherever possible, as it ensures that all the health-giving violet rays pass through into the room. Ultra-violet rays are also used, under expert advice, for disorders of the scalp.

**Waistline, The.**—(*See* **Corseting** and **The Figure.**)

**Warts.**—These small hard skin growths, if not very numerous, may be cured by painting with salicylic collodion, rubbing with common washing soda moistened in cold water, or painting with colourless iodine. When very numerous, medical advice should be sought, as they can be removed with special *X*-ray treatment.

**Water Softeners.**—As many varieties of bath salts, bought ready-made, contain soda, it is advisable not to use them unless guaranteed not to contain this ingredient, which coarsens and hardens the skin. Bath salts can be made by putting layers of borax crystals into a jar, each sprinkled with a few drops of an essential oil, such as attar of roses, oil of lavender, oil of verbena, oil of bergamot, a mixture of several oils, or with a teaspoonful or so of PEARS' EAU DE COLOGNE or LAVENDER WATER. Other water softeners are oatmeal, bran, orris-root powder, ammonia, almond meal, or borax. Only a very small quantity of either of these should be used; and the powder kind should be put into the water by means of tying in thin muslin bags. A recipe for a specially beautifying bath softener is given under **Baths.** *The best of all water softeners is* PEARS' SOAP.

**Weight.**—In deciding whether one is overweight, normal, or under-weight, it is necessary to consider age as well as height. As a general rule, if in good health, there should be little variation in weight between the ages of twenty and thirty. After that, however, there should be a definite increase, averaging from ten to twelve ounces a year, until the age of fifty. Here is a rough table which shows the average increase in weight of a woman. The weights allow for normal clothes without shoes or ourdoor coats.

| Height | Weight | | | |
|---|---|---|---|---|
| | *Age* 20. | *Age* 35. | *Age* 40. | *Age* 50. |
| 4 ft. 10 ins. | 6 st. 7 | 7 st. 0 | 7 st. 7 | 8 st. 0 |
| 5 ft. 0 ins. | 7 st. 0 | 7 st. 7 | 8 st. 0 | 8 st. 7 |
| 5 ft. 2 ins. | 7 st. 7 | 8 st. 0 | 8 st. 7 | 9 st. 0 |
| 5 ft. 4 ins. | 8 st. 4 | 8 st. 11 | 9 st. 4 | 9 st. 11 |
| 5 ft. 6 ins. | 9 st. 0 | 9 st. 13 | 10 st. 6 | 10 st. 13 |
| 5 ft. 8 ins. | 10 st. 0 | 10 st. 7 | 11 st. 0 | 11 st. 7 |

Girls in their middle teens generally put on weight fairly rapidly; but by the time they are twenty to twenty-one they usually have settled down to about the normal weight for their height. Men increase in weight at about the same amount after the age of thirty as a woman.

*For reducing weight* see **Superfluous Fat, Diet,** and **Exercises.** *For adding to the weight* see **Diet, Thinness,** and **Exercises.**

**Wrinkles.**—Wherever wrinkles or "crowsfeet" appear on the face, they tend to add to the apparent age of the owner. They may not be *caused* by age; but their effect is the same. Causes of wrinkles include the wearing of small, off-the-face hats in bright sunshine; doing needlework, writing, reading of small print, or other close work, in bad light or in moving vehicles; bad sight; headache; sleeping on a high pillow; nervousness and irritability; the strain of noisy traffic; indigestion; painful corns and other feet troubles; careless massage of the face; and any long-continued ill-health. Whatever the cause of the wrinkles, it must be removed if at all possible. Local treatment must also be given at the same time. The fine lines that are caused by laughter—the only cause of wrinkles that must *not* be got rid of !—can be eradicated by the same treatment.

*Pat, not massage*, a good skin food into the skin every night, after washing in *lukewarm* water and PEARS' SOAP. For a skin food, *see* **Skin Foods** and **Cold Cream.** Pat so gently that there is no danger of stretching the skin. (*See* **Face Massage.**) Then paint the wrinkled parts with a mixture of equal parts of glycerine, rose-water, and unbeaten white of egg. Mix a little on a saucer when required. It is a good plan to use up the white of egg left behind in the shell when an egg is broken for cooking purposes. It can be kept until night-time for the special painting on the skin. An **Egg Pack** is also excellent for curing and preventing wrinkles. (*See* **Egg Packs.**) A mixture of equal parts of rose-water and tannin is also very good used in the same way. When the tonic has been well painted on the skin, leave it for a few minutes, and then press firmly and gently with the fingers, as though ironing the skin; but keep to a very small area of skin all the time until all is gradually "ironed." *To prevent wrinkles*, use PEARS' SOAP always; and, night and morning, dab the skin with a mixture of equal parts of rose-water and witch hazel; a mixture of four ounces of rose-water, one ounce of spirits of camphor, and ten drops of benzoin; or a lotion made by mixing together three ounces of elderflower water, a tablespoonful of cucumber juice, and twenty drops of tincture of benzoin.

**Youthful Appearance.**—(*See* **Old Age.**)

# COOKERY

PEARS—THE PURE SOAP

*For particulars of Pears Famous Toilet Preparations turn to end of Book*

# Pears' Dictionary of Cookery

COMPILED BY FLORENCE B. JACK

*(Author of "Cookery for Every Household." Joint Editor of "The Woman's Book")*

## PREFACE

There is perhaps no science which does more for the welfare of mankind than that of good cookery. It is as essential to health as pure air, cleanliness and exercise; in fact its influence in this respect can scarcely be overrated. It is also good for the spirits, as health and happiness go hand in hand. The household that is presided over by someone who has a good knowledge of catering and who sees that meals are served punctually, comfortably, and in a digestible and appetising form is likely to be a cheerful and contented one. On the other hand, ignorance of cookery on the part of the young housewife is often the cause of much misery and discomfort in the new *ménage*.

Good cookery means the preparation of the simple everyday food in a perfect way, and in making it not only nourishing and sufficient in quantity, but in presenting it in a manner that is pleasing to the eye as well as to the palate. It also means making the most of the materials at one's disposal, and in seeing that nothing is wasted. A good cook is always economical, as she does not spoil anything, nor throw anything away that is of food value, neither does she allow food to become bad through want of attention.

The choice of the right materials is an important factor in successful cookery. It is never wise to buy articles of inferior quality simply because they are cheap, they must always be good of their kind. This does not necessarily mean buying what is most expensive, but it does mean buying what is clean, fresh, free from taint, and in its proper season.

Cleanliness, of course, must be observed in every detail. Again, it is a great mistake to become too conventional in the choice of one's dishes; if variety is not considered, distaste and lack of appetite will soon be the result. There is always something new to learn in cookery, and in trying fresh dishes one not only enlarges the household repertoire, but adds interest and pleasure to the work itself.

The following paragraphs aim at being a practical guide to those who wish to acquire a working knowledge of the subject. The recipes are alphabetically arranged in their various sections. Most of the recipes are intended for the average household, and are for simple dishes within the scope of moderate means. They also include some of a more elaborate nature, and some for festive occasions, which naturally cost more. It is hoped that the housewife will find in the collection sufficient variety and suggestions to meet all modern requirements.

When using the recipes the novice in the art of cookery must remember that practice counts for a great deal, and that a sound knowledge of the subject cannot be acquired in a day. Recipes must be used in the right way and interpreted properly, and both watchfulness and carefulness will be necessary while the cooking is in progress. Cookery is quite a big subject, it gives plenty of scope for the exercise of brains, but the knowledge once gained will be found a most valuable asset throughout life.

F. B. J.

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### POINTS TO REMEMBER.

1. As the health of the household depends largely on the catering and work done in the kitchen, do it well.

2. Choose food intelligently according to individual needs, the season of the year, and money at disposal. Avoid all waste, and so reduce food bills.

3. See that all materials are of good quality and thoroughly cleansed. Use nothing that is doubtful as to freshness.

4. Success will depend on following the recipe carefully, so do not alter until it has been given a fair trial.

5. Collect all the utensils and materials required, then weigh or measure accurately. Do not guess at quantities.

6. See that the fire or oven is right for cooking, but do not keep a roaring fire nor burn gas or electricity when not required.

7. Each utensil should have its fixed place, and be kept in it when not in use. All new utensils should be scalded before use.

8. Keep the kitchen tidy and clear up as you go along, it will make less to do when you have finished. Fill all used saucepans with water to facilitate washing.

9. Never omit to taste what you are cooking. Season adequately, but do not overdo any flavouring. Vary the flavouring to suit individual taste, and avoid monotony.

10. The importance of appearance must not be forgotten. Always try to make a dish look attractive, pleasing to the eye as well as to the palate.

11. Always serve punctually by watching the clock. See that all hot dishes are really hot, and cold dishes really cold.

12. Remember that good cooking is impossible without cleanliness. Rub over stove every day, and wipe oven with cloth wrung out of soda water when greasy.

13. Burn all rubbish when possible, and put nothing damp into the dust-bin. Keep the scrap-pail lined with paper, and scald occasionally.

14. Above all, do not be discouraged when anything goes wrong; the best cooks have failures, and success only comes with practice.

### SOUPS.

**Beetroot Soup.**—Peel two medium-sized beet-roots and cut them in slices, wash and shred three

celery stalks, and peel and slice two onions or leeks. Melt a tablespoonful of dripping in a saucepan, put in the prepared vegetables, and cook them a few minutes without browning. Add a quart of meat boilings or light stock, mix, and cook until the vegetables are tender, adding more liquid if necessary. Then rub as much as possible through a sieve and return the purée to saucepan. Add 1 dessertspoonful of flour mixed smoothly with ½ pint of milk and stir until boiling. Season to taste and serve with fried croûtons.

**Cauliflower Soup.**—Wash a small cauliflower well and remove the green leaves. Put it in a basin and cover it with boiling water, adding a pinch of baking soda if the water is hard. After it has stood for five minutes, take it out and put it in a pan to boil, with a quart of milk and water, or skim milk without water, until quite tender. Pass all through a sieve and season with one teaspoonful of salt and a little white pepper. Melt one ounce of butter in the saucepan and add to it a dessertspoonful of corn-flour, mixing till perfectly smooth. Add the soup gradually and stir till it boils. Let it boil for three minutes, then draw it aside and stir in two or three tablespoonfuls of cream. Do not allow it to boil again after adding the cream.

**Celery Soup.**—Put into an enamelled pan one quart of white stock or meat boilings with four ordinary-sized onions, peeled and sliced, the white part of two heads of celery, washed and cut into pieces, and a small ham-bone. Boil all gently for about an hour, or till the celery is quite tender, then pass through a wire sieve, and return to the pan. Dissolve one dessertspoonful of corn-flour in a very little cold water or milk, stir into the soup, and let it boil for eight minutes, removing the scum as it rises; season with a little celery salt and white pepper, and just before serving add a half-pint of milk or a little cream; let it get as hot as possible without boiling, and serve with croûtons of bread on a separate dish.

**Fish Soup (White).**—Melt in a pan one ounce of butter with one ounce of flour, add three gills of milk, and stir until boiling. Add two pints of fish stock, stir carefully, and let it boil gently for ten minutes; have the fillets of a small haddock or whiting cut into pieces about an inch square, put them into the soup, and continue to stir till it boils for five minutes, being careful not to break the fish. Season with a little grated nutmeg, white pepper, and salt, and just at the moment of serving add a dessertspoonful of chopped parsley.

**Green Pea Soup.**—Soak one pound of dried green peas in cold water for twenty-four hours. Place them in a saucepan with two quarts of cold water or meat boilings, one large or two small onions, one head of celery and an ounce of dripping. Boil until the peas are quite tender. Pass the soup through a wire sieve. Return it to the saucepan, add a pint of milk, pepper and salt to taste. Boil and serve.

**Hare Soup.**—Pick from the remains of a jugged hare the nicest pieces of meat, and cut into dice to add to the soup later. Put the bones left into a stewpan, with one large onion stuck with cloves, one carrot cut into slices, and two or three stalks of celery cut into inch lengths, also a slice of stale white bread without crust. Pour over about three pints of stock and allow to simmer gently until the vegetables are quite tender. Strain, and rub as much of the vegetables through the sieve as possible, then return the soup to the stewpan and boil up. Thicken with browned flour, adding a wineglassful of port wine, a tablespoonful of red currant jelly, and a squeeze of lemon-juice and seasoning.

**Haricot Bean Soup.**—Put a pint of small haricot beans to soak in cold water overnight, drain them and put them in a saucepan with a large Spanish onion roughly chopped, two ounces of butter, salt and pepper, and two quarts of cold water, and boil gently until the beans are quite soft, after which pass the whole through a fine wire sieve, rubbing the pulp through patiently with the back of a wooden spoon, and moistening it frequently with a little of the liquid; then return the purée to the saucepan, add about a pint and a half of hot milk, and a large tablespoonful of chopped parsley, bring to the boil again, and serve.

**Kidney Soup.**—Wash an ox kidney, soak it for half an hour in salt and water, rinse and dry. Cut it in small pieces, leaving the core, and coat with flour, seasoned with pepper and salt. Melt two ounces of dripping in a saucepan, put in the kidney along with a sliced onion and fry until brown. Add two quarts of stock or meat boilings, and bring to the boil, stirring occasionally. Skim, add a cupful each of carrot, turnip and celery cut in dice, and a small bunch of herbs. Simmer for three hours, add two tablespoonfuls of ketchup and more seasoning if necessary.

**Lentil and Rice Soup (Maigre).**—Put into a saucepan three pints of cold water with three ounces of soaked lentils, half of a Spanish onion, peeled and chopped, a saltspoonful of curry powder, a teaspoonful of salt, and the same of sugar. Let all boil gently for about two hours, then add two ounces of whole rice, another teaspoonful of sugar, the same of salt, and boil gently one hour longer. Just before dishing, stir in one teaspoonful of vinegar, one tablespoonful of chopped parsley, and a good tablespoonful of cream, or half an ounce of butter, after which do not let it boil.

**Palestine Soup.**—Peel and slice two pounds Jerusalem artichokes, one onion, and two sticks of celery. Put them into a saucepan with two ounces of butter, or substitute, and cook them a few minutes without browning. Pour on one quart of water or white stock and simmer until the vegetables are tender, about an hour. Then sieve and return to saucepan. Add half a pint of milk, season to taste and stir until boiling. Serve with fried bread or toast.

**Potato and Leek Soup.**—Take six large mealy potatoes, two leeks, one ounce of crushed tapioca, one ounce of butter or dripping, a quarter of an ounce of sugar, one pint of milk and one quart of boiling water. Slice the potatoes and leeks into boiling water, boil to a pulp, then rub through a sieve and put back into the saucepan. Shake in gently the tapioca. Boil ten minutes, add milk and dripping, boil up, season and serve.

**Tomato Soup.**—Two pounds of tomatoes, two ounces of bacon, one ounce of dripping, one ounce of sago, one carrot, one onion, one stick of celery, one quart of stock, a bunch of parsley and herbs, salt and pepper. Cut the bacon into small bits, and fry it in the dripping for a few minutes. Wash and prepare the vegetables and cut them up into small dice; fry them in the dripping for about ten minutes; next slice and add the tomatoes, add also the stock and herbs. Put the lid on the pan, and cook the contents till they are tender, then rub them all through a sieve; put the soup back into the pan, bring it to the boil, then sprinkle in the sago. Let the soup boil till the sago is quite clear. Season the soup nicely with salt, pepper, and a dust of castor-sugar. A little milk may be added.

**Veal and Celery Broth.**—Wipe two pounds of neck or knuckle of veal with a damp cloth and put it into a saucepan with two quarts cold water. Add a little salt and two tablespoonfuls washed rice. Bring to the boil very slowly, skim and add a small head of celery cut in shreds, and two thinly sliced onions or leeks. Simmer slowly for two or three hours. Serve the meat separately with parsley or celery sauce. Whisk the soup to break up the rice, add more seasoning if required, beat up an egg in the soup tureen and pour the soup on to it, stirring constantly. A little chopped parsley may be added.

**Vegetable Marrow Soup.**—Peel and quarter a marrow, scoop out the seeds, then cut into slices, and put it into a saucepan with a small Spanish onion peeled and sliced, one blade of mace, one bay leaf, three gills of water, and a little salt. Boil gently till tender, and press through a wire sieve. Mix one ounce of flour with a very little milk, then stir in half a pint; put it on in an enamelled pan with the marrow pulp, and let it boil for eight minutes, stirring constantly; after which remove from the fire, and stir in one ounce of butter; season with white pepper and salt, and serve with small squares of fried bread on a separate dish. The marrow should weigh about two pounds and a half.

## FISH AND SHELL-FISH.

**Bream, Stuffed and Baked.**—Clean a medium-sized bream, and trim it neatly. Prepare a stuffing with one cupful of bread-crumbs, one tablespoonful chopped parsley, the grated rind

and juice of half a lemon, half a teaspoonful powdered herbs, two tablespoonfuls melted bacon fat, seasoning, and enough egg or milk to bind. Put the stuffing into the fish and sew it up. Then lay the fish in a baking dish with a little dripping and bake in a good oven for half an hour or longer, keeping it well basted. When ready, serve fish on hot dish, removing the thread. Garnish with parsley and lemon, and serve a good sauce separately.

**Cod au Gratin.**—Take the remains of cold boiled cod; take away the skin, carefully remove the bones, and separate the flakes without breaking them much. Butter a flat dish, put in alternate layers of fish and sauce, sprinkling each very lightly with grated cheese, seasoned with a few grains of cayenne. On the top layer strew rather thickly brown bread-crumbs or raspings, with here and there very small pieces of butter. Put it in the oven long enough to get thoroughly heated. Serve with a dish of mashed potatoes or potato croquettes.

**Cod Steaks, Fried.**—Cut from the tail end of a fresh cod three or four slices rather more than half an inch thick, remove the skin from them, and lay them on a dish. Mix two tablespoonfuls of salad oil with the same of vinegar, a few sprigs of parsley, and a little pepper and salt, with a spoon; pour this over the steaks, and let them remain in it for two hours. When wanted, wipe them with a clean cloth, dust some flour on both sides, then brush with beaten egg, coat with bread-crumbs, and fry a nice brown colour. Serve hot with maître-d'hôtel butter and garnish with parsley.

**Eels in Jelly.**—Choose the eels very fresh and soak them in salt and water for some time before cooking. Cut off the heads, turn back the skin at the top and draw it off. Cut the eels in neat pieces and put them into a saucepan with warm water to cover. Add seasoning, a little bay leaf, some sliced onion and enough vinegar to make the water taste acid. Simmer gently until the fish is tender, then lift out the pieces and place them in a dish. Strain the liquid, return it to saucepan, and boil and skim it until clear. Add gelatine in the proportion of half an ounce to one pint and when dissolved pour over the fish. Serve cold with salad.

**Fillets of Fish with Tomatoes.**—Butter a pie-dish and put in a layer of filleted haddock, sole, or plaice. Sprinkle over the fish a little pepper and salt and a few drops of lemon juice. Cut some tomatoes in slices and put a layer of these next, adding a little more pepper and salt. Fill the pie-dish in this way, finishing the dish by putting a good layer of bread-crumbs on the top, with a few tiny pieces of butter here and there. Bake from thirty to forty minutes.

**Fish and Potato Pie.**—Put two cupfuls of fish free from skin and bone into a buttered pie-dish and pour over a cupful of well-seasoned fish sauce. Sieve four cupfuls of cooked potatoes, heat with a little milk, and some butter or margarine, and season to taste. Beat until smooth, pile on the top of the fish, and arrange neatly. Brush over with milk or egg, and bake until brown and thoroughly hot. One or two hard-boiled eggs cut in slices may be mixed with the fish.

**Gurnet in White Wine.**—Wash three gurnets, removing the heads and fins. Score the skin on both sides, lay the fish in a greased baking dish and add seasoning. Lay some thin slices of tomato and Spanish onion on the top, sprinkle with more pepper and salt and dot with small pieces of butter. Pour a glass of white wine round and cook in the oven until tender, basting the fish occasionally with the liquid. Garnish with sauté potatoes.

**Haddock, Fried Fillets of.**—Choose fillets of medium size and cut each in three pieces. Coat them with flour seasoned with pepper and salt, then dip them in, or brush them over with beaten egg, and coat them with fine fresh bread-crumbs. (Another way is to make a very thin batter of flour and milk, into which dip the fish, then coat with bread-crumbs, thus saving the eggs.) A short time before serving place them in a wire basket and fry them in boiling fat to a nice golden brown with a crisp surface. Drain on paper and serve on a dish paper garnished with parsley. Serve with or without sauce.

**Halibut with Piquant Sauce.**—Trim and wipe two slices of halibut, dry well and coat with flour. Melt a little butter in a frying-pan, and fry the fish for a minute or two on both sides. Then lift out, and fry a small chopped onion in the fat; when brown stir in a dessertspoonful of rice-flour and two tablespoonfuls piccalilli pickle. Add half a pint of fish stock gradually (or milk and water), and stir until boiling. Put back the fish, cover the pan, and leave to simmer until well cooked. Serve the fish on a hot dish, pour the sauce over, and garnish with parsley. Other kinds of fish can be cooked in the same way.

**Herring, Potted.**—Take perfectly fresh herrings and clean them well. Cut off the heads and fins and take the bones out; strew them over with salt and pepper, and a slice of an onion nicely minced to each. Roll them up tightly, pack them in a jar, and pour over them in the proportion of one part vinegar to two of water, with a little whole black pepper. Cover closely and bake them in the oven for an hour. Take off the cover when they are cold, and pour over them a little cold vinegar and re-cover.

**Ling Steaks, Savoury.**—Wash and dry four ling steaks, and coat them with flour seasoned with pepper and salt. Place them in a well-greased baking dish, cover with milk and place in a good oven. Meanwhile slice one or two Spanish onions, and fry in oil or butter to a golden brown. When the fish has cooked ten minutes, spread the fried onions over the top, and cover with thin slices of bacon; return to the oven and continue the cooking until the fish is done. Small baked tomatoes may be used as a garnish.

**Mackerel, Filleted and Fried.**—Well wash, cut off the head, and cut the fish from the bone on both sides. Cut each half in two, well season with pepper and salt, and coat with flour. Beat up an egg until white and yolk are well mixed; dip each piece of mackerel into this, and again into finely grated bread-crumbs. Have ready a frying-pan half full of boiling fat, put in the fish, and fry for ten minutes. Serve with parsley sauce and mashed potatoes.

**Mackerel, Soused.**—Clean half a dozen mackerel, cutting off the heads and fins. Put into a saucepan half a pint of water, half a teacupful of brown vinegar, a thinly-sliced onion, the strained juice of one orange and one lemon, a few pieces of carrot, a small bunch of herbs, and a dozen peppercorns, and let these boil fifteen minutes. Place the mackerel in a greased earthenware dish, sprinkle them with salt, and pour hot mixture over. Cook in a good oven for half an hour and leave to cool. Serve as required, garnishing with parsley and cut lemon. Gooseberry sauce may be served separately.

**Red Mullet with White Wine.**—Clean two red mullet, handling them gently. Score the skin across once or twice, and place the fish in a buttered baking dish, which has been sprinkled with chopped button mushrooms and shallots. Put more of the chopped ingredients on the top and season with pepper and salt. Pour a glassful of wine round, cover the fish lightly with browned bread-crumbs, dot with pieces of butter, and bake in a moderate oven about twenty minutes. Serve in the same dish garnished with parsley.

**Salmon, Grilled.**—Cut slices one inch in thickness, wipe them dry and dip in salad oil or melted butter. Heat the grid, grease it, lay on the slices and cook them under the gas or electric griller, allowing about ten minutes on each side. Serve garnished with lemon and watercress, or parsley. A small pat of maître d'hôtel butter may be laid on the top of each slice.

**Salmon, Mayonnaise of.**—Remove the skin from a piece of cooked salmon and leave it until cold. Then wipe it dry and coat evenly with mayonnaise sauce. Garnish round with pretty lettuce leaves, and the top with thinly-sliced cucumber and radish, or according to fancy.

**Smelts, Fried.**—Take the number required, and see that they are perfectly fresh, as by keeping too long the flavour peculiar to them will be lost. Do not wash them, but draw the gills out very carefully and wipe with a cloth, handling them as gently and as little as possible; dust with flour on both sides, draw through beaten egg, and coat with fine fresh bread-crumbs. Place them on a wire drainer, and fry in boiling fat to a light

golden brown, after which lift the drainer with them on it, and put it in the oven only long enough to drain the fat from them. Serve cross-wise on a folded napkin, and garnish with parsley. Shrimp, Dutch, or lobster sauce may be served with them in a sauce tureen if desired.

**Sole au Gratin.**—Butter a gratin dish rather thickly, then spread over it a very small onion finely minced, a little parsley also finely minced, a few chopped mushrooms, and some brown bread-crumbs. Cleanse, skin, and trim a sole, lay it on the dish, strew a little more parsley and bread-crumbs over it, put on a few small bits of butter and some button mushrooms neatly arranged, pour over a little of sherry and ketchup, and a few drops of the essence of anchovies. Bake in the oven twenty-five minutes. It must be sent to table on the dish on which it is cooked. A whiting may be done in the same way, giving it fifteen minutes in the oven.

**Sole, Grilled.**—Cut off the fins from a medium-sized sole, remove the dark skin, and wipe it dry. Then dip both sides in melted butter seasoned with pepper and salt. Place it on a hot grid and grill it ten minutes or longer, turning it once to brown it on both sides. When using a gas grill make it very hot before putting the fish under it. Serve at once garnished with lemon and parsley. Plain butter or maître-d'hôtel butter may be served separately.

**Trout, to Fry.**—Carefully clean, scale and wash the fish; season them lightly with pepper and salt, and roll them in dry oatmeal. Melt a little fat in a frying-pan, and, when it is quite hot, lay in the fish. Fry them from six to eight minutes according to the size of the trout, browning both sides equally.

**Whitebait.**—Wash the fish well, drain in a colander, then spread on a clean cloth and dry lightly. Toss a few at a time in flour, put in a frying basket and plunge into boiling fat. Fry about three minutes, shaking the basket gently all the time. Then drain until crisp, season, and serve very hot with cut lemon, and thin brown bread and butter.

**Crab Simply Dressed.**—Remove the creamy meat from the shell, and the white flesh from the claws of a boiled crab, throwing away the aprons and gills. Pull the white meat into shreds with two forks and put it on one side. To the creamy meat add a few white bread-crumbs, a seasoning of salt, cayenne and made mustard, a little salad oil or cream, and some vinegar or lemon juice. Mix all together, wash and scrub the shell, and put the creamy mixture inside. Put the white meat on the top and garnish according to fancy, with chopped parsley, hard-boiled yolk, coral from the crab, etc. Serve cold, putting a little parsley or watercress round and the small claws of the crab.

**Lobster à la Newburg.**—Remove the meat from a cooked lobster, break it in pieces, pour over a small glass of madeira, and sprinkle with salt, cayenne and a pinch of nutmeg. Melt an ounce of butter in a frying-pan, stir in a teaspoonful of flour, and then pour on a small teacupful of milk. Stir until boiling, put in the lobster and cook slowly about ten minutes. Beat up the yolks of two eggs with a little cream, add them to the contents of the pan, and heat until thick, but without boiling. Serve with crisp toast.

**Mussels à la Marinière.**—Wash three dozen mussels until thoroughly clean, put them into a saucepan with a small quantity of water and cover closely. Heat until the mussels open, shaking the pan occasionally. Then drain, reserving the liquor. Remove the mussels from their shells, cutting away the little black part or "beard." Melt one ounce of butter in a saucepan, add two shallots finely chopped and cook them slowly a few minutes. Stir in a level tablespoonful of flour, and then the mussel liquor along with enough milk or white wine to make half a pint. Stir until boiling, simmer a few minutes, put in the mussels to heat, and add seasoning and a little chopped parsley.

**Scallops, Fried.**—Wash the required number of scallops carefully, then drain and dry them. Sprinkle them with a little lemon juice, dip them in beaten egg, seasoned with pepper and salt, and then coat with fine bread-crumbs. Fry the scallops in boiling fat until a golden brown, drain, and serve with cut lemon.

## VEGETABLES.

**Asparagus.**—Cut the stalks of equal length and scrape them lightly. Wash and leave in cold water for half an hour. Tie in bundles with the heads lying one way, and then cook in boiling salted water until tender. Drain and serve on a folded napkin or dish with drainer. Serve separately fresh butter melted with a squeeze of lemon juice and lightly seasoned.

**Beetroot en Casserole.**—Melt two ounces of dripping or butter in an earthenware casserole, put in a Spanish onion thinly sliced and cook it ten minutes without browning. Stir in a tablespoonful of flour, add half a pint of vegetable or meat stock and stir until boiling. Then add two or three cooked beetroot cut in dice, with seasoning to taste. Cover and cook slowly about twenty minutes. Before serving add a teaspoonful each of sugar and vinegar and sprinkle with parsley.

**Belgian Endive or Chicory en Casserole.**—Wash and trim the vegetable carefully. Put it into an earthenware casserole with a little good butter, pepper, salt and a sprinkling of sugar. Cover closely, and cook over a gentle heat until tender. There is quite enough water in the chicory to keep it from burning.

**Carrots, Braised.**—Wash and scrape one pound of carrots and cut them in neat pieces. Put them into a saucepan with cold water to cover, bring to the boil, and strain. Melt an ounce and a half of butter, put in the carrots and fry them brown. Add a little stock, seasoning, and a little fine sugar, and cook slowly for half an hour or until tender, basting occasionally with the stock and adding more if necessary. Sprinkle with finely-chopped parsley.

**Celeriac with Sauce.**—Wash and brush the celeriac, peel and remove any brown parts. Then cut into small neat pieces, throw into cold water and soak half an hour. Drain and cook in boiling water with a little lemon juice until tender. Drain again and serve with cheese, parsley or egg sauce made with milk and some of the water in which the celeriac was cooked.

**Cucumber, Fried.**—Peel a firm thick cucumber and cut it in slices an inch thick. Stamp out seeds with a small cutter, and scald the rings in boiling water for ten minutes. Then drain, dry, sprinkle with lemon juice and coat lightly with flour seasoned with pepper and salt. Egg and bread-crumb the pieces, and fry in boiling fat until brown. Serve garnished with parsley and sliced lemon.

**Globe Artichokes, To Cook and Serve.**—Choose them young and fresh, cut off the hard stalk even with the leaves, and remove any hard outside leaves. Then trim the tips of the leaves with a pair of scissors. Wash the artichokes well, and let them lie in cold water for some time. Drain and throw them point downwards into fast-boiling water to which a little salt and lemon juice have been added. Boil about one hour or until tender, then drain and serve piled up on a hot dish. Simple melted butter with a dash of lemon juice added is the best sauce, or serve cold with French salad dressing.

**Green Peas en Casserole.**—Butter a fire-proof casserole, and lay in it a few well-washed lettuce leaves. Add the green peas with seasoning, a sprinkling of finely-chopped mint and a pinch of sugar. Lay more lettuce on the top, and pour in enough water to moisten. Cover closely, and cook slowly for half an hour or until the peas are tender. A double cooker can be used instead of the casserole.

**Green Peppers, Stuffed.**—Choose four green peppers of equal size, cut a slice off each and remove seeds and partitions. Then cook them in boiling water for five minutes and drain. Make a stuffing with four tablespoonfuls each of bread-crumbs and chopped ham or tongue, one dessertspoonful each of chopped onion and parsley, pepper and salt, mixed together and moistened with stock or tomato purée. Fill the peppers with this, sprinkle the tops with browned crumbs, and lay them in a greased baking dish. Dot with a few small pieces of butter, pour a little stock round and cook in a moderate oven about half an hour.

**Lettuce with Poached Eggs.**—Wash two or three lettuce, scald them in boiling water for five minutes and drain. Then shred them and put them into

a saucepan with a little butter, and milk or stock. Put on the lid and cook slowly until tender. Sprinkle with a little flour and seasoning, and stir until cooked. The addition of a little cream would be an improvement. Arrange the lettuce neatly in a hot dish and serve with poached eggs on the top.

**Onions, Stuffed and Baked.**—Skin four onions of medium size, and boil them until almost cooked. Melt half an ounce of butter in a saucepan, add two tablespoonfuls chopped ham, one teacupful bread-crumbs, and a little made mustard. Mix together, add seasoning if necessary, and bind together with beaten egg. Drain the onions, place them in a well-greased baking dish, cut across the top, form a hollow, and fill with the stuffing. Cover with greased paper, and bake in a good oven about twenty minutes. A little brown or tomato sauce may be poured round.

**Potatoes à la Maître d'Hôtel.**—Use rather firm cooked potatoes and cut them in slices. Melt a little butter in a frying-pan, and add a little finely chopped shallot, parsley, pepper, salt and a few drops of lemon juice. Then put in the potatoes and toss them in the mixture until thoroughly hot.

**Potato Croquettes.**—Sieve half a pound of cooked potatoes and put them into a saucepan with a little melted butter, a teaspoonful of chopped parsley, pepper and salt. Beat well and moisten with a little beaten egg. Cool, and form into small balls, using a little flour. Egg and bread-crumb, and fry in hot fat to a golden brown. Drain on paper, and serve garnished with parsley. A little finely-chopped ham or grated cheese may be mixed with the potatoes.

**Rice for Curry.**—Wash the required amount of rice in several waters, then drain and remove any discoloured grains. Sprinkle it into a saucepan of fast-boiling water, slightly salted, and boil quickly so that the grains are tossed about. Cook until the rice feels tender when a grain is rubbed between the fingers—about fifteen minutes. Then strain and let the cold water run over it to separate the grains. Return the rice to a greased saucepan and reheat by the side of the fire or in a cool oven.

**Spinach with Eggs.**—Wash and pick some spinach, and cook it in its own juice until tender. Drain (reserving the liquor), chop finely and add pepper, salt, a pinch of nutmeg, and a little melted butter. Arrange the spinach neatly on a fire-proof dish, sprinkle it with grated Parmesan, and cover with hard-boiled eggs cut in slices. Pour over a small quantity of white sauce to which the spinach juice has been added, top with more cheese, and place in a hot oven until hot and brown.

**Tomatoes, Baked.**—Scald and peel a sufficient quantity of smooth, round tomatoes; put into a deep earthenware dish and sprinkle plentifully with salt and pepper; have a teacupful or more, according to the quantity of tomatoes, of fine cracker crumbs, and spread over the top. Bake in a quick oven from thirty to forty minutes. Drop a few lumps of butter on to the tomatoes, and serve.

**Tomatoes, Fried.**—Cut round solid green tomatoes in rather thick slices without peeling, also some tart, firm apples. Have some pork dripping or olive oil hot in a good-sized frying-pan, roll the slices in batter or flour seasoned with salt and pepper, and fry a golden brown on both sides.

## SALADS AND SANDWICHES.

**Banana Salad.**—Slice some ripe bananas into a glass dish, then put a layer of oranges cut in the same way, then another layer of bananas, and oranges again. Sprinkle with sugar, and over all squeeze the juice of a lemon. Serve with roast game.

**Carrot and Apple Salad.**—Scrape some tender raw carrots and put enough through the mincer to make a cupful. Combine with an equal amount of tart apple which has been chopped with a silver knife. Moisten with French salad dressing, and season to taste. Chill, and serve on nests of lettuce leaves. Mayonnaise sauce may be served separately.

**Date, Orange and Celery Salad.**—Shred half a cupful of dates, and double the amount of crisp celery. Moisten with French salad dressing and leave in a cool place for half and hour. Divide two oranges into sections free from white pith and sprinkle them with a little more of the dressing. Arrange all neatly with a border of lettuce leaves, and serve mayonnaise sauce separately.

**Economical Salad.**—Mix together equal quantities of small cooked haricot beans, crisp celery cut in shreds, and cold potatoes cut in slices. Moisten these with cheese or boiled dressing, and add a little finely-chopped onion and parsley. Arrange neatly in a salad bowl and decorate with a little water-cress.

**Fish Salad.**—Choose a firm white fish that will flake easily. Remove all skin and bone and chill thoroughly. Combine with a little chopped parsley, some chopped capers or green pickle, and slices of hard-boiled egg. Moisten with boiled dressing or mayonnaise with a little anchovy sauce added, and arrange neatly in a salad dish. Garnish with small lettuce leaves or cut cucumber.

**French Bean Salad.**—Use cooked beans; if young they may be left whole; if not, cut them in fine shreds. Put them into a salad dish and combine with finely-chopped parsley, and a small quantity of chopped chives. Moisten with French salad dressing or cheese dressing, mixing all lightly. Red radishes or small red tomatoes would make a pretty garnish.

**Nut and Celeriac Salad.**—Prepare one and a half cupfuls of cooked celeriac cut in dice, and one cupful of tart apple chopped with a silver knife. Combine these with French salad dressing, chill and mix in two or three tablespoonfuls chopped walnuts or other nuts. Serve with green salad.

**Mixed Salad.**—Prepare one cupful each of celery, tart apple and beetroot, cutting them in dice. Mix these with enough mayonnaise or other salad dressing, and chill thoroughly. Line a salad bowl with some crisp lettuce leaves, put the mixture in the centre, and garnish with slices of hard-boiled egg.

**Tomato Salad.**—Choose firm tomatoes of a good colour. Lay them in hot water for a minute or two, then remove the skins and leave them to cool. To serve, slice the tomatoes thinly, and arrange them in a salad dish, and sprinkle with finely-chopped parsley and shallot. Moisten with French salad dressing and stand a few minutes before serving.

**Tomato and Orange Salad.**—Peel two firm ripe tomatoes and two oranges and cut them in thin slices. Arrange lettuce leaves in a salad bowl with the tomato and orange slices on the top. Pour over a dressing made by blending together two tablespoonfuls olive oil, one tablespoonful orange juice, a little tarragon vinegar, salt and cayenne. Sprinkle with finely-chopped parsley before serving.

For **Salad Dressings** see under **Sauces.**

**Notes on Sandwich-making.**—The bread used should be close in texture and not too new. The butter should be softened or creamed to make it spread more easily. Meat should be chopped or cut small, to distribute the fat and enable it to be eaten more easily. The filling should not be too moist, it should be well seasoned, and must reach the edge of the bread. When sandwiches have to be packed, wrap them in grease-proof paper or in a damp muslin.

**Apple and Cheese Sandwiches.**—Spread brown or white bread with cream cheese, and sandwich together with them slices of apple, or chopped apple sprinkled with a little lemon juice.

**Chocolate Sandwiches.**—Grate some best chocolate finely, and make it into a stiff paste with whipped cream; add a few drops of vanilla. Spread on thin bread-and-butter and cut into fancy shapes.

**Fruit and Nut Sandwiches.**—Put equal quantities of seedless raisins, cleaned currants, and dates or figs through the mincing machine. Add a little grated orange rind and juice and chopped nuts, and mix well. Use with brown or white bread and butter.

**Game Sandwiches.**—Put the remains of cold roast game through a mincer, and moisten with a little brown sauce. Spread bread-and-butter with red-currant or guava jelly and sandwich two slices together with a layer of the mince.

**Lamb and Mint Sandwiches.**—Mix a cupful of minced lamb with a little finely-chopped mint. Moisten with a little mayonnaise sauce and add seasoning. Use as a filling for small rolls.

**Maple Sugar and Nut Sandwiches.**—Grate some maple sugar and mix with an equal quantity of

chopped nuts. Use between thin slices of malt bread and butter.

**Marmalade and Pea-nut Sandwiches.**—Mix some pea-nut butter to a creamy consistency with a little cream or condensed milk. Spread this on slices of brown or white bread and sandwich together with a layer of orange marmalade.

**Salmon Sandwiches.**—Mix some flaked salmon with finely-chopped pickle and moisten with mayonnaise or salad dressing. Use as a filling for small rolls.

**Sardine and Cucumber Sandwiches.**—Spread some white bread-and-butter with sardine paste, and sandwich together with thin slices of cucumber.

**Radish and Cheese Sandwiches.**—Finely-minced crisp radishes form the basis of these sandwiches. They should be washed and peeled, and be as young as possible. Wafer-thin slices of brown bread must be spread with whipped cream and some grated Parmesan, and the radishes added in a thick layer between them.

**Veal and Bacon Sandwiches.**—Mince together some cooked veal and cooked bacon, add seasoning and use as a sandwich filling with thin slices of tomato.

## MEAT DISHES.

**To Boil Meat.**—This method is better suited to larger joints than to small, and the meat should not be too fat. *Fresh Meat.*—Wipe with a damp cloth, trim off any discoloured parts, and bind into shape if necessary with a piece of tape. Weigh, and then put into a saucepan with boiling water to cover. Boil five minutes to seal the outside and keep in the juices, then simmer very gently until the meat is tender. A little salt should be added and any scum carefully removed. Suitable vegetables such as carrot, turnip, onion, parsnip and celery may be cooked along with the meat. From twenty to thirty minutes to the pound of meat should be allowed and a little over, according to the shape and kind of meat used. Serve the meat with the vegetables round and some of the liquor separately. Or, a tasty sauce may be made with some of the liquor, such as onion or caper sauce, and served with boiled mutton. Tomato or horse-radish sauce may be served with boiled beef. *Salt Meat.*—Put this into cold or tepid water, to soften it and draw out some of the salt. Bring slowly to boiling point, boil quickly for a few minutes and then simmer only, allowing twenty minutes to the pound and a little over. Vegetables may be cooked along with salt beef, and small dumplings are a good accompaniment. The liquor in which meat has been cooked should be used for making soup. The liquor from salt meat is excellent for pea, lentil or potato soup.

**To Roast Meat.**—Wipe it first with a damp cloth, then trim off any superfluous fat, skewer it into shape if necessary, and weigh it. Frozen meat should be thawed before cooking by letting it stand in a warm kitchen. Place the joint on a stand or trivet in the roasting tin to raise it out of the fat, and put the best side down to begin with. Two or three tablespoonfuls of fat should be put on the top of meat that is inclined to be dry. Place the meat in a hot oven for fifteen minutes to seal the outside and keep in the juices, then reduce the heat and cook more slowly until ready. Keep the oven ventilator open, and baste the meat with the melted fat at intervals of fifteen minutes to prevent it becoming dry. The time required for roasting will depend on the thickness of the meat, but usually quarter of an hour to the pound and quarter of an hour over. Pork and veal should be given a little longer. Turn the joint over at half-time, but never stick a fork into the flesh, as this would allow the juice to escape. Covered roasting tins are now sold; these keep the moisture in the meat to a certain extent, and prevent the fat spluttering and soiling the oven. The cover should be removed a few minutes before serving to allow the meat to brown. Serve roast meat on a very hot dish and remove any skewers or fastenings. A clear or thick gravy should be served separately. For a simple roast clear gravy is best, and thickened gravy for stuffed meat. Recipes on p. 731.

### *WITH BEEF.*

**Beef, Brisket of (Baked).**—This joint is very appetising, stuffed and baked, and very cheap too, which is a consideration in most households. Take out the bones, and fill the holes up with good stuffing, of whatever sort is liked best. The stuffing must be well seasoned. Dredge the meat well with flour and pour over it about half a pint of broth or stock; bake it for three hours, basting occasionally with the liquid. Skim all the fat off the gravy, and serve.

**Beef in Jelly.**—Choose a nice piece of shin of beef weighing between three and four pounds along with some bone, and a cowheel or two calf's feet. Wash the meat and cut it in pieces. Wash and scrape the cowheel or calf's feet, cut in pieces and blanch if necessary. Then put all into a saucepan with warm water to cover and a little salt. Simmer slowly for several hours, until the meat is perfectly tender, skimming when necessary. Then strain and chop the beef and meat from cowheel finely or put through mincer. Return to saucepan with the liquid, season highly, simmer half an hour, cool slightly and pour into wet moulds. Leave in a cold place to set.

**Beef, Minced with Tomatoes.**—Slice two or three good-sized onions into rings, slice half a pound of tomatoes, and fry in beef dripping. Mince one pound of beef, put it into the saucepan with the onions and tomatoes and add seasoning. Let it come to the boil, then remove the pan to the side of the fire, and simmer for half an hour. Thicken with bread-crumbs, make a wall of mashed potatoes, put the mince in the middle, and serve.

**Beef-Steak and Cucumber.**—Dip a rump steak in salad oil and cook under a gas or electric grill until done; place on a dish and serve with cucumber cooked in the following way. Cut a cucumber, after peeling it, into pieces about three inches long; cut each piece into quarters, put in a stewpan with a dessertspoonful of butter, four spring onions finely sliced, pepper and salt. Put the lid on and stew quickly until tender, about ten minutes, shaking the stewpan frequently to prevent burning. Then add a teaspoonful of flour mixed with two tablespoonfuls of milk, or, preferably, cream, and a lump of butter the size of a walnut. Place round the steak and serve.

**Beef-Steak, Stuffed and Stewed.**—Have one pound of thinly-cut steak off the round cut in a square complete piece. Mix together half a pound of sausage-meat, one teacupful of bread-crumbs, a teaspoonful of finely-chopped parsley, quarter of a teaspoonful of mixed sweet herbs, half a teaspoonful of salt, a little pepper, and a little grated lemon rind. Beat an egg and add it to this, mixing all thoroughly together with the hand. Lay this stuffing on the meat and roll it up, not too tightly. Tie it firmly to keep it in shape while it is cooked. Melt a dessertspoonful of dripping in a stewpan, and when it is very hot (a faint blue smoke will be seen rising from it when it is hot enough), brown the roll of meat in it, turning it about to get brown all over, then lift out. Mix a dessertspoonful of flour with a little cold water till quite smooth, then add a little salt and pepper and half a pint of second stock or water. Pour this into the stewpan in which the meat was fried, and stir it until it boils. Put the meat back in the pan, and stew it very gently for two hours.

**Beef, Stewed with Mushrooms.**—Melt two ounces of beef dripping in a stewpan; fasten two pounds of steak in a nice shape, flour it and fry it a nice brown on both sides. Pour in a good stock to barely cover the beef; add a dozen or so of fresh mushrooms, peeled and cut in halves. Simmer gently for three hours, when the meat will be quite tender. Serve on a hot dish, with the mushrooms round it.

**Hot-Pot.**—Take one pound and a half of stewing beef, three sheep's kidneys, two pounds of potatoes and two Spanish onions. Cut the beef in pieces, removing any skin. Skin and split the kidneys, removing the core, then wash, dry and cut them small. Cut half the potatoes in pieces and slice the remainder, and slice the onions thinly. Grease a hot-pot dish and put in the different ingredients in layers, seasoning well with pepper and salt, and putting pieces of potato on the top. Pour in some stock or water, cover and cook in the oven for two hours. Remove the cover a short time before serving, and brown the top.

**Mince Collops.**—Mince one pound of juicy beef with a small amount of fat. Heat one ounce of dripping in a saucepan, put in the meat along with an onion finely minced and pound them with a spoon until browned. Moisten with stock and season to taste. Cover and cook slowly about one hour. Thicken with a few bread-crumbs, and serve very hot, garnished with croûtons of fried bread, or small pieces of toast.

**Ox-tail, Stewed.**—Wash the tail, cut it in short joints and trim off most of the fat. Put the pieces into a saucepan with cold water to cover, bring to the boil, then throw this water away and rinse and dry the tail. Coat the pieces with seasoned flour and fry them in a little hot dripping until well browned. Then cover with stock, bring to the boil, and skim. Add small pieces of carrot, turnip, onion and celery to flavour, put on the lid and stew slowly about three hours, skimming when necessary. Before serving add a little ketchup or other piquant sauce, and taste if sufficiently seasoned.

**Tripe en Casserole.**—Cut half a pound of beef-steak in small pieces and brown it in a small quantity of dripping in a frying-pan. Prepare one large onion, two carrots, and a little celery, cutting them in small pieces. Place the vegetables in a casserole with just enough water to moisten, lay the steak on the top, then one pound of dressed tripe cut in neat pieces. Season to taste, cover with greased paper, put on a tight-fitting lid, and cook slowly for one and a half hours. Serve with mashed potatoes.

*WITH MUTTON AND LAMB.*

**Haricot Mutton.**—Divide a neck of mutton into cutlets about half an inch thick, trim away part of the fat, and chop off the larger pieces of bone. Scoop out a number of balls from carrot and turnip, put these into boiling water with a little salt and a pinch of sugar, and boil till half tender. Brown two ounces of butter in a stewpan with two ounces of flour, put in the cutlets and brown carefully on both sides, then add about a dozen small onions peeled, and the vegetables along with the water in which they have been boiled. Season with black pepper, salt, and one table-spoonful of ketchup, let all simmer gently with the cover on for about one hour and a half, dish in a circle with the gravy and garnish with the vegetables.

**Irish Stew.**—Two pounds of scrag end of neck of mutton, ten potatoes, four small onions, warm water, pepper and salt. Take the mutton and divide it into portions, put it into the stewpan with warm water to cover, bring to the boil and skim. Add alternate layers of sliced potatoes and onions, and season with salt and pepper. Cover the stewpan closely, and let it stew gently until the contents are thoroughly cooked, adding more water if required.

**Lamb Chops.**—Cut a loin or best end of the neck in chops, flatten them, brush over with beaten egg; and coat with a mixture of bread-crumbs, minced parsley, pepper and salt. Have plenty of hot dripping in a frying-pan, put in the chops, and fry them nicely on both sides for twenty minutes. Arrange a bed of cooked spinach on a hot dish, place the chops round and serve with tomato or other suitable sauce.

**Lamb's Sweetbreads, Blanquette of.**—Make a border of mashed potatoes about three inches deep, brush it with beaten egg, and brown in the oven. Soak and scald some lamb sweetbreads in the usual way, and cook them in a little white stock about fifteen minutes. Put them on a dish to cool, then cut them into scollops a quarter of an inch thick. Make a nicely-seasoned white sauce, put the scollops into it along with a few button mushrooms cut in small pieces. Toss them a little till quite hot, but do not let them boil; dish in the potato border with the sauce poured over them.

**Liver, To Fry.**—Cut it into slices a third of an inch thick. Put these into a pan of boiling water, and let them stand for five minutes. Then dry in a clean cloth, dredge thickly with flour, pepper and salt, and fry until brown in dripping or butter. Parboil and finely chop some onions, and when the liver is partly done put in the onions, which should have been drained dry, and fry brown. When cooked through, arrange liver and onions on a hot dish, make a good gravy, and pour over all.

**Mutton Chops with Tomato Sauce.**—Trim the required number of chops, wipe them with a damp cloth, and then dip in salad oil or melted butter. Heat a gas or electric grill, place the chops on the grid under it, cook on one side about three minutes until the outside is browned, then turn and cook on the other side. Continue to grill, turning now and again until sufficiently cooked. Serve on a hot dish with a garnish of hot potato chips, and serve tomato sauce separately.

**Mutton, Curry of.**—Cut one pound or more of lean mutton into small pieces free from bone and skin. Melt a little fat in a saucepan, put in two sliced onions and fry them a few minutes, then put in the meat and cook a few minutes longer. Add a chopped apple, one dessertspoonful each of curry-powder and rice-flour, and a seasoning of pepper and salt. Moisten with a little stock, mix well, cover and simmer slowly about one hour. Then add a dessertspoonful of desiccated coconut, a squeeze of lemon juice and a little chutney. Serve with plainly boiled rice.

**Mutton, Shoulder of (Stuffed and Braised).**—From a small shoulder extract all the bones. Make the stuffing by mixing together six tablespoon-fuls of bread-crumbs, three ounces of chopped bacon, one small onion and parsley chopped fine, a teaspoonful of powdered herbs, and seasoning. Add one beaten egg to bind the ingredients together. Stuff the spaces caused by the removal of the bones with this, and roll up tightly. Cut up in large pieces a carrot, onion, and turnip, and place these in a stewpan with some parsley and herbs, the bones taken from the shoulder and about two quarts of stock. Bring to the boil, lay the meat on the top and simmer for about two hours. Take out the meat, and, when cold, brush over with melted glaze, and garnish with pieces of the cooked vegetables.

**Scotch Haggis.**—Clean the stomach bag of a sheep and let it lie in cold salted water for twelve hours, then put it aside with the rough side turned out. Wash the sheep's pluck well and put it on to boil covered with cold water. Carefully remove all scum as it rises, add a little salt, and boil the pluck for one hour. When cold, trim off any hard or discoloured parts, chop up the heart and the lights and grate half of the liver. Put all these in a bowl and add to them half a dessert-spoonful of salt, half a teaspoonful of Jamaica pepper, and half a teaspoonful of black pepper. Toast a breakfastcupful of oatmeal in the oven for ten minutes, and chop very finely half a pound of suet. Add these to the other ingredients and mix all with some of the water in which the pluck was boiled. Put the mixture into the prepared bag, being careful to leave plenty of room for the haggis to swell. Sew it up securely and put it in a large pan of warm water with half a pint of milk in it. For a short time keep piercing it now and then with a large needle to let the heated air escape, and so prevent bursting. Let it boil steadily for three hours without the lid, and serve very hot without garnish of any kind. The milk in the water tends to make the outside of the haggis white.

If onions are liked, a few can be minced, scalded in boiling water, and added. Should the haggis be made some time before it is wanted and so require to be heated again, it should, when wanted, be put into a pan of boiling water, and allowed to boil for an hour and a half with the lid off. If smaller haggies are preferred, cut the bag in pieces.

**Sheep's Heart, Stuffed and Roasted.**—Soak the heart in warm salted water, then wash it thoroughly and dry in a cloth. Fill it with veal forcemeat (*see* p. 732), sew it up, and coat with a little dry flour. Melt some dripping in a saucepan, put in the heart, and brown on all sides. Then cover and roast gently about one hour, basting frequently. When tender, lift out the heart, pour off the dripping, and make a little thickened gravy in the saucepan. Return the heart for a few minutes, take out the cotton, and serve with the gravy poured round.

*WITH VEAL.*

**Veal Cake.**—Slice down three hard-boiled eggs, and with some of the slices garnish a well-buttered plain round mould. Put alternate layers of veal, ham, and hard-boiled eggs till the mould is nearly full, seasoning well with pepper and salt, and sprinkling in here and there a little finely-chopped

parsley. Fill up the mould with nicely-flavoured white stock, and allow all to bake for four hours in a steady, moderate oven. Let it stand till quite cold, then turn it out carefully and garnish with parsley or salad.

**Veal Cutlets, with Ham and Mushrooms.**—Cut from the fillet, or any nice piece of veal, with a two-inch cutter, ten round or oval cutlets about half an inch thick, and the same number, with the same cutter, from sliced ham, making them a little thinner than the veal. Brush the veal cutlets with beaten egg, coat them with fine bread-crumbs, and cook them in boiling fat. Fry the pieces of ham, or cook them in the oven. Put on a tin of mushrooms in a small saucepan, with a small piece of butter, a little of the mushroom liquor, the juice of half a lemon, a little white pepper and salt, and let them simmer till tender. Brown one ounce of butter with a little flour, then add one gill of stock, a little ketchup, spiced vinegar, and white pepper, and let it boil five minutes. Dish the cutlets in a circle, veal and ham alternately, with the mushrooms in the centre and the sauce poured in under the cutlets.

**Veal Steaks, Minced.**—Weigh a pound of veal free from skin and bone, cut it in pieces and put it through a mincer along with three ounces of fat bacon. Add to the minced meat two ounces chopped suet, two tablespoonfuls bread-crumbs, one dessertspoonful chopped parsley, the grated rind of half a lemon, pepper, salt and a pinch of nutmeg. Mix well and bind together with beaten egg. Form into small flat cakes, using a little flour, egg and bread-crumbs, and fry them in butter or good dripping. Drain and serve on a mound of spinach, with tomato or brown sauce poured round, and a garnish of cut lemon.

**Veal, Stewed with Rice.**—Take two pounds knuckle of veal, wipe it carefully, and put it into a saucepan with hot water to cover. Bring to the boil and skim. Add two Spanish onions and a small head of celery cut in pieces, cover and simmer slowly for one hour. Then add a small teacupful of washed rice with pepper and salt, and continue the cooking another hour. Add a little chopped parsley just before serving.

**Calf's Feet with Butter Beans.**—Wash half a pound of butter beans, and soak them all night in cold water. Next day put them into a saucepan with the water in which they were soaked, and bring to the boil. Add two cooked calf's feet cut in pieces, and two sliced Spanish onions. Add more water to cover, and cook all slowly until tender—about two hours. Add a thickening of flour and milk, and stir until blended. Season to taste, cook a few minutes longer, and stir in some finely-chopped parsley at the last.

**Sweetbreads, Dainty.**—Fry one or two Spanish onions in butter with some small squares of bacon. Add half a pint of stock and thicken with flour. Squeeze in a little lemon juice, and add two sweetbreads previously soaked in salted water, blanched, skinned, and sliced. Let all this simmer for an hour, stirring occasionally. Serve hot on toast.

*WITH PORK.*

**Pig's Head Brawn.**—Wash and clean a pickled head carefully. Put it into a saucepan with cold water to cover it, and bring slowly to boiling point. Skim, and add some carrot, turnip and onion cut in pieces, and a small bunch of flavouring herbs. Simmer until the flesh slips easily from the bones —about three hours—and skim when necessary. When ready lift the head on to a dish, strain the liquid into a basin and leave until next day. Then cut the meat from head into small pieces, trimming away all skin, gristle and superfluous fat. Remove all fat from stock, return it to the saucepan with the bones, and boil until well reduced. Then strain over the meat, add necessary seasoning, and when slightly cooled pour into wet moulds.

**Pork and Apples en Casserole.**—Peel, core and slice one pound of cooking apples and put them into an earthenware casserole. Peel and slice an onion in thin rings, brown these in a little dripping in a frying-pan and add to apples. Then wipe and trim three or four pork chops, coat them with seasoned flour, fry them brown on both sides, and lay on top of apples. Brown a little flour in the fat left in the pan, add a cupful of stock and stir until boiling. Skim, season to taste and pour into casserole. Put on the lid and cook in a moderate oven, about one and a half hours.

**Pork Chops, Baked**—To each chop allow a small onion and a small apple. Skin the onions, slice thinly and spread over a baking dish. Arrange the pork chops on the onions, with pepper and salt. Peel and core the apples, slice, and put over the chops. Place a few small pieces of butter on the sliced apples, cover, and bake in a brisk oven for half an hour.

**Pork Cutlets, To Fry.**—Choose the cutlets from the loin or best end of the neck, and not more than half an inch in thickness. Trim them neatly and remove superfluous fat. Coat them with flour seasoned with pepper and salt. Melt some of the fat in a frying-pan, and fry the cutlets until well browned on both sides. Turn them several times and cook them thoroughly. Serve on a very hot dish with a garnish of fried apples. Cut tart apples in quarters, removing the core, but not the skin, and fry in butter until tender.

## COLD MEAT RE-DRESSED.

**Cannelon.**—Mince very finely one pound of cold meat and half a pound of bacon or ham. Add six ounces of bread-crumbs, a little pepper, salt and finely-chopped parsley. Beat two eggs, and add to them a teacupful of stock. Mix all thoroughly with this liquid, and form the mixture into a roll. Tie it up in a pudding cloth, and steam for two hours. Serve hot with a good gravy or tomato sauce, or, if preferred cold, press it between two plates, and when cold cover it with brown or tomato sauce to which a quarter of an ounce of leaf gelatine has been added. Garnish it with tomatoes or any salad.

**Cold Meat Curry.**—Prepare half a pint of curry sauce (*see* p. 731) and cook it well. Then remove all skin and gristle from about half a pound of cold cooked meat and cut it in small neat pieces. Put these into the sauce and let them heat through and become thoroughly saturated without actually boiling. Serve with boiled rice.

**Cottage Pie.**—Cut one pound of cold mutton in neat slices, parboil eight or ten good-sized potatoes, and cut them in slices also. Peel an onion, put it into a small pan of boiling water, with a little salt in it, and boil it for ten minutes, then take it out and chop it. Butter a pie-dish and put a layer of potatoes in it, sprinkle over some of the onion and a little pepper and salt. Lay the slices of meat in next; put the rest of the onion over it, and some more pepper and salt. Cover with a layer of potatoes, and pour over a gill of stock, gravy, or water. Brush the tops of the potatoes with melted butter, and if the meat is very lean put little bits of dripping here and there. Bake for an hour and a half.

**Creamed Veal with French Beans.**—Melt one ounce of butter in a saucepan, put in a little chopped onion and let it cook without browning. Mix in a dessertspoonful of flour and then pour on half a pint of white stock and stir until boiling. Season to taste, put in a small bunch of herbs and simmer for fifteen minutes. Then strain the sauce into another saucepan and add half a pound of cooked veal finely minced. Heat thoroughly, and add a little cream and a squeeze of lemon juice. Serve with a garnish of French beans.

**Hash, a Savoury.**—Melt two ounces of butter in a stewpan with a dessertspoonful of red-currant jelly. Place slices of cold mutton in this, turn and heat slowly, not letting them get crisp. Place some hot, finely-chopped spinach on a hot dish, and arrange the meat on it. Add a dessertspoonful of vinegar mixed with a little dry mustard, lemon juice, and some gravy to the saucepan and stir well. Thicken with corn-flour, season to taste and pour round the mutton and spinach.

**Meat and Potato Gâteau.**—Grease a plain mould or basin, and line it with smoothly mashed potato that has been mixed with the yolk of an egg, a little milk and butter, and well seasoned. Fill the centre with layers of cooked meat and tomatoes cut in thin slices and moistened with a little sauce or gravy. Cover with more potato and bake in a moderate oven from half to one hour according to size. Turn out and serve with tomato sauce poured round.

**Meat Scallops.**—Mince half a pound of cooked meat and heat it in some well-seasoned brown sauce. Butter about half a dozen scallop shells and sprinkle them with bread-crumbs. Fill them

with the meat mixture and cover with more bread-crumbs. Put a small piece of butter on the top of each and brown in the oven. Serve garnished with parsley.

**Minced Mutton.**—Finely mince the meat, free from fat and skin, season well with salt and pepper, and add a little melted butter. Put into some nicely-flavoured stock, with the yolk of an egg well-beaten. Turn into a stewpan, and gradually warm without boiling. Stir constantly. Boil and mash some potatoes, season, and place round the dish that the mince is to be served on. Pour the mince in the centre, scatter over all some finely-minced parsley, and take hot to table.

**Rissoles.**—Half a pound cooked meat, one ounce each of butter and flour, one gill of stock, seasoning, a little flour, egg and bread-crumbs. Take any scraps of cooked meat, or a mixture of meats, and put them through the mincer. Melt the butter in a saucepan, mix in the flour and cook together a minute or two. Add the stock, and stir until the mixture draws away from the sides of the saucepan. Add the meat, and seasoning to taste and according to the kind of meat used. Mix well, turn out on a plate, and leave to cool. Then form into balls or other shapes, using a little flour. Egg and bread-crumb these, and fry them in boiling fat until a golden brown. Serve garnished with parsley.

**Roast Beef, Re-dressed.**—Cut and trim into neat slices, about a quarter of an inch thick, one pound of cold roast beef, and make a sauce as follows:—Put into a stewpan one ounce of butter, with two tablespoonfuls of vinegar and a very small onion finely minced. Stir with a wooden spoon till the vinegar is absorbed, then mix in one ounce of flour, go on stirring till it browns a little, then add one pint of stock, and black pepper to taste. Let all boil slowly for fifteen minutes, then add three chopped pickled gherkins and one tablespoonful of finely-minced parsley, bring again to the boil, and skim. Put in the slices of beef and heat thoroughly, but do not boil.

**Roman Pudding.**—Cook six ounces of macaroni until tender, drain, and cut the pipes into pieces about an inch long. Have six ounces of cheese grated, cut in strips six ounces of cooked fowl or rabbit, and mix all together in a basin with one dessertspoonful of made mustard, a pinch of cayenne, and a little salt, and moisten with a teacupful of white sauce or condensed milk. Butter a plain mould, sprinkle it over with vermicelli, then line with thin pastry, pressing it gently, that it may take the form of the mould, fill with the mixture, cover with pastry, and bake in a moderate oven for an hour and a half; then turn out on a hot dish, and pour round it half a pint of hot brown sauce.

**Soufflé of Cold Meat.**—Put a tablespoonful of butter in a saucepan, and when melted stir in a tablespoonful of flour. Season with cayenne pepper, nutmeg, anchovy sauce and salt. Pour in half a pint of milk in which an onion has been cooked. Stir till smooth; add to it half a pint of chopped cooked veal or other white meat, and heat all together. Draw the pan aside and add the beaten yolks of two eggs. When the mixture is cooled sufficiently add the beaten whites of the eggs. Pour into a buttered soufflé dish and bake in a hot oven for twenty minutes.

## GAME AND POULTRY.

**Chicken and Rice.**—Cut a steamed chicken into neat joints. Make a pint of white sauce, using equal quantities of chicken broth and milk. When well cooked stir in the yolk of an egg, and a good squeeze of lemon juice, and seasoning to taste. Re-heat the chicken, serve with the sauce poured over, and a border of boiled rice. Garnish with lemon slices and a little parsley.

**Chicken Sauté.**—Put cut-up joints of chicken into a saucepan with an ounce of butter, lay the lid on, and let them fry, tossing the saucepan frequently to prevent burning. When brown add two onions that have been sliced and fried, four tablespoonfuls of tomato sauce, half a pint of brown gravy, some small button mushrooms cut in halves, chopped parsley, mixed herbs, and seasoning. Keep the lid on the saucepan, and let the whole gently simmer for about an hour. Serve hot.

**Chicken or Fowl, Stuffed and Roasted.**—Prepare the bird and wipe the inside with a damp cloth. Stuff the breast with veal forcemeat. Put a piece of greased paper over the breast, and place the bird in a roasting tin with some good dripping, in a hot oven. Baste three or four times with the dripping and allow three-quarters of an hour or longer according to size. Remove the paper ten minutes before the bird is done in order to brown. Garnish with baked sausages and rolls of bacon. Serve with bread sauce and gravy made from the giblets.

**Duck, Stuffed and Roasted.**—Prepare and clean a duck, season it with pepper and salt and rub it over with flour. For the stuffing, peel and core three or four tart apples and cut them in pieces, not too small. Combine these with some stewed and stoned prunes, and put the mixture inside the duck. Then sew it up and truss into shape. Put the duck in a roasting tin with some good dripping and roast about one hour, basting it occasionally. When ready lift it on to a hot dish, removing trussing string, and garnish with water-cress. Pour away most of the fat from tin, add a teaspoonful of flour, and stir until brown. Then pour in some good stock and stir until boiling. Simmer a few minutes, skim well and strain into a sauce-boat.

**Fowl, Boiled or Steamed.**—Prepare the fowl and truss it for boiling. Rub it over with cut lemon to keep the flesh white, and wrap it in buttered paper. Put it into a saucepan of freshly boiling water, or white stock or meat boilings, and see that there is sufficient liquid to cover it. Add a little salt and simmer the fowl slowly until tender—from one and a half to three hours according to age and size. If water is used, a few pieces of flavouring vegetables should be added. Serve with parsley or egg sauce poured over and small rolls of bacon to garnish, or a piece of boiled ham may be served separately. *To Steam.*—Prepare the fowl in the same manner—place it in a steamer over boiling water, and allow a longer time for the cooking. A very good way to cook a fowl is to steam it first and then to put it in a good oven with a little fat, and let it brown.

**Grouse, To Roast.**—Pluck and singe the bird, remove the inside, and then wipe both outside and inside with a damp cloth. Put the liver inside along with a piece of butter worked up with pepper, salt and a squeeze of lemon juice. Truss into shape with needle and string and tie one or two slices of fat bacon over the breast. Roast in a good oven about twenty-five minutes, basting frequently with bacon fat or butter. When nearly ready remove the bacon, dredge the grouse with flour, and leave until crisp and brown. Serve garnished with water-cress, and with brown sauce, potato chips, and a tart jelly as accompaniments.

**Hare, Jugged.**—When the hare is skinned, allow all the blood from the upper part of the body to run into a basin along with the liver and heart. Divide the hare into joints. Put these in a stewpot with water, and one onion stuck with cloves, a tiny bunch of herbs, a bay leaf, and a lemon rind. Stew gently for about three hours, and in the meantime mix into the blood two tablespoonfuls of flour and a little vinegar. Boil this and strain. Parboil the liver and heart, pound them, and mix with some forcemeat, make into balls, and fry in boiling fat. Use these balls as a garnish. Add a glass of port wine to the jugged hare, and serve with red-currant jelly.

**Mayonnaise of Fowl.**—Roast a young fowl, and when cold divide neatly into joints, making eleven pieces altogether. Make a mayonnaise sauce as directed on p. 731, add to it about a third of its measure in aspic jelly quite cold, but not set, mix well, coat the pieces of fowl, then lay them aside till quite firm. Serve prettily garnished with salad.

**Pigeons with Spinach.**—Cut two or three pigeons in halves, clean them and season with pepper and salt. Cut up a little carrot, turnip, onion and celery and make a bed in an earthenware casserole. Pour in broth or stock to cover, and bring to the boil. Lay the pigeons on the top, cover with buttered paper, put on the lid, and cook slowly until tender, about two hours. Lay the pigeons on a bed of cooked spinach and keep them hot. Strain the stock from casserole, and boil it until there is just enough to pour round.

**Rabbit Brawn.**—Take the meat from a cold boiled rabbit and half a pound of cooked bacon.

Cut it into tiny squares. Butter a brawn glass or tin, put in the meat with two chopped hard-boiled eggs, with seasoning of salt and pepper. Take sufficient stock to fill the mould, dissolve in it enough gelatine, according to the size of the mould, to make the stock a thick jelly when cold. Pour the stock over the rabbit, and put in a cold place until set.

**Rabbit, Stewed.**—Wash and soak the rabbit. Cut it into joints and put it into a stewpan with two sliced Spanish onions, and a little bacon or salt pork cut small. Cover with water and stew gently about two hours or until tender. Mix a tablespoonful of flour with a cupful of milk and stir into the stew. Cook ten minutes longer, season and serve.

**Roast Saddle of Hare.**—Use the back only of the hare, cutting it off close to the shoulders. Stuff with a good savoury forcemeat, folding the skin over and sewing together. Cover the back with fat bacon and then with greased paper. Roast for half an hour or longer, basting with dripping and milk. Serve with brown gravy flavoured with tart jelly and port wine, and with potato chips. This makes a neat joint, and the rest of the hare can be jugged or made into soup.

**Turkey, Stuffed and Roasted.**—A moderate-sized turkey is best, it should not be less than seven or eight pounds in weight. Select one that is white and plump, with smooth black legs, and a fair proportion of fat on the body. It should be hung for several days after it has been killed and then plucked, drawn and singed. Stuff the breast with veal or chestnut forcemeat (*see* recipes), sew this in, and truss for roasting. Cover the breast with slices of fat bacon and then with greased paper. Place the bird in a roasting tin with some bacon fat or dripping round, put in a hot oven for fifteen minutes. Then reduce the heat and cook the bird with a more moderate heat until ready. Baste frequently and allow two hours or longer according to size. Remove the paper a short time before serving, dredge the breast with a little flour, baste again, and leave to brown. Serve on a very hot dish, removing the trussing skewers or string. Serve with thickened gravy (*see* recipe, below), making stock from the giblets. Boiled ham, tongue or sausages may accompany the turkey, and bread sauce or cranberry sauce.

## SAUCES AND FORCEMEATS.

**Apple Sauce.**—Wipe half a pound of sharp cooking apples, peel, core and slice them thinly, and put them into a lined saucepan with half a teacupful of water, a tablespoonful brown sugar and a pinch of nutmeg. Stew slowly until reduced to a pulp. Add a small piece of butter and beat until smooth, or sieve. This is served with roast pork, goose or duck.

**Bread Sauce.**—Put into a saucepan half a pint of milk, half a small onion and two or three cloves. Place over a gentle heat until the milk is flavoured, then remove onion and cloves, and add two ounces of bread-crumbs. Cook slowly until the bread-crumbs thicken the sauce, add a little butter and season to taste. Serve with roast chicken.

**Brown Sauce.**—Put one ounce of butter into a clean stewpan, melt it, and let it boil, then dredge in about an ounce of flour, moving the pan very carefully, as it has a strong tendency to burn. When it is a dark brown colour add one breakfast-cupful of stock, and stir with a wooden spoon. If too thick, add a little more stock; season with a little ketchup, black pepper, and salt, and let it simmer slowly for ten minutes. Skim and strain if necessary.

**Caper Sauce.**—Make a plain butter sauce using white stock as the liquid. Add some French capers slightly chopped, and a little vinegar; stir and make it hot. Serve over boiled mutton or in a sauce tureen.

**Celery Sauce.**—Wash one head of celery, cut the white part in half-inch lengths, put them into an enamelled pan with equal measures of milk and white stock, and boil till tender. Melt one ounce of butter in a saucepan, add the same of flour, stirring it well with a wooden spoon, drain the celery, add the milk and stock to the butter and flour, and continue stirring. Let it boil about ten minutes; if too thick, add a little more white stock, then add the pieces of celery, a little cream, and a seasoning of white pepper, salt and grated nutmeg, after which it must not be allowed to boil.

**Cranberry Sauce.**—Put half a pound of washed cranberries into a saucepan with a small teacupful of water and cook them until reduced to a pulp. Then rub this through a sieve, add sugar to taste, and re-heat.

**Curry Sauce.**—Melt one ounce of butter in a saucepan and put in one apple and one medium onion finely chopped. Cook these for a few minutes, then add one teaspoonful each of curry-powder and curry-paste and one dessertspoonful rice-flour. Mix together, and pour on gradually half a pint of light stock. Simmer slowly for half an hour, and add salt, a pinch of sugar, and a squeeze of lemon juice at the last. The sauce may be sieved if desired and a little cream added.

**Gooseberry Sauce.**—Put one pint of washed gooseberries into a saucepan with a teacupful of water and cook until soft. Rub through a sieve, return to saucepan and add a small piece of butter, sugar to taste and a pinch of nutmeg. Re-heat and serve with fried or boiled mackerel.

**Gravy, Clear.**—Strain the dripping off the roasting tin, keeping back the gravy and brown sediment. To this add pepper, salt and a cupful or more of brown stock. Place the tin over the heat and stir until boiling, rubbing down any brown gravy from the sides. Skim if necessary, and strain into a sauce-boat. When no stock is available, use a meat cube or a little meat extract and water

**Gravy, Thickened.**—Strain most of the dripping off the roasting tin, and add a teaspoonful of flour to the remainder. Stir over the heat until the flour is browned, add half a pint of stock, and stir until boiling. Simmer a few minutes and season to taste. Skim and strain into a sauce-boat.

**Horse-radish Sauce for Cold Meat.**—Mix half a teaspoonful of mustard, two tablespoonfuls of cream, and one of Chili vinegar; add a little salt, a tablespoonful of grated horse-radish, and a teaspoonful of brown sugar. Mix all together, and serve in a sauce tureen. Sour cream may be used and lemon juice instead of vinegar.

**Maître-d'Hôtel Butter.**—Put on to a plate one ounce of butter, and one teaspoonful each of chopped parsley and lemon juice. Work these together with a knife until blended, and add salt if necessary. Then tilt the plate so that the lemon juice may run out, and leave in a cool place until required. Form into neat pats and serve with grills.

**Mayonnaise Sauce.**—Separate very carefully the yolks of two eggs, drop them into a clean basin, and with a wooden spoon stir for a few seconds, adding pepper, salt and a little made mustard. Then add salad oil very slowly, stirring constantly until the mixture becomes thick and smooth. Add vinegar or lemon juice to taste. When beginning to mix the oil with the yolks, it should be added drop by drop, and then gradually more quickly. If a wedge-shaped piece is cut out of the cork it will enable the oil to trickle out of the bottle.

**Mint Sauce.**—Put a tablespoonful sugar into a sauce-boat, pour over it two tablespoonfuls boiling water and leave to melt. Then add two tablespoonfuls finely-chopped mint and half a teacupful brown vinegar. Mix, and stand some time before serving.

**Mushroom Ketchup.**—Have the mushrooms gathered in the morning before the sun is on them. Break them in small pieces, put them in a large dish, and sprinkle a good deal of salt on them. Let them lie for four days, turning them daily, then lay them on a sieve, or put them in a thin bag, and let them drip all night until the liquor is all run from them. Take the mushrooms out of the bag, put them in a saucepan with a little cold water, let them boil slowly for about half an hour, then drain, and add this second liquor to the first. Put the liquor in a stewpan, with plenty of mixed spices, let it boil for five minutes, run it through a piece of muslin into a basin, and, when cold, bottle up, cork, seal, and keep it in a dry place.

**Tomato Sauce.**—Melt one ounce of butter in a saucepan, stir in the same amount of flour, and cook together for a minute or two. Then add a good teacupful of tomato purée made by rubbing

fresh tomatoes through a sieve. Thin down with a little good stock and add seasoning to taste.

**Tomato Store Sauce.**—Wipe some ripe red tomatoes and cut them in pieces, removing the stalks. Put them into a basin, sprinkle with salt, cover and leave overnight. Cook them to a pulp and sieve. Measure the purée, and to each quart allow half a teaspoonful each of whole allspice, cloves, celery seed and peppercorns, a small piece of ginger and cinnamon stick, three ounces brown sugar, a clove of garlic, half a teaspoonful dry mustard and half a pint brown vinegar. Put all into a saucepan, tying the spices in muslin and mixing the mustard with a little of the vinegar. Simmer until thick, stirring often, and adding more salt if required. Strain, pour into hot bottles and cork securely.

**White or Butter Sauce.**—Melt one ounce of butter in a saucepan and stir in one ounce of flour until smooth. Cook for a minute without browning, then draw the saucepan off the heat. Pour in half a pint of milk or white stock, and then stir over the heat until boiling. Season to taste, and simmer a few minutes to cook the flour. A squeeze of lemon juice may be added just before serving.

**Anchovy or Shrimp Sauce.**—Make a white sauce, using fish stock and milk for the liquid. Flavour with anchovy or shrimp essence, and add a few drops of Chili vinegar or lemon juice.

**Egg Sauce.**—Add one or two hard-boiled eggs to half a pint of well-made white sauce.

**Parsley Sauce.**—Add one tablespoonful of finely-chopped parsley to half a pint of white sauce.

**Onion Sauce.**—Cook some Spanish onions until tender, then drain and chop them finely. Add these to the required amount of plain white sauce, made with white stock and milk.

**Salad Dressing (Boiled).**—Sieve into a basin one dessertspoonful flour, one teaspoonful each of dry mustard and sugar, salt and cayenne. Stir a teacupful of milk into these gradually, then add a beaten egg, one tablespoonful salad oil, and two tablespoonfuls vinegar or lemon juice. Turn all into a double boiler, and cook until the sauce thickens, stirring all the time. Strain and cool before using.

**Salad Dressing (French).**—Mix together a little pepper, salt and made mustard. Then stir in by degrees three tablespoonfuls of the best salad oil. When the salt is dissolved, add one tablespoonful of French wine vinegar and a few drops of tarragon vinegar. The proportion of oil to vinegar may vary according to individual taste.

**Cheese Salad Dressing.**—Mash down one or two tablespoonfuls of Roquefort cheese and mix it into French dressing.

### Pudding Sauces.

**Custard Sauce.**—Put the yolk of an egg into a basin with a teaspoonful of sugar and beat them together. Pour on gradually a gill of hot milk, stirring all the time. Turn into a saucepan and stir carefully until the custard thickens, without allowing it to boil. Strain at once and add flavouring to taste.

**Hard Sauce.**—Put two ounces of fresh butter into a warm basin and beat it with a wooden spoon until light and creamy. Add two ounces of fine sugar by degrees and flavour with brandy or rum. Keep in a cool place until required and serve piled up in a pretty dish sprinkled lightly with nutmeg.

**Lemon Sauce.**—Wipe one lemon, grate off the yellow rind and rub it into a tablespoonful of fine sugar. Melt one ounce of butter in a saucepan and stir in half an ounce of flour. Pour in half a pint of water and stir until boiling. Then add the lemon sugar and the strained juice of the lemon, and cook a few minutes longer. The yolk of an egg may be stirred in at the last. Serve with steamed puddings.

**Orange Sauce** can be made in the same way.

**Whipped Wine Sauce.**—Put two yolks of eggs, one dessertspoonful of sugar and a glassful of sherry into a small basin. Stand this over a saucepan of slowly simmering water, and whisk the contents until thick and frothy. Serve at once with a hot pudding or soufflé.

**Wine Sauce.**—Melt one ounce of butter in a small saucepan and mix in half an ounce of flour until smooth. Add a teacupful of water and stir until boiling. Add half a glass of sherry, with sugar to taste, and cook a minute or two longer.

### Forcemeats.

**Apple Stuffing.**—Peel and quarter five or six apples, removing the core. Put them into an earthenware casserole with an ounce of butter and a very little water. Cook slowly until tender but not broken, then sprinkle with sugar and a very little nutmeg. Leave to cool, then mix with quarter of a pound of bread-crumbs and a beaten egg. Use with pork or goose.

**Chestnut Stuffing.**—Shell one pound of chestnuts, put them into a saucepan with light stock to cover them, and cook them slowly until tender and the liquid absorbed. Mash them until smooth, and mix with half a pound of sausage-meat, three ounces of bread-crumbs and seasoning to taste. The sausage-meat may be omitted and a beaten egg used to bind the stuffing.

**Fish Stuffing.**—Put into a basin three tablespoonfuls of bread-crumbs, one dessertspoonful of chopped parsley, the grated rind of half a lemon, a pinch of powdered herbs, salt and pepper. Mix these together, then add a teaspoonful of anchovy essence, a tablespoonful of melted butter, or a little chopped suet, and bind all together with a yolk of an egg and a little milk.

**Forcemeat Balls for Hare.**—Cleanse and boil the liver of the hare. Mince and mix with about six tablespoonfuls of white bread-crumbs, two tablespoonfuls of ham or bacon, four tablespoonfuls of suet, one tablespoonful of parsley, and half the rind of a lemon, all chopped finely. Season with cayenne and salt, and mix all together, moistening with well-beaten egg. Form into small balls. Flour well, and fry in boiling fat.

**Sage and Onion Stuffing.**—Peel and cut two or three Spanish onions into quarters, boil until half-cooked. Drain and chop finely, adding a piece of butter and an equal quantity of bread-crumbs, one teaspoonful of powdered sage, a small quantity of chopped parsley, salt and pepper to taste, and a little sugar. Mix thoroughly. Use for roast goose, or roast pork.

**Veal Forcemeat.**—Mix together quarter of a pound of white bread-crumbs, two ounces of finely-chopped suet, pepper and salt, a tablespoonful of chopped parsley, half a teaspoonful of mixed herbs, a saltspoonful of grated lemon rind, and a little grated nutmeg. Moisten with one egg well beaten, and a small quantity of milk.

## PASTRY AND PASTRY DISHES.

**Pastry, Flaky.**—Into a basin put a pound of flour, rub into it a quarter of a pound of butter and mix cold water into it until an elastic paste is formed. Roll out, and put a quarter of a pound of lard on it in little dabs; fold in three, let it lie in a cool place for ten minutes, roll it out again, and put on in the same way a quarter of a pound more lard. Fold it and put away again for fifteen minutes or more; it is then rolled out and ready for use.

**Pastry, Plain.**—Sieve half a pound of flour into a basin with a good pinch of salt and half a teaspoonful baking powder. Add quarter of a pound of lard or beef dripping, and rub together lightly with the tips of the fingers until as fine as bread-crumbs. Bind into a stiffish paste with cold water, and turn out in one lump on a floured board. Knead with the hand until free from cracks, roll out and it is ready for use. This can be used for covering meat pies and other savoury dishes, but if wanted for a tart a little fine sugar should be added.

**Pastry, Rough Puff.**—Sieve half a pound of flour into a basin and add a pinch of salt. Lay in five or six ounces of butter and cut it in pieces with a knife. Make a well in the centre, add a squeeze of lemon juice and enough cold water to bind together. Turn on to a floured board, roll out into a long strip, fold in three and press the edges together. Leave for a few minutes, then turn the pastry half round and roll and fold again. Repeat until the pastry has had three rolls and three folds and cool before using.

**Pastry for Raised Pies.**—Put about one gill of milk or water into a small saucepan with two ounces of lard, and bring to the boil. Sieve half a pound of flour into a basin and add a good pinch of salt. Make a well, pour in the hot liquid, and mix into one lump. Turn out on a floured slab,

and knead until free from cracks. Then use warm as required.

**Short Crust.**—Rub from four to six ounces of butter—according to the richness of pastry desired—into half a pound of flour and add a dessertspoonful of castor sugar. Beat the yolk of an egg with two tablespoonfuls of cold water; add it gradually to the flour, and mix to a paste. A little more water may be added if necessary, as the pastry must not be too stiff and firm, but the less water used the shorter the crust will be. Knead on a floured board until smooth and roll out once.

**Suet Paste.**—Take half a pound of beef suet, finely minced, one pound of flour, a little salt, and mix with cold water into a softish paste. Turn on to a floured board and roll out; fold up, and roll a second time, when it will be ready for use. This paste answers for any kind of boiled fruit pudding or for roly-poly.

**Meat Pie, To Cover.**—Roll out some pastry rather thinly. Wet the rim of the pie-dish and lay a strip of pastry over it. Wet again and lay on a piece of pastry large enough to cover. Press down the edges and trim round. Flute the edges with a knife and make a hole in the middle. Brush over with a little egg or milk and decorate with leaves of pastry.

**Beefsteak and Kidney Pie.**—For a medium-sized pie take one pound of beef cut thin and two sheep's kidneys. Wipe the meat, cut it in small oblong-shaped pieces and dip in flour seasoned with pepper, salt, and a pinch of nutmeg. Roll up the pieces with a piece of kidney and fat inside each. Place these in a pie-dish, piling them rather high in the centre, and pour in a little stock or water and a tablespoonful of ketchup. A little finely-chopped onion may be added. Cover with pastry and bake about two hours.

**Beefsteak and Kidney Pudding.**—Prepare the meat in the same way as for Beefsteak and Kidney Pie. Make some paste crust (*see* above), roll it out and line a greased pudding basin. Fill up with the meat and moisten with a little stock and ketchup. Moisten the edges of the pastry lining the basin, and cover with a round of the pastry. Twist a piece of greased paper over the top and steam at least three hours. Serve in the basin with a table napkin folded neatly, and pinned round.

**Mutton Pies.**—Remove all skin and fat from scraps of mutton. Parboil half a pound of potatoes, and chop an onion and a little parsley. Grease patty pans, and line them with pastry. Fill with equal quantities of meat and potatoes well seasoned. Cover with pastry and bake for a few minutes in a hot oven, then stand on a cooler shelf that the meat may stew more slowly.

**Rabbit Pie.**—Wash one or two young rabbits, put them in boiling water, and let them boil for two minutes, then take them out, and, when cold, cut them into joints. Brown a piece of butter in a stewpan, brown the pieces of rabbits on both sides, and lay them in the pie-dish, with plenty of pepper and salt. Mince two onions small, and brown them in the stewpan where you browned the rabbits, put a little boiling water in it, and, when it boils a minute, pour it over the pie. Add a tablespoonful of vinegar and one of ketchup. Cover the pie with a thick paste, and bake for two hours in the oven. When the paste is done, put some folds of paper over it to keep it from burning. A little bacon may be added.

**Raised Pork Pie.**—Take three-quarters of a pound of fresh pork, weighed free from skin and bone. Cut it in small neat pieces, and season with pepper, salt, and a little powdered sage. A little finely-chopped onion may also be added. Make some pastry for Raised Pies (*see* p. 732), cut off about quarter for the lid and keep this hot. Mould the larger portion with the fingers into a round case with the walls and bottom of even thickness. The pastry will harden as it cools, and soon keep its shape. Pack the meat into it tightly and just moisten with cold water. Roll out the small piece of pastry for a cover, seal it on with a little water, and trim the edges with a pair of scissors. Flute the rim, and use any small trimmings to decorate. Brush the pie over with beaten egg, make a hole in the top, and bake in a moderate oven about one and half hours, or until the meat feels tender when tested with a skewer. A little jelly stock may then be poured through the hole in the top. Serve cold.

**Veal and Ham Pie.**—Cut the veal into small pieces, put a layer at the bottom of a pie-dish, and sprinkle over the meat a little pepper and salt, grated lemon-rind, powdered mace, and minced parsley. Lay over these small thin slices of ham or streaky bacon and some slices of hard-boiled egg. Repeat alternately till the dish is full. Pour in a little meat stock; cover with pastry, and bake the pie in a hot oven till done.

**Sausage Rolls.**—Put half a pound of sausages into cold water, and bring them to the boil. Remove the skins and cut them in two lengthwise. Roll out some rough-puff pastry and cut in oblong-shaped pieces. Place a piece of sausage in the centre of each, wet the edges of the pastry and fold over, making the edges overlap. Press down the ends and mark with the back of a knife. Glaze with egg or milk and bake in a hot oven for half an hour.

**Apple Cheesecakes.**—Peel, core, and slice half a pound of apples, and cook in a little water till soft enough to crush. Add two ounces of butter and two ounces of castor sugar. Stir one way until the butter is melted. Pour into a basin, add the grated rind and juice of one lemon and two well-beaten eggs, and stir with a wooden spoon until well mixed. Line small tins with pastry and fill with the mixture. Bake for a little over a quarter of an hour in a hot oven.

**Apple Dumplings.**—Roll out any scraps of pastry and cut out round about the size of a saucer. Peel and core the same number of apples and put one in the centre of each piece of pastry. Fill the holes with brown sugar mixed with a little powdered cinnamon or grated lemon rind. Wet the edges of the pastry and gather them up so as to enclose the apples. Place the dumplings on a greased baking tin, turning the best side uppermost, brush over with a little milk or white of egg, sprinkle with sugar, and bake in a hot oven about twenty minutes.

**Apple Tart.**—Peel and slice the required amount of apples and put them into a pie-dish, in layers, with sugar and a little grated lemon rind. Make the top layer of apples and add enough water to moisten. Roll out some short crust rather thinly, and cut a strip one inch wide. Wet the rim of the dish and lay it round. Brush over the strip with water and lay on pastry to cover. Press it down, trim edges, and mark round with back of a knife. Brush over with white of egg and dredge with sugar. Make four small holes in the top of the tart, and bake one hour or longer.

**Apricot Flan.**—Roll out some short crust and line a flan ring or sandwich tin, pressing it well into the shape. Line with greased paper and fill with haricot beans to prevent pastry rising. Bake in a hot oven to set the pastry, then lower the heat until brown and crisp. Remove filling, and cool the pastry on a wire stand. Then fill with tinned apricots well drained from their syrup. Put some of the syrup into a saucepan and boil it until thick, then cool and pour over fruit. A little gelatine or arrowroot may be used to stiffen.

**Curd Cheesecakes.**—Warm a pint and a half of new milk, and curdle with a dessertspoonful of rennet. Drain the whey away through muslin. Add to the curd one beaten egg, a dessertspoonful of brandy, sugar, chopped peel, and currants to taste. Line patty pans with good paste, put some of the mixture in each, and bake till a golden brown.

**Jam Puffs.**—Roll out some flaky pastry to an eighth of an inch in thickness, and with a round fluted or plain cutter cut the number of pieces required. Dust lightly a little flour over them, give them a roll with the rolling-pin, so as to make them an oval shape, dip a brush in egg and draw across each. Then put in the centre of each a teaspoonful of thick jam, turn over with thumb and forefinger, so as to raise the edges, dust them with sugar, and bake in a quick oven from eight to ten minutes. Glaze with white of egg and sugar.

**Japanese Tart.**—Line a shallow tin with short crust, and bake it for twenty minutes. When cool, put a layer of jam or preserved apricots in the bottom. Then fill up with a nice thick custard made with the yolks of two eggs and three-quarters of a cup of milk, and return to the oven to set.

Beat the whites of two eggs to a stiff froth; mix through them two ounces of castor sugar, and beat them again for a few minutes. Take the tart from the oven, spread an even layer over the custard, put the remainder into an icing-bag with tube, and ornament with fancy scrolls. Put it back in the oven for a few minutes, but take care it does not brown too much.

**Lemon Tart.**—Line a deep plate with short crust. Put a tablespoonful of corn-flour into a basin, moisten it with cold water, pour a cupful of boiling water on it, and stir till slightly thickened. Add the grated rind and juice of a lemon, one ounce of butter, two ounces of sugar, and one beaten egg. Pour into the lined dish and bake in a moderate oven. Serve cold, with sifted sugar over.

**Macaroon Tartlets.**—Place in patty pans lined with thin paste a teaspoonful of raspberry or strawberry jam. On the jam place a mixture made by forming into a firm paste two ounces of ground almonds, one egg, and four ounces of castor sugar. Over this arrange crossed strips of pastry. Bake in a good oven, and serve cold.

## BREAKFAST AND SAVOURY DISHES.

**Bacon Kromeskies.**—Cut some very thin slices of streaky bacon about one and a half inches broad by two inches long. Lay each slice flat, and place a little nicely-seasoned minced meat on each. Roll up the bacon tightly, taking care that the meat does not escape, and put aside in a cool place. Prepare some frying batter and let it stand for two hours. To serve, dip each roll into the batter, plunge into deep boiling fat and fry a golden colour. Garnish with parsley.

**Bacon and Tomatoes.**—Peel a pound of ripe tomatoes, cut them in pieces and put them into a stewpan with one-third their bulk in fine bread-crumbs, a seasoning of salt, pepper, lemon juice and minced parsley, two ounces of butter, and a teaspoonful of very finely chopped onion. Stew over a gentle fire from fifteen to twenty minutes. Have ready some daintily fried pieces of stale bread, half-inch thick and two and a half inches in diameter, which have been fried a golden brown in boiling fat, and well drained in order to render them quite crisp and dry. Arrange these neatly on a very hot dish; pour the stewed tomatoes over, garnish round with small slices of prime bacon, cut thin, and toasted or fried, and dish up very hot.

**Chestnuts, Devilled.**—Boil half a pound of chestnuts in their shells till tender, peel and skin them, and soak in a good strong bottled sauce for half an hour or more, melt half an ounce of butter in a saucepan, put the nuts in. Stir about till heated through and serve very hot.

**Cod's Roe with Bacon.**—Cut some cooked roe in slices half an inch thick, and coat lightly with flour seasoned with pepper and salt. Then egg and bread-crumb the pieces and leave them to dry. Fry the required amount of bacon rashers, keep them warm, and fry the roe in the bacon fat until nicely browned on both sides. Serve the roe in the centre of a hot dish with the bacon round.

**Fish Cakes.**—Take two cupfuls of cooked fish and an equal amount of cooked potatoes. Sieve the potatoes and break the fish into flakes free from skin and bone. Put both into a saucepan, with two tablespoonfuls of melted butter, pepper, salt and a little anchovy or shrimp essence. Mix well and add a little milk if too dry. Turn the mixture on to a floured board, form into small cakes, using a knife; egg and bread-crumb these and fry in boiling fat until a golden brown. Serve garnished with parsley. Well-cooked rice may be used instead of potatoes.

**Fish in Custard.**—Take away all bones and skin from any cold cooked fish, and chop into small pieces, mixing in pepper, salt, and finely-chopped parsley. Butter some small moulds, and sprinkle with finely-chopped parsley. Put the fish lightly into moulds. Make a custard with one or two eggs well beaten and a very little milk, and pour slowly in to fill up the cups. Cover with buttered white paper. Stand the cups in a pan of simmering water three-fourths up their sides, and steam very slowly until set. Turn out and serve hot.

**Fish, Savoury.**—Free the remains of cold boiled fish from skin and bones, and stir the flakes into some good white sauce with picked shrimps. Season with pepper and salt, add a squeeze of lemon, and make quite hot. On a hot dish pile up some mashed potato, and leave a space in the centre. Fill up with the fish mixture, sprinkle over finely-chopped parsley, and serve hot.

**Fish and Tomato Moulds.**—Take about a breakfastcupful of cooked fish, remove all the skin and bone, and break up finely. Pass the pulp of four tomatoes through a sieve to remove the seeds, and blend it with the fish. Season and add a beaten egg and one ounce of melted butter, stir well, and press into small buttered cups, cover with buttered paper, and steam for half an hour. Turn out on to fried bread, and garnish with plainly boiled rice prepared as for curry.

**Haddock, Small, To Fry.**—Clean, scrape off the scales, and trim the number of fish required. Sprinkle a little salt on both sides and let them lie for about two hours, then wipe with a cloth to absorb the moisture. Sprinkle slightly with pepper, coat them with flour, after which shake them, so that what is loose may fall off. Have a frying-pan, with some very hot fat, put in the fish, shake the pan a little at first, or move them gently with the fish slice, let them fry for eight minutes, then turn and cook the same time on the other side. Serve hot, garnished with parsley.

**Ham and Eggs, Baked.**—Cut some ham into small slices, partially cook, then drain the pieces carefully from the fat, and arrange them at the bottom of a well-buttered dish. Cover the surface entirely with skilfully broken fresh eggs, sprinkle a little salt and pepper over the top, and bake in a moderate oven until the eggs are lightly set, then serve as hot as possible.

**Ham and Potato Balls.**—Sieve one pound of cooked potatoes and combine with six ounces of cooked ham finely minced, salt, pepper, and the yolk of an egg. Form into small balls, using a little flour, egg and bread-crumb and fry a golden brown in boiling fat. Serve garnished with parsley.

**Herring, Baked.**—Remove the heads from half a dozen fresh herrings, and clean the fish thoroughly. Put them in a deep pie-dish with salt, allspice, cloves and peppercorns, a blade of mace, and a teaspoonful of grated horseradish. Add a gill of cold water and the same quantity of vinegar. Bake in a slow oven for thirty-five minutes. Serve cold.

**Kedgeree.**—Remove the bones from a cold boiled haddock, break it into small flakes, add one breakfastcupful of boiled whole rice, prepared as for curry, two hard-boiled eggs shelled and minced, a little salt, and one teaspoonful of dry mustard. Melt and brown a little in a frying-pan about two ounces of butter, add the mixture to it, with one teaspoonful of shrimp or anchovy sauce, and heat thoroughly, stirring constantly with a fork. Serve hot with three-cornered croûtons of bread neatly arranged round the dish, with sprigs of parsley in between each, and sieved yolk of eggs strewn on the top. Cold cod may be cooked in the same way.

**Kipper Toast.**—Mince half a cupful of cooked kipper, carefully removing all small bones. Heat a tablespoonful of cream or butter in a small saucepan and put in the fish along with a teaspoonful of anchovy essence and half a teaspoonful of flour. Stir until blended, add necessary seasoning and cook a minute or two. Spread the mixture on fingers of hot buttered toast or fried bread, and sprinkle with finely-chopped parsley.

**Marrow Toast.**—Cut some beef marrow in small pieces, put it in a small strainer or tie in muslin, and scald in boiling salted water five or ten minutes. Drain well, arrange on neat pieces of hot buttered toast, season with pepper, salt and lemon juice, and press down with a fork. Make hot in the oven and serve sprinkled with finely-chopped parsley.

**Mushrooms, Stuffed.**—For this dish take half a pound the best large mushrooms, remove the stalks, and peel them carefully without breaking them, then put them into a colander and run cold water on them to free them of sand. Dry them in a cloth and trim them round. Chop up the trimmings and add to them one chopped shallot, a teaspoonful chopped parsley, a little chopped ham or tongue, and a good tablespoonful bread-

crumbs. Melt a small piece of butter in a saucepan, put in the mixture and cook for a few minutes. Moisten with gravy and season to taste. Fill the mushrooms with this stuffing, put them on a buttered baking dish, sprinkle with bread-crumbs and put a small piece of butter on the top of each. Bake in the oven about fifteen minutes.

**Mushroom Toast.**—Take as many mushrooms just opened as will be wanted, remove the stalks, wash and drain them, and place them on a flat dish with the hollow part upwards. Put a small piece of butter into each mushroom, sprinkle a little pepper and salt on them, and put them in the oven for about fifteen minutes, or till they are tender. With a cutter two inches in diameter cut out as many rounds of bread, half an inch thick, as there are mushrooms, scoop a little hollow in the centre of each, and fry them in boiling fat. Place a mushroom on each round of toast, with a little gravy, and serve hot.

**Prawns and Mayonnaise.**—Cut strips of bread about two inches long and an inch wide; fry a light brown and let them get cold. Lay some thin slices of tomato on the fried bread, cover thinly with mayonnaise sauce, then put a small strip of cucumber next, and on top of this a prawn dipped in mayonnaise.

**Roes on Toast.**—Take six soft herring roes, wipe them in a cloth, and coat lightly with flour seasoned with pepper and salt. Then egg and bread-crumb them, and fry them in hot butter in a frying-pan. Serve on fingers of hot buttered toast, garnished with slices of lemon.

**Sardines Croûtes.**—Prepare six neat fingers of hot buttered toast. Remove the skins from three or four sardines (or use scraps) and chop them rather finely. Put a smal piece of butter into a saucepan with two tablespoonfuls milk and make them hot. Add an unbeaten egg, the minced sardines, a few drops anchovy essence and seasoning to taste. Stir over the heat until the mixture thickens, pile neatly on the toast, sprinkle with chopped parsley and serve hot.

**Sausage Cakes with Tomatoes.**—Take half a pound or more of pork sausages and remove the skins. Form the meat into small cakes, using a little flour, and fry these in hot fat in a frying-pan until well browned on both sides and thoroughly cooked. Cut the required number of firm tomatoes in halves and spread the cut surface with a mixture of flour, mustard, and pepper made into a paste with a little Worcester sauce. Cook the tomatoes in a hot oven or under the grill and serve them round the sausage cakes.

**Sausages, To Cook.**—To fry sausages some little skill is required, or the skin will burst. All sausages should have the skin pricked in several places with a fork to allow for the expansion of the contents when heated, but the chief point is to apply the heat slowly. Sausages are sometimes first rolled in flour or fine oatmeal, so that they are thickly coated before they are fried. Fried sausages may be served on a mound of stewed red cabbage, stewed savoy, mashed potatoes, or fried onions.

**Savoury Beef Toast.**—Mince quarter of a pound of cold roast beef and put it into a saucepan with two tablespoonfuls bread-crumbs, a little chopped parsley and grated lemon rind, pepper, salt and enough brown or tomato sauce to moisten. Heat thoroughly and serve on hot buttered toast, or on bread fried in bacon fat, and garnish with chopped and warmed capers.

**Smoked Haddock, Stewed.**—Hold a dried haddock before the fire, when the skin will come off easily. Then cut it up in square pieces, lay it in a pan, pour boiling water over it, and stew ten minutes. Pour off the water, and add sufficient milk to cover. Add butter, pepper, and salt. Stew ten minutes longer, then thicken the milk with flour. Take out the fish, and pour the sauce over it.

**Tomatoes au Gratin.**—Take the number of fresh tomatoes required, cut each through the middle crosswise, squeeze out the seeds and water, taking care to keep the outsides of the tomatoes whole, then stuff them with minced ham, mixed with a few chopped mushrooms previously cooked, and some bread-crumbs; season with a little pepper and salt, and moisten with an egg. Place them on a baking dish, strew bread-crumbs over them, and on each a morsel of butter, then put them in the oven for about fifteen minutes.

## EGG AND CHEESE DISHES.

**Coddled Egg.**—Place the egg in a pan with boiling water to cover, put on the lid and stand from seven to ten minutes. This is better than boiling for an invalid, as the white will be set without being tough.

**Curried Eggs.**—Boil four eggs hard and make half a pint of thick curry sauce (*see* p. 731). Cut the eggs in halves or in quarters lengthwise and let them heat in the sauce without breaking. Serve with very dry boiled rice.

**Eggs en Cocotte.**—Butter the required number of fire-proof cocottes and put a spoonful of cream, white sauce or gravy into each along with a sprinkling of chopped ham, tongue or grated cheese. Break a fresh egg into each, add seasoning, lay a small piece of butter on the top, and bake in a fairly hot oven until the eggs are set.

**Eggs Hard-boiled.**—Lower the required number into boiling water, bring the water to the boil again, and boil ten minutes. Lift out and plunge into cold water.

**Eggs sur le Plat.**—To each egg allow a piece of butter the size of a walnut, pepper and salt to taste. Melt the butter in a flat fire-proof dish, break in the required number of new-laid eggs, and sprinkle them lightly with pepper and salt. Place the dish in a good oven, and let it remain until the whites are set, but not hard. Serve in the same dish. A little cream may be poured over the eggs before putting them in the oven.

**Eggs with Shrimps.**—Shell about three dozen shrimps, dust them lightly with cayenne pepper, and put in the oven with melted butter to get warmed through. Meanwhile, put one ounce of butter in a stewpan, break into it three eggs and season to taste with salt and pepper. Stir for two minutes, then add the warmed shrimps, and stir all together until the mixture begins to set; then draw the pan to the side of the fire, so that it may not cook too quickly. When the eggs have thickened, lay the mixture on squares of hot buttered toast, and serve.

**Poached Egg.**—Boil a pint of water in a shallow saucepan, and add a teaspoonful of vinegar or lemon juice and a pinch of salt. Break a fresh egg into a teacup and slip it gently into the water. Cook gently for three minutes or until sufficiently set, then lift out on a perforated slice, and serve on buttered toast.

**Poached Eggs on Anchovy Toast.**—Poach the eggs very carefully, and when cooked and neatly trimmed round the edges, place each one upon a piece of hot buttered toast, previously spread with anchovy paste and sprinkled lightly with minced parsley, and serve immediately.

**Poached Eggs with Tomato Sauce.**—Place half a pound of sliced tomatoes in a stewpan, add a slice of onion, a bay leaf, and some whole pepper. Cover, simmer gently for five minutes, strain, and pass all the pulp through a sieve. Return the pulp to the stewpan, add half an ounce of butter rubbed into a dessertspoonful of flour. Stir all together till thickened, adding a little white stock or water if necessary; season carefully, and stand aside. Poach as many eggs as you wish to serve, and turn them out on rounds of buttered toast cut the size of the eggs. Pour the tomato sauce round each egg, scatter chopped parsley over, and serve.

**Sardine Eggs.**—Cut the required number of hard-boiled eggs in halves, remove the yolks and cut a slice off the whites to make the little cups stand. Put the yolks into a basin, add a little butter, sardine paste, and seasoning. Pound well together with a wooden spoon and then rub through a sieve. Spread small round biscuits with some of the mixture and fill up the whites with the remainder, piling it high. Serve garnished with cress or other green salad. Other savoury pastes may be used in the same way.

**Scotch Eggs.**—Remove the shells from the required number of hard-boiled eggs, and cover them completely with a thinnish coating of sausage meat. Dry them with a little flour, then egg and bread-crumb them, flattening the ends slightly. Fry in hot fat until a golden brown and well cooked. Then cut in two with a sharp knife and serve on croûtons of fried bread, and with brown or tomato sauce poured round.

**Scrambled Eggs.**—Melt one ounce of butter in an enamelled or earthenware saucepan. Add two eggs slightly beaten with two tablespoonfuls milk,

pepper and salt. Stir constantly over a moderate heat until the eggs begin to set and the mixture is of a creamy consistency. Remove at once and serve on neat pieces of hot buttered toast.

**Scrambled Eggs with Mushrooms.**—Put one ounce of butter into a saucepan and break over it two fresh eggs. Add a little milk, one or two tablespoonfuls chopped mushrooms, and pepper and salt to taste. Stir this mixture over a gentle heat until it is of a thickish consistency, then pour over hot buttered toast and serve at once.

**Savoury Omelet.**—Beat up three eggs with a little salt, pepper, a teaspoonful of finely-minced parsley, and a tablespoonful of water. Have ready a clean pan (only used for omelets), and melt in this some butter, allowing half an ounce for each egg, and when quite still and beginning to colour, add the egg mixture, let it stand for a minute or so on the fire, then carefully tilt the pan a little, slip a broad-bladed knife underneath, and let the uncooked egg run under, repeating this till there is no more liquid, slip the knife under, turn it on to a hot plate, and serve at once.

**Soufflé Omelet.**—Separate the yolks from the whites of two eggs, putting the yolks into a medium-sized basin and the whites on to a plate. Add pepper, salt and a little chopped parsley to the yolks, and work them together with a wooden spoon until creamy. Whip the whites to a stiff froth, and fold them lightly into the yolks. Melt an ounce of butter in an omelet pan, pour in the mixture, and stir on the surface until it begins to set. Leave until nicely browned underneath, then slip a knife under it and fold first from one side and then from the other, towards the centre. Turn on to a hot dish and serve at once.

**Cheese Omelet.**—Make in the same way as a Soufflé Omelet, adding two tablespoonfuls Parmesan cheese to the yolks of eggs when creaming. A little more cheese may be sprinkled over the omelet when finished and browned quickly under the grill or in front of a fire.

**Tomato Omelet.**—Cut two or three ripe tomatoes into pieces, and cut a small piece of onion into the thinnest slices possible. Melt a teaspoonful of butter in a pan, and cook the onion and tomato for ten minutes. Keep the mixture hot and pour it over the surface of an ordinary savoury omelet just as you are turning it out of the pan. The omelet will roll over of its own accord, enveloping the tomatoes as it passes into the dish.

**Cheese Aigrettes.**—Grate three ounces of Parmesan cheese, and put it aside on a plate. Put into a saucepan half a pint of water with two ounces of butter, let them come to the boil, then stir in two ounces of fine flour, and continue stirring until the mixture thickens and leaves the sides of the pan. Remove it to the side of the fire, add one egg, mix well; then a third of the cheese, mixing again; repeating this process till three eggs and all the cheese have been put in; season with one teaspoonful of dry mustard and a little pepper and salt. With a dessertspoon drop small pieces of the mixture into boiling fat, and let them cook until very much risen and nicely browned, then take them out, drain for a minute in the oven, and serve very hot on a dish paper. The above will make twenty.

**Cheese Canapés.**—From thin slices of stale bread cut, with a cutter about two inches long and an inch and a half broad, as many croûtons as you require, and fry to a light brown in clarified butter. Spread a little made mustard on each, then a thin slice of cheese, on which sprinkle a little pepper, and put them in the oven or before the fire till the cheese is melted, and serve hot.

**Cheese Custards.**—Butter custard-cups thoroughly, and cut thin slices of bread-and-butter into small dice, arranging them in a pattern on the sides of the cups. Scatter grated cheese—Parmesan if possible—over all. Make a good custard with the yolks of two eggs and three-quarters of a pint of milk. At the last minute, before cooking, add the whites, beaten to a froth. Season with salt, pepper and cheese. Fill up the moulds, and steam very slowly till set. Turn out and garnish with chopped parsley.

**Cheese Fritters.**—Cut some long, thin strips of cheese, about two inches long and an inch wide. Lay them for half an hour in a little oil, vinegar and pepper. Next make some batter by putting two ounces of flour into a basin with a few grains of salt; make a hole in the middle, and mix slowly into it three tablespoonfuls of tepid water, to which half a tablespoonful of melted fat has been added. Beat all well together, then whisk stiffly the white of one egg and stir it in lightly. Have a pan of fat so hot that a faint smoke rises from it. Dip the slices of cheese into the batter with a skewer, then drop them into the fat, and fry a golden brown.

**Cheese and Pastry Fingers.**—Roll out some left-overs of pastry rather thinly, and spread half the surface with some soft cheese. Sprinkle lightly with fine bread-crumbs or grated nuts, and fold over the plain piece of pastry. Press together and cut into strips with a sharp knife. Egg over and bake until brown and crisp.

**Cheese Pudding.**—Put into a saucepan three-quarters of a pint of milk, and allow it to come to boiling point. Mix together in a basin one breakfast-cupful of bread-crumbs, three ounces of grated cheese, one ounce of butter, half a teaspoonful of salt, and a little pepper. Pour the boiling milk over these. Beat two eggs till light and frothy, and add them. Pour into a buttered pie-dish, and bake for twenty or thirty minutes.

**Cheese Rarebit.**—Take quarter of a pound of cheese, one ounce of butter, two tablespoonfuls of ale or milk, a little salt and mustard, one teaspoonful Worcester sauce, and buttered toast. Put the butter in a pan, and when it has melted put in the cheese, sliced, the seasoning, and the ale or milk. Stir well until all are incorporated into a thick cream, pour it over the toast and serve hot.

**Cheese Spaghetti.**—Break half a pound of spaghetti into a pan of salted boiling water, boil until tender, and strain. Melt one ounce of butter in a saucepan; stir into it a teaspoonful of flour and one teaspoonful of mustard. Add the spaghetti with a tablespoonful of milk; and when hot mix in a quarter of a pound of grated cheese. Season to taste, heat thoroughly, turn into a buttered pie-dish, sprinkle bread-crumbs on top, with a few pieces of butter here and there, and brown the surface. Serve with dry toast.

**Cheese Straws.**—Take three ounces of pastry flour, mix in a little pepper and salt, and the merest pinch of cayenne. Rub in two ounces of butter, then add two ounces of grated Parmesan or some grated cheese of a strong, dry kind. Mix this into a smooth paste with the yolk of an egg and a few drops of lemon juice. Knead the paste and roll it out into a strip one-eighth of an inch in thickness. Trim the edges and cut the pastry into neat straws. Roll out the trimmings and cut into rings. Bake in a rather slow oven until a golden brown. Place a few straws in each ring and serve.

**Cheese and Tomatoes.**—Put an ounce of butter into a small stewpan, with a tablespoonful of minced onion, and fry it. Before the onion colours, throw in half a dozen tomatoes cut in small pieces, and allow them to cook thoroughly. Butter a fire-proof dish, pour in the contents of the stewpan, and cover with a layer of Parmesan or any similar cheese. Bake for ten minutes, and serve very hot.

## HOT PUDDINGS.

**Apple Fritters.**—Peel and core three large apples and cut them across in rings. Lay them on a plate, sprinkle them with sugar and a little white wine or lemon juice and let them stand a short time. For the batter, sieve quarter of a pound of flour and a pinch of salt into a basin and make a well. Add one gill tepid water gradually, then one tablespoonful salad oil or melted butter. Beat ten minutes, stand half an hour or longer and stir in two stiffly beaten whites of eggs just before using. Dip the apple slices into the batter and fry them in deep fat. Roll in sugar, and serve piled up on a paper d'oyley.

**Bread-and-Butter Pudding.**—Beat up two eggs and add to them one pint of milk and a little flavouring. Butter a pie-dish and cut three slices of bread-and-butter in fingers, removing the crusts. Put a layer of bread in the dish, sprinkle with sugar and a few cleaned currants or raisins, add more bread, fruit and sugar, and then pour over milk and eggs. Leave to soak for one hour then bake in a slow oven about an hour. Sprinkle with sugar before serving.

**Cabinet Pudding.**—Cut quarter of a pound of white bread into dice and put it into a basin. Beat up an egg and add half a pint of milk, a

little flavouring, one ounce of sugar and a pinch of salt. Pour these over the bread and leave to soak. Butter a plain mould or basin and decorate it with seeded raisins, pour in the bread mixture, cover with buttered paper, and steam very slowly for one hour. Serve with jam or custard sauce.

**Caramel Coconut Pudding.**—To make the caramel put two ounces of sugar into an aluminium saucepan with a very little water, and heat gradually to a rich brown colour. Heat a pint mould or basin, pour the caramel into it and run it round the sides until coated. Cook two ounces of semolina in a pint of milk until soft and thick, add two ounces of coconut, one ounce of butter, and sugar to taste. Mix well, and then stir in two-well-beaten eggs. Pour into the mould or basin, cover with buttered paper, and steam gently for an hour Remove from saucepan, stand a few minutes, then turn out and sprinkle with coconut.

**Caramel Fruit Pudding.**—Butter a pudding basin and coat it with brown sugar. Roll out some short crust thinly and line the basin, fill it with fruit, adding sugar to sweeten and a little water. Cover with a lid of the crust and trim neatly. Bake in a moderate oven for one hour or longer. Turn out and serve hot.

**Chocolate Pudding.**—Break up half a pound of white bread, put it into a basin, pour over half a pint of hot milk and leave to soak, then beat to a pulp and add a tablespoonful of chocolate powder and two ounces of sugar. Melt one ounce of butter in a saucepan, turn in the mixture and stir over the heat until the chocolate is blended. Remove from heat, cool slightly, and add two yolks of eggs and a few drops of vanilla. Whip the whites stiffly and fold them in lightly. Pour the mixture into a buttered pie-dish and bake in a moderate oven about half an hour. Sprinkle with sugar before serving.

**Christmas Pudding.**—Mix together one pound of stoned raisins, one pound of cleaned currants, one pound of beef suet minced, one pound of bread-crumbs, two chopped apples, a teaspoonful of ground ginger, one of cinnamon, one of salt, half a nutmeg grated, two ounces of orange-peel minced, and three ounces of flour. Beat four eggs with half a pound of brown sugar, add a teacupful of milk, and one glass of brandy, mix this with the pudding, and if too stiff, add a little more milk. Put the mixture into buttered basins, cover with buttered paper and then with a cloth, and boil five or six hours, taking care that the water does not go off the boil, and adding boiling water when required. Serve with wine sauce.

**Corn-flour Pudding.**—Two tablespoonfuls of corn-flour, one and a half pints of milk, one tablespoonful of castor sugar, and one egg. Mix the corn-flour into a smooth paste with a little cold milk; boil the rest of the milk, and pour it boiling on to the paste. Stir in the sugar and egg, and pour into a pie-dish and bake for a little over a quarter of an hour.

**Fig Pudding.**—Mix together quarter of a pound of bread-crumbs with an equal weight of flour, sugar, and finely-chopped suet. Add half a pound of figs cut in small pieces, and a quarter teaspoonful each of mixed spice and carbonate of soda and mix all well together. Beat an egg and stir it in, adding enough butter-milk or skim-milk to make a soft dough. Pour it into a buttered mould or pudding-basin; cover it with well-buttered paper, and steam for two hours and a half.

**French Apple Pudding.**—Melt in a saucepan one ounce and a half of butter; stir into it till quite smooth two ounces of flour, and add gradually three gills of milk, stirring constantly. Simmer for three minutes, then pour the mixture into a basin, and add to it one ounce of sugar, and half a teaspoonful of vanilla. Beat in two yolks of eggs, one at a time. Whisk two whites of eggs to a stiff froth, and stir lightly in. Put a thick layer of stewed apples in a pie-dish, pour the batter over, and bake for forty minutes.

**French Pancake.**—Half a pint of milk, one egg, two tablespoonfuls of flour and half a teaspoonful of sugar. Beat up the sugar and egg. Add the flour and milk. Butter two saucers, divide the mixture, and bake in a moderate oven for twenty minutes. Remove from the saucers and sandwich with jam between.

**Fruit Pudding.**—Roll out some suet crust rather thinly and line a well-greased basin. Fill it with carefully prepared fruit, sugar to sweeten, and a little water. A little grated lemon rind may be added to apples to give flavour. Cover with crust, sealing the edges. Boil or steam for two or three hours according to size.

**Gooseberry and Rice Pudding.**—Put a shallow layer of green gooseberries into a buttered pie-dish. Scatter sugar and a little grated lemon-peel over it, then a thick layer of boiled rice. Repeat the layers. Sift bread-crumbs over the top, with a little butter on them and bake in a moderate oven until the fruit is done.

**Lemon Pudding, Steamed.**—Mix together half a pound of bread-crumbs, quarter of a pound of chopped suet, two ounces of flour, two ounces of sugar, and the grated rind of one large lemon. Make a well in the centre and moisten with the strained juice of the lemon and one or two beaten eggs. Steam in a buttered mould or basin for three hours. Serve with lemon or custard sauce.

**Orange Snow Pudding.**—Mix in a basin a cupful of bread-crumbs, a small piece of butter, one tablespoonful sugar and the grated rind of an orange. Pour over a cupful of hot milk, and when soaked add the strained juice of an orange and two yolks of eggs. Mix well, pour into a buttered pie-dish and bake in a moderate oven until firm to the touch. Beat the whites of the eggs to a stiff froth, add two tablespoonfuls sugar and pile roughly on the top of the pudding. Sprinkle with sugar and bake in a cool oven until the meringue is set and lightly browned.

**Pancakes.**—Sieve half a pound of flour and a pinch of salt into a basin, and make a well. Drop in two yolks of eggs, and then add gradually half a pint of milk. Work in the flour until smooth and beat well. Then add another half-pint of milk, and lastly the whites of eggs stiffly beaten. Leave to stand if time permits. To cook the pancakes, pour the batter into a jug, and melt a very little lard in a frying-pan. Pour in enough batter to cover the pan thinly, cook until the under-side is brown, then turn or toss over, and brown the second side. Serve either flat or rolled up, and sprinkled with sugar. Cook others in the same way and serve with cut lemon.

**Queen of Puddings.**—Put half a pint of milk into a saucepan and let it come to the boil. Put into a basin a cupful of bread-crumbs, one ounce of butter, and one ounce of sugar, and pour the boiling milk over them. Mix well and add a few drops of vanilla, and two beaten yolks of eggs. Put this mixture into a pie-dish, and bake it in a moderate oven for half an hour. Let it cool a little, and then spread a layer of jam or marmalade on the top. Beat two whites of eggs to a very stiff froth and stir into them a tablespoonful of castor sugar. Spread this roughly over the jam, and put the pudding back in a cool part of the oven until brown and crisp.

**Rice Croquettes.**—Wash two ounces of whole rice, put it into a saucepan with one pint of milk, two ounces of sugar, half an ounce of butter, and the thin rind of a lemon or other flavouring. Simmer gently until the rice is soft and the milk absorbed, which will take from twenty to twenty-five minutes. Then take it off, add the beaten yolks of two eggs, mix well, and allow it to stand till cold and stiff. Make it into a dozen balls, roll in bread-crumbs, then in egg, and again in the bread-crumbs, and fry in boiling fat till brown and crisp. Drain and serve piled high on a dish with a dish-paper under them.

**Yorkshire Pudding.**—Make the same batter as for pancakes. Grease a Yorkshire pudding tin with dripping from the roast beef and make it hot. Pour in the batter, and bake the pudding in a hot oven until well risen, brown and crisp. Cut in pieces and serve as quickly as possible.

## COLD PUDDINGS, FRUIT DISHES AND ICES.

**Apples, Compote of.**—Peel six ripe apples, halve and core them, and rub each with a slice of lemon. Put half a pound of lump sugar and half a pint of water into a saucepan, and boil until they form a syrup—about ten minutes. Put in the apples, the thinly-pared rind of a lemon, and the juice. Simmer until tender, then take up carefully so as not to break the fruit. Strain, and reduce the syrup by boiling very quickly. Arrange the fruit, when cold, on a glass dish,

colour the syrup, pour it over the fruit, and garnish with little strips of citron.

**Apricot Trifle.**—Cut four small sponge-cakes in slices, and lay them in a crystal dish Take a small tin of preserved apricots, put the fruit and syrup in a pan with a little sugar, and simmer till the fruit is soft. Let it cool a little, then pour it over the sponge-cakes, and let them soak for half an hour. Whip some cream until stiff, and pile it over the fruit. Decorate with finely-chopped pistachio nuts.

**Bananas, Scalloped.**—Cover a buttered pudding dish with a thick layer of sliced bananas; over this sprinkle some sugar, and moisten with lemon juice, and then sprinkle a layer of bread-crumbs, repeating this process till the dish is filled. Pour a little melted butter over the top, and bake until slightly browned.

**Corn-flour Mould.**—Measure one pint of milk, one and a half ounces of corn-flour, one table-spoonful sugar, two thin strips of lemon rind and a small piece of butter. Mix the corn-flour with a little of the milk and heat the remainder with the lemon rind. Add the corn-flour to the hot milk and stir until boiling. Simmer ten minutes, remove lemon, and add sugar and butter. Pour into a wet mould, and when cold turn out and serve with stewed fruit.

**Chocolate Mould.**—Make in the same way as Corn-flour Mould, dissolving two ounces of chocolate powder in the milk before adding the corn-flour.

**Gooseberry Fool.**—Put a quart of green gooseberries into a saucepan with a little water and about half a pound of sugar. Simmer until the fruit is reduced to pulp, and rub through a sieve. Then add gradually half a pint of cream or custard, put in a cool place, and stir it every now and then until cool.

**Grape-fruit and Raspberry Jelly.**—One tin grape-fruit, a quart packet raspberry jelly, and boiling water. Strain off the syrup from the grape-fruit, measure it, and deduct the amount from a quart of boiling water. Cut up the jelly and dissolve it in the water. When quite melted add the grape-fruit, cut in small pieces, and also the syrup. Stir occasionally until beginning to set, then pour into one large or several small moulds that have been wet with cold water. Turn out when firm, and serve with cream or custard.

**Lemon Custard.**—Put half a pint of water into a saucepan, add to it the grated rind and juice of two lemons; sweeten to taste. When the sugar has melted, pour on to three eggs that have been well beaten, stirring all the time. Return to the saucepan, and stir over the fire until the custard thickens, taking care not to let it boil. Serve in glasses with whipped cream.

**Lemon Jelly.**—Put into a saucepan one and a half pints of water, two ounces of sheet gelatine, six ounces of loaf sugar, two inches of cinnamon stick and four cloves Leave to soak. Wipe two lemons, peel the rind off very thinly and squeeze out and strain the juice from enough lemons to make half a pint. Strain the juice into the saucepan, and add the rind along with the whites of two eggs and the shells well washed. Whisk over the fire until a good froth rises, and let the mixture boil up. Then draw to one side, cover and stand ten minutes. Strain through a jelly cloth well heated with boiling water, and if not clear the first time run through again. When the jelly has all run through pour it into a wet mould and leave to set The flavour may be varied by adding part orange juice or a proportion of sherry.

**Peaches and Rice.**—Boil some rice in milk slowly for an hour, and when it becomes quite firm add sugar to taste, and some essence of vanilla and one or two yolks of eggs. Stir over the fire till the eggs are set, then fill a mould. Stew some peaches from a tin for a few minutes. Turn out the rice, dish up the peaches on it, and decorate with strips of blanched almonds.

**Peach Whip.**—Prepare some thick peach purée by rubbing tinned or stewed peaches through a sieve, and using as little of the syrup as possible. Sweeten to taste, and add a squeeze of lemon juice and a drop or two of red colouring. To each large cupful of the purée allow two whites of eggs beaten very stiffly. Fold them into the purée lightly, and pile up the whip in individual glasses for serving. Hand sponge fingers or fancy biscuits separately. Other fruit purées can be used in the same way, and a topping of whipped cream is an improvement.

**Pears with Rice.**—Put four large pears, cut in half, in a stewpan with a pint of water and eight ounces of sugar, and simmer gently until tender. Take out the pears, and let the syrup boil down to half, flavour with vanilla. Spread some rice, nicely boiled in milk and sweetened on a dish, lay the pears on it, pour the syrup over, and serve.

**Raspberry Cream.**—Make a gill of purée by rubbing fresh raspberries through a sieve. Make also a gill of custard, using two yolks to one gill of milk, or condensed milk may be used, whipping it up as stiffly as possible. Add custard or milk to purée and strain in one ounce of gelatine which has been dissolved in a little water or fruit juice. Sweeten to taste and add a gill or more of whipped cream and a little pink colouring. Stir occasionally until beginning to set, then pour into a wet mould or into individual moulds, and leave in the cool until required. Other fruit creams can be made in the same way, and chopped jelly makes a pretty decoration.

**Rhubarb Meringue.**—Weigh a pound of young rhubarb stems after they have been carefully prepared and cut in lengths. Mix eight ounces of pounded sugar with them and stew gently until they form a smooth pulp, then quicken the boiling, and stir constantly until stiff, then turn from the pan, and stand until quite cold. Whisk the whites of three fresh eggs to a solid froth. No drop of liquid must remain at the bottom of the basin. After this mix in gently three table-spoonfuls of dry sifted sugar, and lay lightly over the rhubarb in a rather deep tart-dish. Place in a moderate oven until the meringue is crisp and lightly browned. Serve cold.

**Snow Eggs.**—Separate the whites from the yolks of three eggs, and whisk the whites to a stiff froth with a tablespoonful of castor sugar. Put a pint of milk into a saucepan, sweeten it to taste, bring nearly to the boil. Take two dessertspoons, and shape the whipped white into egg shapes, dropping the pieces one by one into the milk; when set on one side, turn over; then take out and drain on a sieve. Strain the milk, mix with the yolks of the eggs, return to saucepan and simmer gently over the fire to make a custard. Flavour with vanilla, pour into a glass dish, and when cold lay the snow eggs on the top.

**Strawberry Short Cake.**—Two or three layers of any simple sandwich cake will be required, also fresh strawberries, cream, and sugar. Mix most of the strawberries with a little sugar and mash them slightly with a silver fork. Put a good layer of the fruit between the pieces of cake, piling them one on the top of the other with more strawberries on the top. Cover with whipped and sweetened cream, and decorate with some whole strawberries. Raspberries or loganberries can be used in the same way.

**Summer Pudding.**—Pick half a pound each of raspberries, red currants, and black cherries, removing the stones from the cherries. Stew them with a cupful of water and sugar until tender. Line a quart basin with white bread cut half an inch in thickness, cutting a round for the bottom, and wedge-shaped strips for the sides. Pour in the hot fruit and lay a round of bread on the top. Put a plate with a weight on the top, and stand until cold. Turn out and serve with custard or cream.

**Vanilla Ice Cream.**—Put one pint of milk into a saucepan with a piece of vanilla pod and heat slowly. Put four yolks and two whites of eggs into a basin with four ounces castor sugar, and beat with a whisk until light and creamy. Pour the milk gradually on to the eggs, stirring all the time. Return all to saucepan, and stir until the custard thickens, but do not boil. Strain into freezing pot and leave to cool. Then add one gill or more of cream and freeze until stiff enough to serve. The two remaining whites of eggs may be beaten stiffly and stirred into the mixture with the cream. Other flavourings may be used.

**Vanilla Ice Cream (Plainer).**—Cook two ounces of corn-flour very thoroughly in one quart of milk. Beat up three eggs with six ounces of castor sugar, and pour corn-flour gradually on to them, stirring meanwhile. Flavour with vanilla, strain into freezing pot and leave to cool. Then freeze to the required consistency.

**Ice Cream Sundae.**—Put a spoonful of vanilla ice cream into a sundae glass and cover with a purée of strawberry, raspberry or other fresh fruit, sweetened to taste. Top with whipped cream, and add a sprinkling of chopped nuts or a few pieces of fruit.

**Water Ice Lemon.**—Put one pint of water and six ounces of loaf sugar into a saucepan with the thinly-peeled rind of two lemons. Heat slowly and then boil ten minutes. Leave to cool, then strain into freezing pot, add the strained juice of four lemons, and the whites of two eggs well beaten, and freeze until stiff. Other fruit juices may be used, a mixture of orange and lemon being particularly good.

## BREAD, CAKES AND BISCUITS.

### Bread and Scones.

**Brown Bread.**—Warm a basin and put into it one pound and three-quarters of whole-meal with a teaspoonful of salt. Make a hole in the middle, leaving a layer of meal at the bottom. Put three-quarters of an ounce of compressed yeast into a smaller basin with a teaspoonful of sugar and stir them together until creamy. Add to them half a pint each of milk and water heated to a lukewarm temperature (90° F.) and strain into the middle of the meal. Work in some of the meal with the fingers until a batter is formed, sprinkle dry meal over the top, and cover with a towel. Place the basin in a warm place for about an hour or until bubbles form on the top of the batter. Then mix in the meal from the sides until a softish dough is formed, using more liquid if necessary. Knead lightly, divide into two or three small greased tins, half filling them, cover again with the cloth, and set to rise in a warm place. When well risen bake the bread in a moderate oven (350° F.) about one hour. This bread will keep longer if a little butter is first rubbed into the meal.

**Household Bread.**—Warm three pounds of flour, sieve it into a warm basin or crock with a dessertspoonful of salt, and make a well. Cream one ounce of compressed yeast with a teaspoonful of sugar, and mix with one pint and a half of lukewarm water, and strain into the centre. With the hand work in the flour gradually from the sides, until a nice smooth dough is formed. It may be necessary to add more warm water if the flour is very dry. Turn the dough with the smoothest side uppermost and score it across the top with a knife. Sprinkle lightly with flour, cover with a towel, and set in a warm place until it has risen to twice the size. Then knead it well on a board or slab, working in a little more flour, until the dough leaves the fingers quite clean. Put the dough into warm greased tins and prove in a warm place about twenty minutes. Bake in a hot oven for quarter of an hour, then reduce the heat and continue the baking until the bread is cooked.

**Milk Rolls.**—Sieve half a pound of flour with a teaspoonful of baking powder and a little salt. Make a well and add about a teacupful of milk, or enough to form a dough. Turn out on a floured board, knead lightly and cut into ten pieces. Form into small rolls, place them on a greased and floured baking tin, and bake them in a quick oven about twelve minutes.

**Barley Scones.**—Mix twelve ounces of barley flour with twelve ounces of wheaten flour, quarter of an ounce of bicarbonate of soda, and one-third of an ounce of cream of tartar. Pass these through a sieve, and add one teaspoonful of salt. Mix to a soft dough with sour milk, roll out, stamp with a round cutter the size wanted, and bake on the girdle.

**Pancake Scones.**—Sieve into a basin half a pound of self-raising flour along with a tablespoonful of castor sugar and a pinch of salt. Add one or two eggs well beaten, and then milk gradually until a thickish batter is formed. Beat this well, add two tablespoonfuls of melted butter and pour into a jug with a good spout. Heat and grease a girdle, and pour the batter on to it in rounds, keeping them a little distance apart. Cook until nicely browned on both sides, and serve hot buttered.

**Scotch Scones (Girdle).**—Mix half a pound of well-sifted flour with half a teaspoonful each of carbonate of soda, cream of tartar, a pinch of salt, and a teaspoonful of sugar. Stir all together and rub in an ounce of butter, and make a soft dough with sour milk. Roll out the dough, cut into small rounds with a sharp cutter, heat the girdle, sprinkle with flour, and place the scones on, taking care they do not touch. When well risen, and done on one side, turn once, and finish baking.

**Sweet Currant Scones.**—Rub three ounces of salt butter into two pounds of flour, then sieve in half an ounce of carbonate of soda, one ounce of cream of tartar, and add three ounces of sugar and two ounces of cleaned currants. Mix all together, then make a well in the centre of the flour, into which put half a teaspoonful of salt and about a pint of buttermilk, or as much as will make a nice soft dough. Mix carefully with the hand and divide into eight. Knead round and smooth, roll out about half an inch thick, prick and glaze on the top with a little milk and egg, and bake in a hot oven from eight to ten minutes. These scones may be baked on a hot-plate or girdle, in which case they should neither be pricked nor glazed.

**Wholemeal Scones.**—Put into a basin one pound of wheaten meal and mix with one teaspoonful each of cream of tartar, carbonate of soda and salt. Rub in two or three ounces of butter with the tips of the fingers and then form into a light dough with sour milk. Turn on to a floured board, knead lightly, roll out and cut into rounds. Place on a greased and floured tin and bake in a good oven for fifteen minutes or longer.

### Buns and Small Cakes.

**Chocolate Cakes.**—Beat together till creamy quarter of a pound of sugar and quarter of a pound of butter. Add by degrees quarter of a pound of flour and three eggs, beating the mixture for five minutes after each egg is added. Mix quarter of a teaspoonful of baking powder with three ounces of chocolate powder. Stir them in with one tablespoonful of milk and half a teaspoonful of vanilla. Butter small fancy tins, and fill them half full with the mixture. Bake for fifteen or twenty minutes in a moderate oven.

**Coconut Buns.**—Put into a basin half a pound of flour, quarter of a pound of sugar, and three ounces of butter, and rub lightly together till smooth. Then add three ounces of desiccated coconut and a large half teaspoonful of baking powder, and mix well. Beat one egg till very light, add it gradually, with sufficient milk to make all to a stiff paste. Butter a flat baking-tin, and put spoonfuls of the mixture on it, not too close together. Bake in a quick oven for ten or fifteen minutes. A little coconut should be sprinkled over each bun before they are put in the oven.

**Doughnuts.**—Sieve half a pound of flour into a basin with two ounces of sugar, half a teaspoonful each of cream of tartar and carbonate of soda, and a pinch of any preferred spice. Rub in two ounces of butter, make a well and pour in a beaten egg and enough sour milk to form a softish dough. Drop small spoonfuls into a saucepan of hot fat, and fry them a pretty brown colour, turning frequently. Drain on paper and sprinkle with sugar.

**Ginger Buns.**—Sieve quarter of a pound of flour and two ounces of ground rice into a basin, and rub in two ounces of butter until free from lumps. Add two ounces each of sugar and preserved ginger cut in tiny dice, one ounce of candied peel finely shred and one teaspoonful of baking powder. Mix well and make a well. Pour in an egg beaten with a few drops ginger essence, and enough milk to form a softish paste. Half fill small greased tins with the mixture, and bake in a good oven for fifteen minutes.

**Orange Cakes.**—Rub together till quite smooth six ounces of flour, three ounces of butter, and four ounces of sugar. Grate in the rind of one small orange; add also quarter of a teaspoonful of carbonate of soda, and mix all well together. Beat one egg till light, and stir it in gradually with the juice of the orange and sufficient sour milk to make a smooth soft dough. Half fill small buttered tins with this mixture, and bake for fifteen minutes in a moderate oven.

**Rose Cakes.**—Beat together to a cream three ounces of butter and three ounces of castor sugar. Add gradually three eggs and three ounces of flour,

beating for several minutes after each egg is added. Stir in three ounces of corn-flour and half a teaspoonful of vanilla, and lastly sufficient carmine to make the mixture a pretty shade of pink. Butter a dozen small fancy tins, fill them half full, and bake in a moderate oven for quarter of an hour. When cold coat with white or pink glacé icing and sprinkle with crystallised rose-leaves.

**Surprise Buns.**—Sieve into a basin half a pound of flour, two ounces of rice flour, one teaspoonful cream of tartar, half a teaspoonful carbonate of soda, and two ounces of castor sugar. Mix well and rub in two ounces of butter or margarine until free from lumps. Then make a hole in the middle, and pour in a beaten egg and enough milk to form a stiffish dough. Turn out on a floured board, divide into eight pieces, and roll these into balls. Place them on a greased baking tin. Make a hole in the middle of each, fill up with some thick strawberry or other jam, and cover with the dough. Brush over with a little milk, sprinkle with sugar, and bake fifteen minutes or longer in a good oven.

### Large Cakes and Icings.

**Boston Cake.**—Rub half a pound of butter into one pound of flour with the tips of the fingers, then mix well with a heaped dessertspoonful of baking powder, half a pound of brown sugar, and six ounces of grated coconut. Break in two whole eggs, and with a little sour milk or buttermilk mix all together. The mixture must not be too stiff nor too soft. Put it in a well-buttered cake tin; bake in not too hot an oven one hour and a quarter.

**Carraway Seed Cake.**—Put half a pound of flour into a basin, and with the fingers rub in four ounces of dripping or butter. Add a teacupful of brown sugar, half a teacupful of carraway seeds and a heaped teaspoonful of baking powder. Mix together with two eggs and a little sour milk to a fine dough. Butter a cake tin, put in the cake mixture, and bake in a hot oven three-quarters of an hour.

**Cherry Cake.**—Beat half a pound of fresh butter to a cream, add half a pound of castor sugar, and beat well again. Drop in one egg from the shell, add a little flour, and beat for five minutes. Continue until five eggs and ten ounces of flour have been added, and then stir in half a teaspoonful of vanilla and six ounces of glacé cherries. Butter a cake tin, line it with buttered paper, pour the cake mixture in, and bake for an hour or longer. The oven should be rather hot at first, as the cherries, being heavy, are apt to sink to the bottom of the cake if it is slowly baked. Cover the cake with almond icing when cold.

**Chocolate Cake (Iced).**—Beat to a cream quarter of a pound of butter and quarter of a pound of castor sugar. Add gradually quarter of a pound of flour and three eggs, beating the mixture for several minutes after each egg is added. Stir in one ounce of grated chocolate, the same of ground almonds and desiccated coconut, and flavour with quarter of a teaspoonful of vanilla. Butter a flat round cake tin, line it with buttered paper, and put the cake mixture into it, spreading it evenly over the tin. Bake for thirty or forty minutes. When the cake is cold, cover it with the following icing:—Put in a saucepan quarter of a pound of chocolate powder and a tablespoonful of water, and stir until the chocolate is melted. Add quickly quarter of a pound of icing sugar, and spread the icing over the cake with a knife dipped in hot water.

**Christmas Cake.**—Three-quarters of a pound each of butter and brown sugar, one pound of flour, six eggs, two tablespoonfuls treacle, half a pint of milk, half a teaspoonful each cinnamon, ginger and salt, one teaspoonful baking powder, a little grated nutmeg, the grated rind of one orange and one lemon, half a pound each of currants, sultanas, seeded raisins, candied peel (sliced) and chopped almonds and one glass of sherry or brandy. Cream the butter, when very light mix in the sugar, grated rind, spices and salt. Then add the eggs one at a time with some of the flour. Stir in the treacle, milk, fruit, and the rest of the flour, beat well adding baking powder and sherry or brandy at the last. Put into two lined cake tins and bake in a very moderate oven about three hours. This cake will improve if kept for some weeks before cutting. The quantity and kind of fruit may be varied to suit individual taste. When required cover with almond paste and white icing (*see below*).

**Gingerbread.**—Mix together in a basin one pound of flour, two teaspoonfuls of ground ginger, and two teaspoonfuls of carbonate of soda. Put three-quarters of a teacupful of treacle into a saucepan with quarter of a pound of butter or lard and six ounces of sugar, and stir till boiling. Beat two eggs till light and frothy; pour the boiling sugar and treacle over them, stirring all the time, then pour all into the flour, mixing quickly. Add enough sour milk to make a smooth and softish dough, put it in a buttered tin, and bake from an hour to an hour and a half in a very moderate oven. Open the oven door as seldom as possible, and move the cake as little as possible while it is baking. If it gets too brown on the top, as it does very readily, it should be covered with several folds of paper. When it is baked, leave it in the tin for quarter of an hour before turning it out.

**Shortbread.**—Sieve into a basin half a pound of flour and quarter of a pound each of rice flour and castor sugar. Add a pinch of salt and a few drops of vanilla essence. Then rub in half a pound of butter or good margarine, and knead with the hands until a smooth paste is formed. No liquid must be used. Turn on to a floured board—form into two neat round cakes, flute the edges and prick the centres. The use of a shortbread mould will produce a better shape. Place the cakes on a greased tin, bake in a hot oven for ten minutes, then more slowly till firm and a good brown. Cool on the tin.

**Sultana Cake.**—Pass three-quarters of a pound of dry flour through a sieve, with a heaped teaspoonful of baking powder, and a pinch of salt. Beat together five ounces of butter with five ounces of castor sugar, and a tablespoonful of sherry into which some mixed spice has been stirred. Into the flour put half a pound of sultanas, and two ounces of chopped peel. Work in three eggs to the butter and sugar, and then the dry ingredients very slowly. Beat the whole for five minutes. Put into a tin, and bake steadily.

**Almond Paste.**—Sieve six ounces of castor and the same amount of icing sugar into a basin. Add a dessertspoonful of lemon juice and half a pound of ground almonds. Flavour with vanilla, ratafia, or a little rum or brandy and bind into a paste with beaten egg; or yolk alone if a yellow colour is preferred. Knead until the ingredients are blended, then roll out to the shape required.

**Glacé Icing.**—Put half a pound of sieved icing sugar into a small saucepan and add flavouring to taste. Then add two or three tablespoonfuls of water very gradually stirring over a gentle heat all the time, until lukewarm. The icing should be made of a consistency that will coat the back of the spoon without running off, and it must not be made too hot or it will be cloudy. Beat well and use immediately. Colouring may be added.

**Chocolate Glacé Icing.**—Grate two or three ounces of good chocolate and dissolve it in a small basin over steam with as little water as possible. Add it to glacé icing and beat until smooth.

**Coffee Glacé Icing.**—Flavour with strong coffee essence, or mix with strong black coffee instead of water.

**Orange or Lemon Glacé Icing.**—Mix with strained orange or lemon juice instead of water, and add yellow colouring.

**Royal Icing.**—Sieve one and a half pounds of dry icing sugar and add a tablespoonful of strained lemon juice. Then add white of egg by degrees until of the right consistency. The icing should be made stiff enough for the spoon to stand upright and must be well beaten. Spread on the cake with a palette knife.

### Biscuits.

**American Breakfast Biscuits.**—One pound of flour, two teaspoonfuls of baking powder, quarter pound of butter, a little salt. Well rub butter into flour after sifting in baking powder, then make into a nice soft dough with milk; sour milk is really best. Roll out to half an inch in thickness, cut out in rounds with a pastry-cutter, bake

in a very hot oven. When wanted for use cut open and butter. These are very good.

**Brandy Wafers.**—Heat half a pound of treacle. Rub four ounces of butter into six ounces of flour and add half a pound of sugar, one ounce of all-spice, and the grated rind and juice of one lemon. Pour in the treacle amongst the ingredients, mixing them well together; butter a flat tin, and pour in the mixture, spreading it all over with a knife. Put it in a slow oven for about fifteen minutes, then take it out, and cut in square pieces, and roll on a wooden pin, to form the wafer.

**Coconut Biscuits.**—Sieve together quarter of a pound of fine sugar and a dessertspoonful of ground rice. Add quarter of a pound fine desiccated coconut and a squeeze of lemon juice and then bind into a softish mixture with slightly beaten white of egg. Drop teaspoonfuls on rice paper laid on a baking sheet, and bake in a moderate oven until crisp and lightly browned. A little carmine may be added to some of the mixture if desired.

**Shortbread Biscuits.**—Sieve into a basin quarter of a pound each of flour and rice flour and three ounces of castor sugar. Rub in three ounces of margarine with the tips of the fingers, and then bind into a paste with the yolk of an egg beaten up with a little water and a few drops of vanilla. Turn out on a floured board, knead until free from cracks, and roll out thinly. Cut into biscuits, lay them on a greased tin, and bake to a pretty brown colour in a moderate oven. Dredge with sugar and cool on a wire tray.

**Yorkshire Parkins.**—Mix with half a pound of flour four ounces of coarse oatmeal, half an ounce of mixed spice, six ounces of brown sugar, and a full quarter of an ounce of carbonate of soda. Rub in four ounces of butter or lard, add four ounces of treacle, previously heated, and sour milk sufficient to make a nice soft dough. Divide the dough into pieces weighing one ounce and a half each, form them into round flat cakes, put them on greased tins, and bake in a cool oven. When done, glaze them on the top with a little milk.

## JAMS, JELLIES AND PICKLES.

**Apple Jelly.**—Choose green juicy apples, wash them and cut them in pieces without peeling. Put them into a preserving pan with cold water to cover them and bring to the boil over a gentle heat. Then simmer slowly until reduced to a pulp, stirring frequently, strain through a jelly bag and leave to drip all night. The liquid should be slightly thick when cold. Measure it into a preserving pan and add one pound of sugar for each pint, and the thinly peeled rind (tied in muslin) and strained juice of one lemon. Stir until the sugar is dissolved, then boil more quickly until the jelly will set.

**Black-Currant Jam.**—Gather the black currants when dry, allow to each pound of fruit a pound of loaf sugar and to four pounds allow a pint of raspberry or gooseberry juice, adding a pound of sugar for each pint. Put all into a preserving pan, stir slowly until boiling and boil until the jam will set.

**Cranberry Jelly.**—Allow a cupful of water or rhubarb juice to a quart of berries. Boil until soft. Turn into a cheese-cloth bag to drain. Allow sugar in equal measure to the juice. Boil fifteen minutes, removing the scum. When it thickens on the spoon turn (hot) into small glasses.

**Damson Jam.**—Allow a pound of sugar to each pound of fruit. Wash the damsons and dry them well in a towel. Put a large cupful of water and the same of sugar into the preserving pan, and when melted put in a third of the damsons and a third of the sugar. When that melts, put in half of what remains; let that melt before adding the rest. Let all simmer slowly for half an hour, then boil quickly for a quarter of an hour or until the jam will set, pour into jars, and leave them undisturbed for two days before tying down.

**Four-Fruit Marmalade.**—Take two each of sweet oranges, lemons and grape-fruit and three sour apples. Wipe or wash all the fruit. Peel, quarter and core the apples. Halve the other fruits; squeeze out all the juice and remove the seeds. Then cut all the peel in pieces and put it through a mincer along with the apples. Add the fruit juice to the mixture, measure all into a basin and add three times as much water. Cover and stand twelve hours. Then turn into a preserving pan and boil one hour. Stand again in a basin over-night, and next day boil with an equal amount of sugar until the marmalade will set.

**Green Gooseberry Jelly.**—Take the quantity of green gooseberries required, wash them and put them in a preserving pan with cold water sufficient to cover them. Let them boil to a pulp, being careful to stir them occasionally, to prevent burning, and pour through a jelly bag. When the juice has all run through, measure it, and allow one pound of loaf sugar to the pint. Put sugar and juice into a preserving brass pan, and let them boil for about ten minutes, or till the mixture jellies, removing the scum as it rises to the surface. It is better in making this to let the juice run through the bag all night, and finish next day.

**Lemon Cheese.**—Quarter pound of butter, a pound of loaf sugar, three eggs, the rind and juice of three lemons. Put all in stewpan, grating the peel and straining juice. Keep stirring over heat until the sugar is dissolved, and it begins to thicken; when of the consistency of honey it is done.

**Orange Marmalade (Economical).**—Take twelve oranges and two lemons, and rub them with a rough towel, then divide them longwise into quarters, remove the seeds, and cut them into very thin slices. Weigh the fruit and put it into a basin with cold water, allowing three pints to each pound, and let it stand twenty-four hours, after which put all into a preserving pan, boil till tender, and set aside again in a basin for twenty-four hours. Weigh the mixture again, then put it on allowing one pound and a half of loaf sugar to the pound, and let it boil briskly for a few minutes, or till it jellies.

**Raspberry and Red-Currant Jam.**—Pick the required amount of raspberries and to every three pounds allow half a pint of red-currant juice and three pounds of sugar. Put the red-currant juice and sugar into a preserving pan and stir over the heat until the sugar is melted. Then put in the raspberries and cook all together about twenty minutes, or until the jam will set.

**Red-Currant Jelly.**—Pick the fruit from the stalks, put it on in a preserving pan, allowing four pints of cold water to the gallon of fruit. Boil moderately till the currants get quite soft and broken, then pour through a clean hair sieve or jelly bag, and leave to drip. When the juice has quite run through, return it to the pan, allowing one pound of loaf sugar to the pint, and stir with a clean wooden spoon till the sugar melts. Then boil quickly until the jelly will set and remove any scum.

**Rhubarb Jam.**—Take as much rhubarb as required, when it is tender and full grown. Cut off both ends, do not peel it, but rub with a cloth, and cut in pieces about an inch long. To each pound of rhubarb allow one pound of sugar, and put them alternately in a deep dish. Let them stand twenty-four hours, by which time the sugar should be in a liquid state. Pour the liquid into a preserving pan, and boil briskly for half an hour; then add the rhubarb, and boil half an hour longer or until the jam will set. Take it off, and let it stand near the fire another half-hour before potting. A little whole ginger crushed and tied in muslin may be boiled with the fruit to flavour it.

**Strawberry Jam.**—Small strawberries are the best for making jam and they should be gathered dry. To six pounds of the fruit allow the juice of two lemons and five pounds of preserving sugar. Pick the strawberries carefully, put them into a preserving pan with the strained juice of the lemons, and stir over a gentle heat until they come to the boil. Have the sugar warmed, add it gradually to the fruit, and boil all together until the jam will set, removing any scum.

**Tomato Jam with Ginger.**—Select ripe, red tomatoes, remove the stalks, wipe them, and cut them in pieces. Put them into a saucepan without any water, and cook them slowly, stirring frequently until reduced to a soft pulp. Rub them through a sieve fine enough to keep back the seeds, and measure the purée. To each pint allow three-quarters of a pound preserving sugar, the grated rind and juice of two lemons, and half an ounce whole ginger, crushed and tied in muslin. Put all into a saucepan and boil until the jam

will set, when a little is tested on a plate. Remove the ginger, pour into pots and cover down.

**Apple Chutney.**—Peel three pounds of apples and three medium onions. Cut them in pieces and put them through a mincer along with one pound of seedless raisins. Then put the mixture into a saucepan and add the grated rind and strained juice of two lemons, one and a half pounds brown sugar, a tablespoonful mustard seed, one dessertspoonful of ground ginger, pepper, salt and a pint of brown vinegar. Cook all slowly until tender, stirring frequently. Put into jars or bottles when cold and cover down. Keep a month or two before using.

**Beetroot, To Pickle.**—Take as many heads of beetroot as you intend to pickle, wash them well, but do not cut or break the points. Put them in a pan of boiling water, add a handful of salt and let them boil about three-quarters of an hour. Then take them off, skin and trim neatly. Cut them in slices about quarter of an inch thick and put them in a jar. Have ready some hot spiced vinegar (*see* below), pour it over the beetroot, and when cold tie it up with a piece of bladder. Cover tightly.

**Cauliflower and Onion Pickle.**—Choose firm white cauliflowers and half the amount of small silver onions. The day before making the pickle prepare a brine of salt and water, allowing half a pound of salt to two quarts of water. Bring these to the boil, skim, strain, and leave to cool. Cut the cauliflowers into small pieces, and remove the skins from the onions. Wash all free from grit, and drain as dry as possible. Put both kind of vegetables into a crock or basin, cover with the brine and leave twenty-four hours. Next day, drain, and pack the vegetables into pickle bottles or jars. Well cover with boiling spiced vinegar (*see* below). Seal closely, store in a cool, dark place, and keep a month before using.

**Green Tomato Pickle.**—Wipe two dozen green tomatoes and cut them in slices, also peel and slice one pound of onions and put both into a basin in layers with a little salt. Cover and leave twenty-four hours. Drain off liquid, leaving the vegetables as dry as possible. Put them into a saucepan with half a pound of brown sugar, and brown vinegar to cover. Add one teaspoonful each of celery seed and mustard seed, and a few mixed spices tied in muslin. Simmer all slowly until soft—about one hour. Add salt to taste and when cold put into jars and cover down.

**Onions, To Pickle.**—Have as many small pickling onions as you wish. Take off the outside skin, throw them into salt and water as they are done. Let them stand for four days, changing the pickle once or twice, then put them into a jar, and pour over them boiling water and salt. Cover them closely, and when quite cold, pour off the pickle and pack them in wide-mouthed bottles. Have some strong vinegar boiled, and some sliced ginger and mustard seeds. Fill up the bottles, and, while hot, cork and seal them.

**Pineapple Chutney.**—Put one tin of grated pineapple into a saucepan, with a chopped onion and quarter of a pound of seedless raisins slightly chopped. Add half a pint of brown vinegar, one teaspoonful mixed spice, the grated rind and juice of one lemon, and a teaspoonful made mustard. Stir these over the fire until boiling and then simmer until the chutney is thick and clear—about one hour. Season to taste and pour into pots, cover when cold, and keep at least a week before using.

**Red Cabbage, To Pickle.**—Remove the outer leaves, and cut the hearts crosswise in very fine shreds, the finer the better. Spread these out on a large shallow dish, sprinkle freely with salt, and leave in a cool place for twenty-four hours, after which drain away all the liquid and shake dry in a cloth. Place the cabbage in jars and cover with cold spiced vinegar (*see* above). Close down tightly.

**Spiced Plums.**—Put into a saucepan half a pint of brown vinegar, two pounds of brown sugar, and a little cinnamon stick, eight cloves, and a little whole allspice tied in muslin. Boil these until a thickish syrup is formed. Remove the stalks from four pounds of sound plums, wipe them and prick with a silver fork. Put them into a jar, pour over the boiling syrup, cover, and leave three days, stirring now and then. Then strain off syrup, reboil until again thick, put in plums, and bring to boiling point. Seal down in hot jars. This is a cross between a jam and pickle and is very good with cold meat.

**Spiced Vinegar for Pickles.**—Put into a saucepan one quart of vinegar, half an ounce each of bruised ginger, peppercorns and allspice, six cloves, two blades of mace, a small piece of cinnamon stick, a little salt, quarter of a pound brown sugar, and a tablespoonful grated horse-radish. Bring these to the boil slowly and then simmer fifteen minutes. The spices and sugar may be varied in quantity to suit individual taste.

## INVALID COOKERY.

**Beef-Tea.**—Mince lean gravy beef. Put it into a jar, cover it with water, add a little salt, and stir it with a spoon. Cover and put the jar into a saucepan with the water reaching to the middle of the pot, and steam for four hours and a half. See that the water does not dry up in the vessel. Strain carefully before serving to the patient.

**Beef-Tea Custard.**—Where eggs may be given the following forms a nice change for the invalid from ordinary beef-tea, and is usually much appreciated. Beat up two yolks and one white of new-laid eggs, a pinch of salt, and a small cupful of beef-tea made either from fresh beef or any good essence, put into a small basin, and steam it over a saucepan much smaller than the basin, so that the latter will not touch the bottom of the saucepan. The water should only simmer. The custard may be baked by putting it in a small dish, and placing in the oven till set.

**Spinach Cream Soup.**—To one teacupful cooked and sieved spinach allow one dessertspoonful butter, a teaspoonful flour, two teacupfuls light stock or milk and water, seasoning, and a little cream. Melt half the butter in a saucepan, stir in the flour, and add the liquid. Stir until boiling and add the spinach, and cook until well blended. Add the rest of the butter, season to taste, and serve with a spoonful of whipped cream on the top and crisp toast. Other vegetable purées can be used in the same way.

**Fish Cream.**—To quarter of a pound uncooked whiting or other white fish allow two tablespoonfuls milk, a small piece of butter, two tablespoonfuls bread-crumbs, one white of egg, two tablespoonfuls cream, a squeeze of lemon juice, and a little salt. Weigh the fish free from skin and bone and shred it finely. Put the milk, butter, and bread-crumbs into a small saucepan, and stir them over the heat a few minutes. Add the fish, and then rub all through a sieve. Put the mixture into a basin, add the white of egg stiffly beaten, and the cream whipped. Season to taste, pour all into a buttered basin, cover with buttered paper, and steam very slowly until firm to the touch. Turn out when ready and garnish with cut lemon.

**Fish in Custard.**—Sprinkle fillets of haddock, sole, or plaice with lemon juice, pepper, and salt. Roll them up and put them in a buttered pie-dish. Beat an egg till light and frothy, add to it a little salt, white pepper, and grated nutmeg, and a small teacupful of milk. Strain this custard over the fish and bake it in a moderate oven from twenty to thirty minutes.

**Sole, Baked.**—Trim and wipe the required number of fillets, season them with white pepper, salt and a little lemon juice, and double them over. Butter a fire-proof china dish, lay in the fish and pour one or two tablespoonfuls of water with a little lemon juice round. Cover with buttered paper and bake in a moderate oven about a quarter of an hour. Serve garnished with cut lemon and parsley.

**Steamed Chop.**—Choose a tender loin chop, wipe it and trim off superfluous fat. Place a buttered plate over a saucepan of boiling water, lay on the chop and sprinkle with a little salt. Cover with buttered paper and then the saucepan lid. Cook fifteen minutes, keeping the water boiling, then turn the chop and cook the second side until tender. Serve at once along with any juice.

**Raw Beef Sandwiches.**—Scrape down finely about two ounces of lean beef-steak, add a pinch of salt, and rub through a sieve. Spread between thin bread and butter and cut into neat sandwiches.

**Apple Cream.**—Peel and core half a pound of cooking apples. Cut them in pieces and stew gently with a little lemon juice and sugar until reduced to a pulp. Beat until smooth, and when cold serve in a custard glass with whipped cream on the top.

**Cup Custard.**—Beat up a new-laid egg with a small teaspoonful of sugar and a little flavouring. Add a small teacupful of milk, and strain into a buttered cup. Cover with greased paper and steam very slowly until set. Serve in the cup, hot or cold with a little thick cream on the top.

**Isinglass Blancmange.**—Boil an ounce of the best isinglass, with a piece of stick cinnamon, in half a pint of water. In half an hour the isinglass will have dissolved and become a very thick jelly-like substance; then mix to it a pint of new milk, and loaf sugar to taste. Let it boil up once, and then strain into a basin. When nearly cold, pour it into a mould. It should turn out a beautiful white jelly, like marble. Cream or fruit may be served separately.

**Sponge Cake Pudding.**—Cut one sponge cake or two finger biscuits in slices, and lay them in a small buttered pie-dish. Beat up the yolk of an egg with half a teacupful of milk, pour over the sponge cake, leave to soak then bake in a moderate oven until the custard is set. Whip the white of egg stiffly, mix with it a teaspoonful of sugar and lay on top of pudding. Return to the oven until lightly browned. Sprinkle with sugar and serve hot.

**Barley Water.**—Wash two ounces of pearl barley in cold water, then put it into a clean enamelled pan with a little water, let it boil five minutes and pour off the water. Put it on again with two quarts of fresh water and the peeled rind of one lemon, let it boil gently till reduced to a quart, then strain, and when cold add the juice of the lemon.

**Egg Drink.**—Break an egg into a cup and remove the speck. Beat it up with a teaspoonful of sugar and a little sherry (optional). Heat a teacupful of milk, and when almost boiling pour it on to the egg, stirring all the time. Serve hot in a tumbler.

**Egg and Lemon Cordial.**—Break a new-laid egg into a cocktail shaker, and add the juice of half a lemon, a little sugar, and some finely-crushed ice. Shake well, strain into a large tumbler and fill up with aerated water. A little nutmeg or cinnamon may be sprinkled over the top. A jug and small whisk may be used instead of a shaker. This is an excellent drink when one is tired.

**Oatmeal Gruel.**—Put a tablespoonful of oatmeal into a basin with a breakfast-cupful of milk. Stir well, cover, and stand half an hour at least. Then stir again and strain milk into a saucepan, pressing the meal dry. Stir until boiling and simmer a few minutes. Add salt or sugar, and a small piece of butter. Serve very hot.

## CONFECTIONERY.

**Almonds, Salted.**—Blanch the required amount of nuts and dry them in a towel. For each cupful heat a good tablespoonful of salad oil in a frying-pan, and put in the nuts in a single layer. Fry them slowly until of a delicate brown colour, stirring and turning them over frequently. Then drain on paper and sprinkle liberally with fine salt. Other nuts can be salted in the same way.

**Butter-scotch.**—Melt quarter of a pound of butter in a saucepan, then add one pound light brown sugar, half a pound golden syrup, and a tablespoonful water. Dissolve slowly and bring to the boil, stirring all the time. Add a good pinch of cream of tartar and boil until the butter-scotch breaks crisply when a little is tested in cold water. Flavour to taste, and pour into a buttered tin. When set mark in squares, and break in pieces when cold.

**Chocolate Fudge.**—Put one pound of sugar, one gill of milk, two ounces of grated chocolate and a pinch of salt into a saucepan, and stir over the heat until dissolved. Continue to boil without stirring until a small piece dropped in cold water can be rolled into a ball. Then remove the saucepan from the heat and stand it in cold water. When the fudge is cool, remove the saucepan to the table, add one ounce of butter by degrees, beating it in, flavour with vanilla and continue to beat until the mixture is thick and creamy. Turn into a greased tin and when cool cut in pieces.

**Chocolate and Nut Bonbons.**—Shred down half a pound of good eating chocolate and put it into a small saucepan. Stand this in a larger pan with a little hot water and stir until dissolved without becoming too hot. Beat until smooth and stir in an egg slightly beaten, and quarter of a pound of sweet almonds or other nuts roughly chopped and toasted in the oven. Mix well, then arrange the mixture in small heaps on a bright tin or slab and leave to cool.

**Coconut Balls.**—Mix together six ounces of ground almonds and the same weight of castor sugar, and form into a paste with white of egg. Divide and colour one part pink. Form into small balls, and roll in desiccated coconut, pressing it well on. Leave on sugared paper to dry.

**Everton Toffee.**—Take one pound and a half of brown sugar, nine ounces of butter, a teacupful of water, and one lemon. Boil the sugar, water, butter, and half the rind of the lemon together for about ten minutes. Drop a little into cold water, and if it is done enough it will turn hard at once. Draw this off the fire and stir into it the lemon juice. Then pour it on a buttered plate to cool.

**Lemon and Honey Toffee.**—Melt three ounces of butter in a saucepan, then put in two table spoonfuls honey, and half a pound each of brown and white sugar. Bring to the boil slowly, stirring gently. Strain in the juice of one lemon and continue the boiling without stirring until the toffee breaks crisp when a little is tested in cold water. Pour out on a flat buttered tin and leave to cool. When set mark across in pieces and break when cold. Keep in a tin box or wrap in wax paper.

**Marshmallow Prunes.**—Remove the stones from some good dessert prunes, insert a piece of marshmallow in each, and reshape neatly. Make a syrup with half a pound sugar, half a teacupful water and the strained juice of half a lemon. Boil all these together until a little tested in cold water can be rolled up in a soft ball between the fingers. Cool slightly, dip in the prunes one at a time, and then roll them in desiccated coconut. When dry place them in small paper cases. A little pink sugar may be sprinkled over the top.

**Pea-nut Brittle.**—Put half a pound of granulated sugar, half a teacupful of water, and two tablespoonfuls golden syrup into a saucepan, and stir slowly until dissolved. Then boil without stirring, and add two ounces of butter broken in pieces, and one dessertspoonful lemon juice. Continue to boil, stirring occasionally, until the mixture turns brown, and a little tested in cold water breaks crisp. Add quarter of a pound peanuts chopped and toasted, and half a teaspoonful cream of tartar and one of carbonate of soda free from lumps. Mix quickly and while frothing pour on to an oiled slab or flat dish. Press out as thin as possible with a spoon, and then pull out with the hands. When cold break in pieces.

**Peppermint Creams.**—Sieve one pound of icing sugar into a basin, and moisten with one white of egg and about a tablespoonful water. Work with the hand until a smooth, soft paste is formed, flavouring with a few drops oil of peppermint. Turn on to a board or slab sprinkled with sieved icing sugar, and roll out to one-eighth of an inch in thickness. Cut into rounds the size of a penny, lay on white paper, sprinkling with castor sugar, and leave to dry.

**Vanilla Candy.**—Cut two ounces of butter in pieces and let it melt in a lined saucepan. Add one pound of granulated sugar and half a teacupful of water, and stir gently until dissolved. Then add a small tin of Swiss milk and stir constantly until the mixture thickens, and until a little tested in cold water can be rolled into a ball. Remove from the heat, flavour with vanilla, and colour pink with carmine. Pour into a shallow greased tin, leave to cool, and cut in pieces.

## WINES AND OTHER BEVERAGES.

**Dandelion Wine.**—Gather two quarts of dandelion petals—that is, the yellow petals of the flower, pour over them half a gallon of water,

warm, but that has been boiled; stir, and cover with a flannel cloth, and leave for three days, stirring now and again. Strain it, then put the water into a pan and boil for half an hour with the rind of a lemon and an orange among it, and a little ginger. Then slice the lemon into it, and add one and a half pounds of lump sugar; when cool put in a bit of bread with a quarter of an ounce of yeast on it, and leave it for a day or two; then put it in a jar and leave it for a month or two. Bottle and cork for use.

**Ginger Wine.**—To make ten gallons of ginger wine, take eight gallons and five pints of water, twenty-four pounds of loaf sugar, thirteen and a half ounces of ginger, four pounds of raisins, eight Seville| oranges, and six tablespoonfuls of yeast. Bruise the ginger, and boil the ingredients half an hour. Let the mixture stand till nearly cold, then put it into the cask with the juice of the oranges, raisins, and yeast chopped small. Let it stand six or seven days, put in half an ounce of isinglass and a quartern of the best brandy. Bung up the cask and let it stand three months, then bottle off.

**Green Gooseberry Wine.**—To make nine gallons of wine, take half a bushel of fruit crushed or pounded, twenty-eight pounds of loaf sugar, a quartern of brandy, and half an ounce of isinglass. When the fruit is well crushed put the water on it; let it stand three days, stirring it twice a day; strain it, and add the sugar. When dissolved, put it in your cask; it will ferment very much. In three days add your brandy and isinglass and bung it up. Bottle it in March, and in three months it will be very like champagne. It will keep good for years.

**Hop Beer.**—Boil five ounces of hops slowly in nine gallons of water for about three-quarters of an hour. Strain over three pounds of brown sugar in a large pan, add a little bruised ginger, and when lukewarm add about three or four tablespoonfuls of yeast, and let it ferment. If this is to be kept, add a little brandy, for it is not easy to keep any fluid containing sugar without it. After twenty-four hours, strain off and bottle, tie down the corks tightly, or draw from a stone or wooden cask as required for use.

**Raspberry Vinegar.**—To four pints of ripe raspberries allow a pint and a half of vinegar. Bruise the fruit in a large basin, pour the vinegar over it, cover it, and let it stand for three days. Put a sieve over a large basin, break the fruit, put it into the sieve, and let it drip for a night, but do not press it. Allow to each pint of juice three-quarters of a pound of brown sugar; put all over the heat in a preserving pan, and stir occasionally until boiling. Boil three minutes, and strain through a piece of muslin. Bottle when cold.

**Coffee.**—Have a muslin bag, with a wire or metal rim round the mouth or opening, to fit the top of the coffee-pot. When the coffee is wanted, put this bag into the coffee-pot, pour boiling water through the muslin into the pot, in order to heat both, then pour it out, and put the newly-ground coffee into the bag, allowing a tablespoonful to a breakfast-cupful of water. Pour the water boiling over the coffee, letting it run, and add more till the measure of water required has been added. Let it stand near the fire for a minute or two, and serve very hot, with boiled milk in a separate jug, or with whipped cream.

**Ginger Punch (Hot).**—Put a pint of light beer into a saucepan with three ounces of sugar and a little ground ginger, and bring to the boil. Break two new-laid eggs into a jug and whisk them until frothing. Pour the beer on to them gradually whisking all the time, and serve at once.

**Lemonade.**—To three lemons allow one quart of boiling water and from four to six ounces of sugar. Wipe the lemons and peel the rind off them very thinly, taking only the yellow part. Put this into a jug with the sugar and strained juice, pour the boiling water over, cover and stand until cold. Strain and use as required.

**Lemon Syrup.**—Put into a basin a pound and a half of loaf sugar and one ounce of citric acid, with the rind and juice of two lemons. Pour over all one quart of boiling water, and let it stand till cold, stirring occasionally. Strain and bottle, add a wineglassful of this to a tumblerful of water.

**Negus.**—Put a glass of Burgundy or port into a tumbler with three lumps of sugar that have been rubbed on a lemon. Add one or two thin slices of lemon and a little grated nutmeg, and fill up with boiling water.

**Tea and Cider Cup.**—To one pint of clear China tea allow one pint of cider, sugar to taste, the juice of two lemons, one bottle of ginger-ale and some ice. Dissolve the sugar in the tea and when cold strain in the lemon juice. When required add a few pieces of ice to the cider and ginger-ale. Float a few slices of lemon on the top.

**Tennis Lemonade.**—Wipe four fresh lemons and peel the yellow rind off them very thinly. Put this into a jug with one ounce of citric acid and half a pound or more of sugar. Pour in one quart of freshly boiling water, cover and leave until cold. Then add the strained juice of the lemons. Use this infusion with plain or aerated water as required, allowing about one tablespoonful to each tumbler. A garnish of sliced lemon or orange may be added. The infusion can be bottled, and if tightly corked will keep for some time.

**White Wine Cup.**—To one bottle of Chablis or Sauterne allow two or three bottles of aerated water, three tablespoonfuls sugar, one teacupful water, two oranges, one lemon, a sprig of verbena or mint, small pieces of fruit and some ice. Dissolve the sugar in the water, add the thinly-peeled rind of the lemon and one orange. Simmer until well flavoured and strain into a jug with the orange and lemon juice. When cold add the wine and some small pieces of fruit. Place in a cool place, add ice and aerated water just before serving and garnish with mint or verbena.

# HEALTH

## PEARS—THE PURE SOAP

*For particulars of Pears Famous Toilet Preparations turn to end of Book*

# Pears' Medical Dictionary

## BY A PROMINENT LONDON PHYSICIAN

## INTRODUCTION.

It will help the reader to understand what kind of information he may expect to find in this Health section, if I explain some of the ideas I had in mind while I was writing it. First and foremost, then, it was not my aim to supply in these thirty-seven pages a complete guide to the diagnosis, prevention, and treatment of disease. Let no one imagine that by referring to this or any other book he will acquire information that would enable him to dispense with the services of the medical profession for himself and his family. I have tried, on the contrary, to show, by many examples scattered through the following pages, that even the most commonplace and trivial-seeming symptoms may have grave underlying causes; that time and money spent in trying out home remedies and patent medicines may be time and money wasted; that, indeed, it is impossible—I wish to underline this word—absolutely *impossible* for an untrained person to assess the gravity of any illness or, except under skilled direction, to apply the best remedies for its relief or cure.

In these islands the minimum period for completing the curriculum of medical studies is about six years. Many students, perhaps most, take longer; a not surprising fact when it is borne in mind that before they can obtain the licence which confers on them the right of admission to the medical register, and the corresponding responsibilities, they must pass examinations in chemistry, physics, biology, pharmacology, anatomy, physiology, pathology, bacteriology, medicine, surgery, midwifery, and the diseases of women. Nothing less than that! I would ask readers of the Health section to reflect on this fact; to realise, moreover, that a doctor's training does not end with his qualification, but must continue unremittingly throughout his professional life; and then to ask themselves if all the reading in the world, unbacked by an extensive practical training, can give them or anyone else the right to tinker with mechanisms so delicate and complex as those of the human mind and body.

But in none of this do I suggest that ignorance is better than knowledge. Ignorant people are the prey of every quack who cares to promise them a miracle. They live unhygienic lives, and in their folly often endanger the lives of others. As long as they are well or suffering only from imaginary illnesses, they pursue one infallible cure after another; it is, indeed, touching to see how, as soon as one panacea fails them, they will carry an unabated faith and enthusiasm to the next. When, if ever, they do consult a qualified practitioner, it is all too often after miracles have failed to work and they are too gravely ill to be helped; and their continued illness or death is then regarded as a further proof (if proof were indeed needed!) of the failure of orthodox medicine.

The elements of biology and physiology should form a part of everyone's education. On such a foundation, thoughtful men and women could build up a knowledge of healthy living and a capacity to discriminate between science and quackery. They would not thereby become physicians; but, what is just as useful, they would know what they might reasonably hope for from medical science, and how most effectively to co-operate with the practitioners they pay to keep them in health and treat them in sickness.

It is some such knowledge that I have tried to impart in these pages. I have had in mind, too, the needs of those persons who might wish for more detailed definitions than they could find in an ordinary non-technical dictionary of the medical terms they may happen upon in their general reading. But this Health section is not—it does not set out to be—a complete medical dictionary. Such a dictionary would be larger than the whole of *Pears' Cyclopædia*; and, I may add, it could not be sold at under ten times the price!

**Abdomen.** The belly; that part of the body which lies between the chest and the pelvis, and contains the digestive organs (stomach, intestines, liver, pancreas, etc.), the spleen and the kidneys. It is separated from the chest by a dome-shaped muscle called the diaphragm. By means of X-rays it is possible to photograph the various organs contained within the abdomen, and thus to detect or to confirm the presence of such diseases as gastric or duodenal ulcer, gall-stones, stones in the kidney and deep-seated cancers.

**Abortion.** Miscarriage; the premature expulsion of the unborn child, called the embryo or fœtus, whether such expulsion occurs naturally or is deliberately provoked. The induction of abortion, except for the purpose of saving the mother's life or protecting her against serious illness, is an illegal act, and the manipulations of abortion-mongers, usually unskilled persons, may result in the death not only of the embryo, but of the mother too.

**Aboulia.** Absence of will power.

**Abrasion.** The type of injury that results when an area of skin or of the membrane lining some internal organ is rubbed away, whether by friction or any other form of violence. The skin, it is well to realise, is the body's first line of defence against infection, an abrasion forming a breach through which disease-producing germs may invade the body. The best antiseptic to apply to abrasions of the skin, and indeed to all superficial wounds, is tincture of iodine.

**Abscess.** A collection of pus within any tissue of the body. Although the cells composing the organs and members of the body are frequently invaded by hostile germs, either through a wound or by way of the blood stream, they only very rarely succumb to the infection. The germs, it is true, proceed to multiply in the tissues and to attack the cells with which they come into contact; but a number of these cells have the special quality of being able to destroy germs, and to their assistance is mobilised a defensive army, consisting mainly of the white corpuscles of the blood, which surround the invaders, and by doing so limit the area of the battle-field. This battle-field, or abscess cavity, is strewn with dead or dying tissue cells, germs and blood corpuscles; and together these constitute the thick yellowish fluid known as pus. When a tissue is attacked by germs and it seems likely that an abscess will form, the danger may sometimes be averted by resting the affected part, applying evaporating lotions, and administering an appropriate vaccine. If, however, pus has formed, it is usual, should the abscess be in an area accessible to such treatment, to apply hot fomentations, and, by means of an incision into the swelling, to let the pus

escape. In some cases it may be deemed advisable, in order to make sure that the abscess will not form again, to complete the treatment by inoculating the patient with a vaccine made from the germs found in the evacuated pus.

**Abstinence.** Refraining from the use of food or stimulants, or from the indulgence of a desire. The name abstinence symptoms is given to the state of over-excitement or intense depression that occasionally follows the withdrawal of an accustomed stimulant.

**Accouchement.** Confinement; delivery in childbed. An accoucheur is a medical practitioner who assists women in childbirth.

**Acetone.** A colourless pleasant-smelling liquid which occurs in the urine of persons suffering from diabetes, fever, cancer, or severe and prolonged vomiting, and sometimes in that of normal persons whose diet contains too much fat and too little sugar or starch.

**Acidity.** The quality of being acid or sour. The term is commonly applied to a condition associated with heartburn, belching, and a feeling of discomfort in the stomach.

**Acne.** A chronic, inflammatory disease of the skin due to infection of the sebaceous glands and hair follicles, commonly those of the face, back and chest, by means of a germ called the acne bacillus. The eruption is varied in character, blackheads, pimples, pustules, and nodules forming the chief components. Most commonly the disease makes its appearance when the patient is in his 'teens, reaching the height of its severity in the early twenties, and then gradually disappearing. Occasionally, however, cases are met with in young children and in persons past middle age. Although infection by a germ is the immediate cause of the acne eruption, constipation, a sedentary indoor life, and a badly planned diet, especially one containing an excess of sweets and starchy food, seem to be predisposing causes. Some mild cases, indeed, may be cured simply by correcting dietetic errors, training the bowel to empty itself regularly, and persuading the patient to take sufficient exercise in the sunshine and fresh air. Severer cases are treated by a variety of methods which include administering preparations of yeast and sulphur internally, injecting a vaccine made from the acne bacillus, and exposing the affected parts either to the rays emitted by an arc-lamp or to the X-rays.

**Acoria.** A condition in which the patient, though his appetite may not be big, never feels as if he has had enough food.

**Acromegaly.** A chronic disease of which the outstanding symptoms are a progressive enlargement of the bones of the hands, feet and face. The lower jaw becomes enlarged and projects forward; the teeth become separated; the lips, nose, and ears thicken; the skin becomes coarse and greasy; and the hands and feet may attain enormous size. Underlying acromegaly is a disease of the pituitary gland, a small but highly complex structure situated at the base of the brain. If this gland is over-active during childhood and the period of growth, a condition of gigantism results; over-activity in later life produces acromegaly.

**Acropathy.** Any disease of the hands or feet.

**Actinic.** Producing chemical changes. The term is applied to the invisible ultra-violet rays, whose chemical action on the body is used for the prevention and treatment of disease.

**Actinomycosis.** Hard tumours of the mouth and jaws, occasionally of the lung or intestine, due to infection by a parasite called the ray fungus. The disease occurs in cattle, but is sometimes transmitted to man. Treatment is by incision of the tumours, administration of potassium iodide in large doses, injection of vaccines, and exposure of the affected parts to X-rays.

**Actinotherapy.** The treatment of disease by exposing the body, in whole or in part, to chemically active rays, especially to the invisible ultra-violet rays generated by various types of arc-lamp. Such treatment, carefully applied by skilled operators, has been found effective in cases of rickets, surgical tuberculosis (a term covering all forms of tuberculosis except that of the lungs), lupus and other skin diseases, anæmia, and malnutrition. It is used also for stimulating the healing process in chronic ulcers and open infected wounds. In all such cases the rays produce their beneficial effect by increasing the amount of calcium and phosphorus in the blood and enhancing its power of destroying the germs of disease. The chief dangers of the treatment are that improperly applied it is liable to activate quiescent tuberculous disease of the lungs and to lower the body's resistance to all manner of infections. So important is it to protect the public against such risks, that in 1930 the Society of Apothecaries, after discussion with the British Medical Association, decided to establish a register of workers whose training had fitted them to administer actinotherapy and other forms of electrical treatment competently. These men and women work only under the advice and supervision of qualified medical practitioners, and at their hands patients may submit to actinotherapy without any risk whatever.

**Acupressure.** A method of stopping hæmorrhage by inserting needles into the injured part in such a manner that they will compress the bleeding vessels.

**Acute.** An acute illness is one that has a short and relatively severe course; for example, influenza or pneumonia. The term is used in medicine in contradistinction to "chronic," which is applied to such illnesses as rheumatism, that may affect the patient for many years without seriously endangering life.

**Addiction.** The state of being given up to a bad habit; for example, the habit of taking certain drugs. The drug addict must be clearly distinguished from the person who occasionally, under medical supervision, takes drugs for a specific and useful purpose—as, for example, the relief of severe pain. The addict takes drugs because he has an irresistible craving for them; starting perhaps to take morphia, cocaine, or heroin, to name three of the commonest drugs of addiction, for the escape they offer from an intolerable mental strain, or simply to enjoy a new and pleasant sensation, he finds, as time goes on, that he needs larger and larger doses of the drug to produce the desired effect, and ultimately that he must take it simply to relieve the intense depression by which he is possessed when not under its influence. The treatment of drug addiction, which consists in the very gradual withdrawal of the drug and the administration of special medicines, must take place in a hospital or a nursing home. The lengths to which patients will go, and the ingenuity they display, in trying to obtain secret supplies of drugs renders it impracticable to treat them in their own homes.

**Adenitis.** Inflammation of a gland.

**Adenoids.** An overgrowth of the gland-like tissues that in children normally line the cavity behind the nose and mouth. This cavity, which is continuous below with the gullet, is known as the pharynx, and it is in its upper part, distinguished as the naso-pharynx, that adenoid growths tend to appear. The condition prevails chiefly among city-dwelling children of the poorer classes, who live in unhygienic surroundings, enjoy comparatively little fresh air and sunshine, and have to put up with an ill-balanced dietary, usually containing too much starchy food. Such children are liable to suffer from chronic catarrh of the nose, an ailment which with decayed teeth and enlarged tonsils is commonly found in association with adenoids. Owing to the obstruction produced by the overgrown tissues, the patients become mouth breathers, acquire a thick manner of speech, and snore at night. Not uncommonly they suffer from nightmare and night terrors. The condition is liable to spread to the tube communicating between the naso-pharynx and the ear, and thus to produce deafness, ear-ache, and a dangerous infection behind the ear drum. Tuberculosis of the glands of the neck, which in children suffering from adenoids are always enlarged and chronically inflamed, is another serious complication. Mild cases may sometimes be cured by such simple measures as placing the patient in a healthy environment, correcting his diet, and painting his throat with some antiseptic application. More serious cases must be treated by surgically removing the enlarged tonsils and adenoids.

**Adenoma.** A tumour having a gland-like structure, closely resembling that of the organs

from which it arises. Any glandular organ may become the seat of an adenomatous growth; for example, the breast, intestine, and thyroid gland. Unlike cancer, an adenoma has no malignancy, that is to say, it causes no deterioration of health and can only endanger life if it develops in or presses upon some vital organ. The growth, moreover, has no tendency to recur after it has been surgically removed.

**Adhesion.** An abnormal union between two surfaces of the body; any band or patch by which such abnormal union is effected. Adhesions may form between different portions of the gut, as a result of operation or disease, and occasionally, when such adhesions give rise to undesirable symptoms, it becomes necessary to divide them.

**Adipose.** Of a fatty nature; fat. The term adipose tissue is applied to the fat-containing structures of the body.

**Adipsia.** A condition in which the sensation of thirst is absent, or in which drinking is shunned.

**Adrenal Glands.** Two small glandular organs situated just above the kidneys. Each consists of an outer layer or rind closely connected with the genital system, and a marrow which in effect is a chemical factory that manufactures a substance called adrenalin and pours it into the blood. Such a manufacturing process is known as secretion. A gland that secretes its product directly into the blood is called an endocrine or a ductless gland; and the product, an internal secretion or hormone. Adrenalin, then, is the hormone secreted into the blood stream by the suprarenal glands. Such secretion occurs particularly in association with anger, excitement and fear, and through its influence the body is prepared for fight or flight. The heart beats at a faster rate; the blood pressure is raised; the skin becomes pale; the hairs stand on end; the pupils dilate; and the muscles become tense and ready for action. In a rare disease first described by Dr. Thomas Addison about the middle of the nineteenth century, the supply of adrenalin to the blood is deficient owing to destruction of the adrenal glands, with the result that the patient suffers from great muscular weakness and an abnormally low blood pressure.

**Adrenalin.** (See Adrenal Glands.)

**Aerobe.** A germ which lives and grows best in the presence of oxygen.

**Aerophagy.** Air-swallowing; this bad habit is a common cause of flatulence and belching. In most cases it is preceded by a sensation of discomfort in the stomach which the patient erroneously attributes to the presence of gas, and tries to relieve accordingly. The only result of his efforts is that he gulps down a large volume of air, which eventually is brought up by belching. There may then be a few minutes of respite, after which the whole process begins again. The condition is usually treated by explaining to the patient exactly what it is he does, for only rarely does he suspect that the gas he has been at such pains to get rid of has accumulated as a result of his efforts to bring up gas that was not there. Aerophagy is common among hysterical patients.

**Afebrile.** Without symptoms of fever.

**After-birth.** The structure, consisting of membranes and the organ that has united the unborn infant with the mother, expelled from the womb after the birth has taken place.

**After-pains.** Pains, due to contraction of the womb, sometimes felt during the few days immediately following delivery.

**Agoraphobia.** A morbid fear of open spaces. Some writers use the term to denote a fear of being in crowds.

**Agraphia.** A condition produced by disease of the brain whereby the patient becomes unable to express his thoughts in writing. Commonly associated with it is aphasia, also a symptom of brain disease, as a result of which the patient, while retaining unimpaired intelligence, loses the power of expressing thought by speech.

**Ague.** Recurrent attacks of fever accompanied by shivering and a feeling of chilliness. (See Malaria.)

**Air-swallowing.** (See Aerophagy.)

**Albinism.** A congenital deficiency of pigment in the skin, hair and eyes that may affect even persons belonging to dark races. Albinos, as those suffering from this complaint are known, have an exceptionally blond skin, white hair and pink eyes; and usually they are intolerant of strong light.

**Albumin.** An organic compound of carbon, hydrogen, nitrogen, oxygen and sulphur. It belongs chemically to the group known as proteins, complex substances that form the characteristic constituents of living matter. The blood and most tissues of the body contain albumin, and from these it may in certain circumstances find its way into the urine, producing the condition known as albuminuria.

**Albuminuria.** The presence of albumin in the urine. The condition may be detected by heating the acidified urine, which thereupon becomes cloudy owing to the presence within it of coagulated albumin. Notwithstanding its apparent simplicity this test is full of pitfalls and should only be carried out by an expert. Albuminuria, it should be realised, is *not* a disease; it is a symptom which accompanies a great variety of diseases, and may sometimes be found in persons enjoying perfect health. Bright's disease, fevers, infections and tumours of the kidney, diseases of the circulation, and inflammation of the bladder are among the many causes of albuminuria. The condition may be found, on the other hand, in the urine of athletes who have just undergone a great exertion. There is thus no single remedy for albuminuria; in each case the treatment depends on and is directed towards removing the cause.

**Alcohol.** A colourless, volatile liquid, of aromatic odour, generated by the fermentation of sugars, and forming the intoxicating constituent of wines, beer and spirits. In medical practice it is occasionally prescribed as a stimulant to the heart, especially in such debilitating diseases as pneumonia and typhoid fever. Such treatment is not nearly as prevalent or as intensive as it was in the past, but even to-day alcohol is administered as a routine practice to seriously ill patients who have been heavy drinkers. Experience has shown that such persons suddenly deprived of alcohol are liable to develop delirium tremens. Taken in small amounts by healthy persons, alcohol produces its characteristic effects by, so to speak, paralysing the higher mental faculties, and thus allowing freer play to impulses that are normally held in check by self-consciousness. Although it gives the effect of a mental stimulant it is, in fact, a depressant, careful experiment having shown that mental and physical work demanding fine judgment, speed and co-ordination suffer in quality even if only a small amount of alcohol is taken. Chronic alcoholism, the state that results from the long-continued consumption of large quantities of alcoholic liquor, is marked by physical and mental deterioration. Disease occurs in the stomach, liver, kidneys, heart, blood-vessels and nerves. The patient sleeps badly and becomes incapable of sustained mental effort. He is overcome by moods of deep depression from which he seeks relief in ever larger doses of strong spirits. His appetite becomes negligible and usually he vomits as soon as he rises from bed. For this state there is no cure except complete abstinence. Mere temperance is not sufficient. Ordinary people can drink in moderation; but chronic alcoholics never. With them it is excess or nothing. The treatment, which consists in gradually withdrawing the alcohol and injecting small graduated doses of strychnine and atropine, can most effectively be carried out in a special institution.

**Alcoholism.** (See Alcohol.)

**Alimentary Tract.** The passage from the mouth to the anus, by way of the pharynx, gullet, stomach, and intestines, in which nutrient materials are acted upon and transformed by the digestive juices, and along which the indigestible residue of food and other waste matters pass on their way to the exterior. Opening into this tract and pouring their juices into it are the salivary glands, the liver and the pancreas; but besides these there are numerous glands in the walls of the tract itself. Imbedded in the lining membrane of the stomach, for example, are the so-called gastric glands that secrete pepsin and other chemical substances by whose action the proteins and other constituents of food are broken down to simpler compounds. In the intestine the process of digestion begun in the

mouth and continued in the stomach is brought to completion, this result being produced by the joint action of the juices secreted by the glands in the wall of the intestine, the bile, and the pancreatic juice.

**Alkaloid.** One of a group of organic, alkaline, physiologically active compounds found in plants. Well-known alkaloids are morphine, nicotine, caffeine and strychnine—all substances, it will be noted, capable of producing profound effects on the body. Most alkaloids are poisonous, even in small doses, though in still smaller doses they may serve as valuable drugs. Morphine, for example, administered medicinally may save life; in large amounts it is rapidly fatal.

**Allergy.** A condition in which symptoms of disease result from assimilating a substance which is, in similar amounts, harmless to people of normal constitution. In nearly every case the substance producing such symptoms is protein in nature, and very small doses may suffice to produce a most violent reaction. Thus, a person unduly sensitive to egg protein may, on eating a seemingly trifling amount, have a severe attack of asthma, a typical allergic disorder. Other conditions associated with such hypersensitiveness are nettle-rash, eczema, migraine, hay fever and some cases of epilepsy. The tendency to these reactions runs in families and is transmitted by heredity; but members of an affected family may not all suffer from the same allergic disease. Among the great number of substances capable of producing a reaction in susceptible persons are pollen, feathers, the fur of animals, eggs, shellfish, strawberries and aspirin. By inoculating suspected substances into the skin and studying its reaction to this treatment, it is possible in many cases to determine the protein to which a patient is sensitive; and injections of carefully graduated doses of this protein may sometimes desensitise him.

**Alopecia.** Baldness. The liability to baldness is in many cases inherited, but the immediate cause is usually a germ infection of the hair follicles. Occasionally the condition appears temporarily after a severe illness; for example, after typhoid fever. In such cases the appearance of a fresh growth may be hastened by electrical treatment of the scalp, or by painting it with lotions. But ordinary premature baldness seems to be incurable; the best that may be hoped for from treatment is arrest of its onset or rate of progress. A special form of alopecia, characterised by the sudden appearance of bald patches, is called alopecia areata. Although the exact cause of this condition is unknown, there are good reasons for believing that prolonged worry, emotional shock, eye-strain, and the presence in the body of some chronic infection are the factors responsible for most of the cases. Not uncommonly the condition gets better without any treatment, but recovery may be assisted by, among other measures, administering tonics, prescribing glasses if necessary, and local treatment of the scalp by means of lotions or electricity or ultra-violet rays.

**Amaurosis.** Blindness. The term is applied especially to cases of blindness in which the eye itself is apparently unaffected, the underlying cause being in the optic nerve or in the brain.

**Amblyopia.** Dullness of sight due to imperfect reception by the retina of visual stimuli.

**Amenorrhœa.** Absence or abnormal interruption of the menstrual flow.

**Amentia.** Mental deficiency; defect of the mind manifesting itself as idiocy, imbecility, feeble-mindedness or moral delinquency. This disorder in most cases is transmitted by heredity, but some cases are due to injury at the time of birth, or disease of the brain acquired in early life. The diagnosis of amentia is made by means of special intelligence tests, whereby a "mental age" may be assigned to the person under examination. If, thus, the patient can pass tests that come within the competence of a child of two, but not those of a child of three, his mental age is said to be two years. Adults below two in mental age are idiots; those between three and seven are imbeciles; and those above seven but below ten are feeble-minded. The mental age of the average adult is fourteen. In England and Wales at the present time there are about 300,000 mentally defective persons. It is probable that a policy of segregation, combined, in certain cases, with sterilisation, would have the effect of materially reducing this number, though not of stamping out mental defect entirely.

**Amputation.** The surgical removal of a limb or other part of the body.

**Amyloid.** Starch-like; a white starchy substance deposited in various organs as a result of wasting disease or chronic infection.

**Anabolism.** The upbuilding, constructive process whereby the body cells transform food or other materials into more complex forms, and ultimately into living matter itself. Side by side with this process there takes place what is known as katabolism, a continuous breaking down of living tissues, in the course of which they are transformed to simpler chemical substances and ultimately expelled from the body as waste products. The sum of all the chemical and physical changes whereby living tissue is built up (anabolism) and broken down with the liberation of energy (katabolism) is known as metabolism.

**Anaerobe.** A germ that can thrive in the absence of air.

**Anæmia.** A disturbance of health due to a paucity of red corpuscles in the blood or to a deficiency of blood pigment. The blood of the average healthy adult contains about 5,000,000 red corpuscles in each cubic millimetre, and from 4,000 to 12,000 white corpuscles, these varying in number during the day. Hæmoglobin, the blood pigment, is a purple-coloured iron compound, but as it circulates through the lungs it combines with the oxygen of the inhaled air to form oxyhæmoglobin, the colour of which is bright red. This substance, in the course of its passage through the body, parts with oxygen to the tissues—a process on the efficient performance of which the health of every single cell of the body must ultimately depend. It follows that if the number of red corpuscles is too scanty or the amount of hæmoglobin insufficient, the tissues will receive less than their normal requirement of oxygen, and fail in consequence to do their work as they should. It is to this cause that the symptoms of anæmia are due. The patient's skin is pale or even waxy-looking. He feels weak, becomes breathless on slight exertion, and is troubled by palpitation of the heart. He is overcome by attacks of dizziness, and may even faint away. Whether the anæmia is the result of hæmorrhage, or of a disease that destroys the red corpuscles, or of a chronic infection that interferes with the formation of hæmoglobin, these symptoms will appear, though the patient will show as well signs of the injury or disease from which the anæmia has arisen. Certain types of anæmia, notably pernicious anæmia and chlorosis, are due to disease of the blood-forming organs, and are known, therefore, as primary anæmias. Pernicious anæmia is marked by a striking diminution in the number of red corpuscles, which may fall to as low as half a million in each cubic millimetre. About half a pound of liver a day included in the patient's diet quickly brings his blood count back to normal and restores him to good health. The treatment must be continued indefinitely. Chlorosis, or "green sickness," once a common but now a comparatively rare form of anæmia, is characterised by a great decrease in the amount of hæmoglobin, and is treated accordingly by administering iron. In most cases of this disease the patient, usually a girl or young woman, suffers from constipation, is leading an indoor life, and taking next to no exercise. The treatment includes measures for the correction of these hygienic errors.

**Anæsthetic.** A drug which by producing loss of sensation in persons subjected to its influence enables the surgeon to operate on them without causing pain or distress. Anæsthetics are of two main kinds: those which, like chloroform, ether, or laughing gas, make the patient unconscious; and those which, without putting the patient to sleep, temporarily abolish sensation in the part upon which the operation is performed. Most drugs of the former type are given in the form of vapour which the patient inhales; some, however, are injected as fluids into the rectum or one of the veins; ether may be given in any of these ways. Drugs of the second type, known as local anæsthetics, may

be sprayed over the area to be incised, rendering it white, frozen and insensitive to pain; or, by means of a hypodermic syringe, they may be injected into and around this area; or they may be injected into the sensory nerve trunks connected with it, and thus block the path between the site of operation and the brain. Finally, some local anæsthetics, stovaine, for example, may be injected straight into the spinal cord.

**Analgesic.** A drug or other treatment prescribed for the relief of pain.

**Anatomy.** The science of the structure of the body as learned by dissection.

**Aneurism.** A sac, containing blood or blood clot, formed by a dilatation of the walls of an artery. As, at each heart-beat, the blood is pumped through the blood vessels, their elastic walls expand slightly under its pressure, recoiling again between the beats. If, however, any part of the artery is weaker than the rest, whether as a result of injury or disease, it is liable to give way under the pressure, and gradually to expand, forming a swelling along the course of the artery. Such a swelling is an aneurism. Two types of disease make the development of such dilatations possible: first, disease that attacks the blood vessels, weakening parts of their walls; secondly, diseases or habits of life that produce a high blood pressure and thence an increased strain on the vessels along which the blood is pumped. Gout, syphilis, and the lodgment of infected clots in the vessel walls belong to the first type; kidney disease, and over-exertion, especially on the part of persons accustomed to a sedentary life, to the second. In whatever part of the body the aneurism may be situated, it forms a pulsating, painful tumour, which is liable to rupture or to become inflamed, with serious or even fatal results. Spontaneous healing may occur, but the event is a very unusual one. The kind of treatment adopted depends on the site of the aneurism. If it is situated along the course of a limb, surgical methods may be applicable; but in the case of one of the most common and serious aneurisms, that affecting the aorta, the tumour forms inside the chest or abdomen, and only medical treatment, by rest, diet, the administration of anodynes and such-like, can safely be practised. A small proportion of abdominal aneurisms, however, may be suitable for surgical treatment.

**Angina Pectoris.** A serious illness marked by sudden attacks of pain in the chest accompanied by feelings of suffocation and faintness. In most cases the cause is heart disease or aneurism of the aorta.

**Ankylosis.** Immobility of a joint, partial or complete, resulting from injury or inflammation, or deliberately produced by surgical operation.

**Anodyne.** A drug or combination of drugs given for the relief of pain.

**Anorexia.** Lack of appetite for food. Such a condition developing in a previously healthy person may indicate simply that he needs a tonic; it may, on the other hand, be the first symptom of serious illness; for example, of anæmia, tuberculosis, or cancer of the stomach. The cause in any particular case can be assigned only by careful medical examination.

**Anthrax.** Malignant pustule. A serious disease due to infection by Bacillus Anthracis, a germ that attacks cattle, sheep and occasionally man. The chief victims are persons whose occupation brings them in contact with cattle or their carcases—farmers, butchers, tanners, wool-sorters and the like. Some cases have arisen from using shaving brushes made in Japan from the hair of infected animals. In its local form the disease develops at the site of a scratch or abrasion through which the anthrax germ has succeeded in penetrating. After a few days there forms an angry-looking ulcer which proves, in most cases, to be quickly fatal. Combined with this local form, or sometimes developing separately, is a condition called anthrax blood-poisoning. This may attack the lungs or the intestines, producing in either case an almost invariably fatal illness. The disease may be prevented in cattle by inoculating them with a vaccine prepared from the anthrax bacillus; in man the malignant pustule is excised and an anti-anthrax serum injected the moment the condition is diagnosed.

**Antibody.** (See Immunity.)

**Antidote.** A remedy given to counteract a poison. Some antidotes act chemically by changing the poison into a comparatively harmless substance; some act mechanically by preventing the absorption of the poison; and some physiologically by producing in the vital organs effects contrary to those produced by the poisons against which they are given.

**Antiseptic.** A substance that will destroy or prevent the growth of germs. Carbolic acid, iodine, iodoform, alcohol, corrosive sublimate, lysol, permanganate of potash, chloramine-T and flavine are a few of the antiseptics most generally used in medical and surgical practice. The antiseptic method of surgery was introduced by Lord Lister with the object of preventing the development of germs in operation wounds. This was a revolution in practice, comparable in its effects with the discovery of general anæsthesia. Infected, festering wounds, and a high mortality from even small operations, till then the general rule, became and have remained the exception. To-day the surgeon expects the wounds he makes in the course of an operation to heal cleanly; before Lister's time, festering of operation wounds was regarded as inevitable. The technique practised by Lister has been slightly modified, asepsis, that is to say, sterilisation by heat, having to some extent replaced antisepsis; but the principles underlying present-day practice are in every respect the same as those that were formulated by Lister and formed the basis of his great discovery.

**Antitoxin.** A substance in the blood serum that combines with and neutralises a toxin, this being the term applied to the poison secreted by germs. Each antitoxin is antagonistic to one toxin and one only: diphtheria antitoxin to diphtheria toxin, tetanus antitoxin to tetanus toxin, and so forth. Antitoxin forms in response to the presence within the blood of toxin—this resulting from invasion of the tissues by toxin-producing germs, or the injections of such germs into the system. (See Immunity.)

**Anuria.** Inability to pass urine.

**Anus.** The outlet of the bowel.

**Aorta.** The great arterial trunk which arises from the left ventricle of the heart and gives off branches along which oxygen-carrying blood is distributed to every organ and tissue of the body.

**Aphasia.** (See Agraphia.)

**Aphrodisiac.** A drug that excites sexual impulses.

**Apoplexy.** A sudden onset of unconsciousness and paralysis caused by hæmorrhage into the brain. The condition most often attacks men of past middle age who have suffered from Bright's disease or hardening of the arteries.

**Appendicitis.** Inflammation of the appendix, a worm-like, tubular organ continuous with the pouch-shaped swelling in the course of the bowel known as the cæcum. The condition is due invariably to an invasion of the appendix by disease-producing germs, but chronic constipation and bad dietetic habits, notably eating too much meat, seem to be predisposing causes. In most cases the earliest symptom is a sudden pain in the abdomen, at first near the navel, but later lower down in the right side. The patient is feverish and constipated; sometimes he is sick. If he is attacked by the severe type of illness due to abscess of the appendix, his temperature may become very high and considerable vomiting may occur. In no case, it should be realised, is the diagnosis of appendicitis easy. Any lay person who presumes to settle the question may be courting disaster. In mild cases rest in bed, a fluid diet, emptying the bowel by means of an enema and the application of hot fomentations to the abdomen may suffice to bring about a cure. But if the condition is severe, or fails to improve within three days, then operation offers the only chance of recovery.

**Arteriosclerosis.** Hardening of the arteries. The arteries are the vessels through which the blood is pumped from the heart to the various parts of the body. They have a wall that consists of three layers, all of which contain a certain amount of elastic tissue. As, at each heart-beat, blood is forced into the circulation, the arteries, by virtue of their elasticity, expand slightly, and thus create a wider channel for the blood to flow

through. If, however, they are attacked by arteriosclerosis, they become rigid and lose their capacity of giving before the pressure of the blood stream. Greater force then becomes necessary to maintain the circulation; the heart has to pump harder and the blood pressure rises. It is to this extra strain on the heart and the increased blood pressure that the symptoms of arteriosclerosis are due. Among the many causes of this condition are Bright's disease, over-exertion and over-eating, gout, lead poisoning, chronic alcoholism, malaria and typhoid fever. Headaches, giddiness, shortness of breath, buzzing noises in the ears, and insomnia are the commonest symptoms.

**Artery.** The terms artery, capillary and vein may conveniently be considered together. For a description of the heart's action the reader is referred to the section on the circulation, but here the point to note is that three kinds of tubes, or, as they are called, blood-vessels, serve to carry the blood through the body. Arteries are thick-walled tubes, composed largely of elastic and muscular tissues, in which the blood is conveyed from the heart to all parts of the body. In their course, these tubes give off branches, meanwhile becoming narrower and narrower, until at last their calibre becomes very minute indeed and they lead into and become continuous with the most minute blood-vessels of all, known as the capillaries. The capillaries, cylindrical tubes having an average diameter of about $\frac{1}{2000}$ of an inch, form a network within the body, and through their thin walls, which consist of but a single layer of flattened cells, the tissue exchanges that have been described as "the essential business of life" take place. Here the tissues give up their waste to the circulating blood and receive nutriment and oxygen in exchange. The blood then passes on to the veins, tubes which at their beginning are only slightly larger than capillaries, but by coalescing, much in the same way as do the tiny tributaries of a river, form bigger and bigger vessels along which the blood is eventually returned to the heart. Put shortly, then, arteries are vessels in which blood is conveyed *from* the heart to the tissues; capillaries are the network of fine vessels that join the arteries with the veins; and veins are vessels along which blood is conveyed from the tissues back *to* the heart.

**Arthritis.** Inflammation of one or more joints. A widespread acute arthritis, affecting several joints at a time, and sometimes passing from joint to joint, occurs most commonly in the course of rheumatic fever; but it may develop also as a complication of pneumonia, influenza, scarlet fever, the venereal diseases, and many other infections. Very occasionally, the condition known as rheumatoid arthritis, or chronic rheumatism, or rheumatic gout, has a sudden onset, especially when it occurs in young people. But generally the condition develops insidiously, producing pain, stiffness and weakening of one or more joints. Chronic infection, derived from some such focus as inflamed tonsils or pyorrhœa, is believed to be the chief cause in many cases; that it is not the only cause is shown by the fact that eradication of the infection is not always followed by a cure of the arthritis. Hereditary predisposition seems to play an important part; and persons living in a cold, damp climate are especially liable to be attacked. The treatment of rheumatoid arthritis is very complicated indeed. If a focus of infection is present it is removed. The patient's diet is regulated, with a view especially to preventing digestive disturbances and the multiplication of germs in the intestinal canal. Injection of typhoid vaccine or of other protein substances does good in some cases; in others a vaccine prepared from germs present in the patient's body is best. Local treatment includes such measures as massage and electric light baths, and applying heat to the affected parts. Spa treatment often results in the complete cure of early cases; it provides benefit in all cases.

**Artificial Respiration.** At least five methods of maintaining respiration by artificial means are generally practised. The following, known as Sylvester's method, is one of the simplest. The patient is placed on his back with a pillow to support the shoulders; his head is placed to one side and his tongue drawn forward. Grasping the arms just above the elbows, the operator draws them upward above the patient's head, thereby raising the ribs, holds them in this position for a couple of seconds, and then lowers them to the side of the chest, against which he presses them for a second or two. This manœuvre is repeated fifteen times a minute and continued until respiration is re-established or life is extinct. (See **Asphyxia.**)

**Ascites.** Dropsy; an accumulation of serous fluid in the abdominal cavity. The condition may result from inflammation of the membrane that lines the walls of the abdomen, or from disease of the heart, liver or kidneys.

**Asepsis.** (See **Antiseptic.**)

**Asphyxia.** Suffocation; the condition that arises from interference with the act of breathing. Among the causes of asphyxia are the presence of an obstruction within the air passages; pressure on the windpipe from without, as in cases of strangling or garrotting, or of tumours of the neck or chest; replacement of air in the lungs by water, as in cases of drowning; and closure of the glottis as a result of swelling or spasm. The treatment will naturally vary with the cause. But in asphyxia of sudden onset the patient's neck and chest should be bared and his tongue pulled forward. If necessary, artificial respiration should be started, care being taken to ensure that the air passages are free from obstruction. (See **Artificial Respiration.**)

**Asthma.** A constitutional disorder marked by paroxysms of breathlessness, cough, and wheezing, that may last anything from a few minutes to several days. The immediate cause of an attack is spasm and swelling of the lining membrane of the smaller bronchial tubes, but these changes occur only in constitutionally predisposed persons in response to the appropriate stimulus. In many cases this stimulus is a protein substance to which the patient has an abnormal reaction. Thus, a patient sensitised to the protein of feathers may excite an attack by sleeping on an ordinary pillow; in some patients a meal in which eggs, strawberries or oysters are included may have a similar effect. Such cases belong to what is known as the allergic type and should be treated accordingly. (See **Allergy.**) Some asthmatics, however, have no abnormal reaction to proteins. Their paroxysms seem to be brought on by irritation, associated often with an infective process, which causes the bronchial tubes to go into a state of spasm. By direct experiment, it has been shown that stimulation of the membrane lining the nose will cause such a spasm, and to this and similar causes may be attributed the cases of asthma that arise in association with infections situated in the nose, throat and intestines. The successful treatment of asthma demands careful attention to many small details. No one remedy is effective in all cases. Even in allergic cases desensitisation of the patient as described in the paragraph on allergy is not always effective in bringing about a cure. The constitutional predisposition remains unaffected and the patient, desensitised to one protein, becomes sensitised to another. Some patients are free from attacks in towns; others in the country. A food-stuff that will invariably provoke attacks in one patient will have no effect on another. The facts must be learnt about each patient separately. A moderate, easily digestible diet is beneficial in all cases; so also is a daily ration of glucose, especially for young patients. Vaccines, X-rays, ultra-violet light, cauterisation of the lining membrane of the nose, intestinal disinfection: these are but a few of the remedies that have been successful in the treatment of some cases. For cutting short an attack, the drug generally used is adrenalin.

**Atheroma.** Hardening and degeneration of the larger arteries, notably of the aorta, the main arterial trunk of the body. (See **Arteriosclerosis.**)

**Aura.** The sensation or action that immediately precedes the convulsions and loss of consciousness in an epileptic attack.

**Auricle.** (See **Heart.**)

**Auscultation.** The act of listening for sounds within the body, for the purpose of finding out the state of the lungs, heart and other organs. The hollow instrument interposed between the practitioner's ears and the patient's body for the purpose of magnifying these sounds is called a stethoscope.

**Auto-intoxication.** A disturbance of health due to a poison generated within the body. The headache and feeling of heaviness produced in some persons by constipation are held, though not by all authorities, to be due to an accumulation in the blood of poisons derived from the waste products in the bowel.

**Avitaminosis.** Any disease due to deficiency of vitamins in the diet. (See Vitamins.)

**Bacillus.** A rod-shaped germ.

**Bacteria.** Germs; very small, single-celled, vegetable organisms, which multiply by splitting into two parts. Many diseases are now known to be due to bacteria which invade the body and multiply within the tissues; but most kinds of bacteria are harmless to man, and some are actually of benefit to him. Elie Metchnikoff, a great bacteriologist, believed that the longevity of Bulgarian peasants was due to their practice of drinking sour milk that contained a species of health-giving bacteria.

**Banting.** Treatment of obesity by a diet deficient in sugar, starches and fats. This method is named after William Banting, a cabinet-maker, who recommended it to the public in 1863.

**Barber's Itch.** A severe inflammation of the hair follicles in the beard and moustache regions of the neck and face, marked by the formation of pustules and other swellings through which the hairs pierce to the surface. The treatment is by means of X-rays or ultra-violet light.

**Bedsores.** Chronic, sometimes gangrenous, sores that may develop in bedridden patients at sites of the body that have been exposed for too long to pressure. Scrupulous cleanliness, thorough drying after bathing, applying a dusting powder, and changing the patient's position from time to time, are among the measures for preventing the formation of bedsores. The treatment consists in applying stimulating and antiseptic lotions and ointments as dressings.

**Beri-beri.** A form of paralysis that appears in persons who have been living almost exclusively on a diet of highly polished cereal, especially rice. Such a diet is deficient in the food factor Vitamin B, which is contained in the germ and external covering that have been rejected in the process of polishing, and it is to this deficiency that the disease is due. By restoring to the diet the missing component, the disease may be completely prevented; and it may even be cured in cases that have not developed too far.

**Bile.** A bitter, greenish-brown fluid manufactured by the liver and poured into the bowel, where it acts as an antiseptic and helps to bring about the digestion of fats.

**Biliousness.** An attack of sickness, abdominal pain, constipation and headache, attributed to the presence of too much bile in the intestine. In children, a liability to so-called "bilious attacks" is sometimes due to low fat tolerance, that is to say, to their failure to burn up completely the fats included in their diet. Such children, unfortunately, are often thin and run down, but efforts to improve their health by forcing on them plenty of cream and cod-liver oil tend, as might be expected from the causes of the illness, only to make them worse. The proper treatment is to give them a diet deficient in fat but rich in sugar.

**Birth-mark.** A reddish patch or swelling of the skin formed by a network of distended blood vessels bound together by a little connective tissue. The condition is present at birth, or very shortly after, and may affect the skin in several places, most commonly on the head and face. Various methods of treatment are possible: surgical excision, electrolysis, the application of radium, or, if the birth-marks are small enough, freezing with carbon-dioxide snow. The technical name for a birth-mark is nævus.

**Bladder.** The hollow organ in the pelvic cavity that serves as a reservoir for the urine. Its walls are perforated obliquely by the ureters, the ducts along which the urine passes down from the kidneys, and at the centre of its base it becomes continuous with the urethra, the canal through which the urine and, in the male, the semen are discharged from the body.

**Bleeding.** A person who is liable to bleed freely even from a trifling cut or wound. This tendency, which is due to an inborn disease of the blood called haemophilia, is confined to [illegible] though it is transmitted by heredity through the female line.

**Blepharitis.** Inflammation of the eyelids.

**Blood Pressure.** The term blood pressure is popularly used as if it were the name of a disease. Thus, people say they are "suffering" from blood pressure, or that certain expensive and widely advertised pills are "good for" the blood pressure, as though blood pressure were something that any sensible person would get rid of as quickly as possible. Actually, without blood pressure they could not go on living. The circulation of the blood, upon which the maintenance of life and health depends, is rendered possible by the existence of pressures in the circulatory system that are highest in the ventricles of the heart at the instant of their contraction, diminish progressively through the arteries, capillaries and veins, and become least in the auricles of the heart when these are at rest. If, by its contraction, the heart failed to make the pressure of the blood in the ventricles higher than that in the arteries, then blood could not flow from the former to the latter; for a similar reason the pressure of the blood must be greater in the arteries than in the capillaries, greater in the capillaries than in the veins, and so through the circulatory system. The force responsible for giving the greatest impetus to the blood is the contraction of the ventricular muscle, which at each beat forces blood into the large arteries communicating directly with the heart. The walls of these arteries contain a great amount of elastic tissue, which, by its recoil, prevents the too sudden loss of this driving power, and thus helps to transmit the circulating blood along the arterial system. Just before the point at which the arteries become continuous with the capillaries, the very narrow vessels, called arterioles, act as a partial dam to the flow of blood, with the result that in the capillary network the blood pressure is considerably lower than it is in the arteries. This, however, is only one of the effects of the partial dam, or, to give it its technical name, the "peripheral resistance" set up by the arterioles. Experiment has shown that increased resistance at this point, such as might be produced by a constriction of the arterioles, results in a raised blood pressure within the arteries; similarly, dilatation of the arterioles is followed by a fall of blood pressure in the arterial system. The chief forces then that serve to maintain the blood pressure are the contraction of the heart muscle, the elastic recoil of the arteries, and the peripheral resistance set up by the arterioles. In a normal healthy young adult at rest the blood pressure in the arteries of the arm, as measured by an instrument called a sphygmomanometer, is equal—when the heart is actually contracting—to that of a column of mercury about 120 millimetres long, and of a column about 70 millimetres long when the heart is at rest. But with the passing of the years the arteries lose their elasticity, the peripheral resistance tends to become greater, the heart muscle has to pump harder to circulate the blood through the body, and, as a consequence, the blood pressure gradually rises. Such a state of affairs occurs all the more readily if the arterial system undergoes degeneration as a result of chronic disease—arteriosclerosis, chronic Bright's disease, and certain forms of aortic disease being among the conditions that are characterised by a high blood pressure. Low blood pressure occurs in conditions in which the heart action is feeble or the arterioles are dilated—in pulmonary tuberculosis, Addison's disease, wasting fevers, and conditions of shock and collapse. Exercise and excitement tend to raise the blood pressure temporarily, and for this reason doctors prefer that the patient should be at rest and tranquil when they make their examination. Patent medicines taken for the purpose of reducing the blood pressure may do a great deal of mischief.

[illegible] peripheral resistance, and in such a case reduction of the blood pressure may, by making the circulation too sluggish, have a very serious effect on the patient's health. (See Aorta, Artery, Circulation and Heart.)

The fluid and cells that circulate

through the heart, arteries, veins and capillaries, carrying oxygen and food to the tissues, and waste matters to the kidneys and lungs through which they are expelled. In each cubic millimetre of plasma, the colourless liquid part of the blood, there are about 5,000,000 red corpuscles, 4,000–12,000 white cells of different kinds, and 200,000–500,000 platelets. The colour is due to haemoglobin, the iron-containing pigment of the red corpuscles. (See Anaemia.)

**Boil.** A deep red, tender, cone-shaped swelling that results from infection of a hair follicle or one of the skin glands by a variety of germs called staphylococci. When a boil comes to a head, a whitish spot appears at its most prominent point, and through this are discharged its contents, consisting of pus and a mass of gangrenous tissue called the core. Occasionally a boil subsides without forming pus, and if a case is seen early enough by the doctor, it is the aim of his treatment to bring about such a result. Although a boil is but a local inflammation, its ultimate cause may be constitutional, and the proper treatment depends, therefore, on the result of a general examination of the patient. In some cases vaccines made from staphylococci bring about a cure; others in which local treatment has turned out unsuccessful benefit from injections of manganese. Good results, too, have followed the application of ultra-violet rays.

**Bonesetter.** A person without a medical qualification who professes to cure diseases and injuries of the bones and joints by manipulation.

**Botulism.** A very rare form of food poisoning caused by a germ, called B. botulinus, that has been found chiefly in sausages and improperly canned and preserved fruits and vegetables.

**Bradycardia.** An abnormally slow heart action. In most adult persons at rest, the heart beats at the rate of about 70 pulsations in each minute, but a rate of 60 or even less is normal to some persons. Napoleon had a very slow pulse; and such a condition is not infrequent in persons having great physical endurance. When, however, it accompanies jaundice, or convalescence from influenza or some other fever, or gives rise to attacks of faintness, bradycardia must be regarded as an abnormal state demanding medical treatment.

**Brain.** The portion of the central nervous system contained within the cranial cavity. The brain in man is a very complicated structure, the essential components of which are masses of nervous tissue known as the grey and the white matter. The former consists mainly of nerve cells, the latter of nerve fibres. Continuous with the brain and its grey and white matter is the spinal cord with its nerve cells and tracts, the central nervous system being so constructed that some of the tracts lead *from* the spinal cord *to* the brain, and others *to* the spinal cord *from* the brain. It is usual to describe the brain as a kind of enormous telephone exchange, and this analogy, as long as it is not pressed too far, serves very well. Messages, known technically as "impulses," are constantly being transmitted to the brain along the tracts that lead to it from the spinal cord, and along certain other paths too; sensations of touch, heat, cold, pressure and pain, sensations from the organs and muscles, impulses that travel along the nerves and up the spinal cord to the brain, yet never become "conscious," are passing up all the time, and in the brain—the great telephone exchange—they are received, sifted, co-ordinated, and interpreted. The hand is placed too near the fire: an impulse passes along the nerves and up the cord, and in the brain is received the message, "pain and heat!" And similarly with all other impulses, except those that are, so to speak, short-circuited at some intermediate exchange situated in the spinal cord. But, the message having been interpreted, fresh messages are sent out, this time *from* the brain to the muscles, glands and other organs of the body. The message, "pain and heat," to take a simple example, is swiftly followed by a message from the brain to the hand, "Get out of the way," and, in response, the muscles of the arm are contracted and the hand is withdrawn to a place of safety. Or, to take another case: a smell of good cooking assails the nostrils; an impulse is transmitted to the brain along the [illegible] smell and is there correctly interpreted; [illegible]ousness appears the sensation of hunger, while along the nerves to the digestive glands fresh messages are transmitted from the brain; the mouth starts to water, digestive juices are passed into the stomach in preparation for the forthcoming meal, and the whole body makes a move towards the dining-room. Only a very small part of the brain is concerned with "thinking." The great bulk of the work of the exchange is conducted without the intervention at any point of so-called "awareness." Consciousness, emotion, imagination, volition—all these are believed to be associated with activity of the brain, but there exist large areas of the brain which are in no wise concerned with such "mental" operations.

**Bright's Disease.** An inflammatory disease of the kidneys, associated with dropsy, enlargement of the heart, and the presence of albumin in the urine. (See Albuminuria.) Tonsillitis and scarlet fever are chief among the many infections that may be complicated or followed by this serious condition. It is now usual in the case of patients convalescent from such infections, in whom the appearance of Bright's Disease is to be feared, to give large doses of alkaline medicines, for these, experience has shown, are effective in averting inflammation of the kidneys. When, however, the disease has actually developed, such measures are usually not effective, and the treatment consists in keeping the patient completely at rest, supplying him with a diet that will put as little strain as possible on the diseased kidneys, and helping him to expel waste matters through the bowel and glands of the skin.

**Bromidrosis.** Offensive perspiration, a condition affecting chiefly the feet and armpits. Bathing the affected parts with boric lotion and dusting boric acid over the insides of the socks, which should be changed frequently, is in most cases an effective treatment.

**Bronchiectasis.** A condition in which one or more of the bronchial tubes become dilated, commonly after prolonged inflammation, but sometimes owing to a persistent pressure on the affected tube, or to a weakening of its walls brought about by an inhaled foreign body. The outstanding symptoms are shortness of breath, cough, copious expectoration, and a tendency of the fingers to become club-shaped.

**Bronchitis.** Inflammation of the bronchial tubes, a condition that may occur as part of a common cold, in which case it is accompanied by inflammation of the lining membrane of the nose and throat; or as the result of irritation of the air passages by fog, dust or pungent vapours; or as a complication of a local infection elsewhere in the body, as, for example, chronic tonsillitis, or of a general infection, such as influenza or whooping-cough. It occurs mostly in very young and in elderly persons, more often in winter than in summer, in weakly than in robust persons, and in damp than in dry climates. Susceptible persons may be protected by vaccines made from the germs responsible for inflaming the tubes, or, if they can afford the time and money, by wintering in Cornwall, the Riviera, or any other place with a suitable climate. No case should be taken lightly, and many serious complications would be averted if patients stayed in bed for as long as they were told to by their attending practitioner.

**Bulimia.** Voracious appetite, which is satisfied, however, by ordinary-sized meals.

**Bunion.** An inflamed sac-like cavity formed over the head of the big toe, usually as a result of friction caused by ill-fitting boots. The condition in its very early stages may be cured by wearing boots of proper shape, but later the only effective treatment is surgical excision.

**Burns.** Burns and scalds are wounds of varying seriousness, extent and depth, brought about by the action of heat. Only very slight burns covering a limited area should be treated by home remedies; in all other cases, failure to call in skilled help at once may result in death of the patient. First and foremost, the severely burnt patient is in a state of shock [illegible] collapse, and this condition may need treatment by an injection of morphia. The measures will have to be taken to prevent [illegible] reaching the body through the injured area or infection of the wound by disease-producing germs. To this end, it has been found that spraying a

solution of tannic acid over the burn is ideal, but the treatment needs to be applied with great skill and only a freshly-prepared solution of the right strength (2·5 per cent.) is effective. In very severe cases, skin-grafting may be necessary after healing has taken place.

**Bursa.** A sac-like, fluid-containing cavity situated in the tissues covering bony prominences or other sites at which friction is liable to develop. Thus, there are bursas in front of the knee-joint, at the point of the elbow, and round the shoulder-joint. Inflammation of a bursa is called bursitis, of which "housemaid's knee," or inflammation of the bursa covering the knee-cap, is an example.

**Bursitis.** (See Bursa.)

**Cachexia.** Extreme ill-health; the profound wasting and weakness that accompany such a severe illness as cancer.

**Cæsarian Section.** Delivery of the infant or embryo by cutting open the walls of the abdomen and womb. The operation is named after Julius Cæsar, who is said to have been born this way.

**Calculus.** A stone-like mass that may, in abnormal circumstances, form within certain organs of the body; for example, the kidney and gall bladder. Such a mass, popularly called a stone, consists usually of mineral salts deposited in layers round a central core of germs. Thus, stones in the gall bladder, termed technically billiary calculi, are specially liable to occur in persons who have suffered from infection of this organ, or from typhoid fever, a disease in the course of which typhoid germs not infrequently settle in the gall-bladder walls. In most cases the treatment is by surgical removal; such treatment, however, is called for only if the patient is suffering from symptoms attributable to the presence of stone. Thus, gall stones may remain for many years in the gall bladder without giving rise to any disorder, their presence being sometimes discovered accidentally in the course of an operation for some other condition. Stones in the kidney, called renal calculi, are occasionally passed naturally. Persons in whose urine "gravel" appears frequently, this substance being nearly always uric acid, are specially liable to develop calculi, and should drink, as a preventive measure, copious draughts of water to flush the urinary tract, and take drugs designed to make the urine alkaline. Most commonly prescribed among these are the citrate and bicarbonate of potassium or sodium.

**Cancer.** A malignant growth composed mainly of cells derived from covering tissues, such as the skin, for example, or the membranes lining internal organs. In its beginning, cancer is invariably a strictly localised disease, which can, if it forms at a site accessible to surgical treatment or to the action of cancer-destroying radiations, whether from X-rays or radium, be completely extirpated. Beyond the early stages, however, cancer not only spreads by direct extension in such ways as may make local treatment ineffective, but is liable to form deposits in organs and tissues far removed from the original focus. It is therefore vitally important to diagnose cancer very early, when radical cure is still possible, a delay of even a few weeks sometimes turning a curable into an incurable case. Recently, Dr. Bendien, a Dutchman, has discovered a blood test which, there is reason to believe, will make diagnosis possible even of cases that are too recently established to show any other sign. The disease may form in any part of the body, but organs specially liable to be attacked are the digestive canal and the glands connected with it, the tongue, the breast, and the womb. Sometimes cancer forms in the skin, especially in the case of X-ray workers who have not protected themselves against exposure to the rays, and of mule-spinners and persons whose work necessitates frequent contact of the skin with paraffin, tar, shale oil, petroleum or pitch. The early signs of such cancers are comparatively harmless conditions such as warts, cracks of the skin and eczema, and if these are but treated in time the onset of malignant changes may be completely prevented. Another form of cancer that may sometimes be detected early, even by unskilled persons, is cancer of the breast, which first appears as a small, hardish and usually painless lump in the glandular tissues. To assume of any lump in the breast that it is harmless is in only too many cases to invite the development of an incurable tumour. As a general rule it may be said that the appearance and persistence of any symptom whatever should invariably be regarded as a possible danger signal demanding complete investigation by a qualified medical practitioner. The symptom may seem trivial—it may be nothing more serious than indigestion and loss of appetite in a man of forty who has hitherto had no such troubles, or slight hoarseness that does not clear up within a few days, or irregular losses of blood in the intervals between monthly periods—but in every case cancer is a possible cause, and except by a skilled examination there is no way of deciding if it is present or not. Probably the safest course, especially for persons at or approaching middle age, is to make a practice of consulting a doctor regularly once or twice a year; not to wait till symptoms of illness appear, but while feeling in perfect health to be overhauled thoroughly and advised about the mode of life that will best ensure that such good health shall continue. It is sometimes stated that cancer can be prevented by this or that diet, but careful research has shown that no diet is more or less cancer-producing than any other. Nor is there any foundation for the view that the tendency to develop cancer is transmitted by heredity. Such transmission has indeed been shown to occur in a special strain of mice that have been inbred for many generations, but never in human beings. The statement that cancer is infectious is equally unproven. The one cause that has been proved definitely to predispose to cancer is tissue irritation, local or general, and removal of sources of such irritation is therefore the most important preventive measure we know. The bowels should be emptied regularly to prevent irritation of the intestine, and immediate treatment should be sought for such trivial conditions as ulcers of the tongue formed by ill-fitting dental plates. The chief methods of treating cancer are by operation, radium, and exposure of the growth to a special type of X-rays. A few authorities, notably Professor Blair Bell of Liverpool, treat inoperable cases by injecting a preparation of lead into the blood stream. The decision as to which method is the best in any given case is very difficult; it must be left entirely to the practitioner who has the patient under his care and the surgeon he has called in to help him.

**Capillary.** (See Artery.)

**Carbuncle.** A severe gangrenous infection of the tissues immediately underlying the skin due to invasion by pus-producing germs, notably a germ called Staphylococcus pyogenes aureus. The condition, which is specially liable to occur in persons suffering from diabetes or disease of the kidneys, or who are run down from any other cause, starts as a hard painful swelling over which the skin is red and tight. Later, as this swelling extends, the skin becomes thin, and perforations appear in it through which pus is discharged. Eventually the mass of dead tissue is cast off, leaving an ulcerated crater. The patient is liable to feel very ill, though his temperature may not be much above the normal. Treatment depends on the stage to which the condition has advanced when the doctor sees the patient. The further development of very early cases may be prevented completely, but such a desirable outcome is rare. Hot fomentations may be useful, but in most cases the best and most effective remedy is surgical removal of the whole carbuncle. The doctor, however, will not be content with this, but, with a view to more radical treatment, will try to find out whether the patient is suffering from some condition that has lowered his resistance to infection.

**Cardiac.** Relating to the heart. Thus cardiac failure means simply heart failure; cardiac disease, heart disease.

**Caries.** Literally this term means rottenness. It is applied specially to an inflammation of bone in the course of which this tissue loses density and undergoes decay. When such a process occurs in the teeth it is known as dental caries, a condition in which the enamel and dentine are gradually disintegrated by germs and their poisons. It has been shown by careful experiment that dental caries may be prevented by giving a diet rich in Vitamin D; for this substance, by ensuring the proper assimilation of calcium and phosphorus,

and increasing the germ-destroying power of the blood, provides the teeth with the elements that give them firmness, and at the same time opposes the action of any caries-producing germs that may live in the mouth.

**Carminative.** A medicine given for the purpose of relieving flatulence. Familiar examples are ginger, cardamoms, cajuput, peppermint and dill.

**Carotene.** The yellow pigment found chiefly in carrots, green vegetables, milk fat, animal fats and egg yolk. Its importance lies in the fact that it has many of the properties of Vitamin A and can probably replace this vitamin in the diet.

**Carrier.** A person who harbours disease-producing germs in his body and is thus liable to distribute infection to others, though himself showing no symptoms of the disease he is carrying. Many epidemics have been traced to carriers. Persons, for example, who have had typhoid fever may continue for many years after their recovery to "carry" the germs responsible for this disease and discharge them in their excretions. Such carriers should never be engaged in any occupation that may necessitate their handling food destined to be consumed by other people. Diphtheria carriers are sometimes found among school-children, and outbreaks of spotted fever among troops have definitely been traced to the presence among them of healthy carriers.

**Catalepsy.** A condition marked by loss of the power to move the muscles voluntarily. The muscles become rigid, the skin becomes cold and pale, and the pulse-rate slow. Attacks of catalepsy, which occur in the course of certain nervous and mental diseases, or may be induced artificially by hypnotism, last from a few moments to days at a time.

**Catamenia.** The monthly flow of blood from the womb; menstruation.

**Cataract.** An opacity of the lens of the eye that is sufficient to cause dimness of vision. The condition is very occasionally present at birth; it may be acquired as a result of accident or disease, diabetes notably having cataract as one of its complications; or it may develop gradually with the passing of the years as one of the changes of senility. The treatment is by operation.

**Catarrh.** This term means a "flowing down," and is applied to the free discharge of mucus that accompanies inflammation of the membranes lining any of the body canals or cavities that communicate with the outer air. Thus, nasal catarrh is such an inflammation of the membrane lining the nose; gastric catarrh, of the membrane lining the stomach; and bronchial catarrh, of the membrane lining the bronchial tubes. The disorder generally known as a cold in the head is a catarrhal inflammation of the lining membranes of the nose, throat and eyes, which may spread by way of the larynx to the windpipe and bronchial tubes. Various kinds of germs are held to be responsible for this condition; but predisposing causes are damp, a variable temperature, and the conditions obtaining in a warm stuffy room, where people are liable to get hot heads and cold feet. Persons subject to colds in the head should try to lead a healthy outdoor life, avoiding sudden changes of temperature, and stuffy rooms, and public places where they run the risk of being near carriers of infection. Vaccines prepared from the germs commonly found in the mucus of infected persons offer protection in some cases though not in all. Once the condition has developed the patient's wisest course is to stay at home till it is better. In this way he will both cut short the duration of the illness and avoid the risk of infecting other people. A useful home remedy is to inhale steam from a jug containing boiling water to which half a dozen drops of eucalyptus oil have been added.

**Cathartic.** A medicine that brings about emptying of the bowel; a purgative.

**Cauterisation.** The application of heat to the tissues by means of burning substances or hot metals. The process is used for three purposes: for diminishing pain in deep-lying tissues by lightly searing the overlying skin; for controlling bleeding from vessels that cannot be easily reached in other ways; and for dividing tissues without loss of blood. Many surgical operations which, carried out in the ordinary way, using a knife, would be followed by severe bleeding, can be completed bloodlessly by cauterisation.

**Cerebellum.** The part of the brain that is situated between the cerebrum and the pons and contains the nerve centres that govern the co-ordination of muscular movement. It comprises a central and two lateral lobes which are connected with the rest of the brain by means of stem-like processes called peduncles, of which the upper pair is joined with the cerebrum, the middle pair with the pons and the lower pair with the medulla oblongata. Definitions of all these technical terms are given under the appropriate headings. (See also **Brain.**)

**Cerebrum.** The front and larger part of the brain. This highly complex mass of nervous tissue is composed of two practically equal portions called cerebral hemispheres, which are connected by a dense bundle of white matter called the corpus collosum. The grey matter covering the surface of the cerebrum has been proved by physiological experiment and other methods of study to be the seat of such mental processes as volition and sensation. Its whole area has, furthermore, been carefully mapped out, each portion of cerebral cortex —as this outer layer of grey matter is called— having been found to govern a separate group of physiological activities. Thus the nerve centre concerned with speech activity is known to be situated on the left side of the cerebrum (except in left-handed people, who have it on the right); and similar centres have been localised in relation to taste, smell, hearing, muscular movement, sight, tactile sensation, and so forth. (See **Brain.**)

**Chancre.** The sore that appears in the first stage of syphilis, one of the venereal diseases.

**Change of Life.** The disturbances, mental and physical, that attend the final cessation of the menses. The period at which the change occurs is also known as the menopause or climacteric. In some women it occurs comparatively early, even before the age of forty; in others it is delayed past fifty. Usually those who started menstruating early finish late, and vice versa. Common symptoms at the menopause are hot flushes, depression, anxieties, and a tendency to put on fat. In some women the change comes abruptly; but in the majority it is spread over a year or even longer.

**Chicken-pox.** An acute contagious disease, chiefly of young children, marked by an eruption of small blisters, which appear in crops and usually heal completely. It seems to be related in some way to shingles, for not uncommonly a case of shingles in one of the adults of a family is followed by chicken-pox among its young members. The disease is very contagious, runs a mild course with very little fever, and is usually over in about a week. One attack seems to confer protection, a second attack in the same person being very rare. The only treatment required in most cases is to keep the patient out of the company of other children, lest they too should get the infection, and while the eruption lasts to give him a light diet and keep his bowels open.

**Chilblains.** Painful inflamed swellings that develop in the fingers, toes or ears as a result of exposure to cold. The condition appears chiefly in young people with a poor circulation and an insufficient amount of calcium in the blood. In the earliest stage, the affected part becomes white and dead, but shortly after, the overlying skin becomes red, hot, shiny and itching. A swelling forms beneath the skin, and a blister may develop and burst. The best preventive measures are to keep the hands and feet warm, take exercise to improve the circulation, and include in the diet cod-liver oil or some other source of Vitamin D to keep the calcium content of the blood at a healthy level. Painting the chilblains with tincture of iodine or some other antiseptic is a useful measure, and indispensable if they burst.

**Chlorosis.** Green sickness; an extremely rare but once very common form of anæmia which mostly affects girls in their 'teens and early twenties. The disease gets its name from the greenish pallor observed in the skin of patients. The treatment is described in the section on Anæmia.

**Cholera.** An acute infectious disease marked by copious watery discharges from the bowel, vomiting, muscular cramps especially in the thighs and calves, great prostration, and inability to pass urine. Epidemics of this dangerous

disease occur very frequently in India and other tropical countries, but in Europe they are rare; none has occurred in England for about 75 years. The responsible germ was first described by the great German scientist, Robert Koch, in 1883, and more recently a vaccine prepared from this germ has been used extensively for protecting persons, especially soldiers in Eastern theatres of war, who are exposed to the risk of infection. The mortality is very high, but when there is an opportunity of applying the saline-injection treatment devised by Sir Leonard Rogers it is greatly reduced.

**Chorea.** St. Vitus's Dance; a nervous disorder marked by irregular jerking bodily movements over which the patient has no control. It occurs chiefly in children, in girls more than in boys, and most cases are held to be due to an acute rheumatic infection. Adult cases usually occur in connection with pregnancy, but even among these many of the patients have suffered from rheumatic fever in childhood. Although recovery within three months is the rule, relapses are common, and a tendency for spasm to occur in one group of muscles may persist when all other signs of the disease have disappeared. What gives chorea its chief importance is the fact that, like all other rheumatic disorders, it may be accompanied by disease of the heart. The doctor in charge of a case may order complete rest for a far longer period than seems warranted by the symptoms. His instructions should be followed to the letter, for often such prolonged rest is the only means of ensuring that the child shall not be crippled by heart disease for the rest of its life.

**Chronic.** A term applied to diseases that run a prolonged and not very severe course. (*See* Acute.)

**Chyme.** The thick, pulpy mass into which food is changed by digestion in the stomach.

**Cicatrix.** A scar; the permanent mark left at the site of an ulcer or a wound when these have finally healed.

**Circulation of the Blood.** The constant movement of the blood in the living body whereby it passes from the heart into the arteries and, having traversed the capillaries, returns to the heart by way of the veins. This movement goes on without a pause so long as life persists. Day in, day out, the heart at each beat pumps blood into the arteries, and this intermittent movement is made continuous by the elastic recoil of the arterial walls, which keeps the blood moving forward even during the intervals between beats when the heart is resting. To understand the cause of the circulation, it is necessary to know the bare facts about the structure of the heart and the blood-vessels described in the sections entitled Aorta, Artery, and Heart. From these it will be gathered that the heart is a complicated muscular organ consisting of four chambers, two of which, called auricles, act as reservoirs into which blood is poured from the veins, and two, called ventricles, as pumps from which blood is forced into the arteries. Consider what happens at each heart beat to the blood in the left ventricle. The muscle composing the ventricular wall contracts, pressing so tightly on the oxygen-containing blood contained within this chamber that it is driven first into the aorta, and then from this great arterial trunk, into the arteries distributed to the head, neck, trunk, abdomen, limbs, and other organs and members of the body. Its next step onward is into the intricate capillary network, whence, having given up oxygen and nutriment to the tissues and received tissue waste products in exchange, it passes into the veins, which gather the de-oxygenated blood from all parts of the body into two great vessels that pour their contents straight into the right auricle of the heart. Put shortly then, oxygen-carrying blood is pumped through the body from the left ventricle, and returns, deprived of its oxygen, to the right auricle. But it does not stop there; its movement continues uninterruptedly, but now over an entirely different course. From the right auricle it passes into the right ventricle, and thence, when the heart contracts, into a large artery called the pulmonary artery. The branches of this great vessel are distributed to the lungs and lead to the capillary network through the walls of which fresh oxygen, derived from inspired air, reaches the blood, and carbon dioxide, one of the products of tissue waste, is passed from the blood into the external air. The blood, ready once more to be pumped through the body, now passes from the pulmonary capillaries to the pulmonary veins, and from these by way of the left auricle back to the left ventricle. To recapitulate: the blood in its circulation traverses two distinct paths; first, from the left ventricle of the heart, oxygen-carrying blood is distributed to all the tissues of the body, and returns, deprived of its oxygen, to the right auricle; secondly, de-oxygenated blood is pumped from the right ventricle into the lungs, and, having here been recharged with oxygen, makes its way through the pulmonary veins and left auricle back to the left ventricle again. The former of these paths belongs to what is called the "systemic circulation"; the latter, to the "pulmonary circulation." But it should be realised that these two paths are continuous with each other, the blood actually taking the following course: left ventricle, aorta, systemic arteries, capillaries and veins, right auricle, right ventricle, pulmonary arteries, capillaries and veins, left auricle and left ventricle.

**Cirrhosis.** A disease of the liver affecting mainly persons given to heavy drinking, whether of beer, wine, spirits, or all three. Very occasionally, cases occur in teetotallers: on the other hand, some very heavy drinkers live a long life without contracting it; but the great majority of cases occur in persons chronically addicted to alcohol. The liver enlarges, mainly as a result of the formation within it of fibrous bands, which gradually replace the liver cells, and, by their contraction, press on the blood vessels passing through the liver, impeding the circulation in them. The main symptoms—piles, vomiting of blood, and dropsy of the abdomen—are due to this obstruction. The patient suffers in addition from loss of appetite, a furred tongue and morning sickness, all results of free drinking. Cirrhosis is a very serious disease, and though in its early stages it may be checked if the patient gives up his drinking habits and lives a very quiet, regular life, little can be done to relieve it when it has advanced to the stage of dropsy.

**Claustrophobia.** A morbid fear of being shut up in a confined space. People with claustrophobia have a horror, for example, of travelling in lifts or of sitting in the middle of a row in the theatre, or of being in any place from which they feel there would be difficulty in getting out.

**Cleft Palate.** A rare defect whereby a back-to-front slit is present at birth in the roof of the mouth, allowing an abnormal passage to exist between the mouth and the nose. A child with this deformity has a very limited power of suction and needs to be carefully spoon-fed. It is liable, moreover, to develop a chronic and unpleasant infection of the nose, and is never able to produce its words distinctly. The treatment is by an operation, usually undertaken when the child is two or three years old.

**Climacteric.** (See Change of Life.)

**Cold in Head.** (See Catarrh.)

**Colic.** An acute pain in the belly. The term is used more widely for any attack of pain brought about by the stretching of a hollow organ. Thus, when a stone is passed from the gall bladder into one of the ducts leading to the bowel, this duct is stretched, and the spasms of pain then suffered by the patient are called biliary colic. Similarly, the pain felt when a stone passing from the kidney to the bladder stretches the walls of the canal joining these organs is called renal colic.

**Colitis.** Inflammation of the large intestine. In its less serious form, called catarrhal colitis, the condition shows itself by pain, swelling and tenderness of the abdomen, and frequent motions containing mucus and sometimes blood. Ulcerative colitis, the more serious form, has very similar symptoms, but the motions contain pus as well as mucus, and bright red blood is commonly passed from the bowel. The patients, moreover, feel far worse than those with catarrhal colitis, suffer from fever, and become very thin and weak. In both types of disease careful and prolonged medical treatment and nursing are essential. An ulcerative inflammation of the bowel occurs in the course of typhus fever, tuberculosis of the intestine, and certain other diseases. In such cases treatment aims at curing the underlying condition.

**Colon.** The large intestine; that part of the

bowel which extends from the cæcum, a dilated pouch in the course of the intestinal tract, to the rectum. In normally made persons the cæcum is situated in the right lower part of the abdomen, the direction of the colon being first straight upward towards the right under surface of the liver, then across the upper part of the abdomen from right to left, and finally downward into the left side of the pelvis. When, in the course of digestion, the intestinal contents reach the cæcum they contain about 90 per cent. of water; but so much fluid is absorbed from them in the colon that by the time they have reached the rectum their consistency is firm and semi-solid.

**Coma.** A state of complete loss of consciousness from which even great and sustained efforts fail to rouse the patient. Apoplexy or stroke, a condition due to hæmorrhage into the brain, is one of the common causes of coma; but other diseases of the brain, for example, meningitis, abscess, or tumour; certain severe illnesses, notably typhoid fever, Bright's disease, and diabetes; opium and alcoholic poisoning; and epilepsy and hysteria, may in certain cases have coma as one of their symptoms. The treatment depends obviously on the underlying condition, the diagnosis of which may call for the greatest skill and judgment of the attending practitioner.

**Concussion of the Brain.** Stunning; a condition of giddiness, confusion of thought, or even, in serious cases, of total loss of consciousness, resulting from a violent blow on the head. The patient suffering from concussion is pale and clammy; his pulse is weak and respiration rate slow. He should be put to bed at once with his head kept low, and kept there for as long as the doctor orders. In a slight case he might be allowed up in a fortnight; but in severer cases it may be after a much longer interval.

**Congenital.** Existing at or before birth. Thus a congenital disease may be transmitted by heredity, or it may be acquired by the infant while it is yet in the womb, or when it passes through the maternal passages.

**Congestion.** This term, in its strict sense, means the excessive accumulation of blood in any part of the body. It is used popularly to denote the feeling of stuffiness that accompanies catarrh of certain organs; thus catarrh of the bronchial tubes is sometimes called, incorrectly, congestion of the lungs; and nasal catarrh, especially when the mucus makes breathing difficult, is equally incorrectly called congestion of the nose. True congestion of a part is the result either of some obstruction that will not allow the blood to escape from it, or of an infection that causes an extra amount of blood to flow into it.

**Conjunctivitis.** Inflammation of the delicate membrane that lines the eyelids and the eyeball. A discharge which may be severe pours from the eye, clinging to the lashes, and the surface of the eye becomes red, hot, swollen and painful. A very serious form of conjunctivitis, leading to blindness, may occur in newborn infants, but can be prevented with certainty by immediately cleansing the eyes with cotton-wool and boric lotion and instilling a drop of silver nitrate solution (one per cent.) between the lids. This procedure is now carried out as a routine by the doctor and midwife and has undoubtedly helped to reduce the amount of blindness in the community. (See Ophthalmia.)

**Constipation.** A condition in which the bowel does not act often enough to maintain good health. In most persons the waste matters, called fæces, should be retained in the bowel no longer than 24 hours; some persons, however, seem to be at their best when this period is 48 hours, a very few when it is longer, and some when it is only 12 hours, or some other period less than 24. There is, it will be seen, no hard and fast rule, for though most persons enjoy the best health when their bowel empties itself regularly once a day, others are better if the interval between the actions is longer or shorter. This is a matter which everyone must find out for himself; but having found out, he should try to establish the habit of clearing the bowel with *absolute regularity* at the appropriate interval. Persons of the 24-hour habit should make an invariable practice of going to the closet every morning at exactly the same time, immediately after breakfast suits most people, whether they feel the call to pass a motion or not. It is only thus that the bowel itself will acquire automatically the habit of being ready for evacuation at the same hour each day. Some people find that they are more certain of getting an action if they include in their diet a lot of brown bread, oatmeal, bran and other foods leaving an indigestible residue; others are better off for a diet free from irritating substances: this also is a matter that everyone must find out for himself. A diet that includes fresh and stewed fruit, vegetables in the form of salads, and plenty of fluid, suits most people, but not all. Regular exercise helps; but the very best preventive of constipation is the habit of emptying the bowel immediately the call to do so is felt, and of paying an unhurried visit to the closet at the proper intervals, whether a call is felt or not. Drugs should only be taken on a doctor's prescription. Self-medication with laxative pills and other preparations often makes the condition worse, and ultimately may bring the patient to a state in which he can never open his bowel except by taking increasingly large quantities of drastic purgatives.

**Consumption.** (See Tuberculosis.)

**Contagion.** Spread of disease by contact either with the patient or with clothes, bedding and such-like that have been infected by him. All contagious diseases are due to germs which can be spread from person to person in these ways. What is known as mediate contagion occurs when an infection is carried from a sick person by someone who himself does not suffer from the disease; as, for example, when an adult who has been in contact with a case of whooping-cough conveys the infection to susceptible children, though himself remaining free of the infection.

**Contusion.** A bruise.

**Convulsions.** Violent spasms or series of spasms of the muscles. Children especially are liable to suffer from this condition, which in them may be severe enough to simulate the epileptic fits of adults. Among the illnesses in the course of which convulsions may occur are infectious fevers, brain diseases, rickets, paroxysms of whooping-cough, and worms. Teething, to which many cases are popularly attributed, is, in fact, a very rare cause. It is essential that a doctor should be sent for at the very onset of convulsions, but before his arrival some relief may be given to the child by putting it into a warm bath. In severe cases chloroform may have to be given to check the spasms; chloral and bromide of potash are the drugs most commonly prescribed. Once the immediate danger has been dealt with, treatment will be directed to the cure of the disease of which the convulsions are but a symptom.

**Corns.** Localised thickenings of the skin that occur most commonly on parts of the foot and toes that are subjected to pressure. At the centre of each corn is a horny plug that extends deep below the surface of the skin and, by pressing on the underlying tissues, produces a feeling of pain. This pain is specially intense if inflammation occurs below the plug with the formation of pus. Bathing the affected part in hot water, paring the corn and then applying a salicylic acid plaster or a solution of salicylic acid in collodion (10 per cent.) will bring about a cure, but if the patient does not then wear well-fitting boots or shoes the condition will certainly recur.

**Coryza.** Nasal catarrh. (See Catarrh.)

**Cough.** A sudden, noisy expulsion of air from the lungs. The most important fact about cough is that it is a symptom, not a disease. It may be caused by comparatively trivial complaints, a cold in the head, for example, or by serious and even dangerous illnesses, such as consumption or aneurysm. Medicines designed to ease cough may or may not be useful; it depends entirely on whether the cough is helping the patient to bring up phlegm or is merely exhausting him to no good purpose. This is a matter that can only be decided by a skilled practitioner. He may find, after examining the patient, that the bronchial tubes or the lungs are clogged up with mucus that the patient is not getting rid of quickly enough. In such a case, far from prescribing a medicine to stop cough, he will try to induce cough in order to bring away the harmful secretion. Soothing medicines may be dangerous in yet another way; by relieving the cough they

may create in the patient's mind the illusion that he is better, though, in fact, the underlying disease may actually be getting worse. Thus, it is sometimes very easy by means of certain drugs to stop the cough of early consumption; *but* the consumption goes on, and if it is not treated gets worse and may even become incurable. Regular winter cough, cough persisting into the summer months, coughing up phlegm streaked with blood, are all danger signals. Examination may show that they are the result of a comparatively harmless condition; it may on the other hand, prove them to be symptoms of consumption or some other serious illness that demands instant skilled treatment. So many people prefer to deceive themselves, and, if they bring up blood-streaked phlegm, to pretend that really it came from their throat or the back of the nose, that it is worth mentioning that in the great majority of cases, blood in the phlegm comes from the lungs and is a symptom of pulmonary tuberculosis.

**Cretinism.** A form of mental deficiency associated with stunted growth, a large head, and swollen belly, due to an inborn or easily acquired deficiency in the secretion of the thyroid gland. In most cases the symptoms are fully developed by the time the infant is six months old, but as time goes on the contrast between its actual development and what would normally be attained becomes even more striking. Treatment by means of thyroid gland extract is nearly always beneficial, but though the cretinous child may thus be made to grow to a normal stature and lose its physical deformities, its mind but rarely improves to a like degree.

**Crisis.** The turning-point in a disease whether for better or for worse. Such a change occurs notably in lobar pneumonia, in which usually on the sixth to eighth day, when the illness is apparently as bad as it can be, the patient may suddenly take a turn for the better and within about 12 hours have a nearly normal temperature, pulse and respiration rate.

**Cyanosis.** Blueness of the skin, due commonly to such conditions as heart disease or disease of the lung that prevent a sufficient supply of oxygen from reaching the blood.

**Cyst.** Any sac, normal or abnormal, distended with fluid or semi-fluid material.

**Cystitis.** Inflammation of the urinary bladder. The patient, during an acute attack of this disease, suffers pain and tenderness in the lower part of the belly; his bladder is irritable and he makes frequent painful efforts to pass urine, though he passes very little at a time; usually he is very feverish. The urine may contain blood, pus and germs. Cystitis is always due to an invasion of the bladder walls by hostile germs; but the mere presence of such germs does not suffice, except very exceptionally, to cause cystitis. Some predisposing local disturbance—for example, stone in the bladder, enlargement of the prostate gland preventing the free flow of urine, or spinal injury resulting in paralysis of the bladder muscle—is found in most cases to have provided suitable conditions for the germs' activities. Acute cystitis unaccompanied by any other local disease is treated by putting the patient to bed, applying hot fomentations over the bladder region, giving him a light diet and lots of fluid to drink, and prescribing medicine that will destroy or prevent the growth of the germs in the bladder. In chronic cases, cure can only be brought about by treating the predisposing cause—removing the large prostate or the stone, or doing whatever else may be necessary.

**Dactylitis.** Inflammation of a finger or toe, a condition due in some cases to tuberculosis or syphilis of the affected part.

**Dandruff.** Scurf; a formation of dry loose scales round the hair follicles, brought about by infection of the horny layer of the skin by a yeast-like fungus called the pityrosporon. To keep dandruff in check, the best method is to shampoo the scalp regularly, at least once a week in the case of women with long hair, but in the case of men more often, and each day to rub a salicylic acid lotion well into the scalp. The shampoo should be of a kind suitable for frequent use; it must not be strongly alkaline or contain much alcohol. The lotion should be prescribed by a practitioner, for such matters as the amount of salicylic acid to be included and whether other ingredients would help can best be decided after examination of the scalp.

**Deafness.** Partial or complete loss of the sense of hearing. Deaf-mutism is the name given to the state of being both deaf and dumb, persons thus affected being known as deaf mutes. Deafness may be due to disease affecting the nerve that conveys sound impressions to the brain, or to an affection of the ear preventing it from receiving such impressions. Wax pressing on the ear-drum may have this effect temporarily and may thus be regarded as a readily curable cause of deafness; ear disease resulting in the destruction of the sound-receiving organs behind the drum brings about a permanent though not necessarily complete deafness. Many devices have been designed to enable deaf persons to hear, but it should be realised that an apparatus that helps one person may be useless to another, and it is often a costly mistake to buy an aid to hearing without first having given it a fair trial.

**Death-rate.** The number of persons who die in a year compared with the total number of the population. Thus, if of every thousand persons in a given community a dozen die in the year, the death-rate is recorded as 12 per 1000. In recent years the death-rate both of infants and of the whole population has fallen fairly steadily, owing largely to improved hygiene and better medical care of the people. But so much has the birth-rate fallen in the same period that a great change has been and is continually being effected in what is called the age-distribution of the community. Put shortly, the facts are that the proportion of old to young people is increasing, and there are now relatively more people at the ages at which death may be expected to occur than there have ever been before. For this reason a higher death-rate may shortly occur, but, the reason being understood, such an increase should not give rise to alarm.

**Debility.** Lack or loss of strength. Debility, it must be realised, is not a disease; it is a symptom that may appear in the course of many diseases, some serious, some so trivial that they hardly merit the ominous name "diseases" at all. In children, for example, the condition may be due to improper feeding and a resulting accumulation of acids in the blood; in such cases the remedy is to include more sugar and less fat in the diet. In adults it may follow such an illness as influenza or be an early sign of anæmia, tuberculosis, or some other malady that demands skilled diagnosis and treatment. The practice of self-medication with tonics may produce harmful results. The effect of tonics is, in many cases, to produce an illusory sense of energy and well-being, and thus to encourage an exhausted organism to activities that exhaust it still further. Debility should be treated by removing its underlying cause, not by masking its effects.

**Decline.** Any disease producing great wasting and weakness, especially consumption.

**Defæcation.** The act of emptying the bowel. The undigested matter thus passed is called fæces.

**Deficiency Disease.** Any disease due to the lack of some essential constituent of the diet. The term is discussed more fully in the section on Vitamins, for it is to diseases known to be caused by a deficiency of these food factors that the term is especially applied. (See also **Beri-beri, Pellagra, Rickets,** and **Scurvy.**)

**Deglutition.** The act of swallowing.

**Delirium.** A mental disturbance occurring in the course of some forms of insanity, or in sane patients as a result of fever or brain injury, wherein for a few minutes, or even hours at a time, the person affected becomes excited and intensely restless and incoherent, and at the same time suffers from illusions, hallucinations and delirium. The condition called low delirium that occurs in the course of some severe fevers, notably enteric, appears rather as a confused muttering than as excitement. Persons overcome by delirium tremens, a condition resulting from alcoholic poisoning, show terrific excitement, are troubled by hallucinations, "seeing snakes" it is popularly called, and tremble in every limb. Their chief need is to be nursed very carefully, for if they are not constantly watched they may, in their excitement, do themselves an injury. Measures to produce sleep and to secure an effective action of the bowels also help to bring an attack to an end.

**Delusion.** A false belief that persists in spite of the most striking evidence to the contrary. Patients suffering from certain forms of mental illness are given to such beliefs. They may, for example, though poor and of humble birth, claim to possess great riches or noble title; they are said then to be suffering from delusions of grandeur. Or they may believe themselves to be the victims of a conspiracy in which all around them are concerned, suffering in such case from delusions of persecution. These abnormal mental states must not be confused with illusions or hallucinations. Illusions are false impressions of things actually present to the senses. Thus, if a person going into a dark room mistakes a curtain for a ghost, that is an illusion. Hallucinations, on the other hand, are visions or other sense impressions of objects that actually are not present. The strange animals seen by persons suffering from delirium tremens are hallucinations. One fact about delusions should never be forgotten: it is useless arguing with a person under their influence, in the hope that eventually he will "see reason." Delusions are impervious to reason; no one can be talked or bullied out of them. If any member of the family suffers in an abnormal way from any of the states just described, allowing for the fact that even normal people may sometimes be the victims of an illusion, then medical advice about his condition should be sought without delay. Sending him to the country in the hope that a change of scene or fresh air will do him good and make him see the folly of his ideas is nothing but a waste of time and money.

**Dementia.** A form of insanity, marked by great impairment of intellect, will and memory.

**Dengue.** Breakbone fever; an infectious tropical disease marked by severe pains in the bones, head, eyeballs and joints, and a rash that appears on or about the fifth day of illness. The responsible germ, or virus, is carried by a special kind of mosquito, and the disease is transmitted by bites from the insect.

**Depilation.** The process of removing hair. Substances used for this purpose, such as quicklime, calcium sulphate and arsenic, are called depilatories. These remove hair for a time, but sooner or later, usually sooner, it grows again. Electrolysis, by means of which each hair is removed separately, produces permanent results, but is liable, unless applied by a skilled person, to leave unsightly scarring.

**Dermatitis.** Inflammation of the skin. Such an inflammation may be due to infection with germs, fungi, viruses or animal parasites; to the action of drugs, either taken internally or applied externally; to exposure to heat, the rays of the sun, or X-rays; to scratching and other direct injuries; or to the presence of toxins in the blood.

**Desquamation.** The shedding of the outer layers of the skin in scales, flakes, or sheets. Such a process occurs in the course of certain fevers, notably scarlet fever, after the rash has subsided.

**Diabetes Mellitus.** A disease marked by persistent discharge of sugar in the urine. Diabetic patients pass an excessive amount of urine and have to make water frequently; they suffer great thirst and have a dry mouth, lips and skin; in many, though not in all, cases they have a ravenous appetite, but in spite of this are emaciated and weak; usually they feel a sweet taste in the mouth, and an apple-like smell comes from their bodies; they are liable to suffer a number of complications, of which boils, carbuncles, neuritis, cataract and coma are the chief; moreover, they are far more liable than normal persons to succumb to such diseases as consumption and pneumonia. It is evident then that diabetes is a very serious disease, and indeed until a few years ago the outlook for young patients was hopeless. Middle-aged persons, it seemed, could be kept alive for a number of years by careful dieting, the disease in their case being chronic in type; but children, and boys and girls in their 'teens, got worse in spite of every care, and died within three or four years of the first appearance of symptoms. This gloomy picture was changed in 1923, when Banting and Best, scientists working in Toronto, proved that the symptoms of diabetes could be controlled completely by means of an extract, to which they gave the name insulin, made from the pancreas of animals. The physiological theories that led them to their discovery are extremely complicated; briefly, however, it may be said that the inability of the diabetic patient to store and utilise starchy foods is due to the absence from his blood of a chemical substance manufactured in the healthy pancreas and poured in sufficient quantities into the blood of non-diabetic persons. This defect is made good by insulin. Injected under the patient's skin, this extract quickly enters the circulation and enables him to make good use of the sugars formed in the ordinary course of digestion from the starchy and protein elements of the food. At the same time it brings to an end the other symptoms, for these also are due, directly or indirectly, to the failure of the diabetic patient to use the sugars in the normal healthy way. It is true that insulin does not cure diabetes.. With but few exceptions, patients must continue to have injections all their lives if they are to keep well. By some people this fact is regarded as a conclusive proof that insulin is of no value. It is as if one said that there was no point in eating, because, though food satisfied the appetite, not even the best meal could abolish hunger for ever. When it is borne in mind that, thanks to insulin, the young diabetic has exchanged what was in effect a living death for a healthy, active life of the normal duration, then the daily injections are appreciated at their real value, as a paltry price to pay for an inestimable benefit.

**Diagnosis.** The science and art of distinguishing diseases from each other and determining their immediate and ultimate causes.

**Diaphragm.** The midriff; the dome-shaped partition between the chest and the abdomen.

**Diarrhœa.** Looseness of the bowels; a condition in which the motions are more liquid and are passed with greater frequency than the normal. Such a condition may arise from many causes, from food poisoning, over-eating, or taking a diet that contains an excessive amount of irritating matter; from emotional causes, especially fear; from infections of the bowel, as, for example, in typhoid fever, intestinal tuberculosis, colitis and dysentery; and from the habit of taking purgatives to excess. The treatment of diarrhœa is directed towards removing the cause, which may lie in any of the conditions just mentioned, or in others even more serious. Anyone suffering from diarrhœa alternating with constipation should consult a doctor at once.

**Diastole.** The phase of relaxation in the heart-beat; alternatively, it may be described as the brief interval in which the heart relaxes and rests between its contractions. If the heart beats at the average rate (say, 72 to the minute), the period occupied by each diastole would be not more than two-fifths of a second.

**Diathermy.** The generation of heat within the tissues of the body by forcing a special kind of electric current through them. In medical practice this method is now used extensively for the treatment of diseases of the joints, pneumonia, and other deep-seated inflammations; and in surgical practice for destroying certain kinds of bladder tumours and dividing tissues without at the same time causing loss of blood.

**Diathesis.** Constitution; the total bodily and mental make-up of a person by virtue of which he has a tendency to suffer from or to resist diseases.

**Dick Test.** A method recently devised by George and Gladys Dick of Chicago for discovering if any given person is susceptible to or immune from scarlet fever. The test is carried out by injecting a very small measured quantity of a vaccine prepared from scarlet fever germs into the skin of the person under investigation. If redness develops at the site of injection it shows that he is susceptible and would contract the disease if exposed to infection.

**Diet.** The food prescribed by a physician, or the day-to-day allowance of food taken by any person. As far as healthy persons are concerned, the most important dietetic rules are that food should be partaken of unhurriedly at regular intervals; that the ingredients should be sufficiently varied and balanced to include all the essential food components—proteins, fats, starches, vitamins, minerals and water—in suitable relative amounts; that, other things being equal, fresh should be preferred to preserved foods; that no more should be taken at a meal than is needed to satisfy the appetite; and that at all times meals

should be skilfully cooked and served in an appetising manner in order that they may by their appearance and fragrance excite the flow of the juices that are required for their digestion. A lacto-vegetarian diet—namely, one composed of fresh vegetables and dairy produce—seems best for some persons, but not for all. It is true, on the other hand, that most persons, especially at or past middle life, would be better for a diet containing somewhat less meat, and, in fact, less of everything. A generous diet suits youth, but not age. In sickness, the diet prescribed will depend on the patient's condition. In pernicious anæmia, Bright's disease, some cases of gastric ulcer and many other illnesses, the prescription of an appropriate diet forms the most important part of the treatment.

**Digestion.** The process by which food is broken up in the mouth, stomach and intestine into materials that can be conveyed to and used by all the organs and tissues of the body.

**Diphtheria.** An acute infectious disease commonly affecting the surface tissues of the mouth, nose and throat, in the course of which these structures and the air passages become covered by a leathery membrane. The patient is subject to two distinct dangers: first, that this membrane, by impeding his breathing, may produce suffocation; secondly, even if this risk is averted, that the deadly poison liberated by the responsible germs may produce paralysis or even heart failure. A sore throat covered with patches of white membrane, fever, great weakness and a feeble pulse, are among the commoner symptoms of diphtheria; but to these, when the glottis is affected, must be added hoarseness, a brassy cough, distressed breathing, and, in the very worst cases, asphyxia. The patient's chances of recovering depend to a very great extent on the treatment. If diphtheria antitoxin is given at the onset of symptoms he will almost certainly get well quickly; but the longer this treatment is delayed the less likely is such a desirable event to occur. In recent years it has been found possible to protect susceptible children against diphtheria by inoculating them with a vaccine made from diphtheria toxins and antitoxins; and this preventive treatment has been extended to doctors and nurses whose work brings them into dangerous contact with cases of the disease. In 1921, Bela Schick, a New York children's doctor, devised a test for susceptibility which is now widely used. A small measured dose of toxin is injected into the skin of the person under investigation and if, in 24 hours, a red patch develops at the site of injection it shows that he is susceptible and should be inoculated with a toxin-antitoxin vaccine.

**Dipsomania.** An uncontrollable craving for alcohol that occurs at intervals in persons who between-whiles are temperate or even completely abstinent.

**Disinfectant.** Any substance that destroys germs and their poisonous products or renders them harmless.

**Dislocation.** A deformity that results when the bones that go to form a joint are displaced from their normal position. Such a condition may be present at birth, the bones of the hip joint being most commonly affected, or it may be produced by disease or injury.

**Disseminated Sclerosis.** (See Sclerosis.)

**Diuretic.** A medicine that promotes the secretion of urine from the kidneys.

**Diverticulitis.** An inflammatory condition of the bowel marked by the formation of small flask-shaped pouches that project from its wall and gradually fill with fæces. The symptoms that follow these changes, especially when the fæces by their irritation lead to abscess formation within the pouches, closely resemble those of appendicitis, but appear on the opposite side of the body. The persons most commonly affected are constipated, well-nourished, middle-aged men. In the early stages, cleansing the bowel by medical means is sufficient treatment; but when inflammation is advanced, surgical removal of the affected portion of the bowel becomes essential.

**Donor.** A person who furnishes blood for transfusion. (See Transfusion.)

**Drop foot.** Paralysis of the toes and foot resulting usually from neuritis, but sometimes caused by the pressure of bed-clothes on the upper surface of the feet of bed-ridden patients.

**Dropsy.** The abnormal accumulation of fluid from any of the tissues or cavities of the body. Such a condition may arise in the course of many diseases, notably of the heart, liver, kidneys, and blood. If the dropsy is widespread through the body it is called anasarca; dropsy of the abdomen is called ascites; of the chest, hydrothorax; of the skin, œdema; of the brain, hydrocephalus. Although in all cases of dropsy measures are taken to reduce the amount of fluid abnormally distributed in the tissues, the essential treatment is directed to improving or curing the disease of which the dropsy is but a symptom. Thus, digitalis, a valuable remedy in certain cases of dropsy due to heart disease, by virtue of its action upon the heart itself, may be valueless in the treatment of dropsy arising from disease of the liver or kidneys.

**Duodenum.** The first part of the small intestine. If the alimentary tract is regarded as a tube starting at the mouth and ending at the anus, then the duodenum represents the short twisted length of tube that comes immediately after the stomach. Its wall is pierced by a duct through which the pancreas and the liver pour their external secretions into the intestine.

**Dysentery.** A term applied, when used in its strict sense, to two diseases, both of which are marked by inflammation of the bowel, pain in the abdomen, and the frequent passage of motions containing blood and slime. Bacillary dysentery, one of these two diseases, is caused by a germ called Bacterium dysenteriæ; the other, amœbic dysentery, by an organism called Entamœba histolitica. The agents responsible for both diseases are carried from the stools of dysenteric patients to food, and thence to healthy persons who thus acquire the infection. Epidemics may also result from an infected water supply, a condition that occurs only too often among populations with a defective sanitary system. Armies in the field have been among the chief victims of these infections, especially in Eastern theatres of war, where the problem of keeping down the number of flies has proved to be almost insoluble. Outbreaks occur, too, in mental hospitals, the disease there being called asylum dysentery. Preventive measures aim at destroying the breeding-places of flies, disposing of excrement in such ways that flies will not have access to it, covering food with butter muslin or keeping it in wire mesh cupboards, and boiling or otherwise disinfecting all water in infected areas. The treatment varies with the type of disease. Bacillary dysentery, if diagnosed early enough, may be cured completely by injections of anti-dysenteric serum; amœbic dysentery is treated by injections of emetine, a product of ipecacuanha. Patients suffering from either form of disease need most careful and patient nursing, and the injections of serum or of emetine form only a part of their treatment.

**Dysmenorrhœa.** Painful and difficult menstruation.

**Dyspepsia.** Indigestion. This common condition may arise acutely as a result of over-eating or of taking an ill-balanced meal, the symptoms in either case being discomfort and pain in the upper part of the abdomen, headache, palpitation of the heart, and sometimes vomiting. Chronic dyspepsia may be best regarded as a series of symptoms—pain after food, heartburn, flatulence, sickness, foul breath, constipation, and headache—that occur in the course of any disease that interferes with the normal action of the stomach and the upper part of the intestine. It may thus be associated with such a diversity of conditions as chronic gastritis, gastric ulcer, cancer of the stomach, gall-stones, appendicitis, constipation, fever, pregnancy, and Bright's disease. Patients, for this reason, should not feel that when the practitioner makes a careful examination of their case, and even has an X-ray photograph taken, that he is making a great fuss about a small matter. It may well be that the only treatment that will benefit them is treatment that aims directly at removing the underlying cause of their symptoms; and that "indigestion mixtures" would do more harm than good by easing their pain while leaving the disease itself to get progressively worse. Furthermore, it should be realised that such "indigestion mixtures," even when prescribed by a skilled doctor, form only a small

part of the treatment of chronic dyspepsia. The patient must learn to correct faulty dietetic habits, to masticate his food carefully, take regular meals and not too much food at any one of them, avoid foods containing pips, seeds and skins that may leave an indigestible residue in the stomach and intestines, take simple unspiced foods with very little condiment, and drink no alcohol. It is best to drink very little at meal-times, taking the bulk of the daily allowance of fluid about half an hour before food.

**Dysphagia.** Difficulty or pain in swallowing.

**Dyspnœa.** Difficult or laboured breathing, a condition that occurs in healthy people as a result of exercise, but in sick people, especially those with certain forms of heart, lung and kidney disease, may be present even when they are at rest. What is called expiratory dyspnœa occurs during paroxysms of asthma when the patient finds no difficulty in breathing in, but the greatest trouble in forcing air *out* of the lungs.

**Dysuria.** Pain on passing urine.

**Earache.** This occurs commonly in children, especially those suffering from tonsillitis, adenoids, a cold in the head, measles, or scarlet fever—all conditions liable to be complicated by acute inflammation of the middle ear, and thus by earache and deafness. If treatment is not applied at once, the secretions formed by the inflammation may press on the ear drum hard enough to rupture it; but such a mishap may be averted by the timely application of suitable remedies, which include instilling ear drops and applying hot fomentations to the painful area. Sometimes these measures fail to prevent bulging of the drum, and in such cases it is usual to pierce it rather than allow rupture to occur. Experience has shown that the clean cut heals better and more quickly than an irregular perforation. Attempts to treat earache by means of home remedies may prove disastrous. The middle ear inflammation leads, often with a startling suddenness, to inflammation of the mastoid bone, a serious condition of which most cases can be cured only by means of an extensive operation.

**Eclampsia.** Convulsions occurring in a woman at or near the end of pregnancy. This dangerous condition, which is brought about by a form of blood-poisoning to which pregnant women are liable, could be prevented in almost every case if women made a practice of attending an ante-natal clinic or consulting their private doctor at least once a month and towards the end once a fortnight throughout their pregnancy. Eclampsia, serious though it is, has its small beginnings which can be detected by a skilled examiner, and, by proper treatment, prevented from developing further.

**Eczema.** This inflammatory condition of the skin is difficult to describe because its appearances vary so much with the stage to which the inflammation has reached. It begins with the formation of red patches and then of blisters, but later—owing to the bursting and "weeping" of the blisters—crusts and scales become more conspicuous than these; and at any stage, moreover, owing to scratching and rubbing by the patient, the inflamed areas may become thickened and pustular. The essential cause of eczema is believed to be an inborn or acquired sensitiveness of the skin cells to the action of irritants, which may reach it from within the body by way of the blood stream, or from without by direct contact. The agents that may produce eczema in such sensitised persons are almost without number, and range from food constituents and germs to heat and cold winds. So-called "occupational" eczema occurs in susceptible persons whose work necessitates their handling such eczema-producing irritants. Bakers', photographers', butchers', and washerwomen's eczema come within this class. The treatment applied varies with the condition of the skin and the cause of the inflammation. Thus, in cases at the stage of redness and weeping, the doctor will probably prescribe astringent lotions; at the "scaly" stage, ointments would be preferred; and at the stage of thickening, crude coal tar or the application of X-rays. At the same time every effort would be made to discover the responsible irritant and to "desensitise" the patient to its influence.

**Elephantiasis.** A chronic disease, chiefly of the tropics, marked by overgrowth of the skin and connective tissues of the part affected.

**Embolism.** The presence of obstructing clots or other plugs in the arteries or veins. Among the illnesses that may be complicated by such a condition, though fortunately very rarely, are inflammation of a vein, malignant disease, some forms of heart disease, and various parasitic diseases. The obstructing plug is called an embolus, and its effects depend partly on its nature; for example, whether it is infected or not, and partly on the site of the body in which it ultimately lodges. Organs most commonly affected by embolism are the brain, lung, spleen, kidney, liver and intestine.

**Embryology.** The science that treats of the development of the embryo or fœtus of animals.

**Emetic.** A medicine that causes vomiting. Common emetics are mustard and water, ipecacuanha wine, and zinc sulphate.

**Emphysema.** A term commonly used to denote a disease in which the air spaces of the lungs are abnormally distended, with the result that the lungs themselves lose their elasticity and the network of blood vessels in the walls of the air spaces is gradually destroyed. In most cases of emphysema the cause is chronic bronchitis, the cough and obstruction of the tubes tending to bring about a state in which air can be more easily drawn into the lungs than expelled from them. Shortness of breath and a bluish tint of the skin, especially of the lips, are the chief symptoms, but in most cases the symptoms of bronchitis are present as well. The appearance of the patient is characteristic: he has a broad, deep, barrel-shaped chest, raised shoulders, crowded upper ribs, and lower ribs further apart than normal—the total effect to the inexperienced eye being one of fine, healthy development. It is impossible to cure emphysema, but the practitioner, by improving the patient's general health, treating his bronchitis, and teaching him a hygienic way of life, can do much to relieve the symptoms. In some cases benefit results from injecting oxygen into the blood.

**Empyema.** An accumulation of pus in the chest—a condition that may occur in connection with severe cases of pneumonia, blood-poisoning, scarlet fever, tuberculosis and abscess of the lung, suppuration in the abdomen, and perforating wounds of the chest. The chief symptoms are cough, shortness of breath, wasting, fever, and copious sweats; but the practitioner would in most cases confirm the diagnosis by introducing a hollow needle into the chest and examining the fluid that comes away. The treatment of empyema is by draining away the pus, either by repeated aspirations through a cannula, or by an operation on the chest.

**Encephalitis.** Inflammation of the brain. Encephalitis lethargica, known popularly as "sleepy sickness"—not to be confused with "sleeping sickness," a disease prevalent in the Congo—first became epidemic in this country in 1918, but fortunately since 1924 very few cases have occurred, and the disease is now very rare. The chief symptoms of an attack were on the mental side drowsiness, apathy and lethargy, and on the physical, muscular weakness and paralysis. Cure in many cases was incomplete, and when the acute symptoms had passed the patient was found to suffer from mental impairment in some form or other, a deterioration in character amounting even to moral delinquency, or some physical disability such as muscular tremor or rigidity. In recent years a new disease, post-vaccinal encephalitis, has been observed in a very small proportion of recently vaccinated persons. Very young children seem to be immune or almost immune from this complication, which selects for attack persons who, having missed vaccination in infancy, have to undergo it for the first time in some later period of life. The mortality from this disease is high, but in many cases complete recovery occurs.

**Endemic.** An endemic disease is one which is prevalent or regularly found in a region or district.

**Endocarditis.** Inflammation of the membrane lining the inside of the heart. This condition is almost invariably associated with carditis, inflammation of the heart muscle itself, and valvulitis, inflammation of the valves of the heart. Its most important antecedent cause is acute rheumatic fever, and it cannot be too strongly emphasised that in this disease what is supremely

important is not the state of the joints but of the heart. The joint pains may be very slight; they may after a few days subside completely; but as long as there is the slightest suggestion of active disease in the heart, the practitioner will order the patient to keep to bed; and the wise patient will obey his instructions without question. Sometimes such rest is ordered for weeks or even months after the patient has outwardly recovered; but irksome though it is, especially for an active child, this treatment offers the only protection there is against the development of chronic and incurable heart disease.

**Endocrine.** Glands that secrete their products directly into the blood stream are called ductless or endocrine glands. These products, known as internal secretions or hormones, circulate through the body and produce striking physiological effects by stimulating various organs to activity. Examples of endocrine glands are the thyroid gland, the pancreas, and the suprarenal glands, which secrete thyroxin, insulin and adrenalin respectively.

**Endometritis.** Inflammation of the lining membrane of the womb.

**Enema.** A liquid injected into the rectum.

**Enteric.** (See **Typhoid Fever.**)

**Enteritis.** Inflammation of the lining membrane of the intestine, a malady marked by diarrhœa, abdominal pain, and sometimes vomiting. In spite of the diarrhœa, the practitioner in charge of a case not uncommonly begins his treatment by administering a stiff dose of castor oil to clear out of the bowel the irritant to which the enteritis is due. Later he may give bismuth and other medicines to reduce the frequency of the motions, and in all cases he orders a bland diet until the condition has settled down.

**Enuresis.** Involuntary discharge of the urine. Bed-wetting that occurs during sleep is called nocturnal enuresis, and affects chiefly young highly-strung children. In many cases the condition can be remedied by removing some source of physical irritation; in others the cause is psychological rather than physical, and treatment is correspondingly more difficult. Skilled advice should be sought in all cases. No action of the parents can do greater or more permanent harm than scolding a child or shaming him in his own eyes or in the eyes of other people for an act over which he has no control whatever. If the child wets the bed the fact should be accepted quietly and without any fuss. The most careful routine prescribed by the doctor may prove unavailing if the parents by their anger or agitation increase the child's mental distress, and thus the likelihood of his wetting the bed again. Cutting out fluid from the evening meal; training the child to empty the bladder at bed-time; putting him on a pot at a fixed time every night; all these are useful measures, but all of them together are not half as useful as a parental attitude that ensures that the child shall go to bed serene and not worrying about whether he will or will not commit the awful sin of bed-wetting that night.

**Epidemic.** A disease that attacks many people in one region at one time and spreads quickly from place to place.

**Epidermis.** The cuticle; the outermost layer of the skin. This forms a protective covering for the true skin or corium.

**Epiglottis.** The lidlike structure at the root of the tongue that partly covers the opening of the larynx.

**Epilepsy.** A chronic disease marked by the occurrence of fits in which consciousness is suddenly lost or impaired and the body at the same time thrown into a state of convulsions. The first attack usually occurs when the patient is under twenty, and in a large proportion of cases there is a history of epilepsy in the family. Fits may occur at intervals of days or of months; their frequency varies from patient to patient, some remaining free and in excellent health for months at a time, others having as many as two or three fits a week. It is usual to distinguish between two forms of the disease, a major and minor. In the major disease, called "grand mal," the typical seizures occur, lasting anything from five to twenty minutes, and even, in exceptional cases, longer. In the minor disease, called "petit mal," such seizures are replaced by attacks of sudden unconsciousness or impairment of consciousness, or sensations of dizziness that last for a few seconds only. The medicines most commonly prescribed for the treatment of epilepsy are potassium bromide and luminal. But no patient who has been given a prescription for these drugs should imagine that the resources of medical science have now been exhausted in his case and he has nothing to do but have the prescription made up at regular intervals. Epileptic patients should remain under medical supervision all their lives.

**Epistaxis.** Nose bleeding. In mild cases home remedies such as applying cold to the back and cold compresses to the nose, and putting the patient on his back with the head kept low, suffice to stop the hæmorrhage. In more severe cases it may be necessary to plug the nostrils with gauze impregnated with some astringent, and it is better that this procedure should be carried out by a doctor than by an unskilled person.

**Epithelioma.** A malignant tumour derived from the skin or from the surface of a lining membrane.

**Ergosterol.** This chemical substance, which occurs in small quantities in animals and plants and most plentifully in yeast, is believed to be the precursor of Vitamin D; for although it has in itself no ante-rachitic properties, yet it acquires them on being exposed to ultra-violet radiation, and indeed all the other properties of Vitamin D at the same time. The curative effect of ultra-violet baths on rickets can be explained by the fact that these baths convert the ergosterol contained in the skin to Vitamin D, which is then absorbed from the skin into the general circulation.

**Erysipelas.** An acute contagious disease of the skin due to invasion of the surface lymphatic vessels by a virulent germ called Streptococcus erysipelatis. The eruption appears as a spreading, rose-red patch that is slightly raised owing to swelling of the underlying tissues. The patient feels very feverish and ill and suffers a burning pain and itching from the affected parts. In favourable cases the redness and swelling begin to subside on about the fourth day and the patient is convalescent in a week. But in debilitated persons and in very old and very young patients the disease may take a more dangerous course. Moreover, it may be attended by such serious complications as inflammation of the kidneys, brain, or lungs. Cases of erysipelas should be isolated and all persons coming in contact with them should take every precaution against acquiring the infection. It is usual to paint the edges of the infected area with some application which it is hoped will limit the further spread of the disease—with collodion, for example, or a preparation of ichthyol—and to give the patient an injection of antistreptococcal serum with a view to increasing his resistance to the invading germs.

**Erythema.** Redness of the skin due to congestion of its blood vessels. Any flushing of the skin, whether its cause is emotion or inflammation, is strictly speaking an erythema.

**Eugenics.** The science of race improvement; the application of knowledge derived from all relevant fields—from genetics, medicine, sociology, and psychology—for the purpose of eliminating undesirable stocks from the human race and raising the general physical, mental and moral level of future generations.

**Exanthem.** Any eruptive disease; any fever accompanied by a rash.

**Expectorant.** Any medicine given for the purpose of promoting the ejection of phlegm from the lungs and bronchial tubes.

**Fæces.** Excrement; the waste matter that forms in and is discharged from the bowel.

**Fainting.** Temporary loss of consciousness due to anæmia of the brain. The condition is treated by placing the patient in a recumbent position, lowering his head, loosening his clothing, sprinkling his face with cold water, and applying some stimulant to the nostrils, such as smelling salts or alcohol. If he is not too far gone, or is sufficiently recovered, giving him an ounce of sal volatile to drink, or a little brandy, will soon make him feel himself again.

**Favus.** An infection of the skin and hair follicles by a parasitic fungus called Achorion Schönleinii. The eruption consists of round, cup-

shaped crusts which form most frequently on the scalp, causing baldness, but may affect any part of the body. As the disease spreads, the indented crusts become continuous with each other and present a honeycomb appearance. The disease is difficult to cure, but by removing the crusts with poultices and exposing the skin to X-rays good results are obtained in many cases.

**Fever.** Abnormally high bodily temperature; any disease of which such a temperature is a characteristic symptom.

**Fibroid.** This term is usually applied to benign tumours of the womb composed of fibrous and muscular tissue and separated from the body of the womb by a clearly defined capsule. The condition occurs most often in childless women over thirty, but many women who have borne children are also affected. The treatment is by surgical removal, but this is resorted to only if the fibroid is growing rapidly, or is causing bleeding, pain or other undesirable symptoms.

**Fibroma.** A benign tumour consisting mainly of fibrous tissue.

**Fistula.** An abnormal channel joining two hollow organs or a hollow organ and the surface of the body. If it has formed as a result of inflammation, a fistula is in effect a long, narrow, sinuous ulcer leading from one organ to another or from an organ to the skin. Thus a recto-vesical fistula is an abnormal passage between the rectum and the bladder; an anal fistula is strictly speaking a passage joining the skin of the buttocks with the anus or rectum, but the term is applied loosely to any pus-containing track formed in this region. The treatment of fistula is by surgical excision.

**Fit.** A convulsion or paroxysm such as occurs in epilepsy, apoplexy, brain diseases, etc. (See **Convulsions.**)

**Flat-foot.** This condition, characterised by flattening out of one or more of the arches of the feet, affects chiefly young persons whose work forces them to stand about a great deal or to carry heavy loads. In the ordinary way the arches are maintained to a great extent by groups of calf muscles; but when rapid growth in height and weight occurs without a corresponding development in these muscles, they become unable to take off the extra strain thrown on the arches, and gradually, or sometimes suddenly, these give way and flat-foot occurs. The patient walks with his toes pointing outward, and feels pain and a sense of weakness in the calves and feet. In all its stages the condition needs skilled treatment. Early cases get well by fitting boots that are provided with a suitable insole. More advanced cases need treatment by special exercises, massage and electricity; occasionally operation is necessary. Cycling is an excellent exercise for people with a tendency to flat-foot. It exercises the muscles of the calf while keeping the body weight off the ankles.

**Flatulence.** Wind; distension of the stomach or intestines with air or gas. (See **Aerophagy.**)

**Fomentation.** The treatment of inflammation by applying heat and moisture to the affected part. The most generally used material for this purpose is boric lint wrung out of boiling water. To keep the heat in, this is immediately covered with a thick pad of cotton wool and sometimes a layer of oilskin as well, and then bandaged in place.

**Fracture.** A break or rupture of a bone, resulting most often from external violence, but occasionally from a sudden vigorous muscular contraction. It is usual to classify fractures into three groups: simple fractures, in which the bone is broken but no external wound is formed at the site of injury; compound fractures, in which, owing to laceration of the skin, a communication is established between the broken bone and the outer air; and comminuted fractures, in which the bone is broken in more than two pieces. Whatever the type of fracture, unskilled treatment or moving the patient unnecessarily may do more harm than good, and may even turn a simple into a compound fracture. If, however, moving the patient before the doctor's arrival cannot be avoided, then at least care should be taken to prevent further injury to the patient by gently placing the affected limb in any firm support that can be got hold of; for example, a shutter or a wide board

**Freckles.** Brown or yellowish spots that form on the skin of susceptible persons as a result of exposure to the sun. Freckles usually fade or even disappear entirely in winter, but again become marked in the summer months. No treatment is of any avail.

**Frostbite.** Gangrene that results from freezing of the tissues. The parts specially liable to be attacked are the fingers and toes, the nose and the ears. The great point in the treatment is to thaw the frozen parts very gradually, rubbing them with snow, and keeping the patient in a cool room, the temperature of which is raised very gradually. The application of oil of turpentine is said to produce great benefit.

**Furunculosis.** A crop of boils. (See **Boil.**)

**Gall-bladder.** The pear-shaped bag that acts as a reservoir for the bile secreted by the liver.

**Gall-stones.** (See **Calculus.**)

**Ganglion.** A cyst-like swelling formed in connection with a joint or the sheath of a tendon. The most usual site of ganglion is the back of the wrist where it forms a round elastic tumour containing a gelatinous semi-solid substance. Occasionally a sharp blow on the ganglion serves to rupture it and bring about a cure, but usually a minor operation is found to be necessary.

**Gangrene.** The death and degeneration of a tissue brought about by interference with its blood supply and an invasion of destructive germs.

**Gastric.** Pertaining to the stomach. Thus, gastric ulcer means ulcer of the stomach, gastric catarrh, a catarrhal inflammation of the stomach, and so forth.

**Gastric Ulcer.** This name is applied to two distinct types of stomach disease—one acute, the other chronic. Acute gastric ulcer occurs most commonly in women. In this condition ulceration may occur in several parts of the lining membrane at once, producing lesions that vary in size from a pin-point to a sixpenny-piece. Quite commonly these ulcers heal completely, leaving small scars to show where they have been. The first symptoms are due as often as not to bleeding from the ulcers, which may cause vomiting of blood or passing blood in the stools, or both. Otherwise the only symptoms may be those of acute dyspepsia. Chronic gastric ulcer, a far more serious condition, occurs mostly in men. In this disease, multiple ulceration is rare. The ulcer, however, is often very large, and tends to burrow deeply into the stomach wall. The patient may suffer great pain, especially about half an hour to two hours after meals. Heartburn is common, and so is vomiting, which temporarily relieves the pain. Bleeding from the ulcer, perforation of the stomach and contraction of the stomach wall are fairly frequent and serious complications. In all cases a practitioner should be consulted as soon as possible. Self-medication for dyspepsia may provide temporary relief but will in the long run prove disastrous. Early cases of ulcer may be cured completely by appropriate diet and medicines. Advanced cases always require operative treatment.

**Gastritis.** Inflammation of the stomach, a condition which may arise acutely as a result of eating indigestible or decomposing food, or chronically as a result of excessive drinking, or infection of the lining membrane of the stomach by toxins or germs. The common symptoms are pain, vomiting, flatulence, and loss of appetite. (See **Dyspepsia.**)

**Gastro-enteritis.** Inflammation of the stomach and intestines.

**German Measles.** (See **Rubella.**)

**Germicide.** A germ-killing substance. Carbolic acid, iodine, permanganate of potash, eusol, flavine, corrosive sublimate, are among the germicides commonly used in medical and surgical practice.

**Gingivitis.** Inflammation of the gums, a common but serious condition which may be recognised by the swollen and red appearance of the gum margin and the fact that slight pressure causes bleeding. Gingivitis is far more easily prevented than cured. Children should be taught to brush the teeth thoroughly morning and night, and to clean the toothbrush after using it. Such a habit regularly persisted in will keep the gums in a healthy state, but some authorities believe that a further essential precaution is to give a diet containing a sufficiency of calcium and Vitamin D.

**Gland.** This term is used in several senses, but mainly to denote an organ that manufactures a physiologically active fluid. Thus, the salivary gland manufactures saliva, which helps to digest starch; the breast manufactures milk; the liver, bile; the thyroid gland, thyroxin. Glands which pour their products straight into the blood stream are called glands of internal secretion or endocrine glands; glands supplied with a duct through which their products pass to some other organ are called glands of external secretion. Some confusion is created by the fact that the name gland is given to such organs as the spleen which do not seem to manufacture any secretion whatever.

**Glaucoma.** A disease of the eye marked by great increase of fluid, and thus of pressure, within the eyeball. Symptoms suggesting the onset of glaucoma are pain and redness of the eye, intense headache, dimness of vision, and a sensation of haloes about distant lights. An immediate operation is essential to save the eyesight.

**Glossitis.** Inflammation of the tongue.

**Glottis.** The narrow opening between the vocal cords.

**Goitre.** A non-inflammatory enlargement of the thyroid body, a ductless gland situated in front and on either side of the windpipe. Many different kinds of this disease are recognised, each producing its own characteristic symptoms, but in all kinds a prominent symptom is a swelling in the front part and sometimes side of the neck. In what is known as simple goitre, the type of disease that is so common in mountainous districts, such as, for example, Derbyshire and Switzerland, this swelling and the pressure it exerts on neighbouring structures are the only symptoms, and treatment is required mainly for cosmetic reasons or for the relief of pressure. In exophthalmic goitre, or Graves' disease, enlargement of the thyroid gland is of comparatively small importance. This condition owes its seriousness to the fact that the thyroid gland of affected persons is not merely swollen but over-active, pouring an excess of its internal secretion into the blood. For the maintenance of normal health, just so much thyroid secretion is needed by the body, no more and no less. Deficiency leads to conditions called myxœdema and cretinism, which are described under those headings; excess leads to serious nervous symptoms, a rapid pulse, wasting, sweats, mental disturbances, muscular tremors and abnormal protrusion of the eyeballs—all symptoms found in association with exophthalmic goitre. The proper treatment of this condition in any given case may be very difficult to decide upon. Some cases get better by medical treatment only, iodine given in suitable doses producing a diminution or even disappearance of all the symptoms; but such treatment is often ineffective or productive of only a temporary benefit, and in such an event, removal of part of the thyroid gland by surgical operation offers the only chance of cure.

**Gonorrhœa.** A venereal disease. In very few diseases does the chance of cure depend so much on the patient's co-operation. Prompt and persistent treatment is effective in nearly every case; but if such treatment is delayed or the doctor's orders are not carried out to the letter, the disease may become chronic and incurable —a danger not only to the patient himself but to the race.

**Gout.** A disease characterised by an excess of uric acid in the blood, the formation of chalky deposits in the joints and elsewhere in the body, and attacks of acute and very painful arthritis. Persons liable to this affection should avoid uric-acid-forming foods and drinks, especially red meat, sweetbreads, liver, tea, coffee, cocoa, malt liquors and strong wines. Their meals should always be moderate in amount, and they should take every day enough exercise to promote the digestion and assimilation of their food. Certain drugs, notably cinchophen, are useful for preventing attacks, but they should on no account be taken except in the manner prescribed by a doctor. Used correctly, they do a great deal of good, but they may, if taken in the wrong amounts, produce serious consequences.

**Graves' Disease.** (See Goitre.)

**Gumboil.** A swelling of the gums due to an abscess at the root of a tooth. To let the pus out, the offending tooth has to be extracted; painting the gums and taking medicine to relieve pain are helpful enough as temporary measures, but are useless in the long run.

**Gynæcology.** That branch of medicine that is concerned with the diseases peculiar to women, especially of the genital tract and the structures and glands connected with it.

**Hæmatemesis.** Vomiting of blood, a symptom that may appear in the course of a number of diseases, including gastric ulcer, cancer of the stomach, cirrhosis of the liver, and certain serious disorders of the blood.

**Hæmatoma.** A localised swelling containing fluid or clotted blood.

**Hæmaturia.** The discharge of blood-containing urine. This symptom may appear in the course of a number of diseases of the urinary tract, including inflammations, tumours and stone of the bladder or kidneys, enlargement of the prostate gland, and irritation of the membrane by certain drugs. Among the general diseases of which hæmaturia is an occasional symptom may be mentioned heart disease, anæmia and certain severe disorders of the blood. There is no one treatment for hæmaturia. The symptoms call for immediate diagnosis, and treatment has to be directed to removing the underlying cause.

**Hæmoglobin.** (See Anæmia.)

**Hæmophilia.** (See Bleeder.)

**Hæmoptysis.** Spitting of blood; hæmorrhage from some part of the respiratory tract, nearly always the lungs. This is a very serious symptom, and to take it lightly, as some patients do, may be suicidal. It is an interesting fact that many persons, who would never hesitate to consult a doctor on the appearance of some trivial symptom, will go on spitting blood for weeks and even months without mentioning the matter to a soul. They do not seek medical advice, because they are afraid of what they may hear; for, though they tell themselves that it really is nothing, just a little congestion of the throat that will soon clear up, in their hearts they know that they are almost certainly suffering from consumption and the blood is coming from the injured lung. It should be realised that early cases of consumption have an excellent chance of getting completely better, but that the longer treatment is delayed the more remote this chance becomes. There is, it must be admitted, the possibility that in any given case the blood does not come from the lungs at all, or, if it does, that the cause is some malady other than consumption, but these are matters that only a skilled diagnosis can settle. Hæmoptysis always needs skilled treatment, whatever its cause; and should the cause be consumption, then the sooner treatment is started the better the patient's chance of making a good recovery.

**Hæmorrhage.** Bleeding; a discharge of blood from the blood vessels.

**Hæmorrhoids.** (See Piles.)

**Hallucination.** (See Delusion.)

**Hammer Toe.** A claw-like deformity of the toe as a result of which the first joint sticks up, pressing against the upper leather of the shoe, while the tip of the toe or even the nail points straight downwards to the ground. In this condition abnormal pressure from the boot or shoe is exerted upon the root of the toe, the tip of the first joint and the tip or nail, and at these three joints corns are liable to develop and to cause pain and crippling. In early cases fitting proper shoes may arrest further development of the condition, but in the more advanced stages relief can never be obtained except by an operation.

**Harelip.** A congenital cleft in one or both lips, usually in the upper lip only. Surgeons prefer to operate in this condition when the infant is two to three months old, but if the harelip interferes with feeding they are forced sometimes to operate much earlier. There is not the slightest evidence for the popular belief that some startling experience of the mother's during her pregnancy is responsible for the appearance of this deformity.

**Headache.** This, like so many other common disorders, should not be regarded as a single disease for all cases of which the treatment is more or less the same, but as a symptom that may appear in the course of many diseases, some very severe indeed, others trivial and of short duration. Digestive disturbances of all kinds, including gastritis and constipation, eye-strain, anæmia,

the circulation in the blood of toxins derived from some focus of infection, fever, working in an impure atmosphere, diseases of the brain—these, among many other maladies and disorders, are causes of headache, and only by a medical examination of the patient can it be discovered which is responsible in any given case. So-called headache powders may give temporary relief, but once their effect has passed off the headache is almost certain to recur. Only by treating the cause can permanent benefit be obtained.

**Heart.** This muscular organ, which is situated in the chest between the lungs, is the great pump by the action of which the blood is circulated throughout the body. It consists of four chambers, known respectively as the right auricle, the right ventricle, the left auricle, and the left ventricle. The walls of the auricles are comparatively thin, those of the ventricles are thick, especially those of the left ventricle, which are three times as thick as those of the right. The chambers of the right side are completely shut off from those of the left by a partition, so that it is impossible, except in certain abnormal conditions, for blood to pass directly from one side of the heart to the other. Each auricle communicates freely with its corresponding ventricle, but between the two a system of valves is disposed in such a manner that blood can flow only from the auricle to the ventricle, and not in the opposite direction. Thus, blood can flow from the right auricle to the right ventricle, and from the left auricle to the left ventricle; but it cannot flow from either chamber of the right side into either chamber of the left, or *vice versa*. Leading into the right auricle are the two great veins, called the superior and inferior vena cava, through which blood is poured into the heart from all parts of the body. The right ventricle communicates with the pulmonary artery, from which, in turn, blood is conveyed to the great capillary networks that permeate the lungs. Blood is forced into this artery from the right ventricle at each heart-beat. The left auricle communicates with the pulmonary veins, through which blood, having been oxygenated, is returned from the lungs to the heart. The left ventricle leads directly to the aorta, the great arterial trunk along which oxygen-carrying blood is pumped to every organ, member and tissue of the body. The sequence of events at each heart-beat is as follows. First the two auricles contract together, this phase of heart action being known as auricular systole. As a result of their contraction blood is forced from the right auricle into the right ventricle, and from the left auricle into the left ventricle. Now follows the phase of ventricular systole, when both the ventricles contract, the right ventricle forcing blood into the pulmonary artery and the left into the aorta. The disposition of the valves between the auricles and the ventricles prevents the return of blood to the auricles during this phase of the heart-beat. Ventricular systole is followed by a relaxation of the heart, a phase of diastole in which the heart rests before going through the whole cycle of contractions all over again. This process—auricular systole, ventricular systole, diastole—is repeated incessantly so long as life persists. In a normal adult at rest it completes itself on an average 72 times a minute, each cycle of changes occupying about four-fifths of a second. The circulation of the blood is explained in the section bearing that title, and to some extent also in the sections entitled Aorta, Artery, Blood Pressure, Diastole, and Systole. This description of the circulation should serve to clarify the facts set out in those sections.

**Heartburn.** A burning sensation in the upper part of the gullet; a symptom of dyspepsia due to excessive secretion of hydrochloric acid in the stomach.

**Heart Failure.** The symptoms that result when from any cause—for example, weakness of the muscle, or incompetence of the valves—the heart becomes incapable of carrying out its task of maintaining the circulation of the blood. At first the patient may notice nothing wrong except that he becomes very short of breath on slight exertion; but as the failure of the heart progresses, dropsy and symptoms due to congestion of the lungs, liver and kidneys make their appearance. In its popular sense, the term heart failure denotes sudden and fatal cessation of the heart's action.

**Heliotherapy.** The treatment of disease by exposing the body, wholly or in part, to the sun's rays. These rays, by virtue of their invisible ultra-violet component, excite chemical changes as a result of which Vitamin *D* is generated in the skin, and the blood becomes richer in calcium and phosphorus, and more capable than it was before of destroying disease-producing germs. Heliotherapy is used extensively for the treatment of surgical tuberculosis, especially of the bones, glands, joints and abdomen, and of rickets, a disease in which the blood is grossly deficient in calcium and phosphorus. It is an error, however, to assume that because sun-bathing is beneficial it may be freely indulged in by all persons. No one who has suffered or has been suspected of suffering from tuberculosis should ever sun-bathe except under the orders of a doctor; and even persons in perfect health would do well to train their bodies very gradually to take full sun-baths, beginning by exposing only small areas for a few minutes and progressively increasing the extent and period of the exposure. Unless sun-bathing is attended and followed by feelings of exhilaration and well-being, it is better not persisted in. Blistering of the skin, a rise of temperature, headache, and a feeling of sickness are all warnings to stop that must on no account be ignored. Two rules worth remembering are, always to protect the head and neck while sun-bathing, and never to expose the body to the sun immediately after a meal.

**Hemiplegia.** Paralysis of one side of the body.

**Hepatic.** Pertaining to the liver.

**Hepatitis.** Inflammation of the liver.

**Heredity.** The transmission of qualities from parents or ancestors to their offspring.

**Hernia.** A rupture; the protrusion of an organ or of a portion of an organ through a breach in the wall of the cavity in which it is contained. An example will make this definition clear. At each groin there is a narrow canal that makes a communication in the male between the abdominal cavity and the scrotum, that is to say the pouch containing the testes. In certain circumstances a loop or knuckle of bowel may pass through this breach in the abdominal wall, sometimes forming a swelling in the groin, but occasionally getting as far as the scrotum itself. Such a protrusion is called a hernia—an inguinal hernia if the loop of bowel stops at the groin, a scrotal hernia if it reaches further down. The condition can be treated by means of a well-fitting truss, or by an operation. In the case of congenital hernia of children, the former method, if properly applied, usually brings about a complete cure.

**Herpes.** Shingles; an acute and extremely painful skin disease marked by an eruption of blisters, usually along the course of one of the skin nerves.

**Homœopathy.** A system of healing based on two assumptions; the first, that diseases may be cured by administering drugs which would produce the symptoms of these diseases in healthy persons; and the second, that the effect of drugs is enhanced when they are given in minute doses.

**Hormone.** (See Gland.)

**Hydrocephalus.** Water on the brain; a condition in which the fluid circulating through the brain and spinal cord is increased in amount and thus exerts an abnormal pressure on the brain substance and the cranium. The disease is marked by enlargement of the head, decay of the brain matter, mental disorders and convulsions.

**Hydrophobia.** Rabies; an infectious disease which is caught from animals, in this country usually dogs as the result of a bite. It is believed to be due to a virus present in the saliva of infected animals. The symptoms do not develop immediately after the bite; usually, in fact, a period of anything from one to six months may elapse before the patient begins to feel ill. Fever, restlessness, and swelling of the glands in the region of the bite are the first signs to appear, but these are soon followed by choking feelings and spasm of the muscles of the mouth and throat. These spasms are made worse if the patient tries to drink, or even if water is offered to him. The patient meanwhile becomes delirious and more feverish than ever, and behaves in a wild and maniacal manner. Death usually occurs in about five days. Thanks to the work of Pasteur, the great French scientist who died in 1895, hydro-

phobia can be prevented almost with certainty by inoculating persons who have been bitten by an infected animal with a series of injections of rabies vaccine. It is worth pointing out that every single person attacked by hydrophobia dies; the mortality, however, among inoculated persons is less than 1 in 200.

**Icterus.** (See **Jaundice.**)

**Ichthyosis.** Fish skin; a disease of the skin in which the surface is dry, rough and scaly.

**Ileum.** (See **Intestine.**)

**Immunity.** The power of the living organism to resist and overcome disease. From the moment of birth until death every living creature is subject to noxious influences, to stresses and strains, to the action of poisons and parasites, of chemical and physical agents, which, unresisted, would inevitably destroy it. But these noxious influences do not have everything their own way. In the course of evolution, living organisms have necessarily developed all kinds of expedients for defeating their enemies and overcoming attacks on their health and vitality. They have, in short, acquired what is known as resistance, and the sum-total of the mechanisms by which this resistance attains its ends is called immunity. Immunity may be congenital or acquired, partial or complete, active or passive. Some races and persons are born with a resistance to certain diseases; subjected to influences which would produce these diseases in susceptible persons, they remain unaffected; they have a *congenital* immunity. Where, however, this desirable state is lacking, an immunity can still be acquired. Persons who have suffered from certain infectious diseases appear to be insusceptible to a further attack; similarly, persons who have been inoculated with vaccines do not contract the diseases from the germs of which these vaccines have been made. They have, in short, an *acquired* immunity. When immunity exists or is developed in the organism's own cells, tissues or tissue fluids it is called *active*; when it depends not on these defences, but on defences conferred upon the organism by injecting it with serum obtained from an immune animal or person, it is called *passive*. Examples of active immunity are the protection afforded by one attack of measles against further attacks of the same disease, or by vaccination against small-pox; serum treatment of diphtheria or prevention of lockjaw, on the other hand, are examples of passive immunity.

**Impetigo.** A superficial inflammation of the skin marked by the eruption of isolated pustules and blisters, the contents of which form crusts, under cover of which healing takes place.

**Indigestion.** (See **Dyspepsia, Gastric Ulcer** and **Gastritis.**)

**Infantile Paralysis.** (See **Poliomyelitis.**)

**Infection.** Invasion of the body by disease-producing germs.

**Inflammation.** The changes that occur within living tissues when they are attacked by germs, heat, cold, poisons, or any other chemical or physical agents, provided that the injury produced by these agents is not so serious as to destroy the tissues at once. Inflammation should be regarded as one of the processes by which the living body mobilises its forces for the purpose of meeting and overcoming hostile influences. An arm invaded by germs, for example, is red, hot, swollen and painful; but these symptoms, admittedly unpleasant, are a sign that the body's defensive mechanisms are in full activity. The blood vessels in the tissues round the germs become dilated; extra blood, rich in substances capable of destroying germs, flows into the affected limb; great masses of cells wander out of the blood vessels and make a powerful counter-attack against the invader; and then, finally, the enemy being destroyed, all this activity subsides, the inflammation goes down and the arm is restored to its previous healthy state. The symptoms of inflammation can now be better understood. The redness and heat are due to the increased amount of blood; swelling occurs when blood fluid and cells leave the vessels and accumulate in the tissues, and pain results from the pressure exerted by the fluid and cells upon the nerves. The process does not end at this stage. In favourable cases healing is so complete that no trace of inflammation is left behind; in others some destruction of tissue takes place and the site of inflammation is ever after marked by the presence of a scar; and if the invader is too powerful or the resistance is low, suppuration and even gangrene may ensue. Besides the local signs, inflammation produces certain constitutional symptoms of greater or less severity. Chief among these are fever, wasting, loss of appetite, indigestion, constipation, and occasionally exhaustion and collapse.

**Influenza.** An acute infectious disease marked by fever, inflammation of the respiratory tract, and sometimes of the stomach and intestines, pains in the limbs, intense headache, prostration and depression. Opinions differ sharply about the causes of this disease. Various germs have been held responsible, one even having been named Bacillus influenzæ; but according to the most recent views all these germs play but a secondary part in the production of influenzal symptoms, the real culprit being a filterable virus —that is to say, one capable of passing through a filter that would stop the passage of ordinary germs. It is believed that the injection of a vaccine made from Bacillus influenzæ and other organisms found in infected patients confers sufficient protection to prevent an attack during an epidemic. Once an attack has developed the patient has no alternative but to take to his bed and stop there until all symptoms have disappeared and his temperature has been normal for some days.

**Inoculation.** (See **Immunity.**)

**Insomnia.** Inability to sleep. Attempts to procure relief from this symptom by taking sleep-producing drugs are likely only too often to produce dangerous consequences. Drugs do, in fact, play a very important part in the treatment of some cases of insomnia, but they must be taken only under medical direction and in exactly the prescribed doses. Sleeping may be regarded as in one sense a habit, which like other habits can be established or broken. It is well known, for example, that one night of insomnia is liable to be followed by another, and this by a third. In part, no doubt, the patient's anxiety about whether he will sleep or not is responsible for keeping him awake, but, whatever the cause, the longer the symptom is allowed to persist the more difficult it may be to cure. In such cases, judicious drug treatment produces immediate benefit. The habit of insomnia is broken, and after three or four nights the patient is capable once more of falling into a natural sleep. Between such drug treatment and self-medication with opiates continued for periods of weeks or months there is a world of difference. In the former case the patient is never given a chance of becoming dependent on the drug; in the latter, he loses completely his capacity for natural sleep, and has to take ever-increasing doses of drugs to produce the desired unconsciousness. It cannot be too strongly emphasised that if simple home remedies for insomnia fail, skilled advice should invariably be sought. A good firm mattress, a quiet, warm room, a hot-water bottle, a hot drink on retiring, warm but not too heavy bedclothes—these are conditions that may serve to cure insomnia of not too long standing. But if such common-sense methods fail, the remedy is to be sought not in the chemist's shop but in the doctor's consulting-room.

**Insulin.** The internal secretion of the pancreas specially prepared for injection into diabetic patients. Insulin, by increasing the ability of the tissues to use starchy food, lowers the amount of sugar in the blood and relieves all the symptoms of diabetes. (See **Diabetes.**)

**Intestine.** The bowel; that part of the alimentary tract which extends from the stomach to the anus. In appearance, the intestine is a long twisted tube of which the first portion, known as the small intestine, is narrow and about twenty feet long, and the second, known as the large intestine, is wider but only about five feet long. These measurements apply to the intestine of a normally formed, average-sized adult. The small intestine is further subdivided into the duodenum, the jejunum, and the ileum; and the large intestine into the cæcum, the colon, and the rectum. These subdivisions are not, it should be realised, sharply marked off from each other. Only an expert anatomist can say for certain where one leaves off and the other begins. The duodenum merges into the jejunum and the jejunum into the

ileum. But in their minute structure the different parts of the intestine differ from each other in important respects; certain glands are found only in the membrane lining the inside of the duodenum, certain agglomerations of lymphatic tissue only in the inner lining membrane of the ileum. These differences of structure correspond with differences of function, each subdivision of the intestine playing its own special part in the process of digestion.

**Iritis.** Inflammation of the iris, the circular membrane surrounding the pupil, and forming the coloured part of the eye. Injury, rheumatism, the venereal diseases, tuberculosis and other infections are capable of producing this condition, of which the chief symptoms are pain, congestion of the affected region, contraction of the pupil, and an abnormal intolerance to light.

**Irradiation.** Treatment by X-rays, ultra-violet rays, radium, or any other form of biologically active radiation. (See **Actinotherapy, Heliotherapy, X-rays,** and **Radium.**)

**Itch.** (See **Scabies.**)

**Jaundice.** Yellowness of the skin, eyes, mucous membranes and bodily secretions, due to the presence of bile pigments in the blood. Such a condition may be brought about in three ways: by the excessive destruction of red blood cells, such as occurs, for example, in pernicious anæmia, and results in the presence of bile pigment in the blood serum; by the destruction of liver cells, whether produced by chemical or bacterial poisons; and by obstruction from any cause of the flow of bile from the liver. Besides the characteristic jaundiced appearance, to which is given the name icterus, other symptoms due to excess of bile pigments in the blood are a slow pulse, itching, constipation, and the passage of highly coloured urine. The condition calls for immediate treatment.

**Jejunum.** (See **Intestine.**)

**Katabolism.** (See **Anabolism.**)

**Keratitis.** Inflammation of the cornea, the transparent horny structure that forms the front covering of the eyeball.

**Kidneys.** These two glandular organs are situated on either side of the spinal column in the region of the loins. In a man of average size each kidney is about four inches long, two inches wide and one inch thick; it weighs about 4½ ounces. On the side facing the spinal column is a notch called the hilum, communicating with which are the urinary duct (known as the ureter), and the arteries, veins and nerves of the kidney. The structure of the kidney is very complicated indeed; looked at under the microscope it is seen to consist of large numbers of tufted blood-vessels that come into intimate relationship with long twisted glands known as uriniferous tubules. These latter separate waste products and water from arterial blood that is pumped through the kidneys by the action of the heart; and the urine thus formed trickles into the ureter, by way of which it reaches the bladder.

**King's Evil.** Scrofula; tuberculosis of the lymphatic glands with the development of abscesses that eventually break through the skin and form long, sinuous ulcers. It was held in the past that patients affected by this condition could be cured by the royal touch; nowadays, good results are obtained by placing the patient in a healthy environment, feeding him well, and giving him sun-baths and tonics, supplementing this treatment in advanced cases by a slight surgical operation.

**Kyphosis.** Humpback; a condition in which the backbone sticks out prominently, usually in its upper part, the common causes being rickets, the habit, especially among rapidly growing children, of stooping, occupations that necessitate carrying heavy weights or continually bending over a desk or bench, and certain general and local diseases and injuries of the spine.

**Labour.** Childbirth; the process of bringing forth a child.

**Lactation.** Suckling; the secretion of milk by the breast. If all goes well, this secretion begins on the second or third day after labour, the quantity of milk gradually increasing as the days go by and being maintained at a sufficiently high level to meet the infant's needs during the following six to nine months.

**Lanugo.** The fine, soft hair covering the body of the fœtus.

**Laryngitis.** Inflammation of the larynx or organ of voice, a condition marked by hoarseness, cough, a dry and sore throat, and pain on swallowing. In its acute form, laryngitis arises from exactly the same causes as those that produce the common cold, and is indeed in many cases but an extension of that condition. It appears also as a complication of measles, and sometimes of other infectious fevers. Chronic laryngitis is in some cases a sequel to the acute form of disease, developing when treatment of the latter is not carried out properly. It results also from faulty voice production, especially in persons who are forced by their occupation to use their voice at full strength for long periods. Singers, schoolmasters, clergymen, costermongers, politicians and bookmakers constitute the great majority of such patients. Mouth-breathing and the presence of sepsis above the larynx, at the back of the nose, for example, are important contributory causes. In both acute and chronic laryngitis perhaps the most important part of the treatment is to give complete rest to the vocal cords. The practitioner will prescribe inhalations, sprays, and throat paints, and these will do much to bring about a cure; but their effect may be nullified if the patient does not keep complete silence during the acute stage, or talk as little and as quietly as possible when the disease is chronic.

**Leprosy.** A chronic infectious disease marked by the appearance of nodules on the skin, mucous membranes and nerve trunks. Most commonly affected are the face, the hands and feet, the mouth, the larynx and the nose. As they develop on the nerves, the nodules cause pain and sensations of tingling and burning, but later these symptoms give way to numbness and total loss of sensation. Great deformity and mutilation result from the ulceration of the nodules, the ulcers burrowing deeply into the tissues and even eroding bones and joints.

**Lesion.** Any wound, injury, or degeneration in an organ or tissue.

**Leucocytosis.** An increase in the number of white cells in the blood. Such a condition occurs normally during digestion, the number of white cells in each cubic millimetre of blood being greater after than before meals. It develops also in the course of various fevers, in inflammation, and in certain types of anæmia.

**Leucoplakia.** This name is given to white, thickened, horny patches that appear on the tongue as a result of chronic irritation, such as may be produced by excessive smoking or spirit drinking, syphilitic infection, or the pressure exerted by ill-fitting dental plates or a jagged tooth. Leucoplakia should on no account be taken lightly. It is a curable condition, but left untreated is liable to be followed by cancer.

**Leucorrhœa.** The whites; a whitish, sticky discharge from the womb.

**Leukæmia.** A rare disease in which there is an enormous increase in the number of white cells in the blood, together with a swelling and multiplication of lymph cells in the spleen, lymph glands, and bone marrow. As the disease progresses, hæmorrhages occur in all parts of the body, and the patient becomes more and more anæmic and exhausted. Recovery is not to be expected.

**Linctus.** A thick syrupy medicine to be taken by licking. Drugs given for the relief of cough are commonly prescribed in this way.

**Lipoma.** A benign tumour made up of fat cells.

**Liver.** A large glandular organ, dark red in colour, situated in the upper part of the abdomen, mainly on the right side. Its upper surface is dome-shaped and fits up against the diaphragm. Emerging from its under surface are two ducts by way of which bile manufactured in the liver can pass into the intestine; and closely applied to this surface is the gall bladder, which serves as a reservoir for any bile that happens to be formed when digestion is not going on. The liver receives a supply of blood from two sources: ordinary oxygen-carrying blood direct from the heart by way of a vessel called the hepatic artery; and blood loaded with the products of digestion from the intestine by way of a vessel called the portal vein. All its blood, however, is returned to the heart by way of the hepatic veins. Within the liver occur many of the processes that are essential to health and life; bile is manufactured, sugars are stored up in the form of animal starch or glycogen,

urea is separated from the products of protein digestion, and certain tissue poisons are destroyed.

**Lockjaw.** Tetanus; an acute disease of the nervous system caused by a poison derived from the tetanus bacillus, a germ that exists in soil, manure, garden mould and road dirt, and finds its way into wounds contaminated by these materials. The earliest symptom is stiffness of the jaw and of muscles in the throat and neck. Soon after, the jaw muscles become fixed and the patient is no longer able to open his mouth or to masticate food. The muscles of the back, chest, and abdomen are the next to become rigid, and now violent spasms of the muscles begin, which may reach such intensity as to arch the patient's back, distort the muscles of his face into hideous grimaces, and even fix his chest and so stop the act of breathing. Fortunately this dangerous disease can be prevented by at once injecting persons who have received deep, lacerated and contaminated wounds with an antitoxin prepared from the tetanus bacillus.

**Locomotor Ataxy.** (See Tabes.)

**Lordosis.** Abnormal curvature of the spine with a convexity towards the front.

**Lungs.** The organs of respiration, two large spongy organs that fill the greater part of the chest. They are made up of numerous very small air cells that are surrounded by a network of capillaries and communicate directly or indirectly with branches of the bronchial tubes. Air passing into the air-sacs by way of these tubes conveys oxygen to the blood circulating through the capillaries and from it receives the carbon dioxide that has formed in the tissues as a waste product. The effect of inspiration, therefore, is to charge the blood circulating through the lungs with a fresh supply of oxygen; the effect of expiration is to expel unwanted carbon dioxide from the system. Each lung is enveloped by a sac-like membrane called the pleura, the layers of which are in contact with each other, but covered with just enough lubricating fluid to enable the movements of expansion and retraction to be carried out freely and without pain. The right lung is made up of three lobes, the left of two. These lobes in their turn are formed from smaller structures called lobules, each of which consists of a collection of air sacs surrounded by capillaries, lymphatic vessels, nerves, and connective tissue, and communicates directly with a branch of a bronchial tube.

**Lupus.** A tubercular disease of the skin and mucous membranes, marked by the formation of yellowish or brownish-red nodules that gradually coalesce, forming a continuous patch of diseased tissue. Sun-baths or irradiation of the skin with the light from an arc-lamp bring about a remarkable improvement in this condition and often a complete and lasting cure.

**Lymphadenoma.** Hodgkin's disease; a disease marked by enlargement of the lymphatic glands, spleen, bone marrow, tonsils, and the lymphatic tissues throughout the body, together with a severe anæmia. The causes of this dangerous malady are as yet unknown; it seems in some respects to resemble infectious disorders of the glands, in others to resemble malignant disease. A great majority of the persons attacked are under forty, and men are twice as liable to the disease as women. The outlook is by no means good, but regular administration of arsenic and X-ray treatment do seem to benefit a certain number of cases.

**Malaria.** A kind of fever that was formerly believed to result from inhaling poisonous emanations from damp and marshy ground, but is now known to be due to a parasite which is conveyed to the body by the bite of an infected mosquito. The fever occasions paroxysms which tend to reappear every day, every other day, or every third day, according to the nature of the infecting parasite. The first symptom of a typical malarial attack is chill, this being followed by a stage of high fever and finally of sweating. If this sequence of events takes place every day, the disease is called *quotidian*; if every other day, it is called *tertian*; and if every third day, *quartan*. Malaria is further classified into two main varieties, a benign and a malignant—the former being unpleasant but rarely fatal, the latter having a fairly high mortality. In all types of the disease the treatment is by means of quinine, which is given usually by mouth, but sometimes by injection. Plasmoquine, a new drug, is said to be even more effective in destroying the parasites than quinine, and recent research suggests that persons living in malaria districts can protect themselves effectively against an attack by taking a small dose of this drug every day as a precautionary measure.

**Mania.** A symptom of insanity characterised by wild excitement, incessant activity, delusions, hallucinations and a tendency to perform acts of violence.

**Marasmus.** Progressive wasting in infants without any obvious cause.

**Mastitis.** Inflammation of the breast. Like other inflammations, this condition may be acute or chronic, the former occurring most commonly in recently confined women, probably as a result of an invasion of the breast by germs that have made their way through a cracked nipple, the latter in women at all ages, but especially in those at or near the change of life. Prompt efficient treatment is called for in all types of mastitis; especially in the type of disease called chronic interstitial mastitis, which is characterised by the formation of a nodular and often painful lump in the breast. This disease, if left alone, may seem to get no worse for years; but in all too many cases the mastitis gives place to cancer, and what was a curable condition becomes a menace that even a radical operation may not remove with certainty.

**Measles.** A contagious disease marked by fever, an eruption of pink spots, catarrh of the respiratory tract and inflammation of the eyes. It occurs in epidemics, attacking chiefly young persons, though very rarely infants under six months old. One attack seems to confer a lasting immunity, a fact which suggests that persons who have had measles possess in their blood substances that are able to neutralise the virus to which the disease is due. That such substances are indeed formed in response to an attack is proved by the fact, recently observed, that an injection of blood serum taken from a convalescent patient will cut short an attack and reduce the likelihood of dangerous complications. This expedient has also been used for preventing measles in children who have been in contact with a case; but by waiting until the disease has developed and then injecting the serum, it is possible to ensure both that the attack shall be slight and that an active immunity rendering the child insusceptible to a second attack shall have been conferred. (See Immunity.)

**Medulla Oblongata.** The cone-shaped portion of the central nervous system that is continuous with the spinal cord below and the pons above. The nerve centres that determine and control the movements of the heart, lungs, and the walls of blood-vessels, and such physiologically important acts as swallowing, vomiting, and glandular secretion are all situated within or closely connected with this small nervous structure, which may well be regarded as the headquarters from which the essential functions of life are regulated. (See Pons and Spinal Column.)

**Meningitis.** Inflammation of the membranes that envelop the brain and spinal cord. The acute form of this serious disease, which may be due to tuberculosis or infection by other disease-producing organisms, especially such organisms as may reach the brain by extension from an inflamed ear or other neighbouring organ, is marked by high fever, chills, intense headache, vomiting, delirium, abnormal intolerance to light, and such symptoms as spasms and paralysis of groups of muscles which are due to irritation of the nerve cells on the surface of the brain. Epidemic cerebrospinal meningitis, known commonly as spotted fever, occurs in epidemics and seems to be transmitted to susceptible persons by healthy carriers. (See Carriers.) Experience in the late war showed that cases of the disease appeared when troops were crowded together in barrack-rooms, and could be prevented by the simple expedient of increasing the distance between beds, and thus, as it were, lowering the concentration of carriers within a given area.

**Menopause.** (See Change of Life.)

**Menorrhagia.** Excessive loss during the menstrual period, a condition that should never be left to get better by itself, for the good reason that

it scarcely ever does so. An unhealthy condition of the lining membrane of the womb, a fibroid growth, an abnormality in the internal secretions manufactured by the ovaries—these are but a random sample of the conditions that may be found to underlie cases of menorrhagia and to need prompt and skilled treatment.

**Menstruation.** The monthly discharge from the womb that begins at puberty and goes on till the change of life.

**Metabolism.** (See **Anabolism.**)

**Metritis.** Inflammation of the womb.

**Micturition.** The act of passing urine.

**Miscarriage.** Expulsion of the fœtus before the 28th week of pregnancy. (See **Abortion.**)

**Mucous Membrane.** A thin layer of tissue lining those tracts and cavities of the body that communicate with the external air—for example, the respiratory tract, the stomach, the bowel, and the urinary tract—and secreting a sticky fluid called mucus that serves to protect it.

**Mumps.** A contagious disease marked by swelling of the large salivary glands in front of the ears, and sometimes of other glands too, notably the salivary glands in the mouth, the testes, and the breasts. While it lasts the condition is extremely painful, but fortunately the symptoms subside after a few days and gradually disappear. One attack confers immunity, mumps in this respect resembling measles, small-pox, and other diseases due to an invasion of the body by a minute virus. Children and young adults, being highly susceptible to attack, should keep well away from infected persons, especially as there is always a risk that the disease may involve and produce permanent degeneration in the sexual glands.

**Myocarditis.** Inflammation of the heart muscle, a condition that occurs acutely in the course of rheumatic fever, and in a chronic form, leading to progressive degeneration of the muscular tissue, as a result of alcoholism, syphilis, Bright's disease, high blood pressure, chronic bronchitis and emphysema. The symptoms are described in the section on Heart Failure.

**Myxœdema.** One of the conditions due to degeneration of the thyroid gland and deficiency of its internal secretion, thyroxin, in the blood. The human body requires so much thyroid secretion, no more and no less, to keep it in good health. If, as is described in the section on Graves' Disease, the amount is excessive, a dangerous illness marked by fever, wasting and nervous symptoms results, if it is deficient the result depends on the age at which the deficiency appears. In adults it produces myxœdema; in infants, cretinism. Myxœdema is commonest in middle-aged persons. The patient's skin becomes thickened, puffy and dry; his hands and feet become broad and "spade-like"; his hair falls out; mentally he becomes dull and apathetic, and his movements become sluggish and languid. Regular treatment by means of thyroid gland tablets produces great benefit, but the dose of gland substance must be carefully regulated by a practitioner, lest the patient, by taking too much, should in curing the myxœdema develop symptoms of Graves' disease. (See **Cretinism.**)

**Nævus.** (See **Birth-mark.**)

**Narcolepsy.** A rare condition in which the patient is seized at intervals with an uncontrollable desire for sleep. Persons suffering from narcolepsy should follow occupations in which an attack would not subject them or others to danger; they must not, for example, take employment as chauffeurs.

**Narcotic.** Any drug or treatment given to induce sleep or stupor and to relieve pain.

**Necrosis.** The death of a limited portion of tissue, such as occurs, for example, when an organ or a part of an organ is deprived of its blood supply. The term has a very wide application and covers conditions in which the death of tissue results from infections, heat and cold, poisoning, and the action of other chemical and physical agents.

**Negativism.** This term is applied to the mental state of persons who feel a compulsion to do just the opposite of what is asked or expected of them. In its extreme form it leads to the patient's resisting even his own desires, denying himself food, for example, or refusing, despite great discomfort, to empty his bowel. Children against whom authority has been harshly or inconsistently exercised are very liable to develop negativistic traits, and parents would do well, when they observe such symptoms in their children, to consider whether their own behaviour rather than original sin may not be the underlying cause.

**Neoplasm.** Any abnormal new growth or formation of tissue. Thus, cancer is a neoplasm, and so is an adenoma; the former is of the kind called malignant; the latter, benign.

**Nephritis.** Inflammation of the kidney. The acute form of this disease is described in the section on Bright's Disease. A chronic form, called chronic interstitial nephritis, is extremely common, especially in persons who have at some time been attacked by the acute disease or poisoned by alcohol or lead, or have suffered from gout. The patient becomes progressively weaker; he suffers from headaches, shortness of breath, dizziness and diarrhœa, and passes copious amounts of light-coloured urine. The need to empty the bladder may wake him from his sleep once, twice, or even more often every night. In all cases, the arteries degenerate, the blood pressure is raised above the normal level, and the heart enlarges. Skilled medical treatment and a hygienic mode of life can do much to mitigate the symptoms of chronic interstitial nephritis, but a cure is not to be expected.

**Nerve.** In ordinary everyday speech this term is used very loosely. To say that a person has "nerve" is to imply that he is firm and courageous; but if the word is used in the plural, and it is said he has "nerves," then the suggestion is that he is emotional, jumpy, easily frightened, and liable to attacks of hysteria. Medical writers have added to the confusion by using the terms "nerves" and "nervous" in two distinct senses. By nervous illness they mean both illness that has no organic basis, and illness that is due to an abnormality of the nervous system. Strictly the term should be applied only to the latter, an illness of the former kind being more precisely classified as "functional" or "mental." The nervous system consists of two parts—the central nervous system made up of the brain and the spinal cord, and the peripheral nervous system made up of the nerves. These are cord-like structures that convey impulses to and from the central nervous system. In the section on the brain it is explained that this organ may be regarded as an enormous telephone exchange; sustaining this analogy, the nerves are the telegraph wires along which messages are transmitted to and from the exchange. There is a difference, however: a telegraph wire is a two-way line, for messages can be sent along it in either direction; but each nerve fibre serves as a one-way line only, for it will either conduct messages from the periphery towards the central nervous system, or the other way about; it will not do both. Nerves that carry impulses towards the nerve centres are called "afferent" nerves; those that carry impulses from the centres are called "efferent." Take a simple case: the hand touches a hot object, and almost instantly the brain registers the sensation "heat"; an impulse has been carried along afferent nerves that extend from the surface of the body to the brain. Now an entirely fresh set of nerves is brought into action, for *from* the brain the message is sent along the efferent nerves that supply the muscles of the arm, "Contract at once and draw the hand away." This example of the conduction of nervous impulses is also given in the section on the brain, but it is repeated here in order to make clear the part played in the process by the afferent and the efferent nerves.

**Nettle-rash.** (See **Urticaria.**)

**Neuralgia.** Pain felt along the course of a nerve, the term being applied somewhat loosely to any severe throbbing pain for which no organic cause can be found. In many cases of facial neuralgia, however, an organic cause is obviously present, namely, an inflamed tooth; similarly in neuralgia of the chest the cause sometimes lies in the pressure of an inflamed spine on the nerves as they emerge from the spinal cord.

**Neuritis.** Inflammation of a nerve or of nerves, a condition marked by pain and tenderness along the course of the nerve trunks, paralysis and wasting of muscles, and numbness, tingling and other disturbances of sensation. Diabetes, diph-

theria, gout, alcoholism, and poisoning by arsenic or lead are among the conditions that may in some cases give rise to neuritis. Treatment is directed to removing the underlying cause, but massage, electrical treatment, exercise, splinting, and pain-relieving drugs are prescribed for the purpose of mitigating the symptoms and the effects of the neuritis while a more radical treatment is being applied.

**Noma.** A severe gangrenous inflammation of the mouth that affects debilitated ill-cared-for infants. It is usually fatal.

**Nullipara.** A woman who has never borne children.

**Nystagmus.** Involuntary jerking movements of the eyes that occur occasionally as a congenital condition, but more usually in association with some organic disease of the nervous system. The condition is specially liable to attack coal-miners and other persons who have to do long stretches of fatiguing work in an insufficient light. The movements may be slow or fast, sideways or rotatory, coarse or fine.

**Obesity.** Excessive fatness. The difficulty is to define the term "excessive," for physiology and fashion do not always set the same standard. Physiologically speaking, fatness is excessive if it interferes with the healthy functioning of the body; if it causes lethargy, shortness of breath and palpitation, reduces the resistance to infections, or predisposes to diabetes. Fashion takes no account of these criteria; at one period a rounded, opulent figure may be in favour, at another a slender boyish form; and many people, women usually, without any regard to the effect on their health, will gorge themselves with food or starve to attain the one or the other. It should be realised that so-called reducing diets, unless taken under the supervision of the medical practitioner, may seriously endanger health. They are, almost without exception, deficient in vitamin D and in calcium, and the absence of these food constituents from what is in any case an insufficient diet, may lower the resistance to tubercular infections. Some cases of obesity, moreover, are hardly affected by a low diet, the cause of the condition lying in an abnormality of one or more of the internal secretions of the body, usually those of the thyroid, pituitary and sexual glands. Just as some people with enormous appetites remain thin despite what would seem to be over-eating, others remain fat no matter how rigidly they diet themselves. The treatment of obesity must in every case be preceded by expert diagnosis; if the cause is dietectic, then alteration in the diet will cure it; but if the fault lies in the internal secretions, then only treatment that is directed to regulating these can possibly be effective.

**Obstetrics.** Midwifery; the branch of medicine that deals with the management of pregnancy and child-bearing.

**Œdema.** Dropsy; swelling due to the accumulation of fluid in the body tissues. (See **Dropsy.**)

**Oophoritis.** Inflammation of an ovary.

**Ophthalmia.** Severe inflammation of the eye. Perhaps the most important cases of this disease are those that occur in infants born of mothers suffering from gonorrhœa, the infection being contracted as the infant's head passes through the maternal passages. One in every five cases of blindness among children is due to this cause; but a great diminution in this number may be expected to result from the multiplication of antenatal clinics in which expectant mothers may get whatever treatment is suited to their medical condition, and from the scrupulous disinfection of all infants' eyes by the doctors and midwives conducting cases of labour. (See **Conjunctivitis.**)

**Orchitis.** Inflammation of a testicle, a condition that may arise as a result of injury, or in the course of mumps, typhoid or other fevers, or by an extension of a gonorrhœal or tuberculous infection located in an appendage of the testicle.

**Orthopædics.** The branch of surgery that deals with the prevention and correction of deformities and the treatment of diseases and injuries of the bones and joints.

**Osteitis.** Inflammation of a bone, a condition marked by enlargement, tenderness and pain at the site of the lesion.

**Osteomalacia.** A rare disease marked by softening, bending, and fracture of the bones, rheumatic pains, progressive weakness, and ultimately death from exhaustion. The condition occurs far more frequently in women than in men, pregnancy being a common antecedent. Treatment is unsatisfactory, but there is reason to believe that osteomalacia could be prevented by including a sufficiency of Vitamin D and calcium-containing foods in the diet of pregnant women.

**Osteomyelitis.** Inflammation of the bone marrow and of the bone surrounding it, a condition due in its acute form to infection by pus-producing organisms, and frequently arising as a complication of measles, scarlatina or some other fever; and in its chronic form resulting from injury, rheumatism or infection by the germs of syphilis or tuberculosis. The disease is attended by fever and severe pain, tenderness and swelling in the affected region. In all cases skilled treatment, usually by surgical operation, has to be applied without delay.

**Otitis.** Inflammation of the ear, called otitis externa, media, or interna, according to whether the outer, middle, or inner ear is the part affected. The outer ear infection is comparatively unimportant. It includes such conditions as eczema, boils and other inflammations which give little trouble if treated promptly. Otitis media, inflammation of the middle ear, is both common and dangerous. It affects chiefly young children, appearing in most cases as a complication of a common cold or of such severer ailments as tonsillitis, measles and scarlet fever. Earache and deafness, the most prominent symptoms, should be regarded as urgent danger signals. Medical treatment applied without delay may cause the otitis to subside completely, without any need for operative treatment. But if valuable time is lost in trying home remedies it is practically certain that the ear-drum will burst, or, what is worse, that the infection will spread from the middle ear to the mastoid bone or to the brain, producing dangerous complications that cannot be dealt with except by a major surgical operation. Even if medical advice is sought at the very onset of the symptoms, the practitioner may find it necessary to let out matter that has accumulated in the middle ear by piercing the ear-drum. Inflammation of the inner ear, a condition that usually arises from the extension of a middle-ear infection, produces characteristic symptoms, of which the most prominent are giddiness, a tendency of the patient to fall towards the affected side, vomiting, and jerky movements of the eyeballs. (See **Earache.**)

**Otorrhœa.** Running ear; a discharge of pus through the ear-drum. The condition is a fairly common sequel to acute middle-ear inflammation, and needs careful and persistent medical treatment. (See **Otitis.**)

**Pædiatrics.** That branch of medicine which is concerned with the diseases of children.

**Palpitation.** Rapid action of the heart. Exertion, excitement, a raised temperature, Graves' disease and anæmia are a few of the conditions that may cause this symptom, which only exceptionally is indicative of heart disease.

**Palsy.** Paralysis; loss of power or sensation in any part of the body. Facial paralysis is called "Bell's palsy"; an old-fashioned name for writer's cramp is "Scrivener's palsy"; and paralysis agitans, a progressive disease marked by muscular weakness, tremors, a hurried gait, and characteristic movements of the limbs, is also known as "shaking palsy."

**Pancreatitis.** Inflammation of the pancreas, a long gland that secretes digestive ferments which pass through a duct into the bowel, and a hormone called insulin that enables the tissues of the body to utilise sugar and starchy foods. (See also **Endocrine** and **Insulin.**) Pancreatitis, which is usually fatal, is attended by severe pain, distension of the abdomen, and vomiting.

**Pandemic.** A widely spread epidemic. (See **Epidemic.**)

**Pannus.** A red, fleshy, membrane-like covering that forms over the eyeball in the course of the chronic infection known as trachoma.

**Papilloma.** Any non-malignant growth of the skin or mucous membranes in which the lining cells cover nipple-shaped elevations or ridges of the underlying tissues. Thus, a wart is a papilloma of the skin, and polypi are papillomatous growths of mucous membranes and internal organs.

**Papule.** A pimple; a small solid elevation of the skin.

**Paralysis.** Loss of the power of motion, or of feeling in any part of the body. Such a condition may be due to a disease of the body—for example, of the nerves or muscles—or to a disease of the mind. In the former case the paralysis is called organic; in the latter, functional. Organic paralysis may arise from disease of the brain, spinal cord, nerve trunks or muscles. In all these cases either the muscle itself is so injured that it loses the power of movement, or the nerve-connections are so interfered with that messages from those parts of the brain that control movement are unable to pass. By examining the type of paralysis, whether, for example, the affected limbs are flabby or firm, or have wasted away or not, the practitioner is able to discover the exact site of the underlying trouble, whether it is in the brain itself, or in the spinal cord, or the nerve trunks, or the muscles. Functional paralysis occurs in hysteria and other non-organic nervous disorders. In such cases there is no bodily disease or injury to account for the loss of power or of feeling, but a careful examination of the patient's mind, a kind of mental analysis, often reveals some unconscious wish or wishes that have found their gratification in this inconvenient way. Thus, shell-shock was often complicated by a functional paralysis, the effect of which was to get the sufferer out of the firing line. The soldier had, so to speak, successfully fought down the wish to be back in some place of safety, but the repressed wish had lost none of its force; it had realised its purpose by making the soldier unfit for service. Psychological treatment is often effective in curing a functional paralysis; organic paralysis may or may not be curable; it depends on the underlying cause, and for this reason a careful diagnosis must precede treatment in every case.

**Paraplegia.** Paralysis of the legs and the lower part of the body. This condition, which is marked both by loss of sensation and of power of motion in the region affected, may result from, among other conditions, disease and injury of the spine, locomotor ataxia, neuritis due to chronic alcoholism, and disease of the brain.

**Parasite.** A plant or animal that lives on or within some other living organism at the expense of which it obtains nourishment or some other advantage without giving any benefit in return. A typical example of a parasite is the tapeworm which infests and grows at the expense of the animal—called "the host"—into whose body it finds its way.

**Parathyroid Glands.** Although, as their name denotes, these small glands are situated very close to the thyroid gland, they are not directly connected with it in any other way. It is true that, like the thyroid, they are glands of internal secretion, that is to say, they manufacture a physiologically active chemical substance that is poured straight into the blood stream; but this chemical substance—called parathyroid hormone—differs entirely from thyroxin, the chemical secreted by the thyroid gland. Parathyroid hormone is responsible for maintaining the amount of calcium in the blood at a healthy level. If the parathyroid glands are extirpated by operation the blood calcium falls; if, on the other hand, an extract of parathyroid hormone is injected the amount of calcium in the blood is increased. A marked fall in the blood calcium is generally fatal, death being preceded by tremor, cramps and convulsions; the condition may be relieved, however, if parathyroid hormone or calcium salts are injected in time.

**Paratyphoid.** (See **Typhoid Fever.**)

**Paresis.** Slight or incomplete paralysis

**Paronychia.** Infection or abscess of the tissues at the base of a nail. The condition is fairly common among doctors and nurses, for these have often to handle infected material in the ordinary course of their work. In the early stages, treatment by hot fomentations and a small incision to let out pus may suffice to bring about a cure; but in more advanced cases fairly extensive incisions may be necessary.

**Parotitis.** Inflammation of the parotid gland, a large salivary gland situated near the ear. (See **Mumps.**)

**Parturition.** The act of giving birth to a child.

**Pasteurisation.** A method of arresting fermentation in beer, milk and other fluids by heating to a temperature of 140° F. for about half an hour.

**Pathology.** The branch of medicine that deals with the essential nature of disease, especially with the changes of structure that correspond with or underlie departures from health.

**Pediculosis.** Lousiness; a skin disease produced by lice.

**Pellagra.** A serious disease, very rare in this country, but occurring not infrequently in the United States of America and in Southern Europe, which is marked by the appearance of a severe rash, shedding of the skin, weakness, pain, convulsions, and grave mental disorders. It appears only in persons who have had to live for long periods on a diet deficient in Vitamin B, and for this reason is classed with rickets, beri-beri and scurvy, as a deficiency disease. (See **Vitamins.**)

**Pelvis.** The hip bones; the large basin-shaped bony ring that is situated at the lower end of the abdomen and supports the spinal column. Connected with the pelvis on each side and forming the hip joints are the thigh-bones, and contained within it are the organs of generation, the urinary bladder, a portion of the large intestine, and the rectum.

**Pemphigus.** A skin disease marked by the formation of large watery blisters. It occurs sometimes in new-born infants and is believed then to be due to infection by a germ.

**Pepsin.** The ferment of the gastric juice that changes the proteins contained in the food to simpler chemicals known as proteoses and peptones.

**Pericarditis.** Inflammation of the pericardium, the thin sac that contains the heart. This disease, which may arise as a complication of rheumatic fever, Bright's disease, pneumonia, tuberculosis and other infections, is marked by pain in the region of the heart, fever, cough, and shortness of breath. Fluid accumulates in the pericardium, but, as the patient's condition improves, is gradually absorbed. Cases in which this fluid forms in excessive amounts or becomes purulent have to be treated by surgical measures.

**Perineum.** The region between the anus and the genital organs.

**Periostitis.** Inflammation of the periosteum, the tough network of cells and fibres that form the outer lining of bone. In its acute form, periostitis, which is invariably due to a germ infection, is marked by great pain and tenderness, high fever, and the formation of pus along the surface of the affected bone. The symptoms of chronic periostitis, a more common disease, are swelling of the bone and thus of the overlying tissues, and an aching pain which is often at its worst at night.

**Peristalsis.** The wave of contraction that passes along the stomach and bowel whereby their contents are propelled towards the rectum.

**Peritonitis.** Inflammation of the peritoneum, which is the name given to the strong, smooth, shining membrane that lines the inner walls of the abdomen and covers, more or less completely, the organs therein contained. The symptoms of such an inflammation are severe abdominal pain and tenderness, constipation, vomiting and fever; its causes are many and include infections derived from the alimentary canal, as, for example, from an inflamed appendix, invasion by the tubercle bacillus, gonococcus, pneumococcus, or other germs, and perforating, infected wounds of the abdomen. Whatever may be the cause, the condition is serious and needs prompt treatment, which, according to the necessities of the case, may be medical or surgical.

**Pernicious Anæmia.** (See **Anæmia.**)

**Pertussis.** (See **Whooping Cough.**)

**Petit Mal.** (See **Epilepsy.**)

**Pharmacopœia.** A book containing a description of products used in medicine, with details of how these should be prepared, identified, and compounded in prescriptions, and of the doses in which they may be administered to patients. The authoritative work on this subject used in these islands is the British Pharmacopœia, which is periodically revised and brought up-to-date by a committee of the General Medical Council.

**Pharyngitis.** Inflammation of the pharynx, which is the name given to the cavity lying behind the nose and the mouth and forming the upper part of the gullet. Acute pharyngitis

occurs in the course of a common cold and is marked by fever, pain in the throat, especially on swallowing, a feeling of dryness, and sometimes an irritable cough. The condition may become chronic as a result of frequently repeated acute attacks; but infection of the pharynx by the germs of tuberculosis or syphilis may cause a pharyngitis that is chronic from the start.

**Phimosis.** Excessive tightness of the foreskin.

**Phlebitis.** Inflammation of a vein, a condition that may arise as a complication of varicose veins, gout and rheumatism; or as a result of infection of the surrounding tissues; or from an invasion by germs, such as may occur during the lying-in period or the period of convalescence from a surgical operation. It is marked by the formation of blood-clot in the vein, and pain, redness, swelling and sometimes a "*knotty*" feeling of the overlying tissues. Very careful treatment is required, and the affected limb must be kept at complete rest to avert the disaster that might result from a separation of the clot. (See **Embolism.**)

**Photophobia.** An abnormal intolerance of light; inability to keep the eyes open except in darkness or a dim light.

**Phthisis.** Wasting of the body; more commonly, a term applied to tuberculosis of the lungs, a disease in which such wasting is a prominent symptom. (See **Tuberculosis.**)

**Physiology.** The science which treats of the functions of the living organism and of its members, organs, and tissues.

**Piles.** These swellings, known also as hæmorrhoids, consist of distended, varicose veins in the lower part of the rectum and surrounding the region of the anus. Any condition that hinders the return of blood from these parts, by pressing on the veins, for example, will predispose to the formation of piles, constipation and pregnancy being thus among the most prominent causes. Congestion of the liver and the conditions described in the section on Cirrhosis have a similar effect, these in their turn arising commonly from alcoholic excess and a sedentary life. External piles, that is to say, piles that form at the outer edge of the anus, cause a certain amount of itching, but may, as a result of inflammation, become extremely painful and tender. Piles formed in the wall of the rectum itself, so-called *internal* piles, may at first give rise to no symptoms, though usually their presence is marked by a sense of weight in the rectum and a little pain on emptying the bowel. At a later stage bleeding from such piles is almost bound to occur, occasionally in an amount sufficient to cause anæmia. Mild cases of piles may be treated effectively by simple hygienic measures aimed at relieving the congestion in the veins, by regulating the bowels, for example, and encouraging the patient to take regular exercise. More serious cases need operative treatment, though in a certain proportion of these, simple injection of a suitable fluid into the piles may suffice to bring about a cure.

**Pituitary Body.** A small rounded glandular organ situated at and connected with the base of the brain and fitting into a depression in the floor of the skull. It consists of two lobes, a front and a back, both of which manufacture hormones, those of the former regulating bodily growth and the development of the sexual organs, and of the latter raising the blood pressure and causing contraction of the muscles of the intestine and womb. Over-action of the hormones regulating growth produces the conditions described in the section on Acromegaly; removal of the lobe that manufactures these hormones causes stunted growth and arrest of sexual development. Pituitrin, an extract of the other lobe, is used in midwifery to promote contraction of the womb, and in medical and surgical practice to stimulate the bowel.

**Pityriasis.** A name applied to various skin diseases which, though differing from each other in origin and course, are all marked by the formation of branny scales.

**Placenta.** The structure by means of which the circulatory system of the unborn infant is connected with that of the mother.

**Plague.** Pestilence; a term formerly applied to any severe epidemic, but now confined to a serious and usually fatal disease caused by a germ known as Bacillus pestis. Outbreaks of plague occur not only among human beings but among rats and reptiles, the disease being spread in part by the bites of fleas that have acquired the germ from plague-infested rats. Apart from high fever, intense headache, and great prostration, the chief characteristic of plague is in the formation of swellings, called buboes, of the lymphatic glands; and from these it derives the name by which it is now generally known—bubonic plague. The methods used nowadays for the treatment of plague are admittedly not very effective; the best results are obtained by preventive measures, as, for example, the systematic extermination of plague rats, and the inoculation, by means of a special vaccine, of populations in plague-ridden areas.

**Plasma.** The fluid portion of the blood composed of serum and a soluble protein called fibrinogen which in suitable conditions forms blood-clot.

**Pleurisy.** Inflammation of the pleura, the tough, smooth, shining membrane that lines the lungs and the inner wall of the chest. In every case it is a result of an invasion by germs; even those cases which occur in apparently healthy persons and are usually attributed to cold have been found to be due to an infection—indeed, only too commonly to an infection by the tubercle bacillus. Often inflammation of the pleura complicates other diseases, notably pneumonia, measles, rheumatic fever, scarlet fever, pulmonary tuberculosis, influenza and Bright's disease; but whatever its cause it seems to start invariably as so-called "dry pleurisy," passing from this in many cases to a condition known as "pleurisy with effusion." The most prominent symptom in the first stage is a sharp stabbing pain in the chest, a kind of stitch, that is made worse by deep breathing or coughing; but it should be realised that such a pain is not necessarily due to inflammation of the pleura. It is one of the problems of diagnosis to distinguish between true pleurisy and a condition called pleurodynia, of which a stabbing pain in the chest is also a symptom. In the second stage the fever and dry cough, characteristic of the first stage, persist, but the pain passes off as the surfaces of the pleura are separated from each other by the liquid effusion. The condition needs most careful treatment; it presents difficult problems, such as whether to tap the effusion or not, and for this reason the frequent attendance of a practitioner is required in every case. Even when the pleurisy itself is better, prolonged rest in the country or even in a sanatorium may be necessary to prevent the development of pulmonary tuberculosis—a very frequent sequel to pleurisy, even when the disease has taken an apparently mild course.

**Pneumonia.** Inflammation of the lungs, a condition of which there are two typical forms: lobar pneumonia, an infection involving large portions of lung at a time, and broncho-pneumonia, in which small infected patches are surrounded by areas of more or less healthy lung. Lobar pneumonia is a *specific* infection; it has a definite cause—namely, invasion of the lung substance by a germ called the pneumococcus, and its onset, duration and outcome are all pretty characteristic. In practically all cases, the disease starts with a shivering attack, attended or followed by a sharp rise of temperature, pain in the side, shortness of breath with an increase in the rate of breathing, cough, and the expectoration of rusty-coloured phlegm. After a few days, during which these symptoms remain unchanged or increase in severity, there comes, though not in every case, the crisis; in the course of a few hours the temperature, pulse-rate and rate of breathing fall to nearly normal, and the patient, who has been very ill indeed and perhaps delirious, suddenly feels almost well again. In fatal cases fever increases about this time, the breathing becomes even more laboured and the patient passes into a state of muttering coma. Unlike lobar pneumonia, which affects mainly young adults, broncho-pneumonia is essentially a disease of very young children and of aged persons. Moreover, it is an illness that has a variety of causes, of which invasion of the lung by the pneumococcus is a comparatively uncommon one. In most cases it appears as a complication of measles, whooping-cough, influenza, bronchitis, or scarlatina, especially when these diseases attack young, debilitated, under-nourished children. In elderly

persons broncho-pneumonia is liable to occur at the end of any long-continued wasting illness, and in such cases it not unusually ushers in the end. Whether it occurs in infants or the aged, this disease has none of the definite course that characterises lobar pneumonia. It may last for a week or for a month; it may get better quickly or very gradually; in any case it has no crisis, and the temperature, pulse-rate and rate of respiration fall, when they do, irregularly, the patient having several ups and downs before recovering finally. Both lobar pneumonia and broncho-pneumonia are very serious illnesses to which medical care and good nursing may make all the difference between death and complete cure.

**Pneumothorax.** An accumulation of air or other gas in the pleural cavity. Such a condition may arise as a result of disease of the lung, as, for example, the rupture of superficial air cells, or as a complication of a chest wound; or it may be induced deliberately, being then called artificial pneumothorax, as part of the treatment of lung disease, especially of pulmonary tuberculosis.

**Poliomyelitis.** Inflammation of the grey matter of the spinal cord. Acute anterior poliomyelitis—or, as it is commonly called, infantile paralysis—derives its name from the fact that it is a disease of sudden onset due to an infection of the front portion of the spinal grey matter. The infecting agent belongs to the class known as filterable viruses; it is, that is to say, so small that it can pass readily through the pores of a porcelain filter; and the affected grey matter is composed mainly of nerves that transmit impulses to muscles. The disease starts with high fever, and very soon groups of muscles become paralysed and wasted, permanent deformities usually ensuing, unless a complete recovery takes place. In most cases treatment is of necessity prolonged. First, during the acute stage, it aims at limiting the amount of damage, treatment by a special serum being sometimes very effective to this end; later, the aim of treatment is to prevent as far as possible the development of deformity, to re-educate the paralysed muscles, and to train muscle groups that have escaped to take over the tasks that the affected muscles are no longer able to carry out.

**Polyarthritis.** Inflammation of several joints at the same time.

**Polycythæmia.** Excess in the number of red corpuscles in the blood. Such a condition may be quite normal, as in persons living at a high altitude, or it may result from any disease of the heart or lungs that causes oxygen want; in such cases, polycythæmia, by multiplying the number of hæmoglobin carriers, compensates for the inability of the heart and lungs to carry sufficient oxygen to the tissues. (See Blood.) Very rarely, polycythæmia is due to a primary disease of the blood-forming organs.

**Polypus.** A growth arising from the surface of a mucous membrane and attached to it by a narrow stalk-like process of this membrane. Polypi may be true tumours or they may be simply outgrowths of mucous membrane formed as a result of inflammation. Among the organs that are occasionally the seats of polypoid growths are the nose, womb, intestine and bladder.

**Polyuria.** Excessive secretion and discharge of urine, a condition met with in several diseases, notably in diabetes, a rare disease called diabetes insipidus, and chronic Bright's disease; and sometimes also in healthy persons as a result of great and protracted excitement or other emotional strain.

**Pons.** The part of the central nervous system which serves as a bridge connecting the cerebrum, cerebellum, and medulla oblongata, all terms that are explained under the appropriate headings.

**Pregnancy.** The condition of being with child.

**Primipara.** A woman who has given or is about to give birth to her first child.

**Prognosis.** The act of forecasting the probable result of an illness; the term is applied also to the forecast itself.

**Prolapse.** The falling down or sinking of some organ of the body from the position that it usually occupies.

**Prophylaxis.** The prevention of disease; the term is applied to preventive treatment in general. Measures and remedies adopted to this end are called prophylactics.

**Prostate.** The gland which in the male is situated at the base of the bladder, and surrounds the upper portion of the duct, called the urethra, through which urine and seminal fluid are passed out of the body.

**Pruritis.** Intense itching. Pruritis is not in itself a disease; it is a symptom that may appear in the course of many diseases, not all of which, however, are necessarily characterised by the formation of a rash or any other visible change in skin. Diabetes, chronic Bright's disease, and jaundice are examples of conditions, not primarily diseases of the skin, that have or may have pruritis as one of their symptoms.

**Psoriasis.** A chronic skin disease marked by the formation of extensive red scaly patches, chiefly on the back of the arms, the front of the legs, the back, chest, and abdomen. The treatment is complicated, external treatment being not only difficult to apply but usually ineffective unless combined with internal medication, and for this reason it is best carried out in a hospital or a nursing home.

**Psychiatry.** The diagnosis and treatment of mental disorders.

**Psychoanalysis.** This term, which is applied indiscriminately and totally incorrectly to all forms of mental treatment, should be confined strictly to the system of ideas and the method of treatment discovered and practised by Professor Sigmund Freud and his followers. It should be realised, too, that to qualify as a practitioner of this technique it is necessary to do something more than read books on the subject. Doctors, psychologists and educationalists who wish to become psychoanalysts have to undergo a rigorous training in the Freudian method and its underlying theories for a minimum of three years, and during this period they must be psychoanalysed themselves. No one who has not submitted to this discipline has a right to the name psychoanalyst any more than persons who have not studied and qualified in medicine are entitled to be called medical practitioners. The chief idea underlying psychoanalytic practice is that in the course of the individual's growth and development, ideas and feelings that are repugnant to him tend to be driven out of consciousness, with the result that though they still remain in the mind they are confined to those regions of it that are called "the unconscious." Here they do not simply lie dormant but form the mechanism by which dreams, artistic creations, prejudices, and morbid mental states—to cite but a few examples—are formed in consciousness. It is believed that by psychoanalysis, that is to say, by a technique designed to make conscious the ideas and feelings repressed into the unconscious, it is possible to bring about a cure in many cases of hysteria and other mental disorders.

**Psychosis.** Insanity; any mental disease.

**Ptomaine.** A term popularly applied to any poisonous substance formed in food during putrefaction. In its strict sense the term refers to a group of chemicals, not necessarily poisonous, which are formed in food by the disintegration of amino-acids, these being, so to speak, the bricks out of which proteins are built up.

**Ptosis.** Paralytic drooping of the upper eyelid.

**Puerperium.** The period of confinement. The word "puerperal" means relating to childbirth; thus, puerperal fever is the name given to a form of septic poisoning that sometimes attacks recently-confined women.

**Pulmonary.** Pertaining to the lungs; thus, pulmonary tuberculosis means infection of the lungs by a germ called the tubercle bacillus.

**Pulse.** The movement of expansion and contraction in the arteries that corresponds with the heart beat and may be visible on the surface of the body or felt with the finger.

**Purgative.** A medicine that causes evacuation of the bowel. (See Constipation.)

**Purpura.** A condition in which hæmorrhages occur under the skin and mucous membranes producing an eruption of purple-coloured spots. The word "condition" is used advisedly, for purpura is rather a manifestation of disease than a distinct disease in itself. Thus, the eruptions of measles, scarlatina, spotted-fever, and a number of other specific infections, are purpural, and similar hæmorrhages occur in the course of scurvy, hæmophilia, cirrhosis of the liver, Bright's disease, and heart disease. Certain types of purpura seem

to occur in the absence of any other disease; they are called primary purpuras, and are due in some cases to a blood infection, and in others to allergy. (See Allergy.)

**Pus.** (See Inflammation.)

**Pustule.** A small pus-containing pimple.

**Pyæmia.** A serious type of blood poisoning that results from invasion of the bloodstream by pus-forming germs. These are carried round in the circulation and, becoming impacted in the smaller blood vessels, form multiple abscesses in different parts of the body. Pyæmia is marked by the occurrence of severe attacks of shivering, irregular fever, and profuse sweating. The patient feels very ill indeed and wastes away rapidly. Promptly applied surgical treatment designed to prevent the further dissemination of infected material saves life in a certain number of cases; but the outlook in acute pyæmia is very grave.

**Pyelitis.** Inflammation of the pelvis of the kidney—that is, of the sac-like structure that communicates with the ureter, or urinary duct. This condition, which is marked by pain, tenderness, and swelling in the loin, the frequent passage of blood- or pus-containing urine, fever, and disturbances of the stomach and bowels, sometimes appears as a complication of stone in the kidney or of inflammation elsewhere in the urinary tract—in the bladder, for example. But many cases are due to stagnation of urine, such as might be produced by the impaction of a stone in the ureter, or, to cite a familiar instance, by the pressure on the ureter of a pregnant womb. The treatment in every case depends on the cause. Medical measures, which include the administration of drugs that act as urinary antiseptics, may bring about a cure in some cases; but very often surgical treatment cannot be avoided.

**Pyorrhœa alveolaris.** A purulent discharge from the gums due to infection of the membrane that lies between the teeth and their sockets in the jaw. It is accompanied by retraction of the gums, destruction of the sockets themselves and looseness of the teeth. The condition is unsightly, for the patient becomes "long in the tooth" and pockets of pus are in many cases visible right along the gum margin; it is a prominent cause of offensive breath; and, worse still, it leads to serious and sometimes incurable disturbances of the general health. The patient, it should be realised, not only swallows pus at and between meals, but may absorb the poisons generated within the pus by way of the blood stream. Prevention is far easier than cure; by cleaning their teeth regularly night and morning, taking a good mixed diet rich in foodstuffs containing Vitamin D, and going to the dentist regularly, at least every six months, to have the teeth thoroughly overhauled, most people can successfully avert the onset of pyorrhœa. But once the condition has developed, most elaborate treatment may be called for, some cases, indeed, resisting all treatment except extraction of the teeth and injection of suitable vaccines.

**Pyrexia.** Fever; an abnormally high temperature of the body.

**Pyrosis.** Water-brash; a burning sensation in the stomach and gullet with belching up of a sour-tasting liquid. It is one of the symptoms of dyspepsia.

**Pyuria.** The presence of pus in the urine, a condition that may be due to infection of any part of the urinary tract.

**Quarantine.** The forcible detention of ships or persons coming from infected ports in order to ensure that if by any chance they are harbouring an infection they will not transmit it to persons or animals on shore. The term is applied also to the isolation of persons, houses, or districts that might otherwise become the source of an epidemic disease.

**Quartan.** A fever of which the paroxysms recur every third day. (See Malaria.)

**Quinsy.** Suppuration and the formation of an abscess in or around a tonsil. This condition, which is an occasional complication of ordinary acute tonsillitis, is marked by swelling of the affected area, difficulty in swallowing, a high temperature, and severe pain. Left to itself the abscess usually bursts and, with the discharge of the pent-up pus, the patient at once feels better. But in most cases the practitioner prefers to let out the pus as early as possible through a small incision—a method of treatment that is cleaner, more effective, and freer from risk than the alternative of "leaving things to nature."

**Quotidian.** A fever of which the paroxysms recur every day. (See Malaria.)

**Rabies.** (See Hydrophobia.)

**Rachitis.** (See Rickets.)

**Radium.** A rare metal which gives off three distinct kinds of chemically and biologically active rays—known respectively as $\alpha$-, $\beta$-, and $\gamma$-, rays—that have proved of value in the treatment of disease. Experience has shown that these rays—especially the $\gamma$-rays—are able to penetrate the body, and thus act upon deep-lying tissues which otherwise could only be reached by the knife; it appears, moreover, that the $\gamma$-rays attack and destroy abnormal cells, for example, the cells of cancerous growths, far more easily than they do the ordinary cells of the body; and these facts together have led to the development of radium therapy, a method of treating disease by irradiating the tissues with $\gamma$-rays. So far the method has had its greatest successes in the treatment of cancer of the womb, breast, tongue and larynx. In other sites of the body, cancers seem more radio-resistant, which means that they can only be destroyed by an application of radium that is sufficient to destroy the surrounding healthy tissues as well. Too much must not be expected of radium therapy. It can only be effective if the growths to which it is applied are strictly local; once the disease has become disseminated through the body, radium treatment is useless. It is worth recalling, moreover, that the earlier the diagnosis the better the chances of cure, that even localised growths in the most favourable regions may still fail to respond to treatment once they have become too big. Radium can only destroy a growth if the $\gamma$-rays can penetrate to all its cells; this obviously is more possible in the case of small growths than of big ones. Finally, it should be realised that radium treatment is *not* a complete substitute for excisional surgery; some cases are better treated by the one, some by the other; some benefit by both. The decision must be left to the practitioner and the surgeon in every case.

**Ranula.** A swelling beneath the tongue due to obstruction and consequent dilatation of a salivary gland.

**Rectum.** The lower part of the large intestine, extending from the end of the colon to the anus; its length is about six inches. In healthy persons who have established regular bowel habits the rectum is usually empty till just before the bowel is to be opened. The habitual stimulus, however, causes a small quantity of fæces to pass down from the colon into the rectum, and it is the sensation produced by the presence of fæces in the rectum that constitutes what is known as "the call to defæcation." The kind of stimulus that has been found by experience to be effective to this end is described in the section on Constipation. (See Colon.)

**Relapse.** The return of a disease after the patient's apparent recovery.

**Relapsing Fever.** A type of acute infectious disease in which periods of fever alternate with periods of normal temperature, each lasting about a week. There are several varieties of relapsing fever, but just as they resemble one another closely in symptoms, so also are they all caused by closely similar germs.

**Renal.** Pertaining to the kidney. Thus, renal calculus means stone of the kidney, and renal tuberculosis, tuberculosis of that organ.

**Resistance.** The power to combat and overcome disease. (See Immunity.)

**Resolution.** The restoration of an inflamed tissue to its normal state. (See Inflammation.)

**Respiration.** The act of breathing, which includes inspiration whereby air is drawn into the lungs and expiration whereby it is expelled from them. In healthy adults at rest, respiration occurs about 16 times a minute, and at each inspiration about 500 c.c. of air are drawn into the lungs. In deep breathing this amount may be increased to 1500 c.c. During exercise and as a result of fever the respiration rate is increased, and such an increase is specially marked in diseases such as pneumonia, in which portions of the lung are put out of action.

**Retinitis.** Inflammation of the retina. The retina is the innermost coating of the eye; it is

formed by a fine network of fibres from the optic nerve and acts as the visual receiving apparatus, resembling in this respect the sensitive film of a camera. Inflammation of this perceptive structure occurs in connection with kidney disease, diabetes, arterio-sclerosis, syphilis, diseases of the blood, and blood-poisoning, and it is marked by impairment of vision and dropsical swelling of the retina.

**Rheumatism.** This term is used very roughly to denote practically any disease of which pain or inflammation of joints or muscles is an outstanding symptom; but there has been in recent years a tendency to limit its use to the clearly defined disease that is known technically as chronic rheumatoid arthritis or rheumatic gout. This disease, like many of the other conditions that have been at some time called "rheumatism," is marked by inflammation of the joints, but it has certain peculiarities that mark it off from the rest. In the first place, it occurs almost exclusively in women; secondly, it tends to involve the small joints, such as those of the fingers, rather than the bigger joints of the body; and furthermore, it seems to select for attack the muscles and connective tissues around the joints rather than the bones themselves. The disease is hereditary, or rather the tendency to contract it is; it is commonest among persons living in cold and damp climates, and these conditions predispose to attacks in affected persons. The view that every case of rheumatoid arthritis is due to infection of the joints from some septic focus, as, for example, diseased teeth or tonsils, is not so widely held today as it has been in the past. For one thing, such foci exist in persons who have never been troubled with rheumatism in their lives; moreover, eradication of the foci is not always or even usually successful in bringing about a cure. These facts, it should be realised, do not rule out infection as *one* of the factors responsible for the production of rheumatoid arthritis, but they do suggest that probably this factor is not by itself sufficient to do so, and that probably the cause is to be sought in a combination of circumstances, one of which is in all probability the predisposing constitution. Even in comparatively advanced cases much benefit may be conferred by suitable treatment. This includes such measures as eradication of septic foci, the injection of vaccines made from germs found in the patient's body, the injection of protein substances to produce a condition called "protein shock," massage, the local application of electricity, diathermy, and special baths, and careful supervision of the diet. These and other forms of treatment are probably best applied at health resorts and spas specially organised for this purpose; but skilled treatment will give good results anywhere.

**Rhinitis.** Inflammation of the lining membrane of the nose. Acute catarrhal rhinitis is another name for a cold in the head and is described in the section on the subject.

**Rickets.** Rachitis; a disease of children characterised by softening and curvature of the bones. On the Continent, rickets is known as the English disease, not to suggest that it is more prevalent here than there, but in honour of Francis Glisson, the great English physician who first described it as far back as 1650. The softening and bending of the bones is but one of the symptoms of rickets, and a fairly advanced one at that. Essentially the condition is one in which the body is failing to absorb the calcium and phosphorus contained in food. The bones become soft because they are not supplied with a sufficient amount of these elements to harden them; but to the same cause, namely, the insufficiency of calcium and phosphorus in the blood, are due most of the other symptoms of rickets too. The child is liable to attacks of bronchitis and of inflammation of the stomach and intestines; it is very restless, perspires a great deal about the head and neck, and suffers from various forms of convulsions. Usually it is pot-bellied, and has a large head; its teeth erupt late. In every case the condition is due to the same cause—a deficiency of Vitamin D in the child's body, for in the absence of this vitamin it cannot absorb the calcium and phosphorus needed for healthy growth and development. Rickets is thus a deficiency disease, and may be classed with scurvy, beri-beri, and pellagra, all of which are also known to be due to lack of one or the other vitamins. It may, moreover, like the other deficiency diseases, be prevented or cured by introducing a sufficient amount of the appropriate vitamin into the diet. For this reason cod-liver oil, which is rich in Vitamin D, is commonly included in the diet of even healthy infants, and till fairly recently it was given as a routine treatment to every child known to be or suspected of suffering from rickets. A few years ago, however, it was discovered that sun-baths could to some extent serve as a substitute for a diet containing Vitamin D, and since then many cases of rickets have been cured entirely by their means. The ultra-violet rays in the sunlight, acting on certain elements of the skin, manufacture Vitamin D, and this, being absorbed into the blood, helps the body to utilise calcium and phosphorus just as well as Vitamin D in cod-liver oil does. More recently still, it has been found that by exposing certain foods to ultra-violet rays they can be made to contain Vitamin D, and foods so irradiated are also used for the prevention and treatment of rickets.

**Rigor.** A chill; an attack of shivering in the course of a feverish illness. The onset of many fevers, pneumonia, for example, is marked by a rigor, and rigors are a characteristic symptom of malaria and pyæmia.

**Ringworm.** A contagious disease of the skin marked by the appearance of round scaly patches. It is caused by an invasion of the skin by certain fungi, and the site of the disease is determined by the nature of the infecting fungus. In these islands the commonest form is that which attacks the scalp—the disease known technically as tinea tonsurans, which is so liable to attack schoolchildren, especially those of the poorer classes. Another variety attacks the groins and the armpits, and yet another the fingers, toes and nails. Nowadays ringworm is treated effectively by exposing the diseased parts to carefully regulated doses of X-rays, or by giving a medicine called thallium acetate, which causes the hair to fall out and the fungus with it. New healthy hair appears in a few weeks.

**Rodent Ulcer.** A localised and curable cancer of the skin which gradually erodes the underlying tissues and even the bones. Radium therapy is most effective in curing this type of growth.

**Roentgen Rays.** (See **X-rays.**)

**Rosacea.** A chronic inflammation of the face and nose marked by a permanent flushing of the affected parts and the appearance in them of dilated blood vessels. The condition occurs most frequently in persons who are given to heavy drinking, but it is met with also in persons who partake too freely of tea or coffee, or include too much starchy food in their diet, or suffer from chronic constipation or a septic condition of the mouth and teeth. The treatment is directed to removing the cause, but most cases do well when the diet is regulated and measures are taken to correct abnormalities in the gastric juice, for this is usually found to be deficient in persons suffering from rosacea.

**Rubella.** German measles; an acute fever which in its symptoms is rather like a mild attack of measles. The patient suffers from catarrh, sore throat, and pains in the body; a rash appears on the first day of the illness, and the glands of the neck and behind the ears are usually swollen. The temperature is rarely raised by more than a degree or two, and after a few days the patient is quite better.

**Rupture.** (See **Hernia.**)

**St. Anthony's Fire (Erysipelas).** (See **Erysipelas.**)

**St. Vitus's Dance.** (See **Chorea.**)

**Saliva.** Spittle; the juice that is secreted by the salivary glands into the mouth and serves to lubricate the food and to carry out the first stage of the digestion of starch.

**Salpingitis.** Inflammation of the Fallopian tubes, these being the slender channels along which the female egg cells pass on their way from the ovaries to the womb. The condition may occur as a complication of childbed fever or of gonorrhœa; more rarely it results from tubercular infection or from contact with an inflamed appendix. In most cases, if they are caught early enough, an effort is first made to bring about a cure by medical measures only; but these usually have to be supplemented by surgical treatment later.

**Sarcoma.** A malignant tumour derived from connective tissues and, in its structure, resembling these tissues as they are in their rudimentary state. Practically everything that is written about the treatment of cancer in the section on that subject applies also to sarcoma.

**Scabies.** A disease of the skin caused by a small insect-like parasite belonging to the family of mites. The female parasite burrows under the skin, laying her eggs as she does so. In the tunnel thus formed, these eggs are rapidly incubated, and the most mature find their way to the surface, where they are hatched out. The invasion of the skin produces a more or less severe local irritation which the patient very naturally tries to relieve by scratching. As a result the burrows become still further infected, pus forms in them and the surrounding skin becomes inflamed. Sulphur ointment applied freely to the affected parts for three or four days quickly cures the condition, but to prevent relapse the patient must then wear new clothes or have the old ones disinfected before putting them on again. Scabies is sometimes called the itch; its technical name is acariasis.

**Scalds.** Burns caused by hot liquids or vapour. (See **Burns.**)

**Scarlatina.** Scarlet fever; an acute infectious fever marked by the appearance on the second day of a bright red rash consisting of closely-set red spots. The disease is ushered in by chills and vomiting, and shortly after the patient develops a high temperature and suffers from painful 'sore throat.' On the third or fourth day the rash starts to fade, and in favourable cases the temperature falls and the patient feels better. By the end of a week the rash has usually disappeared, and as it fades the skin is shed in fine scales or in large flakes. Convalescence begins usually in the third week, and complete recovery may be expected within the following month. The complications of scarlatina are very serious, the commonest being inflammation of the ear (otitis) caused by an extension of inflammation from the throat, and acute Bright's disease, which may appear three or four weeks after the beginning of the illness when the patient is apparently on the high-road to recovery. A recent research has shown that the onset of this latter complication can be prevented in most cases by administering an alkaline medicine throughout the period of convalescence. Scarlet fever is essentially a disease of children and young persons; second attacks are rare, and it is therefore reasonable to assume that in reacting to the disease the patient's body has developed the power of overcoming the responsible germs, even if these should attack him many years later. The measures adopted for the prevention of scarlet fever include isolation of patients and the application whenever necessary of the Dick test. (See **Dick Test.**) Treatment' is naturally directed to remedying the inflammation of the throat; but by way of more radical treatment it is usual nowadays to administer a special antitoxic serum early in the illness, the effect of this being to hasten recovery and reduce the likelihood of serious complications.

**Sciatica.** A painful affection of the sciatic nerve, this being a thick nerve trunk that extends down the back of the leg. The pain may at times be very severe indeed, and sometimes it is accompanied by wasting of the calf muscles. Every case of sciatica needs the most careful diagnosis; it should be regarded not as a disease in itself, but as a symptom of some underlying condition the exact nature of which can be discovered only by a skilled investigation. It may be that in a given case nothing more serious than an attack of inflammation, brought about perhaps by cold, is responsible; on the other hand, so serious are some of the conditions from which sciatica may result, that no case should be regarded as too trivial for medical examination. The treatment must obviously vary with the cause. Cases due to inflammation of the nerve frequently benefit from injections of saline solution right into the nerve trunk. Stretching the nerve is also a successful form of treatment.

**Scirrhus.** A hard cancer.

**Scleritis.** Inflammation of the tough white tunic of the eyeball.

**Sclerosis.** A hardening that results from inflammation or from deposition of connective tissue. The term is applied especially to such hardening of the central nervous system—for example, of the spinal cord. The disease of the nervous system known as disseminated sclerosis is marked by the appearance of hard patches throughout the brain and cord. Its outstanding symptoms are weakness, muscular inco-ordinati', jerky movements of the eyeballs, paralysis, and a curious, deliberate way of speaking, known commonly as scanning speech. The condition is liable to periodic remissions, but on the whole it tends to get worse, though the patient may go on living for a good many years.

**Scoliosis.** Abnormal sideways curvature with twisting of the spinal column.

**Scorbutic.** Pertaining to scurvy. The term anti-scorbutic is applied to any food or drug that is given for the purpose of preventing or curing scurvy. (See **Scurvy.**)

**Scrofula.** A disease of early life marked by tuberculous inflammation of the lymphatic glands. (See **King's Evil.**)

**Scurvy.** A disease due to deficiency of Vitamin C in the diet, and marked by anæmia, softening of and bleeding from the gums, and hæmorrhages under the skin and mucous membranes. The condition affects underfed and wrongly fed infants and such persons as sailors and explorers who live for long stretches of time on a diet deficient in fresh vegetables. The juice of oranges, lemons, limes and tomatoes is rich in Vitamin C, and its inclusion in the diet serves as both a preventive and cure of scurvy.

**Sea-sickness.** Nausea and vomiting caused by the motion of a ship. While there is no unanimity on the question why some persons should be susceptible to this disorder and others apparently immune, it is generally agreed that apart from treatment by certain drugs, notably chloretone, that may be prescribed by a medical practitioner, the most useful preventive measures that can be adopted by persons fearing an attack are to pack the ears with ribbon gauze so tightly that it can be felt to press upon the drums, to take a light and easily digestible meal before going on board, and to include in this meal a free allowance of barley-sugar, and, on feeling the premonitory symptoms, to lie down on the right side with the legs drawn up to the body.

**Sebaceous Cyst.** A firm, rounded, elastic swelling containing a thick, semi-solid substance, that may occur anywhere on the surface of the body but most commonly on the scalp, chest or back. It is due to obstruction from any cause of the duct of a sebaceous gland, this being a gland of the skin that secretes a fatty lubricating substance which serves to keep the surface of the body in a healthy state. The treatment is by surgical excision, a trifling operation that is usually carried out under local anæsthesia.

**Sebaceous Gland.** (See **Sebaceous Cyst.**)

**Seborrhœa.** A chronic disease of the sebaceous glands marked by excessive discharge of lubricating substance which, on the surface of the body, forms solid plugs and greasy scales. The condition is due in part to infection of the skin by certain germs, but this cause, it seems, can only operate in predisposed persons, the tendency in many cases being inherited. There is no doubt, too, that a faulty diet increases the liability to contract seborrhœa, especially a diet that is too rich in sugar and starchy foods. Greasiness and dandruff of the scalp are symptoms of the seborrhœic state.

**Sedative.** A medicine given for the purpose of allaying excitement and producing mental serenity.

**Sepsis.** Poisoning by germs or their products.

**Septicæmia.** A serious disorder due to the presence in the blood of disease-producing germs and the poisons they generate. It is marked by irregular fever, chills, sweating and great weakness.

**Serum.** The clear fluid that separates from the blood when it coagulates. The term is also applied to the blood serum of animals that have been inoculated with germs or their poisonous products. (See **Immunity.**)

**Shingles.** (See **Herpes.**)

**Silicosis.** A disease of the lung due to inhalation of minute particles of stone, flint or sand, such as may occur in persons whose occupation necessitates their working in an atmosphere laden with these substances. It is also called grinder's rot.

**Sinusitis.** Inflammation of one or more of the air cavities situated in the cranial or jaw bones

that communicate with the nose. The condition occurs not uncommonly as a complication of influenza or of a severe cold. If the attack is very severe and proceeds to suppuration, it may become necessary to open up the affected sinus in order to let out the pus.

**Skiagram.** An X-ray photograph.

**Skin.** Most people regard the skin as a kind of tight-fitting garment by which the flesh and blood and bones are clothed. Actually it is as important an organ of the body as any other—quite as important, for example, as the kidneys and the lungs, two organs with which it, in fact, co-operates very closely to keep the body in health. Its most obvious function is that of protection. The unbroken skin serves as an indispensable first line of defence against germs and other noxious influences which would certainly, but for its presence, invade and overwhelm the internal cells of the body. It is for this reason that cuts, abrasions and other injuries of the skin must not be taken lightly. They form a breach in the defences which must be closed at once by some germ-destroying substance, such, for example, as the tincture of iodine. Another function of the skin is set forth in the sections on vitamins and ergosterol, where it is explained that by virtue of its content of ergosterol, and the action upon this substance of sunlight or of ultra-violet rays from some artificial source, the skin serves to keep the system supplied with Vitamin D, and thus to maintain the amounts of calcium and phosphorus in the blood at a level consistent with good health. The skin, moreover, is an essential part of the temperature-regulating mechanism of the body. By means of its sweat secretion, that goes on incessantly though for the most part invisibly, it helps to keep the temperature of the body practically constant—a function the importance of which can readily be appreciated when it is realised that in such a serious condition as heat stroke the patient's temperature tends to approach that of his surroundings owing to a temporary paralysis of the cooling, sweat-producing mechanism of the body. Through this sweat secretion toxic substances may be eliminated as well as water, and advantage is taken of this excretory function of the skin in the treatment of kidney diseases, wherein, by measures designed to increase the flow of sweat, some of the strain is taken off the diseased and inefficient organs. Another secretion of the skin is called sebum, an oily product of the sebaceous glands that serves to keep the skin supple and the hair glossy. The best way to maintain the skin in a beautiful condition is to live healthily, and use soap and water freely. Both for medical and æsthetic reasons cosmetics should be applied with discretion; moreover, in buying powders, lip-stick, face creams, and such like, it is as well to be sure that they have been manufactured by a firm with a reputation to lose.

**Sleeping Sickness.** A very serious chronic disease of the tropics prevalent chiefly among negroes living in the Congo and caused by an invasion of the body by a tiny germ-like parasite known as a trypanosome. When this parasite attacks the nervous system the patient becomes lethargic and depressed, and finally he sleeps practically all the time.

**Small-pox.** Variola; an acute infectious disease marked by fever, pains, sickness, and the formation of an eruption that appears first in the form of red pimples, then of blisters and finally of pustules. These pustules ultimately dry up, forming crusts which fall off and leave the typical pitted scars known as pock-marks. The disease seems to have two distinct forms—variola major, the malignant smallpox that has been responsible for such deadly epidemics in the past and is still prevalent in certain parts of the world, and variola minor, a relatively mild disease that causes but little discomfort to the patient, rarely produces disfigurement, and is hardly ever fatal. Vaccination protects against both forms of smallpox, but in view of the fact that, for many years, only the latter has been epidemic in this country, some authorities are now inclined to the opinion that the law relating to compulsory vaccination should be suspended, and such prophylactic treatment be applied only if there are signs of the reappearance among us of the major disease.

**Snuffles.** A discharge of purulent phlegm from the nasal lining membrane in infants, due in most cases to inborn syphilis.

**Sore Throat.** (See Laryngitis, Pharyngitis and Quinsy.)

**Spasmophilia.** A tendency to spasms; a condition, mainly of infants, in which the patient is abnormally sensitive to external stimuli, and suffers from spasms of the muscles and convulsions. The condition is due to the same causes as those which are responsible for producing rickets—namely, an insufficiency of Vitamin D in the diet and thence of calcium in the blood. (See Rickets.)

**Spinal Cord.** The cord-like column of nervous tissue contained in the spinal canal and extending from the brain to a cone-shaped termination near the level of the second lumbar vertebra. Together with the brain it forms the central nervous system to and from which all nervous impulses are conducted; and like the brain it is made up of two kinds of matter, a grey and a white. The grey matter consists of nerve cells and fibres, of which those in the fore-part of the cord conduct impulses *to* the organs and members of the body, and those in the hind-part conduct impulses in the opposite direction. It is explained in the section on Nerve that the former are called "efferent" and the latter "afferent" nerves, and that each kind of nerve fibre can conduct messages in one direction and one only. The white matter of the cord consists of nerve fibres which are assembled in bundles called "nerve tracts." These also are of two kinds—namely, ascending tracts which convey impulses from the periphery to nerve centres in the cord or the brain, and descending tracts which convey impulses from these centres to the periphery. Thus, to take the simple case given in the sections on brain and nerve: when the hand touches a hot object, a message is conducted along the afferent nerves to the spinal cord, and thence up ascending tracts of the cord to the cortex of the brain, where the sensation "heat" is then registered. The message from the brain to the hand, "Get out of the way," passes from the cortex along descending tracts in the brain and spine, and thence to the efferent nerves which supply and bring about contraction of the muscles of the arm. The important thing to realise is that the nervous system must be regarded as a unity. For convenience of classification we distinguish between the cerebrum, the cerebellum, the medulla, the cord, the peripheral nerves, and many other divisions. But all these are interconnected at every point, as it is obvious they must be in order to maintain a harmonious working of the organs, members, tissues, and cells of the body.

**Spleen.** A deep red-coloured glandular organ situated in the abdomen immediately to the left of the stomach and under cover of the lower ribs. Examined under the microscope, sections of the spleen may be seen to contain a considerable amount of lymphoid tissue; and the spleen does, in fact, act as a factory for the manufacture of a variety of white blood corpuscles called lymphocytes. A similar function, it may be noted, is carried out by the other lymphatic glands of the body; and if for any reason the spleen has to be surgically removed, these glands become greatly enlarged to compensate for its absence. The spleen serves, furthermore, as a kind of dump for worn-out red blood corpuscles; here they are finally scrapped, and their hæmoglobin is made available to the liver for conversion into bile pigment. Enlargement of the spleen occurs in the course of many diseases: in typhoid fever, blood poisoning, Hodgkin's disease, malaria, cirrhosis of the liver, pernicious anæmia, leukæmia, and a number of others.

**Sprain.** An injury of a joint marked by tearing or stretching of its capsule and other attachments, but not so severe as to lead to a dislocation of the bones. The signs of sprain are well known, for it is a type of injury that occurs very commonly in the ankle. The joint is swollen, hot, very painful, and tender. The slightest movement may cause almost unbearable agony. It is by no means easy to be sure in every case that the injury is limited to sprain, and a medical examination is advisable if only to rule out the possibility that a dislocation is present as well. The alternate application of hot and cold compresses, together with tight bandaging and rest to the injured part, usually brings about a complete recovery.

**Sprue.** A chronic disease of the tropics caused by invasion of the body by a minute parasitic fungus. The patient becomes very thin, anæmic and weak. He suffers from a sore tongue, sickness and diarrhœa, with the production of large, pale, frothy stools. Treatment by means of liver or liver extract has been found to be very effective.

**Sterilisation.** This term has two distinct meanings. It is applied to the process of rendering the hands, instruments, clothes, or any other materials surgically clean—that is to say, completely free of germs. But it also refers to the process whereby an individual is rendered infertile, or, in other words, incapable of producing children.

**Stillbirth.** The birth of a dead infant.

**Stomach.** This term is very commonly used as a synonym for abdomen. "Stomach-ache" may thus refer to a pain felt anywhere between the chest and the thighs. But this common and genteel usage is incorrect. The stomach is that part of the alimentary canal which is situated between the gullet and the duodenum. In the abdomen it occupies a position that is mainly to the left side and fairly high up, and in healthy adults its lower border seldom reaches below the level of the umbilicus. It is the strong muscular pouch in which a great part of the digestive process is carried out. The membrane lining its inner surface is studded with glands which manufacture the ferments and other chemicals which together constitute the gastric juice. Pepsin and hydrochloric acid, which convert the proteins of food to simpler compounds; a ferment which helped by the acid transforms cane sugar to sugars that the body can assimilate—namely, grape sugar and fruit sugar; a fat-splitting ferment; a ferment called rennin which curdles milk; these are all present in the gastric juice and by their action on the food in the stomach transform it into simpler, more assimilable compounds. To do their work properly the ferments need to come into very intimate contact with the food components. Obviously, well-masticated food is more fitted to make such a contact than food that nas been bolted down in great chunks. But fortunately for many of us mastication is not the only method whereby our bodies strive to ensure that food taken into the stomach shall be acted on by the gastric ferments. The stomach plays its part too; for in the process of digestion the powerful muscles of its wall undergo vigorous contractions, churning up every particle of food and bringing it into the closest possible contact with the digestive juice. These muscular movements serve also to drive the chyme—as the churned-up mass is called—into the intestine, where a further stage in the process of digestion is completed.

**Stomatitis.** Inflammation of the mouth, a condition that is usually attended by pain, excessive secretion of saliva, and offensive breath.

**Stone.** (See **Calculus.**)

**Stricture.** The narrowing of any of the ducts, canals or passages of the body. This condition may have any of three distinct causes. It may follow an inflammation of the part of the body concerned that results in the formation within its walls of scar tisgue, which ultimately contracts, as scar tissue invariably does. Or it may be caused by the pressure of some abnormal tissue, a growth, for example, on the affected part. Or it may result from the actual deposition of such abnormal tissue within the duct, canal or passage affected. Temporary stricture may be what is called functional; it may result, in other words, from a spasm for which no organic cause can be discovered.

**Stridor.** Harsh, high-pitched, noisy breathing that accompanies spasm and other abnormalities of the respiratory passages.

**Stroke.** (See **Apoplexy.**)

**Stye.** Inflammation of a sebaceous gland of the eyelid, forming a painful swelling of the lid margin. (See **Sebaceous Gland.**)

**Sunstroke.** A high temperature, convulsions, nausea, vomiting and giddiness that may culminate in complete loss of consciousness, brought about by excessive exposure to a hot sun. The condition is especially liable to attack persons who are suffering from or are in the convalescent stage of an illness, but alcoholism and fatigue are also important predisposing causes. The most useful first-aid measures are to remove the patient to a cool place, loosen his clothing and dash cold water on his face and neck. Serious cases must be attended to by a medical practitioner; very skilled and elaborate treatment may be needed to save life.

**Suppository.** A solid medicine, usually in the form of a cone, especially designed for introduction into the rectum, vagina, or urethra. In most suppositories the base with which the active medicine is incorporated is cocoa-butter, but sometimes it is glycerine.

**Sycosis (Barber's Itch).** (See **Barber's Itch.**)

**Syncope.** (See **Fainting.**)

**Syndrome.** A set of symptoms that occur together; any group of symptoms the concurrence of which is characteristic of a known disease.

**Synovitis.** Inflammation of a synovial membrane, this being the name given to a special kind of thin, shining tissue that lines the cavities of joints and bursas, and the sheaths of tendons, and secretes a sticky lubricant fluid called the synovia. The condition is marked by the formation of a tense, painful swelling due to the presence of a fluid effusion within the synovial cavity. Injury, cold, sepsis, rheumatism, and infection by the organisms of gonorrhœa, syphilis and tuberculosis are among the causes of synovitis, which is usually treated by resting the affected part in the position in which it feels most comfortable, applying cold compresses or hot fomentations according to the special needs of the case, and, if necessary, draining off the fluid by means of a syringe. Later, massage and exercises may be prescribed.

**Syphilis.** A contagious venereal disease due to infection by a germ called the Spirochæta pallida.

**Systole.** The phase of contraction in the heart-beat; the period during which the thick chambers of the heart known as ventricles expel their contents into the aorta and the pulmonary artery. In the average healthy adult at rest the heart beats 72 times a minute; in other words each beat is completed in four-fifths of a second. The time occupied in such a case by systole is about three-tenths of a second. (See also **Circulation, Diastole,** and **Heart.**)

**Tabes Dorsalis.** Locomotor ataxia; a disease due to syphilitic infection of certain nerve tracts in the spinal column and of the sensory nerve trunks emerging from it. The disease usually occurs several years after the syphilitic infection was originally contracted. It is marked by disturbances of sensation, paroxysms of intense pain, especially such as come so swiftly that they are called "lightning pains," by inco-ordination, wasting of the body, a curious, uncertain, staggering gait, the development of sores, especially under the ball of the big toe, destruction of joints, loss of control over the bladder, and paralytic drooping of one or both eyelids. The disease develops slowly but surely; it may have a very long course, but on the whole it tends to get worse. Complete cure is very rare indeed. It must not be assumed, however, that skilfully applied treatment can do no good. It is, on the contrary, very effective in arresting the progress of the symptoms and in enabling the patient's unparalysed muscles to take over the work that was previously done by those that have become paralysed. Tabes, it should be realised, is a preventible disease. Syphilitic infection promptly treated in its very early stages can almost always be completely cured. Furthermore, not every insufficiently treated case becomes tabetic later, though a fair proportion do.

**Tachycardia.** Excessively rapid action of the heart. In normal adult persons at rest the heart beats at a rate of about 70 to the minute. In persons with tachycardia the rate may be 130 and over. In a rare condition called paroxysmal tachycardia, attacks of such rapid heart action come on abruptly, last for a few minutes, hours, or even days, and then pass off as abruptly as they came.

**Talipes.** Club-foot; a deformity of the foot in which it is so twisted from the normal position that it points downward and at its fore-part is bent inward.

**Tapeworm.** One of a species of parasitic worms that derive their name from their flattened tapelike form. The only conclusive proof of the presence of this parasite in the body is the discovery of segments of tapeworm in the patient's motions. Infection by tapeworm is treated by administering to the patient an extract of the plant known popularly as male fern.

**Teeth.** The temporary or milk teeth begin to erupt usually when the infant is about six months old. In all there are twenty such teeth, ten in each jaw. Taking each jaw separately and working from the centre outward, there are two central incisors, two lateral incisors, two canines and four molars. Usually the lower central incisors are the first to appear; these are followed by the upper central incisors, and then in order by the lateral incisors, the first molars, the canines, and the second molars. This order is by no means followed in every case, nor is there anything necessarily wrong with an infant in whom the process begins rather late. But if by the ninth or tenth month there is no sign of teething, a practitioner should certainly be consulted. The permanent teeth, of which there are thirty-two, sixteen in each jaw, begin to appear when the child is about six. Each set consists, beginning from the middle and working outwards, of four incisors, two canines, four bicuspids and six molars. The outermost molars are called the wisdom teeth. There is unfortunately a widely prevalent idea that the milk teeth, being anyway destined to fall out, need no special attention—that dental care, in short, need not begin till the eruption of the permanent teeth. This idea has been and still is responsible for a great deal of damage. The fate of the permanent teeth depends very largely indeed on that of the first set. If these are allowed to decay, if caries in them is not arrested or properly treated, the permanent teeth will almost surely be defective. It is now known that the best method of ensuring a healthy set of milk teeth is to give the child a diet rich in Vitamin D and calcium and to teach it as early as possible to clean its teeth regularly. The child should furthermore be taken regularly to the dentist, and if this course is adopted with tact and no fuss, the child will look forward to these visits and not acquire, as so many do, an unreasoning dread of the dentist's chair.

**Tennis Elbow.** A strain of the elbow brought on by playing lawn tennis, and especially liable to occur early in the tennis season. It is marked by an aching sensation along the arm and an agonising pain on attempting to twist the forearm inwards.

**Tertian.** A form of fever in which attacks of high temperature recur every other day. (See **Malaria.**)

**Tetanus.** (See **Lockjaw.**)

**Tetany.** A disease characterised by painful spasms of the muscles, especially those of the limbs. It may last for a few days or even weeks, but in most cases complete recovery takes place. Excision of the parathyroid glands, rickets, and continued diarrhœa, are among the underlying causes, and the treatment includes administering calcium, Vitamin D, and an extract of parathyroid gland.

**Therapeutics.** The science and art of healing; the sum of measures adopted for the treatment of disease.

**Thorax.** The chest; the part of the body between the neck and the abdomen, and separated from the latter by the diaphragm. It contains the heart and the great blood vessels leading into and from it, the lungs, the windpipe and its ramifications, the gullet, and the thymus gland or its remains.

**Thrombosis.** The formation of a clot inside a blood vessel. It is a condition that may be brought about by injury or inflammation of the vessel walls, by increased coagulability of the blood from any cause, most commonly the presence within it of germs or their toxins, or a diminished rate of blood flow, such as may occur, for example, when the heart action has been weakened by disease. The clot itself is called a thrombus. One of the dangers of thrombosis is that the clot is liable to separate and be carried in the blood stream till it becomes lodged within some vessel, causing obstruction to the blood flow therein. (See **Embolism.**)

**Thrush.** A disease of infants due to infection of the membrane lining the mouth with a fungus called Oidium albicans. It is characterised by the formation of white spots and sometimes of ulcers. At the same time the child's digestion is disordered, and it is usually necessary, therefore, to apply general treatment in addition to the local treatment of the mouth.

**Thymus.** A gland situated in the chest just behind the upper part of the breast-bone. It is far larger in children than in adults, tending to shrink and practically disappear after the childhood years. In certain cases of death under anæsthesia the thymus gland has been found to be larger than the patient's age would have led one to expect. To this abnormal persistence of the thymus, which seems to be associated with overgrowth of the thyroid gland and of lymphoid tissues throughout the body, has been given the name Status lymphaticus.

**Thyroid.** (See **Goitre, Myxœdema,** and **Cretinism.**)

**Tic.** Involuntary spasmodic twitching of a group of muscles—as of the face, for example. The condition is also called habit spasm and is liable to occur in young persons of the neurotic type. The name tic douloureux is given to an excruciatingly painful spasmodic neuralgia of the face that has been found to result from irritation or other affection of the fifth cranial nerve. This nerve is known also as the trigeminal nerve, whence the name trigeminal neuralgia that is sometimes applied to tic douloureux.

**Tinnitus.** The clicking or buzzing sounds heard in the ear by patients suffering from chronic middle-ear disease or an affection of the auditory nerve.

**Tonsillitis.** Inflammation of the tonsils, small almond-shaped masses situated in the folds of membrane that form pillar-like structures on either side of the arched passage between the mouth and the pharynx. The tonsils are believed to serve as germ filters and as factories that manufacture cells specially fitted to cope with and destroy organisms infecting the mouth. The symptoms of tonsillitis are described in the sections on Adenoids, Catarrh, and Quinsy.

**Torticollis.** Wryneck; an abnormal rotation and bending of the head caused by contraction of the muscles of the neck. The condition is sometimes congenital, but it may be acquired as a result of disease or injury of the muscles concerned or of the nerves supplying them. Some cases are functional, which means that they occur in the absence of any recognisable organic lesion and are believed to be symptomatic of hysteria or some other mental disturbance.

**Toxæmia.** A disturbance of health due to the absorption of bacterial poisons from some focus in which they are being generated—from the intestine, the tonsils, or a decayed tooth, for example.

**Toxin.** A poisonous product of bacterial action. The name is also applied to certain substances, for instance, snake venom, that have a toxin-like action. (See **Immunity.**)

**Trachea.** The windpipe; the tube extending from the larynx to the bronchi.

**Trachoma.** A highly contagious disease marked by the development of small inflammatory swellings, and later of scar tissue, on the inner side of the eyelids, and ultimately by deformity of the lids when this scar tissue contracts. The condition is commonest in Egypt and the Far East, and comparatively rare in this country.

**Transfusion.** Strictly speaking this term means the introduction of any fluid into the blood vessels, but it is nowadays used to denote the process by which blood is transferred from one person into the circulatory system of another. Before performing transfusion the surgeon takes steps to find out if the donor—that is, the person whose blood is to be taken—belongs to a blood-group that is compatible with that of the recipient—this being the person into whose system the blood is to be transferred. There are, it has been discovered, four blood groups, to one or other of which everybody belongs. Persons in the first group are called universal recipients, for they can receive blood from members of any group; persons in the second and third groups can give blood only to persons belonging to their own group and to the universal recipients; and the fourth group consists of universal donors, for they can give blood to members of any group, though they can receive it safely only from members of their own. Transfusion of blood to a recipient whose blood is incompatible with that of the donor may lead to disaster, the red blood corpuscles of the donor then forming clumps in the plasma of the recipient. But properly carried out, transfusion has proved itself again and again a means of saving lives. In cases of serious hæmorrhage, in certain anæmias, in septic conditions, and in some diseases of the spleen, transfusion may offer to the patient his one chance of recovery.

**Trauma.** A wound or injury. The name psychic trauma is given to any emotional experience that produces a lasting effect on the mind.

**Trephine.** A round saw designed for opening up the skull by removing from it a round disc of bone. The term also means to operate with such a saw.

**Tuberculin.** Any one of the many types of emulsion that have been specially prepared from the germs responsible for tuberculosis in order to be used for the diagnosis or the treatment of this disease

**Tuberculosis.** An infectious disease due to invasion of the body by a germ called the tubercle bacillus, and characterised by the formation of tubercles, these being small nodular masses of diseased tissue that tend to spread in all directions and thus to disseminate the infection widely throughout the body. It is probable that at some time or other nearly every adult living in a modern city becomes infected with tuberculosis germs; but only a small proportion of persons thus infected actually contract tuberculosis. The body has, so to speak, a natural immunity to this disease, whereby it is able to destroy the invading germs or shut them up in a cell of fibrous tissue, the actual disease only developing if the germs happen to be in very full force—if, to use the technical term, there is a massive infection, or the body is in a run-down and thence less resistant state than normally. In everyday language the term tuberculosis is used as a synonym for phthisis, or tuberculosis of the lungs, but strictly it is applied to infection by the tubercle bacillus of any organ or structure of the body. The lungs and the lymph glands are specially liable to infection, but the disease occurs by no means uncommonly in the liver, intestines, spleen, kidneys, bones, joints, pleura, peritoneum and brain. Pulmonary tuberculosis is marked by destruction of portions of the lung, the expectoration of purulent phlegm, cough, shortness of breath and more or less seyere hæmorrhages. In its early stages, when the disease has made very little progress and may be completely curable, the symptoms are correspondingly slight. The patient may feel a little run down, a little feverish in the evenings, inclined to get tired on an amount of exertion that would previously not have had this effect. Or he may be dyspeptic and find he has lost his appetite; or the only thing he may notice is that he is getting thinner. These symptoms may, it is true, arise from causes quite other than tuberculosis. But that is a matter that can only be settled by a skilled diagnosis. It may be necessary to X-ray the patient's chest, to examine his phlegm several times in order to discover whether or not it contains tuberculosis germs, to take his temperature night and morning for some weeks, and to carry out other and even more elaborate tests. But it should be realised that all this trouble is worth while; if the diagnosis is made early and the patient submits himself to sanatorium treatment he may make a complete recovery; but if the disease is allowed to progress too far the very best that may be hoped for from sanatorium treatment is a patching up. Further facts about tuberculosis are included in the sections on Cough and Hæmoptysis.

**Tumour.** A swelling; the term is applied more particularly to a swelling due to a growth of new tissue. Tumours are classified in two groups: benign and malignant. Benign tumours are strictly localised and do not grow into other tissues; they simply push them aside. They do not undermine the general health, and when removed they have no tendency to recur. Malignant tumours are localised at first, but sooner or later they produce secondary growths elsewhere in the body; they grow into adjacent tissues, disturb the general health, and often recur after they have been removed.

**Twilight Sleep.** (See Anæsthesia.)

**Tympanum.** This term is commonly applied to the drum-head or membrane that separates the middle from the external ear; but strictly speaking it refers to the whole of the ear-drum. This cavity, situated in the inner side of the drum-head, contains the three small bones called auditory ossicles, by way of which sound waves are transmitted to the nerve connected with the hearing centres of the brain. Inflammation of the tympanum, a condition known as otitis media, is discussed in the section bearing that name.

**Typhoid Fever.** Enteric; an infectious fever caused by an invasion of the body by a germ called Bacillus typhosus. It is marked by inflammation and ulceration of the small intestine, especially of patches of lymphoid tissue that are distributed along its inner lining membrane. The first symptoms are somewhat indefinite; they may point to any of a number of different infectious disorders. The patient has a headache, pains in the back, tenderness of the abdomen and a raised temperature. The temperature is characteristic; it rises, falls a little, rises again, and so on, but although each rise is followed by a fall, the general tendency is upward and remains so for about a week when the fever reaches its height. Such a temperature is called a "staircase" temperature. About the sixth or seventh day of the illness there appears a rose-coloured rash on the chest, abdomen and the flanks, and at this time, too, the patient begins to suffer from diarrhœa, passing a large number of liquid "pea-soup" motions. For a week or so there is no marked change, and then, if the illness takes a favourable course, the fever gradually subsides, and with it there is a lessening of diarrhœa and other symptoms. Convalescence may be very slow and relapses are not uncommon. In grave cases the patient becomes delirious, at first only slightly, but later his drowsiness deepens and he is in a state of complete coma and muscular prostration. The most serious complications are perforation of an intestinal ulcer, peritonitis, pneumonia, pleurisy, otitis, kidney disease, and the formation of clots in the blood vessels. Closely resembling typhoid fever, and caused by germs very like the Bacillus typhosus, are two acute infectious fevers known as paratyphoid fever A and paratyphoid fever B. It is usual to protect troops in the field and other persons liable to be attacked by typhoid fever by means of a special vaccine, and this vaccine in recent years has been made from the germs of typhoid, paratyphoid A and paratyphoid B. It is called T.A.B. vaccine, and it is a well-established fact that the comparative immunity of the troops in the late war to typhoid infections was due to the very general practice of inoculating drafts before sending them out of the country. Persons who have had a typhoid infection may continue to excrete the germs of this disease in their urine and motions for many years, and so act as healthy "carriers," liable to transmit the infection to persons about them. Many outbreaks of typhoid have been traced to such carriers. (See Carrier.)

**Typhus Fever.** An infectious fever the causal organism of which is transmitted by the bites of body lice. Although now rare in these islands, it is still prevalent in Eastern Europe, where epidemics break out from time to time, continue for a few months and then subside. Filth and overcrowding favour its occurrence, armies in the field and prisoners in jail being specially liable to attack. The patient at the onset of the disease suffers from intense headache, a feeling of illness, chills, pains all over the body and great weakness. There develops a dark flush on his face, his tongue becomes covered with a black fur, and dark-brown foul matter collects on his lips and round his mouth. On the fifth day the rash appears as a mottling of the skin, together with numerous pink spots. Meanwhile the prostration increases, delirium develops, and the patient passes into a state of coma. The fever lasts in all for about two to three weeks, at the end of which, in favourable cases, the temperature falls quickly to normal and the patient makes rapid progress. Convalescence, however, is prolonged and may last several months. About 60 per cent. of the patients recover. The chief preventive measures consist in the routine inspection of clothes, blankets, etc. for lice, and destruction of lice should any be found.

**Ulcer.** An open wound or sore resulting from destruction of the surface tissues. It may arise from injury, infection, or the spreading or breaking down of tumours. The treatment varies with the cause and site, and depends, too, on whether the ulcer is showing signs of healing or extension. In uncomplicated ulcers of accessible sites the obvious measures are to remove the cause, if this is still operating, and to protect the injured surface from mechanical irritation and germ infection. It is usual to keep the ulcerated part at rest, covering it meanwhile with some antiseptic

dressing, as for example, a boric fomentation. So-called indolent ulcers—chronic lesions that tend gradually to extend in area and depth—may need a more drastic treatment. They occur most commonly on the legs of middle-aged persons and are usually associated with varicose veins. Measures for improving the circulation in the affected limb, the administration of Vitamin D to increase the amount of calcium in the patient's blood—for in this condition calcium deficiency is usual and a cause of the persistent ulceration—and the application to the ulcer of a special antiseptic paste, or of ultra-violet radiation, are usually effective in bringing about a cure, though this may take a long time to effect.

**Ultra-Violet Rays.** (See **Actino-therapy** and **Heliotherapy.**)

**Umbilicus.** The navel; the scar that is left at what was the site of the navel string.

**Uræmia.** A grave disorder caused by an accumulation of urinary waste products in the blood. A common antecedent is Bright's disease, but uræmia may arise from any disease of which suppression or deficient secretion of urine is a symptom. It is marked by headaches, nausea, vomiting, dimness of vision, a rise in the blood pressure, and the occurrence of convulsions.

**Ureter.** The duct along which urine is conveyed from the kidney to the bladder.

**Urethra.** The duct along which urine is discharged from the bladder. In the male this same duct serves also to convey the semen.

**Urethritis.** Inflammation of the urethra, a condition due commonly to a gonorrhœal infection, but sometimes to gout, or to an invasion of the urethra by non-venereal organisms.

**Urine.** The secretion of the kidneys that is stored in the bladder and from it periodically discharged by way of the urethra. The healthy adult passes urine three or four times in the day and not at all, or only very rarely, at night. The average total quantity he passes in twenty-four hours is about 1500 cubic centimetres. By way of the urine are discharged various waste products that are formed as a result of the ingestion of food, and the building up and breaking down of the body tissues. Chief among these are urea, uric acid, common salt, certain phosphates, sulphates, and oxalates, and the urinary pigments. (See also **Albuminuria** and **Hæmaturia.**)

**Urticaria.** Nettle-rash or hives; a skin disease marked by the eruption of firm, elevated patches, pinkish in colour, though sometimes having a white centre, and each surrounded by an area of redness. The condition, which usually subsides in a day or two but sometimes lasts longer, is attended by such intense itching that the patient cannot refrain from scratching the skin, thereby making matters even worse than before. In many respects urticaria resembles the conditions described in the section on Allergy. It arises, though not exclusively, in persons who have been "sensitised" to some chemical substance—a food constituent, for example, or the poison from an insect bite—and these persons are liable to suffer an attack every time this constituent is present in their food, or this poison is injected into their system. Shellfish, pork, eggs, and strawberries are among the foods that may provoke an attack in susceptible persons. Many drugs have a similar action, and in some cases the responsible agent seems to be the poison liberated by germs or parasites that the patient happens to be harbouring in his body. The treatment of urticaria aims at relieving the immediate symptom and preventing the recurrence of attacks. The practitioner usually secures the former end by injecting a preparation of adrenalin and administering a purge; but the second can usually be attained only by carrying out an investigation and course of treatment along the lines described in the section on Allergy.

**Uterus.** The womb; the hollow muscular organ in which the embryo is developed during the period of pregnancy.

**Uvula.** The soft, fleshy, conical mass that hangs from the back of the palate over the roof of the tongue.

**Vaccination.** In its strict sense this term refers to the process of conferring protection against smallpox by inoculating lymph containing the virus of cow-pox. Nowadays, however, it is applied more widely to include protection similarly conferred against any disease by means of an emulsion of the germs or virus believed to be responsible for its occurrence. Thus, "vaccination" by typhoid germs is used for the prevention of typhoid fever, and other examples of the same process are the "vaccination" practised against plague, cholera, acne, distemper, and rabies. True vaccination was first carried out by Edward Jenner in 1796. He had observed that milkmaids and others who had accidentally contracted cow-pox were subsequently immune to small-pox, and conceived the idea of inducing cow-pox deliberately as a protection against the far more serious disease. On the question whether such a vaccination does indeed confer the desired protection the medical profession is practically unanimous; but, at the present time, in view of the mildness of the prevailing type of small-pox, the most conflicting views are held as to the advisability of continuing the practice of compulsory vaccination still required by English law. (See **Small-pox** and **Encephalitis.**)

**Vaccine.** (See **Vaccination** and **Immunity.**)

**Valvular Disease.** Inflammation or other disease of the heart valves. In the section on the heart it is pointed out that when the thick-walled ventricles contract a regurgitation of blood into the auricles is prevented by valves that are disposed about the margin separating these chambers. The valve between the right auricle and the right ventricle consists of three cusps, from this fact deriving its name "the tricuspid valve"; the valve between the left auricle and the left ventricle consists of only two cusps and from the resemblance of these to a bishop's mitre is called "the mitral valve." But besides these, two other heart valves are important—namely, the aortic and the pulmonary valves. The aortic valve is situated at the entrance to the aorta; its purpose is to prevent the return of blood to the left ventricle during the phase in the heart's action when this chamber is at rest. The pulmonary valve, situated at the entrance to the pulmonary artery, serves a similar purpose in preventing a return of blood to the right ventricle. Valvular disease may affect any of these valves, but most commonly the mitral and the aortic valves. Consider the effect of disease on the mitral valve. It may by distorting the cusps and making it impossible for their margins to meet properly, render this valve "incompetent"; in other words, it may result in a regurgitation of blood into the left auricle at each contraction of the ventricles. The heart in such circumstances would labour at a serious mechanical disadvantage, never quite driving the whole of the blood in the left ventricle into the aorta, and always having to cope with a back-pressure exerted from the overfilled left auricle upon the blood in the pulmonary veins. (The reader will find these facts, and others about to be discussed easier to follow if he will first refer to the sections entitled Aorta, Artery, Circulation and Heart.) Or the effect of disease upon the mitral valve may be so to constrict the opening between the left auricle and ventricle as to create a resistance to the flow of blood from the one to the other, and a consequent damming back of the blood stream from the auricle to the pulmonary circulation. A sequence of events is set in train, beginning with over-distension of the left auricle and ending in dilatation of the right ventricle and heart failure. It should be realised that valvular disease does not necessarily lead to such calamities. In no circumstances indeed may incompetence or constriction of the valves be taken lightly; a heart with such defects is necessarily working at a mechanical disadvantage; but skilled medical treatment is able to relieve the heart of some of its burdens, and—most important of all—the heart itself undergoes certain structural changes whereby it is able in large measure to compensate for the extra strains thrown upon it by a valvular disorder. Its muscles grow bigger and stronger, its contractions more vigorous, and if the amount of disease is not too great the patient may in spite of it look forward to a long and useful life. But better than the best treatment is prevention. Constriction of the mitral valve is one of the legacies of rheumatic fever; it is to measures directed to the prevention and to the thorough-going treatment of this disease that we must look for any large-scale reduction in the incidence of heart disease upon the community.

**Varicella.** (See **Chicken Pox.**)

**Varicocele.** An enlargement of the spermatic veins—a condition marked by the presence of a swelling that feels like a "bag of worms."

**Varicose.** Permanently dilated or enlarged. The term is applied chiefly to veins, the dilated vessel being called a varix. Piles, varicocele and dilated veins of the leg are all examples of varicose veins. The treatment of this condition depends on its site and the exact state of the vein or veins affected. Palliative treatment of varicose veins of the legs consists in the correct application of an elastic bandage; but in many cases operative treatment of one kind or another is advisable. It is possible, nowadays, to obliterate varicose veins by injecting into them a sclerosing solution, but not all cases are suitable for such treatment, and patients would be well advised to leave the decision in the hands of their practitioner. The treatment of piles is discussed in the section on that subject.

**Variola.** (See Small-pox.)

**Vasomotor.** This term refers to the expansion and contraction of blood vessels, and is applied to the nerves, hormones, and other agents by which these changes are effected.

**Vein.** (See Artery.)

**Ventricle.** (See Heart.)

**Vertebra.** A bone of the spinal column. There are in all thirty-three such bones; seven cervical, twelve thoracic, five lumbar, five sacral and four coccygeal, those in the last two groups, however, being fused to form the sacrum and the coccyx respectively.

**Vertigo.** Dizziness; a condition that may arise from disorders of the heart, stomach or eyes, from middle-ear disease, anæmia, high blood pressure, brain tumours, or wax in the ear-drum. The causes, it will be seen, are very various and include serious and trivial conditions. The diagnosis is, therefore, a matter of great importance and often of great difficulty too. A medical practitioner should be consulted in every case

**Vitamin.** One of a class of substances present in minute quantities in certain food-stuffs, and serving as "accessory food factors" the presence of which in the diet is essential for the promotion of normal growth and nutrition and the prevention of a group of diseases which, because they only appear in animals and persons who have been fed on a diet lacking in one or more vitamins, are called "deficiency diseases." Up to the present six vitamins, known respectively as A, $B_1$, $B_2$, C, D, and E, have been recognised and distinguished from each other by chemical or biological tests, though there are reasons for believing that yet others remain to be discovered. Vitamin A is found most abundantly in animal fats, cod-liver oil, egg yolk and green leaves; it promotes growth and protects against infection, exercising its latter function by preserving the health, and thus the invulnerability to germs, of the covering tissues of the body. Vitamin $B_1$, occurs in the germ layer of wheat, rice, and other cereals, and serves to prevent beri-beri, a disease that is described in the section bearing that title. $B_2$, is found abundantly in yeast, and acts as an anti-pellagric vitamin. (See Pellagra.) The distribution of C is described in the section on Scurvy, this vitamin being known as the anti-scorbutic factor. D is in some respects the most important vitamin of all, not, it should be said, because its biological action is any more important than that of the other vitamins, but because it is more likely than the rest to be lacking in the kind of diet taken to-day by the great majority of persons in these islands. By careful regulation of the diet, ample supplies of all the vitamins may be secured all the year round, but even an expensive diet is likely to be deficient of D during the winter months. Fortunately, it is present in cod-liver oil and can be manufactured by exposing a substance called ergosterol to ultra-violet radiations. By taking cod-liver oil in the winter months, or if not cod-liver oil then a preparation of irradiated ergosterol, and a good mixed diet including plenty of milk and butter in the summer months, it is possible to ensure to the body an adequate supply of Vitamin D the whole year round. The action of Vitamin D is described in detail in the sections on Rickets and Spasmophilia. Vitamin E is found in wheat germ and in green vegetables. Not very much is yet known about this vitamin except the fact that its absence from the diet of some animals produces sterility. Further facts about vitamins may be found in the sections on Beri-beri, Pellagra, Rickets and Scurvy.

**Volvulus.** A knotting or twisting of the bowel causing intestinal obstruction.

**Wart.** An elevation or excrescence of the skin or a mucous membrane due to overgrowth of a papilla or a group of papillæ. (See Papilloma.) Certain types of warts tend to come and go, the last treatment applied then getting the credit for an event that would have happened in any case. But persistent warts usually yield to treatment by electrolysis, freezing with carbon dioxide snow, or the application of X-rays.

**White Leg.** Swelling of the leg due to the formation of a clot in one of the large veins through which blood in normal circumstances is returned from the leg to the heart. It is a condition that occurs occasionally as a complication of the lying-in period or of typhoid fever.

**Whitlow.** Abscess of the finger, the term being applied especially to such abscesses as occur at or about the root of the nail. (See Paronychia.)

**Whooping Cough.** Pertussis; an acute infectious disease marked by catarrh of the respiratory tract and paroxysms of cough that end in a prolonged high-pitched inspiration called a "whoop." The paroxysms are characteristic; the patient draws in a deep breath and then emits a long series of short coughs during which his face becomes livid, and his eyes become bloodshot; at the end of it he takes in a long breath which is usually accompanied by the "whooping" sound. Quite commonly the act of coughing makes him vomit, and such a sequence of events in children, even in the absence of "whoop," should make parents suspect the possibility of whooping cough. The illness passes through three fairly well-defined stages: the first, called the catarrhal stage, lasts about a week, during which the patient has what are in effect the symptoms of an ordinary cold—a running nose, a slight cough, and some fever; the stage of paroxysms follows, and may continue for about a month, and this is succeeded by the final stage—the stage of decline, in which all the symptoms gradually subside and ultimately disappear. The complications and sequels of whooping cough may be very serious. They include convulsions, broncho-pneumonia, hæmorrhage into the brain, and pulmonary tuberculosis. Second attacks are extremely rare, infection by the germ responsible for whooping cough having almost the invariable effect of making the patient immune for the rest of his life. Children, as is well known, are affected far more commonly than adults, but cases do occur among the latter and the diagnosis may on occasion prove very difficult. The treatment resolves itself mainly into finding ways of checking the number and the severity of the paroxysms. Various drugs have been used for this purpose, notably belladonna; but cough mixtures bought in a chemist's shop may be worse than useless. Many parents regard whooping cough as a trivial ailment. It is not. In every single case a practitioner's help and advice are indispensable.

**Wryneck.** (See Torticollis.)

**X-rays.** Electromagnetic radiations generated by passing an electric current through a vacuum tube. They are used in medical and surgical practice for making photographs, called radiograms, of various parts of the body, including deep-lying organs and tissues, and thus to reveal the presence of foreign bodies, fractures, or the changes characteristic of disease. They are used, moreover, for the treatment of certain diseases—for example, cancer, eczema, ringworm, and Hodgkin's disease—experience having shown that in such cases the X-rays are able to destroy or otherwise disorganise the diseased part without injuring the healthy tissues surrounding it.

**Yellow Fever.** An acute infectious fever, occurring chiefly in West Africa and other tropical districts, and marked by fever, jaundice, albuminuria, black vomit and great weakness. It is transmitted by a mosquito called Stegomyia fasciata, by the bite of which, it is believed, the virus is transferred from infected to uninfected persons. The mortality rate is very high, being in some epidemics as high as 100 per cent. Recently, however, a vaccine has been prepared from yellow fever virus, and it is hoped that by its use the incidence of this disease will be considerably reduced.

**Zymotic.** Pertaining to zymosis, this name being applied to any infectious or contagious disease.

# BABY'S FIRST YEAR



PEARS—THE PURE SOAP

*For particulars of Pears Famous Toilet Preparations turn to end of Book*

# The First Year of a Baby's Life

## BY A MEDICAL PRACTITIONER

THE well-being of a baby during the first year of life is mainly dependent on three factors:

1. That the baby is healthy and well nourished when born.
2. That the baby's mother is healthy and strong.
3. That the baby receives care as to correct feeding and general hygiene, and is made to form regular habits.

The baby that is born robust and healthy will give little cause for anxiety; and provided he is given plenty of fresh air with correct food and sleep at regular times he will be happy and contented.

In order that the baby may be given every opportunity of being strong and well nourished when he is born, it is essential that the mother should be healthy, should eat nourishing food, and lead a careful life during the period of pregnancy. The mother's blood circulates through the baby in her womb and supplies the baby with food on which he lives and builds up his body tissues. It is very necessary that the mother's blood shall not contain any impurities or poisons which can be elliminated, as otherwise these too will be taken to the baby in the blood stream. Common causes of such impurities are bad teeth, pyorrhœa, septic tonsils causing sore throat, and various poisons from the bowel due to constipation. If the mother suspects she is suffering from any of these conditions or does not feel generally well and strong, she should consult her doctor or dentist in order that these conditions should be removed. If she neglects to do this, then she is imposing a severe handicap on the future good health of her baby. The mother should lead an active life, taking exercise and spending as much time as possible in the open air. She should eat good plain and nourishing food—excessive eating is wrong—with plenty of fresh fruit, good butter, milk and eggs, not too much meat and little sugar, jam or pastry, little tea or coffee and no alcohol. She should sleep with her windows open, and it is essential that she should have unbroken sleep during the night. Life in the fresh air with reasonable exercise, absence of constipation, going to bed at regular and early hours will inculcate the habit of restful slumber. During the last three months of pregnancy it is advisable for the mother to rest in the morning and in the afternoon. This will help to alleviate any tendency towards varicose veins and "white leg."

**Clothing.**—The expectant mother should wear warm, loose, and light clothing. All her clothes should be suspended from the shoulders and nothing tight or constrictive should be worn around her body such as garters, corsets, or *brassières*.

**Preparation of the Breasts.**—In order that the baby may have no difficulty in obtaining natural food, unless for some reason this is not available, it is necessary to prepare the breasts and nipples. The nipples must be hardened during the time of pregnancy; in this way cracked nipples and the risk of abscess of the breast will be avoided. The breasts should be washed daily with tepid water, finishing off with cold water. The nipples themselves should be rubbed with a soft toothbrush using a good quality soap such as PEARS'—not an ordinary soap. Care should be taken to dry the nipples thoroughly with a clean towel, especially around their bases. A little gentle massage should be applied to the breasts themselves each day and the nipples pulled out and moulded between the finger and thumb. Retracted nipples can be improved by the use of a breast pump. When the breasts become heavy towards the end of pregnancy they should be supported by a sling hung from around the neck. They must not be constricted by means of a binder.

**Clothes for Baby.**—One of the great joys of expectant motherhood is the planning and preparation of the first clothes for baby. These must be dainty and attractive; but they must also be serviceable.

They should be light, warm, and non-irritating to the skin, and loose enough to permit of free movement of baby's little limbs. There must be no tight constricting bands which would in any way interfere with the movements of either the chest or abdomen. It is essential that baby should be able to breathe and expand his lungs without any restriction, and also be able to exercise his legs and arms unhampered by either heavy or tight clothes.

Baby should be clothed in three layers:

*First Layer.* This should comprise a vest made of a mixture of silk and wool. Pure wool should not be used, as it is often irritating to the skin. The vest should be long in the body, fit high up around the neck and have long sleeves. It should be made to open down the front and to wrap over and tie at the neck and waist.

*Second Layer.* This is a back flannel which also ties in front. The edges of the flannel should be bound with tape or ribbon, and the texture light and loosely woven. The top around the chest should be made of a double layer of the material so that the baby's back is supported. The lower end should be turned up over the baby's feet and fastened with a safety-pin. Plenty of room should be left so that baby can move and stretch his legs, and care should be taken to see that the vest underneath is pulled down, as otherwise it will ruck up away from the napkin and cause discomfort.

*Third Layer.* This is the frock, and is made preferably of silk and wool or superfine wool; or, for the summer, of lawn or silk. The frock should be about 24 in. long. In cold weather a matinée coat should be worn. A small head-shawl should be worn in very cold weather; in this way the back of the head, the neck and arms are protected. It is not desirable for the baby to wear a bonnet. It is most desirable to permit the sunlight and air to reach the baby's scalp and hair; and if he does not wear a bonnet, his head will be accustomed to exposure and will not feel the cold any more than his face. A baby who wears a bonnet is much more susceptible to draughts when indoors; and, further, a bonnet tends to cause scurf and eczema of the scalp. If the body flannel is folded properly around the feet it is not necessary for baby to wear woollen boots. It is better not to constrict the feet, as they are easily made unshapely, and a tight woollen boot hinders the blood circulation. A soft light and warm woollen shawl, preferably made of Shetland wool, should be provided to roll loosely round baby when he is taken out of doors. No binder or body belt should be worn. They are unnecessary and only ruck up and become uncomfortable and restrict the free movement of the abdomen.

**At Night.**—The baby should wear a silk and wool vest and a woollen nightdress which should be tied in front, so that, when he lies on his back in the cot, there is no knot to make him uncomfortable. No pillow is necessary; and the cot clothes should be light in weight, as otherwise baby's sleep is restless.

**What Baby will need:**

4 long-sleeve vests (silk and wool).
4 back flannels (loose woven material).
6 frocks.
6 nightgowns (wool).
6 matinée coats (knitted wool).
1 Shetland shawl.
2 small head shawls.
6 bibs.
2 doz. turkish towelling napkins.
2 doz. soft napkins.
2½ in. by 3 in. crepe bandage.

All baby's clothes should be made so that they open right down the front; in this way, when he is dressed, he can be laid on the lap on his abdomen and all the layers of his clothes are put on him in order with his arms in the sleeves, and then, when all the clothes are on, he is turned over on his back, and the clothes fastened up in front in their respective layers. In this way the baby is dressed as rapidly as possible, and with the least turning and handling.

**Feeding.**—The best food for baby is the food of nature—namely, breast milk; except in cases where, on account of ill-health of the mother or poor quality of the milk, breast-feeding is considered inadvisable. After the birth of the baby during the first two days there is a small secretion of fluid from the breasts. This fluid is called colostrum. It contains a large proportion of fat and acts as a laxative, and helps the baby to empty his bowels. On the first day the baby should be allowed to suck each breast for two minutes. On the second day for three minutes, and so on, increasing the period of time each day. It is important that the breasts should have been prepared, and the nipples hardened beforehand, as otherwise suckling will cause them to be tender at first. Also the period of suckling should not at first be prolonged, as this also causes discomfort.

On the third day after birth the supply of breast milk should have become established and a regular four-hourly feed should be arranged and firmly adhered to, unless a three-hourly feed is advised by the doctor. If the baby appears to be restless or thirsty during the first two days, then a few teaspoonfuls of boiled water at 100 deg. Fahr. should be given after each suckling. When the flow of milk is established, then the period of time at which the baby should be nursed at the breast will be from fifteen to twenty minutes, though no hard-and-fast rule can be laid down, as each individual baby will vary. The baby should not be kept at the breast too long, as this will induce feeble suckling; and care should be taken to see that he takes the whole of the nipple into the mouth and that both breasts should be used at each time the baby is fed.

It is a good plan to change the order in which the baby is put to the breast at each feed, that is, if the baby is put to the right breast first at his first feed at six o'clock, then he should be put to the left breast first at the next feed at ten o'clock and so on. In this way each breast is completely emptied at alternate nursings, as the baby suckles more vigorously at the beginning of the feed than towards the end. It is important that the breasts shall be emptied at each feed. If, by emptying the breasts, the baby would be getting too much milk, then the surplus should be drawn off by hand or with a breast pump. If there is not enough milk for baby's needs, then the deficiency can safely be made up with a humanised milk food such as Humanised Trufood, which is similar to breast milk and will not upset the baby in any way.

**Over-feeding.**—The most common cause of trouble with the feeding of the baby is due to over-feeding, and many of the minor ailments of infancy are due to this cause.

It does not follow that because a baby cries after his feed he still needs more food. In most cases the crying is caused by indigestion from over-feeding, or, in cases where he is not breast-fed, because the alternative food he is given is either not suited by reason of its constituents, or is not in the right condition for natural digestion. It should be remembered that a young baby's stomach is very small, and in the first few days of life it will hold little more than three tablespoonfuls of liquid, so that it is very easily overloaded and painfully distended by injudicious feeding.

Overloading of the stomach is not confined to the bottle-fed baby; breast-fed babies are often permitted to fill themselves to repletion, with consequent vomiting. It is not a difficult matter to regulate the baby's meals, both as regards time of feeding and quantity of food, and both over-feeding and under-feeding should be easily avoided. It should be remembered that often the starved baby is drowsy and quiet and appears to be contented, while the overfed baby is restless, discontented and ravenous.

**Times for feeding.**

| 4-hourly: | 3-hourly: |
|---|---|
| 6 a.m. | 6 a.m. |
| 10 a.m. | 9 a.m. |
| 2 p.m. | 12 noon |
| 6 p.m. | 3 p.m. |
| 10 p.m. | 6 p.m. |
| | 9 p.m. |

In general it is recommended that the baby should be fed every four hours in the daytime and no feeding during the night. When a baby is fed at four-hourly intervals his stomach is given time to digest each feed, and to pass on into the intestine that of the food which remains unabsorbed, and to ensure a rest to the stomach before the next feed. Babies fed from birth four-hourly generally sleep more soundly, have a better appetite and tend to suck more vigorously. The mother has greater opportunities for sleep, rest and outdoor exercise; and in consequence of fewer nursings there is less risk of chapped nipples, breast abscess, etc. Notwithstanding all these advantages in the case of a baby who weighs under 6 lb. at birth, or is very delicate, it is wiser to feed three-hourly for a time instead of four-hourly. Baby should not be fed during the night. If the baby wakes up during the night, a little warm boiled water should be given with a spoon. Milk should not be given. The baby will soon grow out of waking up in the night and will not form a habit, and so the mother will not be disturbed, but will be permitted to have eight hours' sleep between the ten o'clock at night and the six o'clock in the morning feeds. It is very necessary that the mother should have unbroken rest during the night. It is of the very greatest importance that the right habits should be insisted on with the baby from the very beginning. The baby is very easily trained; but it is very difficult to break the baby of a bad habit when once it has started. It is essential that the baby should be fed rigidly at the same time every day; if, when the time comes for food he is sleep, he should be awakened. If, from the very commencement the baby is fed at correct intervals, then in a few days a regular habit of feeding and sleeping will be established at the correct intervals. A new-born baby will sleep nine-tenths of the day. At perfectly regular intervals the baby should awake, feed, and drop off to sleep again. The baby that is regularly and properly fed will cause little trouble, for he will sleep well, digest his food easily, and will be happy and contented. It is very necessary that the mother should pay great attention to the breasts. The baby must not be allowed to fall asleep during a feed. Before and after each feed the nipples should be washed with a good soap such as PEARS' and water, and then kept covered with clean lint. If the supply of breast milk is insufficient, then the breasts should be massaged and bathed for twenty minutes each night and morning with alternate douches of hot and cold water. If the nipples become sore or cracked, some Friar's Balsam should be applied and a nipple shield used. The mother should adopt a comfortable attitude when nursing the baby with her feet raised on a footstool and the baby on a cushion or her knees. A baby should not be weaned from breast milk just because a mother thinks, or because someone tells her, that her milk is not agreeing with him. In many cases management will correct the difficulty with the food; and before breast-feeding is stopped medical advice should be taken. It is important that during the first few months the mother should drink at least a pint and a half more fluid than she would ordinarily take.

**Bottle-feeding.**—In cases where the supply of breast milk is insufficient it should be supplemented by bottle-feeding. The feeding-bottle

should be simple and easily cleaned. There should be no corners, angles, or projections inside the bottle. The neck must be wide enough for easy scouring. There should be no screws or tubes inside the bottle, as these only tend to harbour germs. If the bottle is badly designed and cannot easily be cleaned, then there is great danger of it harbouring microbes which cause intestinal trouble and summer diarrhœa in babies. On no account should a long-tube feeding-bottle be used, as it is practically impossible to keep either the glass tube inside the bottle, or the rubber connecting tube outside clean. The ordinary boat-shaped bottle with the rubber teat at one end and an automatic air-regulating valve at the other is the best type of bottle. It is easily held in the hand and the baby can be fed naturally and without tiring. The teat and valve are easily detached and readily cleaned, and the bottle itself, which is open at both ends, can be placed under the tap and the full force of the water from the main used to scour away whatever milk is clinging to the sides of the bottle. It is best to scour the bottle out as soon as possible after baby has finished feeding, as in this way the milk has not had time to dry. The bottle should first be rinsed out with cold water and then scalded with hot water, after which it should be laid in a basin of cold water which has first been boiled, and the basin covered with clean butter muslin. Then the bottle is perfectly clean, fresh and hygienic, and ready for the next feed. The teats must be kept very clean. The inside of the baby's mouth is very delicate and easily injured, and the action of sucking often causes it to split, so that it is especially liable to infection from any microbe. The teats should not be sterilised in boiling water or they soon perish. They should be washed immediately after use with cold water and then rubbed with salt both inside and outside to remove any slime. The teat should then be rinsed with clean boiled water and dried and placed in a clean dry jar covered with clean butter muslin.

If great care is taken with the bottles and teats, there is no fear that the baby will develop any mouth disease such as thrush, septic mouth, or any gastric or intestinal troubles which are due to carelessness in not keeping the bottle and teat perfectly clean. The rubber valve at the end of the bottle opposite the teat should be of the "one-way" or "non-return" type—that is, it allows air to enter behind the food but does not allow the food to escape. This valve also prevents the nipple of the teat collapsing, and ensures that the baby does not swallow air along with his food. A reserve supply of teats should be kept, as, with use, the hole in the teat nipple enlarges, and the baby will suckle his food too quickly. The teat must then be replaced. The size of the hole in the teat is important. The best size of aperture is the smallest through which the baby can take the whole of his feed in about fifteen minutes. To test the supply of food from the bottle turn it upside down when prepared with the food inside, and if the liquid falls more rapidly than at the rate of one drop per second, the teat should be replaced by a new one.

**The Correct Food.**—Every mother should suckle her baby if she can possibly do so, but in cases where for some reason this is impossible, or when the breast milk is inadequate, and it is necessary to supplement it, great care should be taken that the artificial food is suitable for the baby. The most vital days in baby's life are during the first six months, as it is during this time that the foundations are made not only of his body but of his brain. Many illnesses in after life can be traced to wrong feeding in babyhood and resultant malnutrition. Nature intended that the baby should be fed on breast milk; when this fails the next best thing must be a food which most closely resembles breast milk in composition, and in body- and brain-building action. The food which fulfills this purpose is Humanised milk, which is made from cow's milk and built up to scientifically take the place of breast milk. The use of cow's milk itself is not recommended, as there is the great danger that it may contain the germs which cause tuberculosis; and further, in order that it may be reduced to a condition possible to use it as baby-food it is essential to dilute it with water and to add sugar, etc., which is a tiresome process and even when completed makes an unsatisfactory baby-food. The proportions of the constituents of cow's milk are entirely different from those of breast milk, particularly in respect to the protein casein. Cow's milk contains in proportion three times as much casein as breast milk, and this forms a hard, leathery clot in baby's stomach which he is unable to digest. There are also a number of preparations sold as baby-food which are composed of dried cow's milk with often sugar or starch added. These are not suitable foods for the baby in that—(1) They contain too much casein, which forms a tough, leathery clot in the baby's stomach, and causes pain, indigestion, and flatulence. (2) They contain germs which cause diarrhœa and often tubercle bacilli, which cause consumption or tuberculosis. (3) They often contain starch or cane sugar instead of milk sugar, and so cause wind, sickness and diarrhœa. (4) The fats which nourish the baby are often altered by the great heat to which many of the dried milk foods are subjected when they are dried, with the result that the baby does not thrive on them. (5) They do not contain sufficient food for baby's brain, nerves, and bones.

The Humanised milk-food, which is easily obtainable from the chemist, is practically identical with breast milk, and is the essential food on which babies will thrive and form strong bones and firm muscles and run no risk of developing any of the diseases which are caused by the use of improper food-stuff. It is important to remember that a bottle-fed baby should never be left to feed alone. There is the risk that the baby will suck in air when the milk in the bottle gets low; and it has happened that babies have choked through the teat slipping too far down the mouth.

**The Care of the Newly-born Baby.**—After birth the baby should be wrapped in a blanket and placed in a warm room. The eyes should be cleaned with sterilised absorbent cotton-wool and lukewarm water which has been boiled, and a few drops of silver nitrate solution dropped in each eye. The bath should be given in a warm room. Olive oil should be gently rubbed all over the body to remove the vernix, and then the baby washed with water at a temperature of 100 deg. Fahr. The baby must on no account be immersed in a bath until the cord has separated. When dressed the baby should be placed in his cradle and covered with blankets.

**Baby's Cradle.**—This is best made of wicker. A new fluffy blanket large enough to lie in the cradle under the mattress and to completely cover the whole bed and baby with about 6 in. of overlap at the side and 12 in. beyond the mattress at the end over the feet should be laid on the bottom of the cradle. On the blanket put the mattress and clothes in the ordinary way. When the baby is placed in the cot the sides of the blanket which overlap should be brought over the clothes and baby and secured with safety-pins, and the 12-in. overlap at the foot brought up over the feet and pinned. A hot-water bottle may be placed in the cradle, but great care must be taken that it does not come in contact with the baby, otherwise there is the risk of a burn. The baby should not sleep with his mother. It is always better that he should be taken into another quiet and darkened room, and only brought into his mother at feeding-time.

**The Cord.**—The cord should be kept dry and touched as little as possible until it falls off. It falls off about the fifth to seventh day. A 5-in. muslin bandage wound lightly round the abdomen is the best method of keeping the dressing in place. A flannel binder is not advised. The cord should be covered with talc or bismuth powder and a pad of sterilised gauze applied. When the scar at the navel has healed—generally in about ten days—then the bandage should be discarded.

**Bath.**—The room should be warm and heated with a coal fire. The temperature of the water should be 98 deg. Fahr. for the first six months and gradually lowered until at the end of the first year it is 90 deg. Fahr. It is necessary to have a bath thermometer in order that the temperature of the water may be tested. The bath should be over quickly and the baby rapidly dried. After the baby is a year old it is a good

thing to give a rapid douche or splash in tepid water followed by a brisk rubbing with the towel.

**Eyes.**—For the first ten days or so the eyes should be cleaned with a piece of soft lint or cotton-wool, dipped in a weak solution of boric acid. The eyelids should not be forced open, but gently swabbed. If there is any discharge the doctor should be consulted immediately. There must be no delay or the result may be blindness. A baby's eyes are very sensitive to light in the first week. At first he will only open his eyes in darkness or semi-darkness. Then later he likes mild, shadowy light and gradually he likes ordinary daylight. He should not be placed in strong sunlight or under a white canopy.

**Mouth.**—The mouth should be gently cleaned each morning with soft gauze and boiled water. The gauze should be burnt after use each morning. The greatest care and gentleness are necessary, as the baby's mouth is very tender and easily damaged. It is also important that the nurse's hands should be very clean, as it is very easy to introduce dirt and germs into the mouth and so to set up ulcers, thrush, etc.

**Skin.**—The baby's skin is very delicate. It is essential that it should be kept clean and handled very gently. Only a soap of the very finest quality should be used, such as PEARS' SOAP. A soap that is not perfectly pure will do a great deal of harm. Napkins must be removed as soon as they are soiled, and the nurse or mother must be careful to wash her hands well after removing the napkin. A talcum powder can be dusted into the fold of the skin in the armpits and between the legs. Napkins must not be washed in soda nor with a soap containing soda. Only a good quality soap should be used to wash the baby's clothes which will not leave a residue which will irritate the skin. Rubber pilches or knickers must on no account be worn, as they quickly cause sore buttocks.

**Breasts.**—Sometimes the breasts become painful during the first week; if this happens they should be bathed with warm boracic solution in water and gently dried and a clean gauze pad applied and firmly bandaged; on no account should the breasts be rubbed. If they become red, hot, or tender, a doctor should be consulted at once.

**Training.**—The baby should be trained to regular habits from the very beginning. There should be absolute regularity of feeding during the day, with no feeding during the night. The time of bathing, sleeping, etc., should be regular. At three months the baby can be trained to empty his bowels when placed on a small chamber. This should be done after each feeding-time. By the end of the first year the child can be trained to indicate when he wants to empty his bladder; and, when this is effected, then napkins can be dispensed with during the day. When the average healthy child is about two and a half years old he will not wet during the night if he has been properly trained.

**Sleep.**—During the first five weeks the healthy baby will sleep for about twenty hours out of the twenty-four. During the first six months he will sleep for sixteen hours a day. And at one year old he will sleep for twelve hours at night and one or two hours during the day. Training in the habit of sleeping at regular times should begin at birth. The baby should not be rocked, nor should he be allowed to go to sleep on the breast of his nurse, nor given a rubber teat. A baby will soon go to sleep if he is properly fed on a food which does not cause indigestion or colic; and if he is in a warm bed with dry napkin in a quiet, darkened, and well-ventilated room. Correct training with regular hours of feeding, of motions, and of sleep will produce a healthy contented baby, and with consequently little work and anxiety for his mother and nurse. A fretful, restless baby is caused by irregular habits, by over-feeding, by hunger and by pain and discomfort caused by giving unsuitable food.

**Exercise.**—The baby should be allowed free movement of his limbs and should wear nothing tight or constrictive around the body which is likely to interfere with the muscles of the chest or abdomen and also with the breathing. It is important that the feet should be kept warm. The baby should be allowed to roll, kick, and tumble as he likes on a soft mattress placed out of a draught for a short period at least twice a day. In this way he exercises his muscles.

**Fresh Air.**—The new-born baby needs very special care and attention. It is a good thing to have a fire in the bedroom for the first few days in cold weather. But the room must not be allowed to become overheated and stuffy, but must have pure outside air flowing through it both day and night. The baby must be kept out of a direct draught; but don't be afraid of the air being cool. Pure, cool air is invigorating and will strengthen the baby and prevent him from catching cold. It is the warm, stuffy air that is dangerous and weakening to the baby and renders him very susceptible to catching cold as soon as he is taken out of doors. Care must be taken that the baby is sufficiently covered with light but warm clothes. He should be kept in the open air and sunlight as much as possible; but remember that a new-born baby is very sensitive to light at first and only gradually becomes accustomed to it; so that care must be taken to protect the eyes. On no account must the baby be allowed to sleep in his mother's bed, but in a cot by himself. He is given the best chance to grow strong if he is put in a well-ventilated room by himself or outside on the verandah. In warm weather the baby should be taken out after the first week for about a quarter of an hour, and each day the period of time that he is kept out of doors should be gradually increased. It is important that the nursery should be sunny and well ventilated. The air must be fresh and uncontaminated, and there should be no draughts. It is generally advisable to have all the drains of the house tested where a young baby is and to take care that they are kept clean.

Do not allow in the nursery—

(1) Washing or drying of clothes.
(2) Cooking or food to be kept in the room.
(3) A gas stove or steam radiator.
(4) Cats or other animals.

The furniture of the nursery should be clean and not upholstered. There should be no cloth hangings or carpets; linoleum or polished boards with a rug are best for the floor. American cloth curtains are easily sponged over and do not collect germs or dust. The cot should not rock and should be placed out of a direct draught. The mattress should be firm and the waterproof sheet tied down at each end of the cot so that it cannot ruck.

**The Growth of the Baby.**—It is very important that the baby should be weighed each week. During the first week there is generally a loss of weight from 4 to 8 ounces, and after this the baby should regularly gain from 4 to 8 ounces every week. A healthy, properly fed baby should have doubled his weight at birth by the time he is six months old; and have trebled it by the time he is twelve months old. A record of the baby's weight week by week should be kept.

Average Weight for Babies (boys).

| | lb. | ounces. |
|---|---|---|
| At birth | 7 | 0 |
| At 2 weeks | 7 | 8 |
| 4 " | 8 | 0 |
| 6 " | 8 | 12 |
| 8 " | 9 | 8 |
| 10 " | 10 | 0 |
| 12 " | 11 | 0 |
| 16 " | 12 | 8 |
| 20 " | 14 | 0 |
| 24 " | 15 | 8 |
| 28 " | 16 | 12 |
| 32 " | 18 | 0 |
| 36 " | 19 | 0 |
| 40 " | 20 | 0 |
| 44 " | 21 | 0 |
| 48 " | 21 | 8 |
| 52 " | 22 | 0 |

*Note.*—Girl babies generally weigh 4 ounces less than the above weights. During the second year the average gain is at the rate of 2 ounces each week.

It should be remembered that the general condition and weight of the baby at birth depend to a large extent on the nourishment he has obtained from his mother before birth. A heavy baby will gain more slowly for a month or two

and a small baby will gain more rapidly, provided he is suitably fed. Provided the baby is gaining steadily in weight each week, no matter if he is below the average in weight for his age, then there will not be much the matter with him. The rate of gain is all-important, and this varies during the various months of age of infancy.

Between birth and 3 months a baby should gain about 5½ lb.
Between 3 and 6 months a baby should gain about 3½ lb.
Between 6 and 9 months a baby should gain about 2½ lb.
Between 9 and 12 months a baby should gain about 3 lb.

For the first three days after birth there is a loss of weight, but this is generally regained by the tenth day. The average weight at birth is 7 lb. At the end of the first year the baby should weigh three times as much as at birth.

**Loss of Weight.**—The baby should gain in weight gradually and progressively after the usual loss of weight during the first week. If the baby shows a loss of weight then it is very necessary that the cause must be sought. A steady loss of weight is serious, and unless the loss of weight is checked the baby will gradually become very weak; and the loss will increase with a consequent loss in strength of the baby that will be difficult to recover. The younger the child is, then the more rapid is the loss of weight and the greater the danger.

Causes of Loss of Weight.

(1) The baby may suffer from some congenital or hereditary disease.
(2) The digestive organs may be at fault.
(3) The food is wrong in composition, quantity or quality—this is the most common cause.

In the case of a breast-fed baby the first consideration should be as to whether the quantity of breast milk is sufficient. If it is not, then treatment should be commenced to increase the supply and the normal breast-feeding should be augmented by means of Humanised milk-food, which is similar to breast milk and will not upset the digestion of the baby. Skilled massage of the breasts together with good food, fresh air, and exercise combined with rest on the part of the mother will often go a long way towards establishing a complete flow of breast milk. If the baby is bottle-fed, then the nature and composition of the food which is given should be considered.

**Height.**—The average baby grows about eight inches in height during the first year; during the second year the increase is about three and a half inches; during the third year and onwards the increase in height is between two and three inches each year.

**Shape of the Head.**—The head is sometimes compressed when the baby is born. By the end of the first month this has generally disappeared. The baby must not be allowed to lie too long in one position, as sometimes this will alter the shape of the head.

**Walking.**—The baby generally begins about the ninth or tenth month to try to bear the weight of his body on his feet. Generally in the twelfth or thirteenth month he will try to walk, but this will vary with the individual baby. On no account should a baby be forced to walk. When the time comes he will start trying to walk on his own account and it will come naturally to him. The baby that has been bottle-fed on an improper food which has retarded his development or on a food containing starch which has caused him to be a heavy, lumpy baby is always late in walking.

**Speech.**—Towards the end of the first year the average baby begins to try to speak. Girls generally talk two or three months earlier than boys. At the end of the second year the baby is generally able to speak sentences of a few words. Some defect must be suspected if a child of two year makes no attempt to speak.

**Teeth.**—The milk or deciduous teeth are twenty in number. They appear at the following times:

| | |
|---|---|
| Two lower central incisors | 6 to 9 months. |
| Four upper incisors | 8 to 12 months. |
| Four canines | 18 to 24 months. |
| Two lateral incisors } Four anterior molars } | 12 to 15 months. |
| Four posterior molars | 24 to 30 months. |

At one year a baby should have 6 teeth.
" 1½ years " " " 12 teeth.
" 2 " " " " 16 teeth.
" 2½ " " " " 20 teeth.

The permanent teeth begin to come in the sixth year.

**Teething.**—Babies that are healthy, not constipated, and that are fed correctly, generally cut their teeth without pain or much disturbance. The signs of teething are—

1. Increased dribbling.
2. The baby puts his hand to his mouth.
3. The cheeks are a little red and swollen.
4. The gum is red and tender.
5. Sleep is disturbed and the baby is fretful by day.
6. The appetite is not good; not so much food is taken as usual.
7. There is a tendency to constipation, sometimes diarrhœa.
8. There is a slight rise of temperature.
9. Sometimes there is a rash on the body.

These symptoms generally disappear after a few days. Particular care should be taken to keep the baby warm and away from draughts, as there is the danger of contracting acute bronchitis. The main points to remember are:—1. Do not give soothing syrups or powders. 2. Do not rub the gums. 3. Keep the bowels open. 4. Avoid draughts. 5. Do not give a dummy. 6. If the appetite is poor, then decrease the quantity of food. 7. If there is a rash it is wise to obtain medical advice, as the rash may be due to some cause other than teething.

**The Bowels.**—There should be at least one motion during every twenty-four hours. There are generally two or three motions daily after the first few days. It is important to train baby in regular habits from the start. The best way is to place a small chamber between the nurse's knees and set the baby upon it, being careful to support the back. This should be done at the same hour every day after the morning and evening feeds, since the bowels will move best immediately after meals. Baby's normal motions should be of uniform soft consistence and pale buff to orange in colour. Green stools indicate that there is some derangement of the baby's intestines. The cause may be a slight disagreement of the food, or a chill or diarrhœa may supervene. Slime or mucus present in the motions indicates some inflammation of the lining of the bowel. This may be due to threadworm, or, if diarrhœa is present, to "summer diarrhœa." Threadworm will easily be discovered if the motions are watched and will be removed by a salt and water enema. If diarrhœa is present, then stop all food to the baby and give him boiled water for a day or so. If the diarrhœa is persistent, then a doctor should be consulted. Curdy motions indicate indigestion generally due to the baby being overfed.

**Weaning.**—Weaning should always be done very gradually, if possible, for the sake of both mother and the child. The most important months in the first year of the baby's life are the first months, and if the baby has been fed well during these months, then there is rarely any difficulty in feeding him during the following months. It is not considered advisable generally to continue breast-feeding after the ninth month without the risk of draining the mother's vitality and giving the baby insufficient nourishment It is often necessary to supplement breast-feeding about the fifth or sixth month, and it is a mistake to continue breast-feeding if the baby is not doing well. If baby does not gain in weight over a period of some weeks it is desirable to wean. If there is a loss of weight, then it is essential to do so. It is inadvisable to wean during the summer weeks if it can be avoided, nor should the baby be weaned when teething.

# GARDENING



PEARS—THE PURE SOAP

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# Pears' Illustrated Dictionary of Gardening

EDITED BY HERBERT COWLEY
(*Editor of "Gardening Illustrated"*)

1. THE KITCHEN GARDEN
2. FRUIT GROWING
3. FLOWER GARDEN INCLUDING GREENHOUSE PLANTS
4. REMINDERS FOR EACH MONTH

## THE KITCHEN GARDEN

### General Hints on Vegetable Culture

The choice of ground for kitchen gardening will be governed in a good measure by opportunity; but it should be as open and sunny as possible, and, if that can be managed, slope gently towards the south to facilitate surface drainage. Protection should be afforded against north wind by a wall or close fence, and where the vegetable ground is at the southern end of the flower garden—a very good position—a thick hedge of good height should be provided to act at once as a screen and a shelter. Holly and quick mingled do very well for this, the holly planted on the flower garden side, the quick to the south to complete the solidarity of the shelter. If the hedge be clipped frequently its appearance and utility will both be improved. In very exposed places where easterly winds are frequent a close hedge or low fence on that side of the kitchen garden is also desirable. On the south and west all the light, air, and sun-heat obtainable are wanted, and this should be borne in mind when the positions of runner beans and tall rows of staked peas are determined upon. The former do very well in short rows at right angles with the north hedge, or, if one long row will suffice, parallel thereto, while the peas, being hardy, may run advantageously alongside the eastern fence, with room between to get to the eastern side of the row and work the hoe, gather the crop without trouble, and permit the sun to shine down on to the roots. Position having been settled and the walks planned and made, preparation of the ground next demands attention. Perfect drainage, and the land in "good heart" are the things to be aimed at. Both can be accomplished by assiduous culture only, after a thoroughly sound beginning. A good time to start is late autumn, and trenching to a depth of a couple of feet is advised, to be repeated at least every third season, spade-deep digging being practised in the intervening years in the formation and preparation of the beds for the reception of the various vegetable plants, seeds or sets, as the case may be. It pays to purchase reliable seed of all vegetables, and this is assured by going to a firm of repute. Readers should consult the catalogues of leading firms for new or approved varieties.

**Artichoke.**—The Jerusalem is a suitable subject for growing alongside a fence, as it helps to form a screen for the garden in that position; the tubers should be planted in early spring-time in rich and well-drained soil, 15 or 18 inches apart. When they have reached a foot high, earth them up, potato fashion, and keep clear of weeds by frequent hoeing. If stored for use they must be placed in dry sand to exclude light and air, or the tubers will be a bad colour on cooking.

The Globe artichoke is cultivated entirely for the sake of its immature flower heads. Sow in a hotbed in March, potting off the seedlings singly and hardening for planting out in June in groups of three or four, or increase by carefully transplanted offsets.

**Asparagus.**—An asparagus bed should be from 3 to 5 feet wide, formed by taking out the earth to a depth of 3 feet, and throwing in at the bottom over subsoil broken by digging a considerable quantity of well-rotted dung, and incorporating with the soil returned to form the bottom spit over this a good deal of short, rich manure. Then a large proportion of sand should be intermingled with the next spit, leaving the top spit almost all sand, with a liberal amalgam of salt and some soot. Asparagus is good for cutting when green peas begin to yield, and should not be gathered too freely, else it will run small. Always cut as near to the cooking time as possible to get the delicate flavour at its best. The pretty "grass" of the asparagus is very useful for bouquet garniture.

**Aubergine.**—An edible variety of the Solanum, or Egg Plant, a half-hardy annual, extensively cultivated in Southern Europe. Sow in heat in April, prick out the seedlings singly into four-inch pots, well drained, using a compost of rich, sandy loam.

**Balm.**—A sweet-scented flowering herb, the leaves of which used to be in considerable demand for making a cooling drink, with a lemon-like flavour. Botanically called *Melissa officinalis*, the balm possesses very ornamental foliage, and flourishes in any ordinary garden soil. Propagated by root division in spring or autumn.

**Basil.**—This herb is raised from seed in gentle heat in March. Thin out the seedlings, give air freely, and plant out in a warm border of rich light soil in early June. Bush basil is the hardiest variety.

**Beans.**—Broad or Windsor beans crop best in a strong, heavy soil, with plenty of good short manure worked in. If sown in October on the south side of ridges running east and west, about 3 to 4 inches apart, they will get the benefit of all available sun without being waterlogged when cold rains are frequent, and come into bearing early. Seed for succession may be sown similarly, but on the level, in drills, in January, drawing the earth up to the stems on dry days when the young plants are three to four inches high, a plan which induces root development.

Runner beans should be grown in deep rich soil alongside a fence with a southerly or easterly aspect, or in the open in double rows 9 inches apart, with 9 inches also between each bean. Sow 2 inches deep on a good thickness, say 3 inches, of soil superimposed upon well-rotted manure laid upon a worked subsoil, in early May, or put out young plants raised in boxes from seed in a frame for mid-May starting in the garden. For climbing support, a double row of light poles should be stuck along the lines of runner plants, inclining towards each other and crossing towards the top, horizontal sticks being dropped into each junction and tied with tarred string to make all taut against strong wind. Topping the shoots when the summit of the pole has been reached induces bushy fruiting growth. It is well to protect against possible late spring frosts a little at nights at first, and in September when the bine is in good bearing a loose night covering will often save the beans for a week or two of further yield should a premature cold snap come, followed by open weather.

Dwarf or French beans may be sown in mid-April in sunny positions or a little later where sun warmth does not reach so well, good rich loamy soil being provided, in rows a foot and a half to 2 feet apart, the seeds being put 1 inch underground in batches of three, each batch being 9 inches to a foot from the next. When slug dangers are past, any more than one plant remaining in each batch may be eliminated, leaving only the strongest-looking. Draw the soil towards the stems on either side as the plants

row, carrying the ridges as high as possible. A dressing of soot and fine lime will retard the progress of snails and slugs, which are very fond of young bean shoots, while adjacently laid little heaps of brewers' grains will attract them, when they may be caught by candle-light, and killed in salted water. Manurial waterings at the root in the growing period will add to the productiveness of these and all other beans. For haricot beans the pods must be allowed to remain for the seed to ripen, but the faster the pods are gathered for cooking in the fresh state the longer the beans will continue in bearing.

**Beetroot.**—Turnip-rooted is the best of the early red beets so useful for salading and pickling, and should be sown in the beginning of April in drills rather over a foot apart and a little less than an inch deep, thinning out to 8 inches apart. A bed in which previous cropping has taken place, and which was heavily manured, therefore, suits beet, the soil being light and well pulverised, but if this be inconvenient the ground should be dug out, trenched, and manured with well-decayed dung at the bottom. A light dressing over the bed when the plants are a few inches high will be of service, and weeds should be kept down. In lifting the roots in October great care should be taken not to bruise the skin or break off the tap root, and the leaves should be cut a good inch above the crown to prevent bleeding, which would spoil the colour of the root in boiling. They should be stored in a dry, frost-proof shed, laid on sand, with sand over each layer.

**Borecole.**—Borecole, also called kale and winter greens, belongs to the great Brassica family, and is cultivated for the leaves, which stand all but the severest frost, and for the sprouts in spring. The borecoles do not take so much out of the ground as cabbages, and may be planted after peas when the haulm has been cleared without further manuring. Sow in a seed bed in April or May and again in August. Dwarf curled greens are the old Scotch curly, close, compact, and curled; the tall green curled runs up to 2 to 3 feet high, and cooks well after frosting. Purple, or sprouting borecole, is very much like the all green curled kale in everything save colour. All the borecoles are the better for having the soil drawn up to the stalks as growth proceeds, and should be hoed frequently, as stirring the ground surface is very beneficial to the plants. The sprouts are good for use as long as their stalks will snap off easily.

**Broccoli**—Broccoli is a variety of the cauliflower, differing therefrom in having the flower stem longer and not so fleshy, and head not so compact. It does not attain the size of the best cauliflowers, nor does it furnish such delicately flavoured eating. It needs good, rich, well-tilled soil, and should be sown under glass in early spring for autumn use, and in late May in the open to stand until the following spring. The broccoli is hardier of constitution than its congener the cauliflower, which it succeeds in cropping, and may be cut up to Christmas, and even later. Broccoli must be planted firmly and about 2 feet apart, and when the flower is forming have a leaf or two broken over the head for protection, save in the varieties which curl their leaves in naturally. The young broccolis should be well watered after transplantation from the seed beds until established, and those standing the winter have their heads bent down facing northwards to check root action and render them less succulent during frost, besides facilitating shelter with dry litter or bracken when the weather is very severe. The spring varieties come in most acceptable for the table at a time when the supply of the finer vegetables is scanty.

**Brussels Sprouts.**—A protracted growing season is essential to the maturing of these excellent vegetables, which belong to the Brassicas. March sowing in light soil in a cold frame, and transplantation into deeply-worked and well-enriched ground will produce stems a yard high covered with close sprouts to the extent sometimes of a peck a stalk. They should be planted in rows 2½ feet asunder and each plant 2 feet apart. Some cut off the heads as soon as the stems have arrived at the full height, so as to conserve all the strength of the plant for the perfection of the sprouts, others retain the head as an umbrella for the side-growth. The earliest sprouts come in for the table in November, and they continue to yield in improving quality until Lady Day.

**Cabbage.**—These prefer a loamy soil, well drained and well manured, and can assimilate a lot of moisture in dry weather, and copious waterings of liquid manure during the growing period. For spring cabbage a sowing should be made in beds of friable mould during the third week of July, the seed being placed in drills. Transplant later to prepared ground 18 inches apart and earth up to steady the stalks and protect the roots as growth goes on, hoeing frequently, and dressing the surface with either short manure, lime and soot mixed, or any favoured manufactured fertiliser during showery weather in early spring. The coleworts, sown in June and early July, come in for autumn cutting. In all cases lime, salt, and soot mixed may be applied as a dressing to the seed bed with advantage, and dusted on the seedlings after a shower to prevent attacks of the cabbage fly. Weeds should be kept down by frequent hoeing and hand-picking, and caterpillar minimised by continuous hunting and lime-dusting when the dew is on the leaves. Red or Milan cabbage, so popular for pickling, should be grown from seed sown at the end of July and again in April, and transplanted later in due course, the after culture being similar to that of the other cabbages. Red cabbages must stand in the ground until the hearts are quite hard. The Portugal cabbage, sometimes called Couve Tronchuda, is a Brassica of very distinct type, and somewhat tender of constitution, requiring to be sown in spring for autumn use. Only the fleshy leaf ribs are eaten, prepared for the table like sea-kale. The Portugal likes a good rich loam in which to grow.

**Capsicum.**—Ornamental plants, especially in autumn, when the fruits are ripe. They should be raised from seed in a hotbed in February, the seedlings being pricked out into single pots of light rich soil, and given successive shifts until each occupies an 8-inch pot. They require a genial temperature, and may remain in the frame until the fruit begins to change colour, though in the extreme south they will flourish in the later stages in a warm border if planted out in June. The pods ripen in September, and will keep a year or two in a dry room. Capsicums like plenty of water and some liquid manure in dry weather, and for pot culture should be given good drainage, and frequent overhead syringing. In the green state the pods are employed in salads and for pickling, or used for making Chili vinegar, either ripe or unripe. Fully ripe and powdered they furnish cayenne pepper.

**Cardoon.**—A perennial from the Mediterranean shore, related to the artichoke. The inner leaf-stalks are tied closely together around the stem in autumn and blanched for eating, the whole being bound in straw bands except the tips. Sown in shallow trenches in deep rich soil, and a warm situation in May, and kept copiously watered, cardoons are ready for the full blanching process after a few gradual earthings up by September. During severe frosts the exposed leaf-tips need protection. On gathering trim away all but the blanched heart with a sharp knife, when the "chard" or edible portion is ready for the cook.

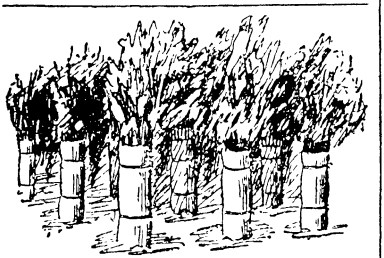
**Carrot.**—Soil for carrot culture should be very deeply dug, and manured in the autumn, at the bottom of the trench, and if at all stiff the land must be lightened with sand and peat. Break up the surface with a rake in spring, working in a good inch dressing of wood ashes, and leave all smooth for seeding in shallow drills, covering the seed very slightly with finely sifted soil, and pressing down with the back of the rake. Powdered chalk and coarse salt may be incorporated with the top dressing before sowing in early April. Thin out to four inches apart in the case of the early Shorthorn variety, which is of delicious flavour when young, and water well from soon after the leaves commence to grow, taking great care to keep weeds down. After October is over no carrots should be left in the ground, for retention there tends to make them crack. Loosen the soil with a long-tined digging fork, and draw each root carefully, cutting off the tops and storing them in dry sand for winter use in the kitchen. Light soil, deeply drained, with a layer of rich manure well down at the bottom of the prepared

bed, will give good clean carrots, free from forking, which is always undesirable. Before the general harvest, carrots should be drawn as required regularly, leaving what remain to mature more and more free to feed and thicken.

**Cauliflower.**—Cauliflowers, like cabbage, require a deep rich ground to grow in, only more so; and, being somewhat tenderer of constitution, they should be planted in a position sheltered from the north. Otherwise their culture is very similar, as to seeding, transplantation, and the rest, to that requisite for the summer sorts of Brassica proper. Derived from Corsica and the Mediterranean coasts, cauliflowers have been esteemed as esculent for ages. The June eating sorts should be sown in a warm border, with some shade from direct noon sun, in the middle of August, and transplanted into cold frames to stand the winter in October. If frames be not available, then a position on a south, sloping, well-sheltered border will serve, the soil being fine and rich, and protection being afforded during severe frost by hurdles, mats, or some other convenient contrivance. Finally transplant into the prepared perfecting ground in May. Mid-season sorts should be sown and grown on accordingly as in the case of successional cabbages. Good root watering, with occasional stimulation by liquid manure, is advisable in droughty weather, and on the commencement of the head formation the leaves should be bent over to keep the hearts clean and white. Draw up the earth to the stems when it is dry and friable, take off all decaying leaves, and hoe often to prevent the establishment of weeds, and let air and warmth down to the roots. Also watch out for caterpillars closely, for, if permitted to secure a lodgment, these pests will frustrate all your efforts.

**Celeriac.**—The turnip-rooted celery is cultivated for its root-stock alone, and therefore does not need blanching or trench-growing like celery proper. It is a hardy biennial subject, and is employed either sliced in salads or for cooking, having the peculiar celery flavour. Sown and transplanted early, it may be put out into good ground in May, when it will soon develop its irregular root knob, which will in some cases attain a weight of over three pounds. The roots should be lifted before the beginning of November and stored in dry sand.

**Celery.**—Sow seed in a moderately warm bed under glass in March for all ordinary purposes, or a month sooner if a very early table supply is required, using good rich soil. Put your celery in 8 inches apart, planting firmly and carefully without breaking the ball, and then water as liberally as you like, remembering that the genus is a marsh-dweller naturally. Do not begin the



Celery in paper collars. Leeks may also be papered up in this way.

earthing-up or papering-up too soon, but get a sturdy start, applying liquid manure or soot water occasionally. When plants are 15 inches high remove suckers and side growths cleanly, and tie up the leaf stalks lightly towards the top with bast, very carefully banking up the earth from the ridges in dry weather, and avoiding the introduction of soil amongst the leaf-stalks. Make banks gradually by repeated heaping, sloping the earth down evenly until the ridge reaches almost to the leaves. The final banking should be completed before the first severe frost comes, and then dry litter or fern may be lightly laid over all for protection, and removed on mild days to permit the leaves to dry. So you will get good thick, firm heads, well blanched and crisp, and lasting over a long time of yielding.

Earthing up Celery—sloping the earth down evenly until the ridge almost reaches the leaves.

A dressing of dry lime upon the soil employed in earthing up will keep the worms and slugs from troubling, and a little quicklime in the water used occasionally for supplying root moisture is also effectual in the same direction, while, should the celery fly put in an appearance, soot may be dusted advantageously over the foliage when it is damp. In gathering celery commence at the end of the row, removing one head at a time by forking down to loosen the root without disturbing the remainder of the crop, and pulling up from well below so as not to damage the stalks. Grow from the best quality of seed, whether you are using the white or red varieties, the former being most in favour.

**Chervil.**—A useful salad herb which should be sown in drills over nicely-manured ground in March for summer use, thinning thereafter, or in August, in a warm dry situation, to stand the winter, the latter crop requiring protection against severe frost.

**Chicory.**—The tender roots of chicory, succory, savory, or wild endive, the roots of which are cultivated for grinding to amalgamate with coffee, are in request for winter salading. Seeds are sown in drills on a border in May, the plants being thinned out to 4 inches apart and allowed to develop. Then, in August, all the leaves are cut off to within an inch of the ground, to promote new growth. About the commencement of October the whole plant is lifted with a digging fork, the larger leaves again cut away, and the roots pruned. Then the chicory is planted in dry, light soil, closely in shallow boxes, and covered with litter to protect from frost, watering when needful. The plants may be taken, boxes and all, into a warm, dark shed or cellar, to blanch and complete preparation for the table, the leaves being usually cut when about 6 inches long, and quite crisp and tender.

**Chilli.**—Chilli fruit, like that of the capsicum, is cultivated in the greenhouse for its pungent properties as a pickle, and for infusion cut up in vinegar. The seed is sown over gentle bottom heat, and the young plants potted off singly and shifted later into larger pots. If the chillies are to be gathered green, the plants may be placed in a warm border in June, but should the fruit be wanted to ripen fully it must be developed indoors under glass. (See also **Capsicum.**)

**Chives.**—Cultivated for their succulent leaves, onion-like, but rather milder in flavour, and very useful in soups, also for salading. A perennial, propagated by root division autumnally, the clumps growing nicely in ordinary soil with little attention. The tender leaves are cut up by some turkey-raisers for admixture with the food of their newly-hatched birds.

**Colewort.** (See **Cabbage.**)

**Corn Salad.** Sometimes styled the "Lamb's lettuce," this weedy annual is employed in France and in a small way in this country as a winter and early spring substitute for lettuce in salads. Should be drilled in upon a warm border in September, in rich light soil, and weeded and watered as may be needed, and litter must be placed over the plants in very frosty weather. The leaves must be picked when young and tender to afford satisfaction.

**Cress.**—The seed of the garden cress may be sown thickly in shallow boxes of light soil at any

time, or in the open ground from March to October, on a moistened surface, and covered either with a sheet of glass or stretched paper to assist germination. In winter the seed-pan may be placed on a hotbed. The seed leaves only are eaten, with those of white mustard, as small salading, or they make an agreeable accompaniment to lettuce. What we commonly call cress is a Central Asiatic annual.

**Cucumber.**—Cucumbers can be grown under glass, at any season of the year, by adjusting the temperature and moisture of the soil employed and the surrounding atmosphere to their needs. The frame of the forcing house in which they are cultivated requires to be maintained at a temperature ranging from about 70 to 75 degrees, and never permitted to fall below the former. This is the first essential of success. Cucumber plants, raised from good seed sown in single pots of leaf-soil, drained each with a lump of fibrous turf, may be planted on mounds when the second pair of leaves are well formed and the first shoot has commenced to move, the hillocks having meanwhile been warmed equably. Hollow each hillock a little, basin-shaped in the centre, to facilitate watering. The thing to strive for is air, moist and fresh, and yet constantly at the temperature indicated. Sun-heat will give you a deviation to 5 degrees extent at least higher at midday, even if you are particularly cautious as to putting air on in the morning and withdrawing it at the proper time, but this is a natural condition of plant life. In a forcing house where the heat is regulated by an easily governed boiler or by fire-heated flues, it will be necessary to maintain the moisture by waterings and floor sprinklings, and the cucumber vines, grown in borders over, or near to, the flues or pipes may be trained to trellises to hang the fruit down naturally and straight. In the frames glasses will be necessary to secure straightness for the finest fruit, but, with quick, healthy growth achieved by practising the precepts here expounded, there will be little malformation that matters. Gherkins, and some fairly-long hardy outdoor cucumbers, of which seed may be readily obtained, give satisfaction if grown in a sunny yet sheltered position in good hotbeds in the garden, the young plants being started off under bell or handglasses and lightly syringed overhead in the evenings to promote humidity as much as possible. The plants being maintained in vigour, their thick large leaves will give the requisite shade to the running and fruiting shoots. The fruit not introduced into training glasses may be laid on pieces of slate to prevent discoloration underneath, and all decaying leaves should be removed.

**Endive.**—A very useful salad plant, easily grown in light, porous soil, well trenched, and enriched, in any sunny garden. Seed may be sown in shallow drills on a pulverised bed surface in June, raking all even. Thin out the weaker seedlings, leaving the more robust plants about a foot apart all ways. When fully grown, the plants, having had the soil drawn up to the roots, during development may be blanched by tying up and placing inverted flower-pots over them. The process takes a week or more, and it protects against injury from frost as well as giving the requisite whiteness to the heart leaves. Batavian endive is a satisfactory sort to grow and of fine flavour, its lettuce-like leaves having an appetising bitterness. Some protection must be provided for the crowns in severe weather.

**Fennel.**—Fennel, cultivated as an ingredient of sauces and salads as well as for pickling, may be raised from seed sown in April, and covered lightly with soil. Transplant the seedlings a foot apart and pick off all flower stalks as they appear in order to ensure fine leaves. A good bed will last for several years. The leaves possess valuable digestive properties, and are a corrective of flatulence.

**Garlic.**—This powerfully pungent bulbous perennial, a very little of which goes a very long way, requires similar culture to the shallot, being propagated by separation of the cloves of which the bulbous root is comprised, and setting them out in spring in rows in rich and friable soil and a sunny situation, planting 2 inches deep and a few inches apart. Weed the bed well, and dry when ripe in the sun for storing. A small clove of garlic inserted in the knuckle of a leg of mutton will permeate the whole joint, and the mere rubbing over of a warm dinner-plate with a cut clove will affect whatever is served therefrom with the strong garlic flavour.

**Horseradish.**—This requires rich, deep soil for its proper cultivation, and a moist situation suits it best, the object being to obtain long, straight, smooth root growth. Sets or pieces of root should be planted at the bottom of a deep and well-manured trench, and a single shoot only allowed to grow above ground at one time in each case. In digging, the earth should be carefully thrown from the root to be gathered, so as to get up the full length without damage to it of the stick. It must be harvested before frost hardens the ground when wanted for winter use, and stored in damp sand.

**Kale.** (See **Borecole.**)

**Kohl Rabi.**—The turnip-rooted cabbage, as Kohl Rabi is often called, is half a cabbage and half a turnip to look at, having a bulbous stem like the latter, and producing broad, cabbage-like leaves. The root, when eaten young, is very palatable, and the Kohl Rabi resists frost as well as drought, so that the leaves often come in handy for the pot. Sow in drills or in seed-bed in spring, and transplant later to a foot apart, watering if need be till growth begins, after which nothing but occasional hoeing will be wanted.

**Lamb's Lettuce.** (See **Corn Salad.**)

**Leek.**—Leeks may be sown in February or March in widish drills, on a well-prepared and well-enriched bed of light soil along with onion seed, the young onions being drawn for spring consumption, leaving the leeks to stand and mature. The soil later should be drawn up to the leek stems, to promote blanching. A better plan is to grow them in shallow manured trenches, celery fashion, setting each leek from a seed-bed in a dibbled hole in a centre row, 6 inches apart, and just covering the root fibre at the bottom of the hole with fine soil. For exhibition purposes leeks are sown under glass early in the year, hardened by transplantation, and cultivated in protected and richly manured trenches.

**Lettuce.**—A hardy annual, whose crisp and juicy leaves are of old dietetic renown. It requires rich friable soil, and a nice open situation, but not too much exposed to strong sunlight, and should be sown broadcast on nicely prepared and narrow beds from March onward, thinning and transplanting carefully. The cos lettuce leaves may be carefully drawn together when growth is well advanced and tied towards the top with soft bast to help hearting and blanching.

**Manuring.**—Seaweed, blood, crushed bones, sewage, nightsoil, and many other kinds of animal and vegetable refuse may be utilised in various ways in the ground, the great thing being to employ them intelligently and methodically.

**Marjoram.**—Pot marjoram and winter sweet marjoram are hardy perennials, which grow well in warm, dry soil, and may be divided and planted in spring or autumn. Cutting the stems of the plant should be done in summer, drying in bunches in an airy, shady place.

**Marrow.**—The vegetable marrow must be first raised from seed sown in a hotbed or greenhouse, in light sandy leaf-soil, the seedlings being transplanted into single pots to harden off ready for planting off on a sunny bank sloping southwards or an old rubbish heap or dung heap, being given a rough mound of rough turfy loam and broken sods to run their roots in, kept well watered and clear of weeds. They abominate stagnant moisture, but cannot very well receive too much if the root drainage be complete. It is not necessary to make a hotbed specially for marrows, any raised collection of well-shaken refuse will serve to give them an elevated position in the sun and furnish a good growing start, but it is advisable to cover the young plants with a handglass tilted a little at first, or otherwise afford shade and protection against midday sun and possible night frost. Late May or early June is quite soon enough for outside planting. The huge pumpkin or squash needs a lot of room for its great rambling shoots. Its sometimes enormous fruit is not gathered immature for the table, like that of the Marrow, but ripened for mashing, and pie or jam-making.

**Mint.**—Any little piece of mint root will estab-

lish itself readily, and this very useful herb should be grown in sufficient quantity in good soil, in a damp or shady border, well prisoned in between a wall and a deep edging or the roots will invade neighbouring territory. March is a very good time to plant. Just when the bloom stalks begin to show, cut and dry in the sun for bunching and kitchen use.

**Mushrooms.**—Most people like nicely-cooked fresh mushrooms, and these delicious fungi may be grown all the year round by artificial spawning. A very good situation is a warm damp cellar or any outhouse where the atmosphere is moist and close. The foundation of any mushroom bed should be a sufficiency of well-rotted stable manure, turned over in the sun three or four times to sweeten, and well mixed with about a quarter of its bulk of good loam at the last time of turning. The bed should not go above about two feet high and be given a gentle slope and well beaten down with the back of a spade. Smaller beds may be made up, sloping from front on wall, on shelves in shed or cellar, always getting about the two-feet depth. When the bed temperature is down to about 75 degrees, two-inch bits of the spawn bricks to be had of all florists should be broken off and inserted freely over the surface of the manure, pressing down and covering with an inch of good garden soil. Then cover with an old mat or bag to exclude all light, and if the place be moderately warm and your spawn is good, you will in six weeks or so find mushrooms under the mat. Then, and not till then, you may water with warm or tepid water from a rosed can, and a salt dressing over the beds will add to their fertility.

**Mustard.**—As an accompaniment of cress for small salading this is indispensable, and should be sown similarly, broadcast, in pans, boxes, or on borders, the soil made smooth and moist. Press the seed upon the surface, but do not cover, or the stalks and leaves will be gritty. Water gently with a fine rose after the leaves are first formed, and shade from the sunlight to keep green. Sow often and cut quickly.

**Onions.**—Autumn sown onions escape the fly which is such a pest to this esculent. Give them good soil, well tilled, and sow in drills, 9 or 10 inches apart, thinning afterwards freely. This will give plenty of spring onions for the table, and with weeding and hoeing later, large bulbs for maturing and drying for winter use. Dressing with soot and crushed common washing soda staves off the maggot and promotes fertility. Seeding in February or March, covering thinly with fine soil, will give successional growth. Fresh manure, except when trenched deep down, is not good for an onion bed, but wood ashes and charred refuse are excellent for working in before sowing. At maturity, that is when the leaf stalks begin to die down in autumn, pull up the bulbs and let them dry on the ground for a good week, turning occasionally, before storing away where frost or damp will not get at them.

**Parsley.**—March sowing for summer supply and June seeding for winter use is the practice with this very useful biennial garnishing plant, which may run along the edges of borders advantageously.

**Parsnip.**—The Parsnip is cultivated in deeply trenched sandy soil, the manure being well worked down into the subsoil to prevent forking of the roots. Sow in lines, say 15 inches apart, in early March, covering the seed very lightly with finely sifted soil. Take up the roots in November, cutting off the tops before storing away in a cool cellar. They are hardy enough as a rule to withstand frost if left in the ground and covered lightly with bracken, but would begin to grow again in February if permitted to remain, and quickly deteriorate.

**Peas.**—Ground for pea cultivation should be trenched to 2 feet deep, during the winter, and left quite rough for the frost to get well at it. Work in manure at the digging. Dry days are best for the sowing, which may commence in November in the most sheltered positions. Sow in drills 2 inches deep, covering with nice light soil after gently pressing each seed down, and "stick" when 4 to 6 inches high, drawing up dry soil in ridges to the stems, which affords shelter and induces good root growth. In frost a little bracken or clean litter may be laid over the young upspringing plants. In January a second early crop may be sown. Successional sowings to continue the yield right on into autumn can be made according to requirement. Mulching with good short manure is good for peas in dry weather, and copious root watering also if the soil be deeply worked and drained. Leave as much room as you can between the rows, and run them north and south for the main crop.

**Potato.**—Potato culture is the most important of all kitchen garden work, and should therefore be approached with full understanding and systematically. To begin with, the ground must be rich but sweet. Soil heavily manured for a previous crop such as celery, then thrown up roughly for frosting in the winter, suits potatoes well. Sandy soils previously enriched make the best flavoured and finest conditioned potatoes for the table, if not the heaviest crops. Charred vegetable refuse is valuable for working into the surface soil when the "sets" are planted, and a sprinkling of dried wood ashes along the trench and over the "sets" will often be helpful in warding off disease. Never attempt planting potatoes too early except for forcing, lest a night frost blacken all the promising row of peeping leaves and put you back weeks later than your more prudent neighbour who has deferred operations.

**Radish.**—Early radishes may be procured by sowing in favourable February weather on a well-prepared bed of light loamy soil on a warm border or in a sunny corner of the garden, with an old light or two or a collection of straw-covered hurdles to afford protection on cold nights, or they may be grown in cool frames by removing the cover during the day and replacing when frost is about. The soil should be rich and friable, and nicely drained, and the seed may be sown thinly and broadcast, giving tepid moisture with a rose in dry weather, and keeping the birds scared away. Quick growth is the thing to strive for.

**Rhubarb.**—Rhubarb may be planted in spring or autumn in well-digged and richly manured ground, placing the divided crowns 3 to 4 feet apart. Tubs or wide chimney-pots can be placed round the sets in autumn to give an extra early supply of long, juicy stalks, and the ground should be well mulched with short decayed manure after pulling.

**Rue.**—Besides being a medicinal plant, Rue is useful for garnishing, and may be grown from seed sown in April, or propagated from slips.

**Sage.**—Sage should be grown in light, rich soil, and is propagated without difficulty by slips taken after flowering in the autumn, or by layering in spring. Harvest and dry in the air in September, preserving in light paper bags for pulverisation of the leaves in seasoning preparations in the kitchen.

**Salsafy.**—Salsafy, sometimes called the "Vegetable Oyster" because of the delicate flavour of the root when properly cooked, is a biennial. It should be sown in light, rich soil, well manured from a previous crop, in April, the plants being thinned out to about a foot apart.

**Savoy.**—The Savoy is a kind of cabbage with blistered leaves, very hardy and improved as to flavour by exposure to frost. Successional crops may be sown in February, mid-March, and late April, for later transplantation.

**Scorzonera.**—Scorzonera requires similar culture to Salsafy, which it resembles as to root save for the back skin. To get the roots of Scorzonera large it may be permitted to grow on to the third year.

**Sea-kale.**—Sea-kale may be raised from seed, or cuttings of the root extremities or "thongs." The seed should be sown about the beginning of April in drills. The blanched stalks should be cut for use when ripe, going down to the base, and removing all decaying leaves before giving a dressing of ashes and salt to keep earth-worms under.

**Shallots.**—Eschallots are Syrian bulbs, excellent for pickling or for flavouring purposes, and may be planted in autumn or spring in good light soil, a warm situation being requisite for the first two settings.

**Sorrel.**—The leaves of this plant are employed in flavouring soups and in salads and sauce preparations. It will grow readily in any ordinary

soil, and is propagated by division, planting in rows in early spring. The leaves are gathered singly for use, and are peculiarly acid to the taste.

**Spinach.**—Spinach needs rich yet light land to grow into perfection, and a plenitude of moisture. The seed should be sown in drills a foot apart in mid-March, and when the plants can be safely handled they must be thinned out to 4 inches apart. A good place to grow them in is between pea rows. The Round-leaved is a very good summer sort, and the Prickly-seeded spinach will stand the winter if sown in August, when it will come in for winter and early spring use. The leaves should be plucked singly as they arrive at full size. Spinach Beet, or Perpetual Spinach, may be grown similarly to Spinach proper. The Lettuce-leaved Spinach furnishes an abundance of succulent foliage for winter cutting, but requires slight protection against frost in hard weather.

**Tarragon.**—Propagated by root division in March and October, and should be grown in a dry and warm spot, in good rich soil. Cut down for kitchen use as winter approaches.

**Thyme.**—May be raised from April sown seed in good light soil, or increased by root division in spring, planting about 4 inches apart. Lemon thyme is much esteemed for its delicate perfume and delicious flavour.

**Tomato.**—Sow in heat from January to March. The young plants must be pricked off into boxes of rich sandy loam and leaf soil as soon as they will bear handling, and afterwards, when the third leaf appears, into well-drained 4-inch pots, and kept well up to the glass in a cool frame. Two further shifts will be requisite, to 6-inch and 12-inch pots respectively, if the plants are intended to be fruited in the pots, and in these stages of culture they should be gradually exposed more and more to air. They must in any case not be retained in too close an atmosphere when in flower, the pots being gently tapped to distribute the pollen for the purpose of fertilisation and assisting the fruit to set. They may be planted out in a sunny border against a fence or wall with a southern aspect, in which case they may be turned from 4-inch pots in late May or early June.

**Turnips.**—The soil must be particularly rich and friable, but clear of heavy undecayed organic matter, so that well-rotted manure only should be employed in enrichment with as much charred vegetable rubbish and wood ashes as can be worked in.

# FRUIT-GROWING

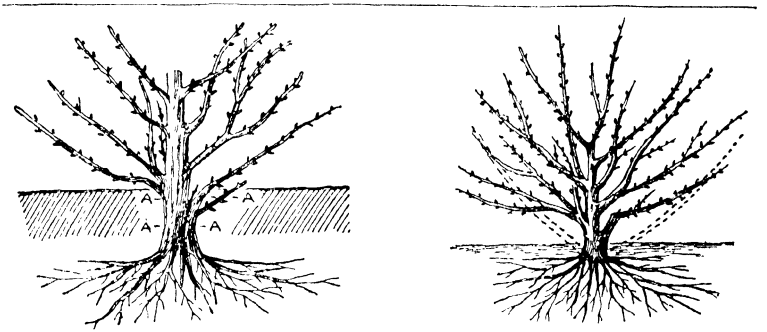
**Apple.**—Generally speaking, apple trees require a good loam soil, with a subsoil of clay, though many kinds will grow and fruit well over a calcareous or gravelly subsoil. They should not, as a rule, be planted in low-lying ground or a moist situation, nor yet in a high and exposed position. A good maxim is to select the sorts of apple which do best in any locality for planting thereabout, having regard to the positions available; and counsel from a practical grower with a knowledge of the neighbourhood should be obtained by the novice, not only as to apple trees, but with regard to every description of fruit tree, bush, or plant of any kind, the cultivation of which is contemplated. Those whose available orchard space is limited will do well to go in for apples grafted upon the Paradise or dwarfing stock, which should not be planted nearer than 12 feet apart, while standards of the Free, or Crab stock, must not be placed closer together than double this distance. When the trees are received for planting, any time between November and March, care should be taken that they are not exposed to frost. Be guided by the earth mark on the stem indicating how the young tree stood in the nursery.

**Apricot.**—Apricots flourish in good sound loam, with a chalky admixture, and may be planted in yard-deep holes in a sun-warmed and sheltered position, with a broken brick layer for drainage. Rotten leaves, to the extent of a quarter to three-quarters of the loaming staple, should be mixed well with the planting soil. Stop all leading shoots in pruning, and pinch back such shoots as are not required to furnish the wall properly. Thin thickly-set fruit off partially at once, reserving a final thinning until the fruit has stoned. Protection against severe frost will prevent damage.

**Blackberry.**—Stony banks and other waste places may be profitably utilised for the cultivation of the Blackberry, which will absorb heavy manurial dressings.

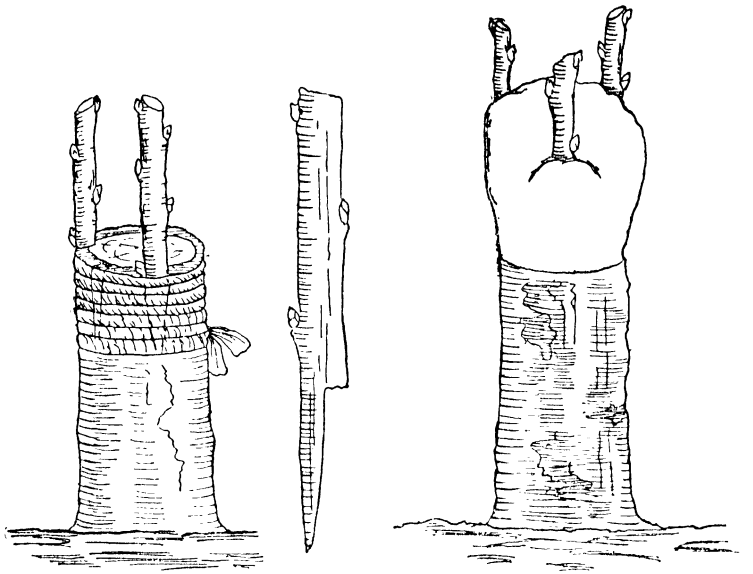
**Cherry.**—Every garden or orchard in which space is available should afford room for a cherry tree or two. A deep rich loam, well drained, over a dry subsoil, suits most sorts admirably. Those grown on walls should have a southerly aspect, and careful training is essential, while for orchards the standard form is best. The Morello Cherry does well on a north wall. Cherry trees, especially bush trees, should be autumn pruned, as this goes a long way to prevent objectionable gumming.

**Currants.**—Currants, as bushes, or trained on walls, will grow in any garden, but thrive best in deep, moist, rich soil, and are readily propagated from cuttings of young growing shoots struck under a hand-glass in light sandy soil from October to March. These or young bushes should be planted out in the autumn the second year 5 feet to 2 yards apart. Prune in winter, leaving the leading shoots about 6 inches long, and shortening the bearing wood on the sides of the branches to form spurs an inch or two long. The black currant needs only the weaker and old



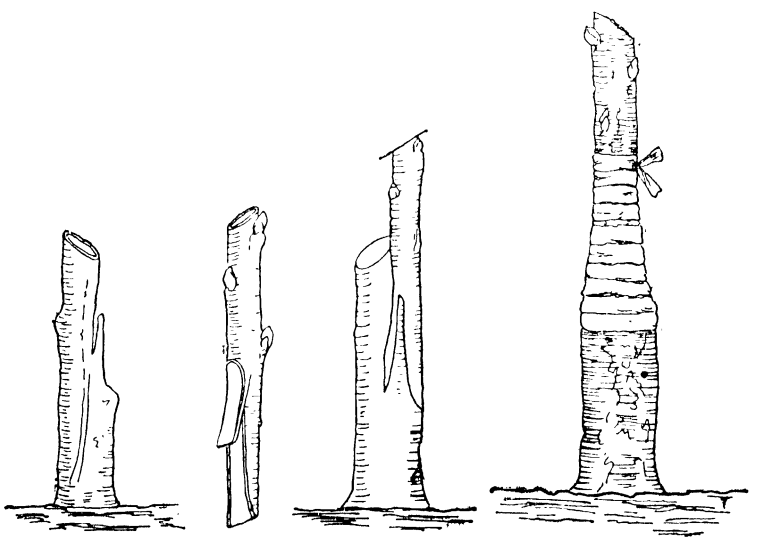

BLACK CURRANTS—Planted too deep and at the right depth.

The life of all bush fruits would be jeopardised by the possible decay of bark at A, A, A, A. The dotted lines in the right-hand illustration represent new strong basal growth on Black Currant, the result of right planting.



RIND OR CROWN GRAFTING FRUIT TREES.

Stock-headed back and scions inserted and bound, after which a covering of moist clay is applied. When the scions have pushed nine inches, the clay (or grafting wax) should be removed and the ties half loosened to allow for expansion.



TONGUE GRAFTING FRUIT TREES IN MARCH.

Stock and scion prepared. A tongue is made in the scion to fit the stock. Scion inserted and tied in with raffia.

branches taken away to leave the robuster young wood to stand clear.

**Figs** need a south wall and a sheltered situation, with firm loam soil, and frequent waterings with liquid manure during the growing period. A chalky subsoil is congenial, and protection against frost is advisable, which shows in the late shoots in the spring following from an attempt at ripening, which will occur in the summer should it prove hot and genial. These bearing shoots should be trained at full length to the wall, and cut back to one eye when fruiting is finished.

**Filberts and Cob Nuts.**—Filbert and Cob Nut trees or shrubs make a very good screen in a large garden, and are ornamental in addition to being utilitarian. They will thrive in any ordinary soil which has been well manured, and should be planted in autumn, and pruned in April, which much improves them. Planted rather closely in a sunny situation, they form capital hedges. The Kentish Cobs and the Red and White Filberts are all free growers and may be layered (see illustration). The pendulous catkins which show in early spring so prettily are the male flowers, and should not be shorn away too ruthlessly in pruning, or there will be few nuts on the trees later.

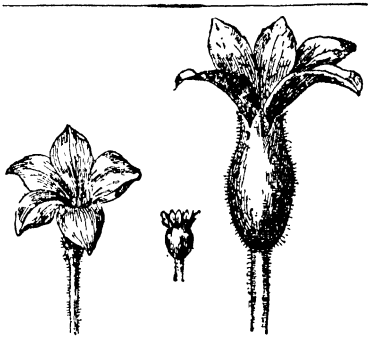
**Gooseberry.**—Gooseberry bushes like loose rich soil, absorbing but not retaining much moisture. They are propagated by cuttings, and should be planted in early autumn 7 or 8 feet apart, and pruned in January. Let the main stem of young gooseberry trees run to a foot high before allowing lateral branches to extend, then prune as you would a red currant bush. If the caterpillar puts in an appearance, hand pick and destroy the pests.

**Grapes, Outdoor.**—If suitable vines be planted, in a properly-prepared border, against a high warm house or other wall with a southern aspect, ripe grapes may be secured by careful cultivation out of doors in favourable seasons in this country, and a well-trimmed vine is always very ornamental. The best sorts for this treatment are Royal Muscadine (white), the old white Sweetwater, Miller's Burgundy (purple), Black Cluster and Chasselas Vibert (white and sweet). The border may be made on the ground itself; if with an asphalt or concrete foundation all the better, but the bottom must slope gently down to a drain. Chalk, well rammed, say 4 inches deep, makes a good first layer. Upon this place a thickness of a foot of rubble, rough and free from dust and dirt, with an admixture of large broken bones, calcined or not, but clean. Next a layer of turves, grass-side downwards, and on the top of this, a depth of not less than 2 feet (3 feet will be better) of compost. This should be formed of five parts rich fibrous loam, one part of half-inch bones, and one part old mortar and broken-up bricks, with wood ashes, charcoal, and burnt clay or ballast. All is to be thoroughly mixed and placed on the border dry, being kept in position preferably by an outer wall of firmly-pilled reversed turves, dressed smoothly on the front, so as to have the appearance of a shapely bank with a slight slope from the ground level inwards to the upper surface of the border, which should be as wide as possible. When all is nicely settled by a few preliminary waterings, the vines may be planted out in spring-time, when the young shoots are started, spring being a good season for the operation, though October will serve. Plant with the stem from 1 to 2 feet away from the wall, spreading the roots carefully about a foot down, to radiate in a half-circle outwards. (See also Vines, Indoor.)

**Loganberry.**—Suitable for training over wire arches or trellises, and a free grower. The fruit, resembling that of the raspberry, is useful for culinary purposes, and the correct cultivation is similar to that requisite for the raspberry, save as to the training of the long rambling shoots.

**Medlar.**—A deciduous tree, bearing hard green fruit unfit for eating until "bletted" by keeping two or three weeks after gathering in November, when it is agreeably acid and slightly astringent. Does well in loamy and moderately moist ground. May be propagated by budding on the quince or whitethorn, and requires rather free pruning.

**Melons.**—Melons may be grown readily in hotbeds and frames, made up as for cucumbers. They require a good deep bed of very firm loamy soil over the fermenting manure. Never more than three fruit should be permitted to form on one plant, as all appear at about the same time, and three is enough—select the most promising and central—to tax the nutrition-providing powers of each subject. Let these swell coincidently, nipping off every superfluous shoot. It will be necessary to keep the air dry in the frame whilst fertilisation of the female flowers is being secured, and this can be accomplished by slightly opening the lights at the back at night. When the fruit is well set and swelling, slip a slate under it, and keep up the heat and moisture in the frame liberally until the first sign of ripening appears, after which aim at securing dryness again. As soon as the stalk looks like separating from the fruit, it is ripe; it should then be cut at once and eaten as soon as possible, or the flavour will deteriorate. A second crop may be induced by allowing new shoots to start from the centre and cutting all away beyond them, remoulding up the bed with fresh soil and giving liquid manure to get the new growth going, and then proceeding as before, save that this time only two melons should be fruited to each root. From setting to ripening occupies about five weeks. Mildew can be kept down by sulphur dusting and cautious increase of air, and it may be necessary to fumigate to disestablish red spider. Fresh-slaked lime round the neck of the plant is often useful in the prevention of damping off.



MELON FLOWERS—Male (pollen-bearing) and female with fruit in embryo. The latter only bears the fruit and pollination is necessary to ensure a crop.

Good seed of scarlet, green, and white fleshed varieties of melons may be had of all nurserymen of repute, and should be raised as cucumber seed is.

**Mulberry.**—A tree of Persian origination and ornamental appearance, bearing richly aromatic and juicy oblong fruit in some favour for dessert. Likes a deep loam, and plenty of moisture and a sunny position, either as a standard or trained to a wall. Propagated from cuttings or by layering the young branches. The fruit of the Black Mulberry is the only kind eaten in Britain; the White Mulberry is utilised in other countries for silkworm feeding.

**Nectarine.**—A smooth-skinned sport of the Peach. (See Peach.)

**Nuts.** (See Filberts.)

**Orange.**—Ordinarily when the orange is cultivated in this country it is rather because of the ornamental habit of the plant and the beauty and odoriferousness of its blossom than on account of the fruit, which rarely reaches perfection with even an expensively appointed and spacious orangery. But with some considerable trouble oranges may be fruited very well in a British hothouse, and some of the handsome Tangerine sorts thoroughly ripened. This is a matter for the possessor of a hothouse. He who has not at command a roomy glass structure in which the temperature is never below fifty on the coldest winter night is warned off from any attempt at orange-growing. He will never produce fully developed fruit, though, with luck, he may main-

tain small orange trees in sufficient health to get them into blowing and bearing, and be able to use them for ornamenting a conservatory or a parlour.

**Peach.**—Peaches and nectarines are nearly related, the former having its delicious fruit downy-skinned, the latter smooth. Both are usually fan-trained to walls or wooden trellises when cultivated out of doors, the branches being tacked or nailed to the support until the leaves fall, when they are released to facilitate pruning. The approved pruning method is to cut back the young shoots to two-thirds of the wood grown in the previous year. Bearing only results from wood of the current season. Fruit set too thickly should be thinned when the flowers fall, and again when what has been permitted to remain so far reaches marble size.

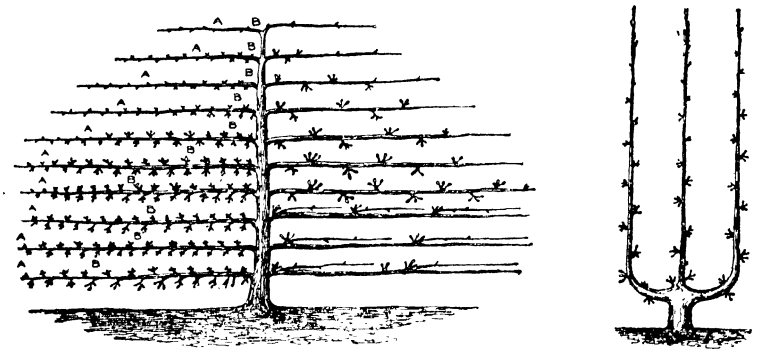
**Pear.**—In selecting young pear trees for planting—whether they be on the free (or wild pear) stock or upon that of the quince—many people like to have them one year from the graft, others those of two or three years' training. Wall pears require branch pruning and training in winter, and the rubbing off of superfluous shoots during summer. Marie Louise and Beurre Hardy are grand wall sorts, while for standard, pyramidal or bush growth, Pitmaston Duchess, Jargonelle, Williams's Bon Chrétien, Doyenne du Comice, and Louise Bonne of Jersey are all choice dessert fruits.

**Plum.**—Plum trees do not require much pruning, as over-free use of the knife sets their resinous juices "bleeding." Root-pruning is useful to check rank growth in the plum orchard, and young shoots forming too freely on bush and wall plants should be promptly pinched off, to let in the light and air to the wood which will be productive, and root suckers should be removed assiduously every autumn, or they will quickly prove exhaustive to trees and land alike. It is advisable to afford support to pendulous branches when laden with fruit, as plum wood is peculiarly brittle.

**Quince.**—Largely employed as a dwarfing stock for certain kinds of pears, but sometimes cultivated for its powerfully odoriferous and astringent fruit, which makes good marmalade. May be propagated from cuttings and layers (see illustration), and treated as an orchard tree. The Portugal Quince produces the finest and largest fruit.

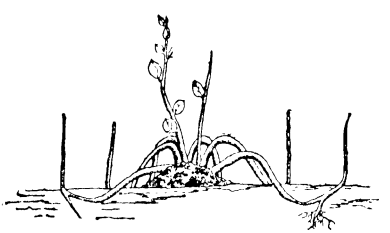
**Raspberry.**—Raspberry plantations are best started in the autumn, and, properly attended to thereafter, they will continue to bear abundantly for years. The ground round the plants or bushes should not be disturbed with the fork after they are once established, but a good dressing of rotten manure may be given annually. Autumn-bearing Raspberries should be kept rather thin.

**Strawberry.**—Strawberries must be cultivated in a deeply-dug and highly enriched porous soil, efficiently drained. Dark yellow loam, not at all sticky, and thoroughly worked well before planting time in August, will give a good resultant. Plant the rooted runners from the nursery bed in rows 3 feet apart, allowing a foot between each plant. Bring them in the trowel singly, with a good ball, disturbing as little as possible in the operation, press down and round firmly, and water occasionally until new growth is evident. In the spring a good top-dressing of loam is helpful, and a few days later a mulching of long litter worked under the leaves will conserve moisture



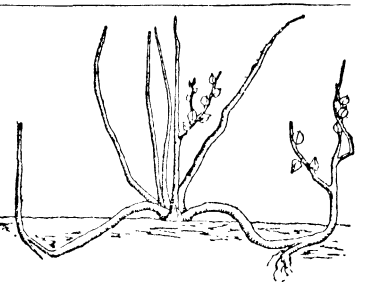

TRAINING PEAR TREES ON WALLS.

The espalier and a triple cordon. A. Lateral growths. B. Fruit spurs.



LAYERING THE QUINCE.

*On left*, as laid in March.
*On right*, rooted in October.

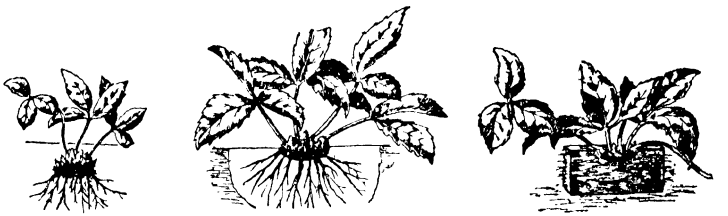


LAYERING THE COB NUT.

Shoots pegged down and roots emitted at the point where the tongue is made. *On left*, as laid in March; *On right*, rooted in October.

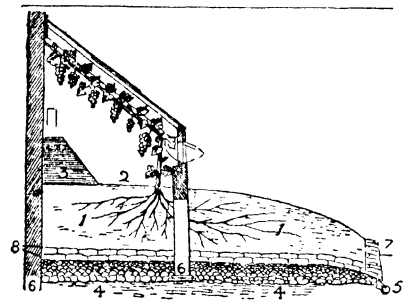
and keep the fruit clean when it comes to develop. Strawberry plants should never be permitted to get at all dry at the roots, and plantations must be renewed not less seldom than every third year. The old leaves may be advantageously cut away after fruit gathering, a mulching of short well-rotted manure being applied at the same time. Only a sufficiency of runners must be allowed to start off from the rows to serve for new plant raising, and the secondary runners of these should be chopped away and destroyed. It is bad policy to replant the layered runners, after their individual development elsewhere, in the parent-bed when renewal time comes. Then a thorough re-trenching and re-making of the beds should take place, importing plants from a distance, placing out your own raised runners in quite a fresh situation. Change of ground is good for strawberries.

**Vines (Indoor.)**—To grow grapes thoroughly well and with certainty in this country it is necessary to have a suitable glass structure (see illustration),



STRAWBERRY PLANTING.

Planted too deep, at the right depth, and a layer rooted in a turf.




A LEAN-TO VINERY IN SECTION.

Showing inside and outside border provided with good drainage.

1. Fibrous roots denote healthy growth. 2. Inside border. 3. Raised path. 4. Well drained subsoil. 5. Drain-pipe to outside border. 6. Brick pier. 7 & 8. Inverted turves of good loam.

and provision for keeping up a proper temperature therein, either by an efficient system of hot-water apparatus or by well-constructed flues circulating warmed air through the house, such air being heated at an outside furnace of proper dimensions and receiving regular attention. The vinery may be small or capacious, according to its owner's means or desiring, but it should be well built, well placed, and well looked after. The border from which the vine or vines receive nutriment ought to be partly internal and partly external, and its arrangement internally should form a supplementation of what has been advised for outdoor grape culture, continuing well over the floor of the structure, and in communication with the outside border made as directed. Planting of the vines may proceed internally as was indicated to be good practice outside, sufficiently large apertures in the brickwork supporting the frame of the house having been left purposely for the roots to run through. Training of branching shoots of the indoor vines will be up the sides and beneath the glazed top of the house, instead of upon an external wall, the most important difference being that short rod or spur pruning will be permissible alternatives in after treatment. Indoor vine borders will require frequent watering with tepid water, and forcing must, when necessary, be managed with circumspection, fire heat being supplied gently at first, and gradually wrought up to the requisite maximum, as much ventilation being afforded as a general rule as the weather will permit.

**Walnut.**—The walnut tree luxuriates in a deep sandy or calcareous loam, freely exposed to light and air. It is usually raised from seed, and is improved by cutting off straggling growth in autumn. It is essential that as little injury as possible should be inflicted when walnuts are gathered, fruit being borne at the extremities of the preceding season's shoots.

# FLOWER GARDEN

*(Embracing Window-gardening and Greenhouse Work)*

**Abelia.**—Abelia rupestris is a useful deciduous shrub, reaching a height of 3 feet, and bearing in early autumn clusters of fragrant white bloom. Plant in a sheltered sunny position, in good light soil.

**Abronia umbellata.**—Rosy-lilac, half hardy annual, 6 inches.

**Abutilon.**—Free-growing, hard-wooded greenhouse shrub, bearing pretty and distinctly formed flowers, some varieties having variegated foliage. Useful for training round pillars as an indoor pot-plant, and for plunging in a sheltered spot in the garden at the back of a bed in summer-time. Sow in bottom heat in spring, and transplant into rich soil, or strike in September, potting off into good-sized pots.

**Acacia.**—The yellow Mimosa makes a good greenhouse or window plant, and is easily cultivated. The Locust tree is really not a true Acacia, but is a favourite for planting in ornamental shrubberies, and sheltered front gardens, where it will rapidly grow to a great height, though taking many years to mature. Bears sweet-scented blossom in June, and has particularly graceful foliage.

**Acanthus.**—Beautiful-leaved South European herbaceous perennial, grows and flowers well in light border soil. Raised from seed or propagated by division. Commonly called "Bear's breech."

**Achimenes.**—Raised from seed in a hotbed in shallow well-drained pots, these pretty plants bloom well in a warm greenhouse or conservatory, and do nicely in decorative hanging baskets. Leaf soil, rich loam, and silver sand, with a few lumps of charcoal over the drainage, should be employed, and they should be kept moist at the roots when growing and flowering.

**Aconite.**—The monk's-hood is often grown at

the back of borders or in front of shrubberies, where it gives little trouble. There are white and purple sorts. The winter aconite, yellow-flowered, is popularly called "The New Year's Gift" because of its early blooming. It will grow in any corner almost, and gives no trouble. Seed of all the Aconites may be sown in summer, and the young plants should be kept well-watered, and removed to their permanent quarters in the following year, or propagation by root division, as with many other perennials, is safe and easy.

**Agapanthus.**—August-flowering African Lily, for pot culture or massing in beds, in the summer with Gladioli; the blue or white varieties are very effective. Must be kept dry in winter, and if left out of doors protected from frost. Thrives in strong loam, not too rich, and does well in large pots or tubs. Well water with liquid manure in warm weather.

**Ageratum.**—Dwarf, half-hardy annual, bearing grey, blue, white, or rosy blossom, the former being oftenest met with. A useful bedder, easily raised from seed in gentle heat in March, or may be sown in a sheltered position outdoors later, and transplanted before placing in the border. Succeeds best in good light soil. Introduced from Mexico, and deservedly a favourite.

**Alonsoa Warscewiczii.**—Bright, scarlet-blossomed half-hardy annual, 1½ feet, prolific and useful for cutting.

ALSTRŒMERIA AURANTIACA (PERUVIAN LILY).

**Alstrœmeria.**—A showy, tuberous-rooted perennial, suitable for border cultivation, and needing protection in severe weather, with good soil to luxuriate in. Can be raised from spring-grown seed, and needs well watering in summer. Flowers, a mixture of yellow, orange, and intervening shades to flaming scarlet.

**Alyssum.**—Hardy, compact-growing border or alpine perennial, useful for edging purposes, 6 inches to a foot high. The rock madwort, as the perennial alyssum is called, flourishes in sunny Flowers, orange-yellow streaked with red. town borders. The "sweet alyssum" is a prolific British annual, which may be sown out of doors in April where wanted to bloom. It is white-flowered.

**Amarantus.**—Useful and distinctive annual, 2½ feet high. Caudatus (the well-known Love-lies-bleeding) and Hypochondriacus (Prince's Feather) are very useful for borders.

**Amaryllis.**—This bulbous-rooted plant may be given pot-culture in a greenhouse, being placed in deep pots as near the glass as possible, in good, rich, peaty loam, mixed with matured stable manure. It reaches 3 feet high when at perfection, and bears gay, lily-like bloom, either of white ground with rosy-purple flushing, all white, or crimson. Bulbs for pot growth must be planted up to the neck, and are best started in heat in spring. Whilst leaf formation proceeds, water freely.

**Anemone.**—The well-known "wind-flower" is difficult to surpass as a spring-blooming perennial, hardy and brilliant. The tubers should be planted in late autumn, when most kinds will flower in May. There are many beautiful colours and both single and double varieties, the latter later in blooming than the former. They prefer friable soil and a position free from keen wind, and will do well for years where well established, though some authorities advocate replanting after three or four seasons to avoid soil exhaustion and consequent deterioration of bloom. Lifting the mass with a fork and enrichment of the ground under the stool and around will suffice to sustain the choicest anemones at their best, if good rotten manure and sharp sand be plentifully employed. Many varieties will flower in mid-winter weather, and the scarlet fulgens is generally very early. The summer and autumn blooming Anemone Japonica is very hardy, and its long flower stalks and cup-shaped white blossoms are always admired. The poppy-flowered French sorts are easy to deal with, and many of the singles can be grown from seed. It is not necessary, or even desirable, to lift the tubers after the leaves have died down when flowering is done, especially as regards the double anemones.

**Antirrhinum.**—The snapdragon is an old garden favourite that can put up with poor soil, especially if it be at all chalky. The more vigorous type of antirrhinum grows well upon rockeries and even on old walls; but good soil tends to perfection with the choicer varieties which floricultural selection has produced. Many fine-flowered selfs are now obtainable from seed, as also striped, veined, and marbled sorts of great beauty. By sowing in heat early in February, all snapdragons may be treated as annuals, transplanting into sheltered situations in good soil, to be moved to their permanent positions in May, when they will bloom in early autumn.

**Aquilegia.** (See Columbine.)

**Araucaria.**—A Chilian cone-bearing tree of a peculiar yet highly ornamental character, with stiff, straight branches, almost at right angles from the stem, covered with pointed leaves, the variety most usually found out of doors in this country being imbricata, the "monkey-puzzle." Likes open situations, and will carry snow without injury, but is sometimes browned by severe frost. Not easily moved after establishment, but will stand for many years on lawns or in parks after it is established.

**Arbutus.**—A beautiful flowering and fruiting shrub, sometimes called the strawberry tree. Its clustered, cup-shaped blossoms are followed by deep orange or red strawberry-like fruits. Can be raised from seed or by layering, and flourishes near the coast in warm situations, growing best in peaty loam. It will reach ten feet high under favourable conditions. Smaller specimens of certain kinds of arbutus are grown in cold greenhouses for decorative effect.

**Aristolochia Sipho,** the "Dutchman's Pipe."—An ornamental climber with large leaves and peculiar-shaped flowers; thrives as a greenhouse and sheltered outdoor pillar plant when grown in good peaty loam, with a mixture of clean, sharp sand. Propagated by root divisions and spring or autumnal layering.

**Arum.**—An easily cultivated plant, sometimes called Richardia and Calla, and more popularly the trumpet or Nile lily. Grows freely from offsets, and requires protection from frost only. Should be re-potted in October in good light soil, having rested in a dry place after finishing blooming in June; but in the growing state cannot have too much water if the soil is well drained. Its beautiful flowers are most distinctive.

**Aspidistra.**—Well-known room-plants, not affected by gas fumes. Will keep in health for years in ordinary soil if nicely drained, sparingly watered, and occasionally sponged. Bears small and insignificant flowers close to the soil, and is increased from suckers.

**Aster.**—Indispensable garden flower. Very varied in height, form, and flower shape, as well as coloration. The old China aster, sinensis, 15 inches, has white, red, and blue shades, self or suffused. Then there are the giant comet varieties with very large flowers, the pretty dwarfs that keep down to 2 or 3 inches, the pæony-flowered type, the quilled varieties, incurved, and others. Any of these can be grouped effectively in beds, and answer the demand for cut flowers admirably. They are treated as half-hardy annuals, sown in March in boxes or pans of light rich sandy soil under glass, in an airy sunny situation, transplanted later in a sheltered yet uncovered place to spread their roots and become sturdy, and bedded out in due course or potted off towards the end of May. The true aster is the Michaelmas daisy, a very useful border perennial of quite another character.

**Aubrietia.**—A good border plant, or rock trailer, with purple bloom and evergreen leaves. Perennial, 4 inches in height, grows best in sandy soil, flowers profusely in spring when massed in sunny

spots, and is easily increased by division of the roots.

**Aucuba.**—The familiar variegated laurel-like shrub of the town garden, which resists smoke and will grow in any nutritive mould. Cuttings will strike in light soil readily in spring or autumn.

**Auricula.**—Alpine and show auriculas are distinct, the former being very hardy, but both are amenable to culture by division in autumn or from seed sown in spring under glass in sandy soil. Grown in pots, which should be small, auriculas must be given plentiful drainage, and require a sprinkling of powdered charcoal or wood ashes in the compost. They do best shaded from strong sunlight, and should be top-dressed with well-spent manure or rich leaf-soil in February, and in watering care should be taken not to wet the flower buds or leaves. The eye of the blossoms of the Alpines is yellow, with gradations of varied rich colour deepening to the edge. The show sorts are either selfs, green-edged, grey-edged, or white-edged, the more clearly defined the outer zone of the three last classes the better. The show varieties are particularly susceptible to damage by damp, and should not stand on the ground, but upon a bed of ashes if in a frame, or on shelf in the greenhouse.

**Azalea.**—There are outdoor and greenhouse Azaleas, both beautiful, the latter excessively so when in bloom. The hardier varieties of the garden do nicely in sheltered permanent situations when grown in a compost of well-sanded peat and loam. At midsummer the plants should be taken out of the greenhouse and placed in open frames or under sunny walls to make new growth, which must be well ripened by the autumn. Azaleas make splendid parlour window plants when the blooming period arrives. To get equal flower furnishing, besides discriminate tying of the shoots to nicely arranged stakes, it is necessary to turn the plants round occasionally, thus obtaining equality of exposure to light. Efficient drainage and copious watering, when the azaleas are dry only, will ensure success. The reward of cultural care will be floral beauty of several weeks' duration. Plants of very large size can be secured by occasional shifts to larger pots at the proper repotting period, specimens lasting for many years when treated as here directed. They like light and air.

**Balsam.**—Decorative, half-hardy, prolific-blossoming annuals, very useful in conservatories or greenhouses or outdoors in summer, also for window show. They require rich soil to be grown to the best advantage, and stimulation to rapid growth from the seed-bed onwards. Sow in early spring, in heat first, and in cool frames later, bringing on the young plants by shifts to larger pots, plunged in tan or fibre as requisite, watering with weak manure freely. For blooming seven or eight-inch pots are the best size, and for bedding-out the plants should be carefully removed without breaking the ball, just releasing the root ends and well watering to prevent check. They need staking nicely, being easily broken, both as to stem and shoot, and protection against heavy wet should be arranged where possible for outdoor balsam beds, as the diversified and beautiful blossom is very delicate.

**Bartonia aurea.**—Favourite bright yellow annual, fifteen inches high.

**Bear's Breech.** (See **Acanthus.**)

**Begonia.**—Flowering Begonias, admirably adapted for bedding, greenhouse, and window decoration, as well as the metallic-looking, silver-belted, hairy-leaved sorts that furnish such distinctive ornamentation indoors, are tuberous or fibrous-rooted plants of much attractiveness. The large-leaved sorts can be propagated from leaves laid on good silver-sanded soil over bottom heat, the ribs and veins being slightly incised underneath with a sharp knife; but all kinds increase easily by root division, or can be raised from seed. There are many varieties and hybrids, compact and branching, large and small-flowered, in numerous shapes and shades. Indoors they like warmth, moisture and shade, outdoors they should be well mulched and kept damp at the roots. They require light yet specially rich soil and careful staking in most cases, the branching growths being very fragile.

**Biennials.**—Sweet Williams, Stocks, Canterbury Bells, Foxgloves, French Honeysuckle, Honesty, and other indispensable garden flowers come under this head. Most of them by early sowing may be made to flower the same year, and preserved after the biennial or fully mature period of flowering has finished by layering down branches or transferring base shoots.

**Bouvardia.**—Shrubby and serviceable greenhouse plants, with white, scarlet, and other coloured flowers, scented, raised by spring striking of root and stem cuttings.

**Box.**—This dwarf evergreen is chiefly in vogue for edging purposes, for which it is very handy, though it sometimes proves a harbour for slugs. The variety sempervirens is the best for finishing off borders, and should be planted in spring or autumn, and kept in neat trim at all times. There are variegated kinds of Buxus, aurea and argentea among them, useful for ornamentation.

**Briza.**—Ornamental grasses, useful for bouquet-making, and in floral decorative work generally. The family includes the "trembling" or "quaking" grass, the "ladies' tresses," and others. All may be grown in sunny patches from seed sown in March.

**Bulbs.**—There are bulbs and bulbs, and bulbs—so-called—which are not bulbs at all. The Hyacinth tribe, growing coat over coat, furnishes one class of true bulb; the Lilies, scale over scale, another. Snowdrops and Daffodils belong to the first group, and there are many liliaceous subjects. But Crocuses and Gladioli, and even more so the Cyclamen, are only bulbs in external appearance. It is convenient to call the gladiolus root-crown a corm, but when further away from bulb-land's centre, we come to arums, asphodels, lilies of the valley, flame flowers, ranunculi, anemones, irises, and pæonies—which some folk will insist on including in the category—we call a halt, and discriminate between tuber, root, and bulb. There is no need, however, to be too pedantic here, for each subject has its due paragraph.

**Cactus.**—Cacti like little pots, and quite as much sand as loam and peat to form the staple of the compost they stand in. Deep drainage and plenty of charcoal is more than half the battle with these curious succulents, and lime rubbish or crushed brick and well-rotted leaf soil should be mixed into the mould when potting, all being dry when a start has been made. They require winter rest without much moisture, and should only be encouraged by gentle watering to make new roots in May; when a little later on any really essential re-potting should be very carefully undertaken. The cacti make capital window plants if the soil they are set in is well guarded against becoming "sad," and the rat-tailed, creeping cereus is a rare good hanging basket subject. Properly speaking cacti are greenhouse perennials, and when their singular and brilliant blooming occurs they are most interesting. Shoots from the stem are easily rooted, if dried a little after breaking off, or seed may be grown.

**Caladium.**—A very beautiful, variegated-leaved, tuberous-rooted plant, nearly all the varieties of which do best in moist heat and require shade. Young plants should be procured from a nursery, and treated carefully, when good results may follow. Rich soil, with peat and silver sand in plenty, must be employed in potting.

**Calceolaria.**—Bedding or shrubby calceolarias, yellow or orange, are propagated from cuttings made in September when the borders are cleared. These should be put into beds made in frames from which the frost can be excluded by a mat covering, and given little water till February, after rooting is ensured, though air should be given on damp days. As spring approaches the lights may be taken off by day, and replaced by night when frost is feared, gradually hardening off and giving more water until the time for planting out, which is usually quite safe in mid-May. Pot specimens may be brought on earlier by transplantation and removal to the greenhouse. The large-flowered herbaceous calceolaria is usually raised from seed sown in summer in pans or boxes filled with rich, moist, sand-covered soil under glass. The minute seed should be thinly scattered on the surface, and when the seedlings can be handled they must be pricked off separately, and gradually potted on as necessary, watering and shading carefully after each shift.

Heat is not essential, in fact it is undesirable, in successful calceolaria culture, but fresh air as far as is consistent with safety, good soil, and good drainage are; also vigilance in keeping down vermin. In greenhouses well-grown calceolarias of the show kind are grand objects when symmetrically staked for bloom.

**Calendula.**—These orange or yellow Scotch, or pot marigolds are particularly easy to grow, and yet most effective for filling gaps in exposed borders or shrubbery belts. Once established they usually reproduce themselves profusely from self-sown seed.

**Calliopsis.** (See Coreopsis.)

**Camellia.**—This greenhouse favourite of Christmas time, with its beautiful waxy bloom and glossy leaves, is hardier than most amateurs imagine, and does well if kept clear of severe frost and intelligently handled. It does not ever need artificial heat except for forcing purposes, and early growth and maturity may be induced by judicious culture. After flowering is over early in the year the plants should be potted, if badly root-bound, and put in a cool place slightly sheltered, and when growth commences be moved right into the open, syringing often and keeping moist. Only when the flower buds are formed and the shoots well-ripened should the plants be taken indoors to protect the blooms and beautify window or conservatory. They thrive in any really good soil, strong loam with sand and peat, and like an admixture of clean, rotten wood or rich leaf-mould. The camellia comes from China and Japan, and is a relative of the tea-plant. The red and white selfs are the best and most floriferous, but there are pretty striped and fringed sorts procurable. Shoots taken when just matured will root with care.

**Campanula** (C. pyramidalis), especially in the white variety, is a beautiful perennial bell-flower, and will flourish in any one place for years, besides being easily divided; and fragilis, the trailer, forms a fine basket plant, either for indoor or outdoor display. The Canterbury bells, biennials, are favourites everywhere, and deservedly so, for they virtually cultivate themselves, and give bright bloom over a long period. All the species may be readily raised from seed, and the florists have brought about many mutations, both in doubles and singles, and really good strains are cheaply offered in small quantity in nearly every catalogue.

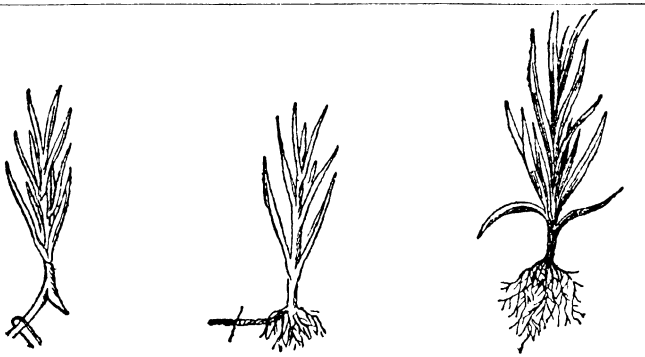
**Canary Creeper.** (See Tropæolum.)

**Candytuft.**—No garden should be without this prolific flowering annual, so useful for cutting and so pretty in the borders. It has been immensely improved by culture; and reliable mixed seed sown in autumn in rich, light soil, and transplanted in due course, will give great satisfaction. The dwarfer varieties are most effective for bedding, the pure whites and deep purples particularly so. There are also biennial and perennial candytufts.

**Canna.**—This tropical plant, commonly called "Indian Shot," finds favour in many eyes because of its beautiful leaves and gorgeous bloom. It will succeed either as a greenhouse subject or bedded out of doors in a sheltered situation for the summer. Seed may be sown in early March under glass, and will grow rapidly if previously soaked in hot water. When flowering is finished out of doors, the roots may be stored for another season in dry soil in pots or boxes. Canna growing, once begun, will rarely be relinquished by amateur gardeners of taste. The canna is a gross feeder. Although of Oriental origin it is an adaptable plant.

**Canterbury Bell.** (See Campanula.)

**Carnation.**—Carnation-culture is most fascinating, whether growing from seed be adventured, piping and layering be favoured (see illustration), or all three be indulged in, and flowers successfully produced by any of the practices may be very beautiful. There are selfs of many colours and shades, clove-scented and odourless, flakes and striped varieties, large-bloomed and small, tall-growing and dwarfs, compact marguerites on short stalks and quick-flowering, each taking some care to cultivate, but all repaying the trouble, especially when experience has shown the way to avoid failure. Then there are the aristocrats of carnationdom, the winter or perpetual sorts that lord it indoors when gardens are at their barest. The latter are propagated chiefly from cuttings, and grown along in slightly-heated, well-aired frames or houses to tall flower growth, with beautiful results at the year end, when the cutting striking commences *de novo*. The best soil to grow carnations in, either as pot plants or in beds, is one-third well-rotted cow-dung and two-thirds rich maiden loam from mellow decayed turves, free from insect life. Pipings are young shoots drawn from the joints and started to root in light sandy compost under a hand glass; cuttings, shoots which will not layer conveniently, and layers—the surest way of propagating of all—the bending down, underslitting, and ground-pegging into good soil of strong side-shoots from the flowering plants in summer, late June to August. These are detached and potted off after rooting. Many pot them in pairs, and they should be well-drained, eight-and-a-half inch pots being a good size to employ. Careful staking is requisite when the flower stalks are put forth. Keep away wire-worms from the roots and green fly from the grass.



LAYERING CARNATIONS.

Bending down, underslitting and ground-pegging of a strong side shoot. Later detached and potted off after rooting.

**Celosia.**—This is an old-fashioned singularity among half-hardy annuals, the variety Cristata, commonly called the Cockscomb, being a favourite for its curious crimson flower crest. Some of the other Celosias have pretty feathery spikes of bloom, which will dry well for vase furnishing. The seed comes up quickly from a March sowing over bottom heat, and the plants may be potted on for greenhouse bedecking or ultimate planting in borders, where they make a brave show.

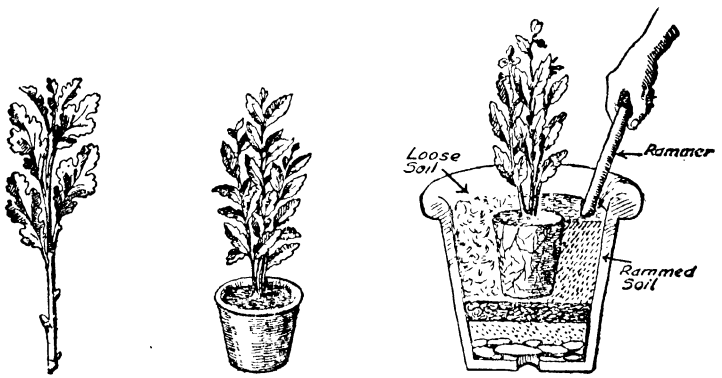
**Centaurea.** (See Cornflower.)

**Cerastium.**—"Snow in Harvest," very valuable as a spreading border, herbaceous perennial, the species Tomentosum has soft, silvery foliage and white flowers. It is propagated by division in early summer, and finds a place in most gardens.

**Chamærops Excelsa.**—The fan palm, a good conservatory decorator, or tub plant for a summer terrace or lawn, doing well in fibrous loam. Only needs protection from severe frosts in winter, and readily raised from seed or off-set suckers. It will stand outdoors all the winter in favourable localities.

**Christmas Rose.**—The black Hellebore, a hardy perennial, which bears white blossom in winter, and loves the shade. It will flourish in ordinary garden soil, and is propagated by division. Some pot it off for indoor decoration in December.

**Chrysanthemum.**—Early-flowering Japanese garden varieties can be propagated by cuttings or from seed, and grown by division. They need staking to withstand wind. The more ornate varieties call for a good deal of cultural care, but no coddling. Raised from cuttings or layers, they may be potted in April, shifted again in May, nipped back and hardened off, and finally transferred into good-sized blooming pots towards the end of June. They should be permitted to grow out of doors until October, and then moved to the greenhouse to flower, being well cleansed beforehand. No flagging must be permitted at any stage, and weak manure water must be frequently administered. The best soil is rich fibrous loam, with a little leaf-mould and decomposed cow-dung, and a plentiful sprinkling of clean, sharp sand and powdered bone. For extra fine flowers the side shoots should be kept down as well, the tops pinched off, and the fewer stems in a pot the better. Let the stock come from a good source, rubbish takes as much trouble as the best. When the old plants are cut down, they may be divided, potted separately, and given a good rest before new growth is encouraged.




CHRYSANTHEMUMS IN POTS.

Cutting from *basal* shoot selected after flowering. Potted after rooting. The final potting showing the pot in section.

**Cineraria.**—These early flowering favourites of the conservatory can be started from seed sown in May in heat, the seedlings being potted off singly and placed in a cool frame until the autumn. Finally, at the flowering size they may go into a warm greenhouse to develop the flowers, which should begin to appear in October, and bloom on to Christmas or after. A compost of leaf-mould and rich loam, well mixed with old stable manure and powdered charcoal, as well as coarse, clean sand, all being left rather rough, will suit. In the growing state Cinerarias will absorb strong liquid manure readily, being particularly hungry subjects.

**Clarkia pulchella.**—Pretty purple, rose, and white hardy annual, eighteen inches in height.

**Clematis.**—These elegant trellis climbers, which luxuriate on sunny walls or in well-ventilated houses, and make nice pot plants also, like a good strong soil. They will stand nourishment, freely administered, when grown indoors, and should have judicious root-dressing when established in the open. The Jackmanii varieties are rich and fine, and vigorous of growth.

**Climbers.**—Climbers are essentials of the garden and greenhouse, and for wall covering everywhere. As regards outdoor climbers, the best rule is to grow what does best in a particular situation in any given neighbourhood. The Virginian Creeper will spread fast and flourish anywhere, and the small-leaved, self-clinging variety, Ampelopsis Veitchii, is always neat. It has inconspicuous flowers and loses its leaves autumnally, but their gorgeous colouring at the close of the season may be taken as compensatory for deciduousness. The Ivies, particularly the small-leaved and variegated sorts, make pretty and permanent clothing for a house wall, and to do them well a deep and rich soil is requisite. Some other favourite outdoor climbers are the Jasmines, both the sweet-scented white and the yellow flowering sorts, the latter blooming before leafage; the Clematises, which prefer a good loam and south aspect, the Loniceras or honeysuckles, which like shade and shelter, especially the yellow, reticulated Japanese kinds; the graceful Wistarias, with racemes of pale blue or white, that flourish in peaty mould; the Passion Flowers, that need protection in winter where exposed, and must have a light soil to make the best of; the evergreen Magnolias, requiring a sunny, sheltered outlook; the winter sweet (Chimonanthus), with fragrant orange flowers opening about Christmas under favourable conditions; the Banksian and other small-blossomed, rambling roses, besides the tea-scented Gloire de Dijons; the vines, the tecomas, the bignonias, catkin-carrying Garrya elliptica, the graceful coral barberry, the accommodating firethorn, which will grow anywhere, the bluebush (Ceanothus), and the curious Dutchman's pipe (Aristolochia). Here is enough to choose from, and there are others. Most of them will increase readily from slips, layers or root cuttings, and the rest from division. They all need trimming and training at the proper season. The tenderer flowering subjects may be utilised as greenhouse climbers, where also the tacsonias, lapagerias, the stephanotises, plumbagoes, kennedyas, and others may advantageously be allowed a free run either in a pot or border rooting, roomy and well-drained.

**Cockscomb.** (See Celosia.)

**Coleus.**—French nettles, some style these particularly beautiful-leaved greenhouse plants, which luxuriate in moist heat, and whose variegated and often gorgeous foliage makes them great favourites for all decorative purposes. Young plants, carefully hardened, may be put out late into summer garden borders, but should have a sheltered site, for cold winds nip them up, and they die at the first frost bite. They propagate

nicely from cuttings struck in bottom heat and brought on in close frames. Rich soil is their delight, and fearless pinching back induces a compact habit.

**Collinsia.**—A genus of bright border annuals; bicolour, purple and white, 9 inches, very serviceable.

**Columbine.**—This is a very old cottage garden favourite, but the florists have improved it out of all knowledge latterly, and many long-spurred varieties of the always pretty herbaceous perennial obtainable from seed are extremely beautiful. They may be safely sown in April in any ordinary garden soil, and transplanted later on to nursery beds for ultimate removal to a permanent position. These hybrid columbines yield acceptable cut bloom.

**Conservatory, The.**—This is properly regarded as a display house for the reception of plants brought to the prefection of efflorescence or foliage by culture, or an airy structure full of floral beauty. It is not, strictly speaking, so much a structure to grow as one to show plants in. Therefore, it should be spick and span and only of equable temperature; and it may advantageously open out direct from the dwelling-house, intervening between that and the greenhouse, vinery, or stove beyond, where such exist, and receiving its subjects in full dress from them or from frames and pits in the garden. The conservatory should always have plentiful provision for ventilation, and is best situated on the southern side of any house, with which it should harmonise, as much as possible, as to size and otherwise, communicating by means of a glazed passage or corridor when span-roofed. Those who have but one glazed structure, and do virtually all their propagation and plant-growing therein, will be well advised to call it and consider it a greenhouse, leaving the conservatory cognomen to the possessor of larger resources. The shadier portions should have place for ferns, palms, and indoor ornamental evergreens, or variegated foliage plants may occupy permanent positions of vantage in the conservatory, the rest should be a constantly changing exhibition of the best floral things attainable by its owner, leaving space sufficient for social enjoyment, the chief reason for any conservatory's existence.

**Convolvulus.**—Annual; dwarf or minor, a foot high, various colours; major, the climbing sort, is useful for trellis-work or trailing, and also possesses a variety of bloom.

**Coreopsis.**—Called also Calliopsis, a family of gay and useful border annuals reaching a foot or more high, bearing prolific blossom and chiefly a shade of yellow or yellow with red centre. Likes full sunlight, and grows readily from spring or autumn-sown seed, plants of the latter flowering, after moving, early and vigorously.

**Cornflower.**—The Centaureas are showy things, growable in any garden. The bright blue cornflower is the favourite, but the white comes in for cutting acceptably, and so does the rosy-tinted. Then there is Depressa, an uncommon crimson-centred, dwarf-growing blue kind, obtainable from seed of most nurserymen. All can be raised by autumnal or spring sowing in the open, and the seedlings take kindly to transplantation. The Sweet Sultans are Centaureas, and their fragrance and floral beauty should secure them admission to any home plot. Suaveolens is their specific name, and they should be thinly sown on a sunny border in July in light soil for transplantation next season.

**Cowslips.**—These spring favourites may still be seen in many borders, and some of the hybridised sorts are pretty and useful. Sow seed in June for following season's flowering, transplanting in autumn.

**Creeping Jenny.** (See Moneywort.)

**Crocus.**—This early spring blossomer, though not strictly a bulb, is generally so regarded and treated accordingly. It is a perennial, and once planted will last, if undisturbed, for some years, but division betters it occasionally, though no crocus should be taken out of the ground till its leaves are quite dead, when the roots may be stored away if space is needed for summer bedding. Mellow loam suits them, and they may be raised from seed sown thinly in sandy soil, the seedlings being pricked off later to develop. There are yellow, white, light blue and purple crocuses, also variously striped sorts, all quite hardy. When planted in early autumn in good light mould, two to four or six inches deep, they will make a brave show in spring, especially if massed, and they do well in sunny window boxes as well as in beds and borders, and can be grown indoors in saucers of rain-water, containing small pieces of charcoal. Colchicum autumnalis, an autumn bloomer, as the name implies, should be planted in spring; its foliage dies in summer and grows again after flowering. The Dutch and all other crocuses are readily procurable in the finest sorts at a small outlay, and yield attractive bloom for years.

**Cuphea Platycentra** (Cigar Flower).—A pretty bedder, with almost black, scarlet, and white flowers, twelve inches high, grown from seeds or by cuttings.

**Cuttings.**—Generally speaking cuttings of all kinds should be taken in dry weather or from pot plants which have not recently been watered, short-jointed vigorous shoots being selected when the subject is in good growing condition. A clean cut with a sharp knife must be made immediately below a joint on the detached shoot, all leaves which would touch the ground being removed. In planting the soil in the box, pan, or bed should be firmly pressed down and moist, and the cutting, save in exceptional cases, inserted only one-third its depth. Silver sand and light sandy mould make the best cutting-striking material, and there should be ample drainage, for free air percolation through the soil is a requisite of success. These general directions apply in all sorts of soft-wooded cuttings, of bedding plants particularly, and most of them will strike quicker if placed over slight bottom heat. In some cases very desirable, indeed dahlia cuttings, for instance, will hardly do well without it. Myrtle, heath camellia, and other hard-wooded subjects want little warmth below, but should be struck down to the drainage level in the striking pots. Side shoots from towards the bottom of the stem of a thriving plant, the shoots themselves ripe as to wood, and yet not case-hardened, give the best results. Failures should carefully be removed from cutting groups as soon as discovered, or they will injure the rest.

**Cyclamen.**—Easily grown and graceful winter and early spring flowering plants for frame and house culture and conservatory decoration in winter. From seed sown very thinly in sandy, peaty loam, in pans kept at a temperature of between sixty and seventy degrees, and kept covered with glass or near the light in a greenhouse, the cyclamen can readily be raised. The seedlings may in due course be potted singly, and kept clear of frost influence. For blooming one bulbous root—it is not a true bulb—should be allowed to a five or six-inch pot, particularly well-drained and filled with a compost of loam and leaf-mould, with a liberal admixture of well-rotted manure and sharp sand. Do not more than half cover the root with the soil, and press down firmly. Cyclamens revel in moisture but must never be stagnated. They want air without draughts, and an equable temperature, plenty of light on winter days, and shelter from summer sun.

**Cytisus.**—This pretty cool greenhouse and dry-soil garden subject—often catalogued by the dealers as Genista—yields a profusion of bloom, chiefly yellow, in spring and summer. All the brooms which this class comprises are easy to cultivate if one will but bear in mind the hot soil of their natural habitat. They are deciduous, and the smaller-flowered kinds, with their graceful foliage and tiny pea-shaped blossoms, are very decorative when in their full beauty, looking particularly well in a parlour window.

**Daffodil.** (See Narcissus.)

**Dahlia.**—Dahlias of all sorts must have strong sunlight and a free, airy situation to flourish in above ground, and rich gross feeding below. It is well to put in a stout stake at the time of planting, and to protect the young dahlia from the slugs until it has grown out of harm's way. Leave a couple of yards at least between every two show or decorative dahlias if fine blooms are desired, and give copious manurial waterings as they grow. Trap earwigs with hay in small inverted pots at the top of the stakes when the flowers come, or they will lodge in and devour

the petals. Cut away lateral growth, leaving but few branches and those the strongest. Relatively these instructions apply to the fancies and the pompons as well as to the big double show sorts; also to the singles and the cactus kinds, all of which now include many beautiful varieties. When frost blackens the dahlias in early October, cut them down, and lift the tubers, putting the old sets away dry in a shed in boxes of sand or fibre, or ashes will do. As spring comes on, shoots should be encouraged by removing the roots to a greenhouse or warm frame, and these be taken off to start growth in small pots ready for planting out in June, labelling each correctly. Cuttings may also be made from the plants in autumn, and kept over the winter under shelter after striking, except in special circumstances.

Daisy.—Double daisies, white and red, quilled, or the hen-and-chickens variety, make nice border plants, and are serviceable for edging purposes. In good loams they will give a fine and long-lasting flower display, and may be raised from seed, though a certain amount of singles are sure to come. Propagation by division is sure, if done when flowering is over.

Delphinium.—To this genus belong numerous beautiful border annuals and biennials, as well as perennials, varying in height and colour. They are fine for grouping or for planting singly, the taller sorts being mostly bright blue, but there are delphiniums with spikes of pearly white and a particularly vivid orange-scarlet sort of dwarf habit. The annuals are sown in the open in March where they are to flower, the biennials and perennials in June and July, and transplanted when large enough to nursery beds or put where they are required to remain.

Deutzia.—A class of hardy flowering shrubs, bearing beautiful white bloom, like thin-substanced snowdrops. Increased by cuttings, struck under glass in August, and liking a mixture of rotted cow-manure and loam to grow in. For forcing and pot culture generally the deutzias are well adapted, being very decorative when in flower. Deutzia gracilis, a compact, free-flowering dwarf variety, is a capital plant for window or conservatory.

Dianthus. (See Pink, also Sweet William.)

Dielytra.—Dielytra spectabilis, sometimes called the "lyre flower," is a pretty and popular herbaceous border subject, bearing handsome bending branches of peculiar pink bloom, and having very attractive foliage. There is a white-flowered variety, less common, but easy to grow in light, rich soil. Both may be brought on for early show in pots in the conservatory, and readily increased by division. It is advisable to protect from severe frost, and they will take up a lot of water when coming into bloom.

Digitalis. (See Foxglove.)

Dusty Miller. (See Auricula.)

Dutchman's Pipe. (See Aristolochia.)

Eccremocarpus.—Half-hardy flowering climber, bearing racemes of orange bloom; will stand in a sunny spot out of doors in winter, if cut down after flowering and covered with litter till spring. It will ramble over stumps or trellises prettily. May be raised from seed in a hotbed in autumn, young plants being thus obtained for spring culture in the open, or for pot use in a greenhouse.

Echeveria.—This is a rosette-shaped succulent, a good deal employed in ornamental bordering nowadays, and used also in rockwork. It carries a curious coral-red spike of bell-shaped blossom, and grows well in any good, light, sandy soil. Increase by off-sets, which root with facility.

Egg-Plant.—A curious half-hardy annual, botanically styled Solanum, delighting in warmth and light rich soil. Seed should be sown in early April in pots plunged in a hotbed, the young plants being potted and placed near the glass as soon as they can be handled. When wanted to fruit in the conservatory or parlour, they should be transferred to good-sized pots. They will do well in frames if kept free from red-spider by syringing; a little stimulation when the fruit is setting is helpful.

Erica. (See Heaths.)

Erodium.—Hardy rockery and edging perennial, dwarf and fond of dry warm situations; carries purple-spotted white bloom, propagated by root-partition, also from seed.

Erysimum.—Hardy annual, the orange-flowered Perofskianum, twelve inches, makes a pleasing border subject.

Eschscholtzia.—Californian annuals now largely employed in furnishing our summer flower-borders. They are very hardy and may be sown thinly where they are to bloom in April. The yellow-coloured varieties are the most common, but there are orange-flowered, rose, carmine, and white Eschscholtzias obtainable of good seedsmen; also a perennial variety, Californica, with big, beautiful, deep orange-centred bloom. Some of the sorts close their flowers tightly at the approach of rain. They belong to the Poppy family.

Eupatorium.—Flowering herbaceous or shrubby plants introduced from America, chiefly used for greenhouse culture and closely related to the hemp agrimony of our British marshes. Some send up stalks of white tassel-like bloom from the low leaf growth. They may be propagated by cuttings covered with a bell glass, and grow best in sandy peat and loam. There are purple and pink kinds to be had, and the vivid green of the foliage is very attractive. They may be moved out-of-doors in the shade in summer.

Euonymus.—A common yet popular garden shrub, amenable to urban surroundings. Most glossy green. There are some variegated sorts, but all are ornamental, hardy, and easily increased by cuttings struck in good loam in the autumn from the preceding year's shoots. E. europæus is the Spindle tree.

Evening Primrose.—This well-known flower is one of the Œnotheras, which include a number of useful edging, border, and rock plants, some of them annuals, others biennials, and some of perennial growth. The Evening Primrose is a biennial, but, if sown early, will bloom the same season. Its bright yellow blossoms, folding towards nightfall, are very familiar. The Œnotheras prefer a light yet rich soil.

Everlasting. (See Helichrysum, also Rhodanthe.)

Ferns.—Any garden or greenhouse without ferns is quite incomplete, and nothing grows more easily if properly placed and treated. They require shade, all of them; and most prefer moisture as well. A good general soil to plant them in is a mixture of fibrous loam (mellow and fresh), clean sharp sand, and good leaf soil. In pots they should be well-drained, with porous sandstone in lumps above the sherds and mixed with the soil. Peat is helpful as a further ingredient of the compost for the tenderer ferns. All should be very firmly secured in pot or ground on introduction. For outdoor growth in shady corners under walls, or in parts of rockeries where the sun's direct rays never reach, nearly all the British ferns, of which there are multitudinous forms, can be successfully cultivated; while under the stages or other positions in the shade within a cool greenhouse many exotics will grow luxuriantly. There the maidenhair and other adiantums are invaluable for decoration and addition to flower bouquets, as are the pterises, aspleniums, and lygodiums. Of larger growth are the anthyriums and the osmundas, while the polypodiums, polystichums, scolopendriums, and hare-foot ferns can all be tackled successfully. Filmy ferns like the todea, trichomanes, and hymenophyllum may be grown under bell-glasses to conserve moisture. Ferns should be made the most of by every amateur.

Ficus elasticus. (See India Rubber Plant.)

Flax Plant. (See Linum.)

Flos Adonis. Hardy annual, deep red, nine inches.

Flowering Currant. (See Ribes.)

Forget-me-not.—The Myosotises are annuals, biennials, or perennials, but it answers well to grow them from seed as border plants, for the dainty blue blossoms are everywhere welcome. There are pink and white varieties, too, which will repay sowing in June for the following season's flowering. It is an accommodating plant, but always appears thankful for water, and the shadiest part of the garden suits it better than full exposure to summer sun. A good strain of seed should be secured to begin with, and increase by division relied on later.

Foxglove.—Handsome cultivated varieties of the Digitalis of our woodlands are easily raised from seed or propagated by off-shoots. They do admirably on shrubbery borders in any ordinary soil, and there is a particularly fine white sort to

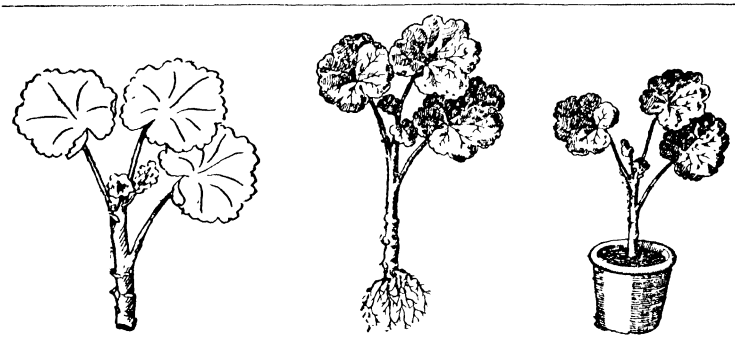
be had at most nurseries, as also red, purple, yellow, and spotted varieties. A packet of good seed will produce pleasing results where there is space to exploit the foxglove properly. It should be remembered that the Digitalis possesses poisonous properties.

**Frames and Pits.**—These are of immense value in any garden, both to the possessors of greenhouses, conservatories or forcing houses of an ambitious character, and to the more modest horticulturist who relies entirely upon them and the hotbeds they may contain to carry his delicate stock through the winter. They are easily and cheaply constructed if one be content with things on a small scale. A glazed light or two will cost little, and any gardener can make his own frame out of rough wood, and to his own liking, movable or for placing permanently over a pit excavated in the ground. The principle to be insisted on is that they should be highest at the back, sloping towards the front, and that they should be fitted so to receive the top light when in position that rain is excluded. The frame may stand on low brick walls or stacked turves, or rest on the ground as considered most desirable. The earth may be excavated pit-form to secure depth according to requirement; and the interior may be wholly or partially filled with properly prepared stable manure to form a hotbed on which soil is superimposed, and thus may be renewed or removed when spent. Rows of frames can be arranged for more extensive operations by lengthening front and back and placing rest-rails to support the inner edges of the lights. The most costly purchasable frames are only elaborations of this idea of securing protection against frost, and resisting the influence of changeful external temperature generally; and the home gardener who knows how to adapt himself to circumstances will meet with a surprising amount of success at but little monetary outlay.

**Gardenia.**—A charming greenhouse evergreen, bearing beautiful waxy bloom, very odoriferous, and much in favour for button-hole wear. Will do best with much moist heat and profuse watering in the growing period and whilst flower forming. Sandy, peaty soil, very rich, is requisite, and a bottom heat of at least 70 degrees must be maintained to root heeled slips in well-drained pots of silver sand and peat. Gardenia florida, the "Cape Jessamine," is a good sort for the amateur to grow.

**Genista.** (See Cytisus.)

**Geranium** (Pelargonium).—The geranium, of all half-hardy subjects, is best styled everybody's flower. It possesses infinite variety as to foliage and blossom, and no sort is difficult to deal with. The zonals, so universally employed in window decoration, boxes, vases, greenhouses, conservatories, and as bedders, possess handsomely formed leaves, and bear beautiful bloom trusses, single and double, in colour from pure white to vivid scarlet, with rich salmons, delicate cerises, and many gradations of pink. These may all be kept sturdy and shrubby by topping, or trained to grow tall at will. There are gold-leaved and silver-leaved sorts, bronze and gold varieties, silver tricolors and yellow tricolors in charming diversity, lovely as to foliage alone, and all floriferous. Then there are the scented sorts, with beautifully divided leaves, the staghorn lemon-scented and the peppermint variety; also the ivy-leaved trailers, single and double, with all the colours of the plain-foliaged and the zonals; and through all the many mutations produced by hybridisation the geranium remains an easily grown favourite. Propagation is best by cuttings, taken when the old plants are most vigorous in July or later, rooted and left to stand in cold frames or greenhouse, or potted on at will towards the following bedding-out time, or as a further alternative converted by encouragement into specimens of size. The old plants after cutting down and potting out do best for this, being first given a good rest. The soil employed should be light and sandy, well drained and firmly pressed down for pot culture. For flowering well use small pots. The many beautiful varieties of show and fancy pelargoniums, which are distinct from the zonal geranium, are useful for conservatory and greenhouse treatment, being hardier than their more generally cultivated relatives. Regal pelargoniums these are often called, and there are the French spotted and large and small varieties, as well as the more elaborate doubles. They are increased by cuttings, best potted singly in a dry light sandy loam after taking from the parent plant when the flowering season ends, and plunged in mild bottom heat to facilitate rooting. Then pot on gradually, pinching as root growth is encouraged and hardening by exposure to air as development goes on. When flower buds begin to show, the plants, then in their blooming pots, may go into cold frames or greenhouse, the former preferably, and be kept well syringed to stave off insect attacks.



GERANIUMS (PELARGONIUMS) FROM CUTTINGS.
Cutting taken in July or August, rooted and potted on towards the following bedding-out time.

**Gesnera.**—Tuberous, hothouse, herbaceous, flowering plants, requiring rich soil, plenty of moisture, and a warm even temperature for successful culture. May be raised from January sown seed, by cuttings of shoots or leaves, or by tuber division. Compost of peat, fibrous yellow loam, and sand, in well-drained four to six-inch pots will be needful for securing good blooming plants. The scarlet sorts are very showy when in bloom, and great care is essential to keep them clear of thrip.

**Gladiolus.**—This is a grand subject for autumnal display in massed beds, and may be raised from seed as well as from the tiny-looking bulbous off-sets of the old corms. There are numerous sorts of the "sword-lily," as this gorgeous plant is popularly styled, the early flowering and forceable Colvillei furnishing one fine type, and the Gandavensis, Primulinus and Brenchleyensis, besides hybrids, other sections. The latter is the more common, and bears brilliant spikes of various colours in profusion. The corms may be planted out in good garden soil, rather light than strong, in March, cleaning the old roots and mould away,

and inserting each firmly in a surrounding of sand or dry ashes. They delight in a sunny situation protected from strong winds, and a dressing of well-rotted manure over all after planting will be serviceable. The Bride and other early blooming varieties may be brought on by pot culture in pits for house and conservatory flowering. It is advisable to take up the corms from bed or border in late autumn when the leaves are dead, storing them in soil for next season's planting.

**Gloxinia.**—Gloxinias are generally regarded as stove or hothouse subjects, but may be cultivated successfully in frames where an equable hotbed is maintained, or in any warm greenhouse. They are exquisitely beautiful, and repay the trouble necessary to obtain the best result. Seed may be sown in fine soil in February, the pots being plunged over a bottom heat of about seventy degrees, which should be kept close by covering with glass, giving air cautiously.

**Godetia.**—The purple-flowering form of the popular Evening Primrose, or Œnothera, treated as a distinct species by many florists. An effective border annual, about a foot high, and quite hardy enough to be sown in the open in April for transplantation.

**Green Fly.** (See Pests of the Garden.)

**Greenhouse, The.**—"Who loves a garden loves a greenhouse too," sang Cowper in "The Task," and with the spread of garden love amongst us, there has certainly been a great growth of greenhouses, humble and spacious. Artificially-heated structures are requisite where half-hardy and tender plant culture is carried on to any considerable extent. They can be procured in sections, and are adapted for putting up in the most favourable position, in sizes and at prices to suit almost every purse, as tenants' fixtures, so that any artisan or clerk can nowadays have his own greenhouse, according to his circumstances or desires. Greenhouses may be either span-roof, independent of any other structure, or lean-to, the back being furnished in the latter case by a boundary wall or that of the dwelling house. They may be simply glazed and rendered watertight (with proper provision for ventilation) or they may be fitted with heating apparatus of a more or less elaborate character. The cool greenhouse, which excludes winter rigour from its occupants, will be found very serviceable to those of modest floricultural ambitions, especially if it be placed facing southwards. That to which provision for heating is added will answer with any aspect, but this and the means employed for keeping the temperature artificially raised must be regarded as considerations of individual convenience. Supplemented by a frame or two, a greenhouse of even a small size presents many pleasing possibilities, from the growing and reception of various specimens of fine-flowering and otherwise ornamental plants, which may be removed to the parlour or conservatory when in full beauty, or remain to deck the stage on which they have arrived to perfection, and also for the propagation and preservation of subjects which will not winter safely with us out of doors. Stepped staging is advisable where practicable, in combination with a flat and comparatively narrow stage at the glass front returned at the ends, with additional and movable shelving near the roof on suspended brackets, also above the table-high side stage. Plenty of room should be left to get easily at every plant, and plenty of room under the staging for the reception of subjects, for which a shady position is desirable, while provision for necessary ventilation is of the highest importance. Where there are flues or pipes for heating, kept warm by a properly placed fire outside, slated shelves may be fixed above for the accommodation of plants and young stuff needing bottom heat. Draughts must be most studiously avoided, and cleanliness strictly observed. Good, well-fitted joints in the woodwork, and neat glazing, preventing the ingress of rain, are essential. The management of a greenhouse is really a matter of practice and intelligent pursuit of well-weighed and attainable ends. To have bloom all the year round in a greenhouse there must be, of course, systematic selection of subjects. The brief entries in this dictionary will be found to convey much that is suggestive and helpful to greenhouse beginners.

**Guelder Rose.**—A beautiful flowering shrub, with snowball-like bloom, propagated by suckers or by layers pegged down in spring. Prefers a sunny and open situation, and will grow in any good soil. Viburnum Carlesii and the Japanese snowball tree (Viburnum plicatum) are particularly handsome.

**Guernsey Lily.**—Nerine Sarniensis, an amaryllid with pale salmon flowers, not to be confounded with the Belladonna Lily. Bulbs may be had of the seedsman early in August for immediate planting, and will grow and flower quickly in cocoa-nut fibre or rain-water as well as if given good soil.

**Heaths.**—Small plants of the Erica family from the Cape of Good Hope; make admirable greenhouse blooming subjects. They require good peat, broken up and intermixed with silver sand. In potting up great attention must be given to drainage, and the soil be very firmly rammed round the ball of each plant, and careful watering practised. If the plants are ever allowed to get dry at the roots, or on the other hand consistently over-watered, death will certainly ensue. Robust, bushy heaths should be chosen, and propagation obtained by cuttings of the tops of young shoots, inserted in shallow pots of well-moistened silver sand and peat over slight bottom-heat, these being closely covered with a bell-glass. The bell should only be removed to wipe away moisture from the interior until growth is perceptible, when air should be gradually given. When a good start has been achieved the glass should be taken away, and the plants potted off singly, and cultivated separately, never permitting drought at the roots, or there will be stunting and disappointment. Charcoal with the drainage is good at each repotting. Heaths are not good subjects for an amateur to grow.

**Hedges.**—Privet and laurel make hedges, so do the taller growing box plants, the firethorn, Lonicera nitida, arbor vitæ, holly and quick combined, the yew, the hornbeam, or the common beech. All require topping and clipping carefully to secure good branching bottom growth. Plant straight, and not too thickly to begin with, and leave room for air to act freely on the roots, preparing the ground by deep digging. Sweet-briar is useful for the construction of low divisional hedges in the garden, if given moderate attention until free and regular development be assured.

**Helianthus.** (See Sunflower.)

**Helichrysum.**—Half-hardy annual, usually called the Everlasting Flower, various colours, one and a half feet high. Seed should be sown in March in gentle heat, the seedlings being later transplanted in sheltered borders. The flowers should be cut when young for preservation.

**Heliotrope.**—The "Cherry Pie" is the fanciful popular name of this well-known and fragrant bedder and pot-plant. It can be grown from seed sown in gentle heat in February or a little later, and transplanted in light rich soil, or from cuttings taken in September and cultivated in cold frames like calceolarias in the winter. It is a capital pendent plant for ornamental baskets, window-boxes, or vases; or it can be trained for greenhouse or conservatory blooming by staking and tying. In the borders it should be pegged down and allowed room to run and spread. Before bedding out the heliotrope needs hardening, as frost is fatal to it. Some greatly improved varieties have recently been introduced into cultivation, and seed of these can be obtained from all the leading nurserymen at a moderate price.

**Hellebore.** (See Christmas Rose.)

**Hippeastrum.**—A genus of bulbous plants, including many pretty hybrids. Requires pot culture, in heavy rich loam, which should be treated with bone dust and pounded charcoal, and given free drainage. Propagated by offsets. Closely related to the amaryllis.

**Holly.**—The variegated and common green hollies are very decorative, and grow readily wherever there is room in strong or ordinary soil, not being injured by the smoke of towns. Once planted they are capable of looking after themselves, save in the matter of pruning, which should be done judiciously and to the encouragement of vigorous and symmetrical growth. Rows of ornamental holly make good screens in gardens for the protection of the tenderer subjects from northerly and easterly winds. Planting is best done early in May.

**Hollyhock.**—Hollyhocks propagate from short-jointed young shoots easily, but raising from seed is preferable, as the seedlings resist disease, to which this genus is very liable. Well-selected seed can be placed in drills on a carefully prepared bed in April, so as to come up about an inch apart, covering with fine soil. Weed and water, and transplant without disturbing the roots when vigorous growth has begun, allowing ample space for development, and keeping off slugs and other injurious pests.

**Honeysuckle.**—All the Loniceras will strike readily from layered branches and cuttings taken during the growing period, or root divisions may be made. They are invaluable as trailers and wall and trellis climbers, and some are good greenhouse ramblers, Sempervirens particularly so. Japonica, the small-leaved, variegated variety, is deservedly a favourite, and should be given a sunny position in the garden, and neatly trained or permitted to run over banks or stumps.

**Honesty.** (See Lunaria.)

**Hyacinths.**—Anyone can grow these beautiful blooming bulbs, but not everyone is able to cultivate them to perfection. In the open garden the necessary procedure is simple. The soil should be well dug and manured, and the bulbs planted in October three inches deep and well surrounded with sand. When frost comes strew the beds with clean straw, easily removable in mild weather, and leave the rest to Nature. For pot culture, plant each bulb in a four-inch flower-pot, or two or three if desired in correspondingly large pots, well drained and filled with a compost of fibrous loam, leaf soil, well-rotted cow-dung and silver sand, promoting root growth by covering the whole of the pot and bulbs six inches deep in ashes or cocoanut fibre until growth is well advanced, when gradually inure to light and take to a warm greenhouse or room to flower. Let the compost be rather rough and drain the pots thoroughly. The process may commence in September or October, and early bloom can be procured by careful forcing, aiming always at getting the pots full of root before upward growth is encouraged by light and air.

**Hydrangea.**—A decorative half-hardy shrub from China, bearing very large tresses of pearly bloom, white to blue. Requires strong loam enriched, and plenty of water, weak soap-suds suiting it well. If left out in the winter it should be protected against frost. Partition of large clumps, or cuttings of half-ripe young shoots, after flowering, are the methods of increase. Hydrangeas make good tub plants for terraces or large conservatories, and will live for many years with a little care, cutting back after blooming, and top-dressing from time to time. They start well in a cool greenhouse, and like a little liquid manure or other fertiliser to help them along when the buds begin to appear.

**Ice Plant.**—This uncommon and attractive trailer, to which the florists give the lengthy name of Mesembryanthemum crystallinum, makes a good rock plant or hanging basket subject. It will flourish with a little trouble in the beginning, in any good soil, in a sunny situation. Sow seed in gentle heat in April, transplant to small pots and re-start growth, then turn out to harden, and finally set where wanted to remain, keeping down surrounding weeds. Some grow the ice plant for garnishing.

**Impatiens.**—A rather tender but handsome border plant, of the balsam tribe and curious because the seed vessel opens at a touch. Will easily propagate itself by seeds when once the latter have been sown in the open. Impatiens Sultani, bright scarlet-flowered, requires retaining in the greenhouse to bloom.

**Indian Shot.** (See Canna.)

**India Rubber Plant.**—This well-known parlour plant should be placed firmly in a pot, well-drained, of sufficient size, containing charcoal over the drainage, and filled with a compost of mellow sandy loam. It, once started, need only be watered when thoroughly dry, and that by immersion in rain or tepid water. It prefers a shady to a sunny window, and requires fresh air.

**Indoor Decorative Plants.**—The plant lover who does not possess a conservatory will often like to decorate his parlour or other dwelling-rooms with the choicest procurable plants, preferably of his own growing, and there are many subjects which lend themselves to this kind of display. In the spring, the hyacinth is available, and cinerarias, pelargoniums, calceolarias, begonias, and fuchsias, among beautiful flowering plants, will keep up an indoor flower show over a lengthy period, while azaleas, primulas, and cyclamens can be employed to brighten up the home. India Rubber plants, small dracænas, aspidistras, and numerous other foliage plants of moderate size may also be maintained in health at a minimum expenditure of trouble, as can many beautiful ferns, if kept out of direct sunlight and moist at the roots without stagnation. To this end, there must be systematic and sensible watering, just when each plant wants it, and aeration, as distinct from exposure to chills and draughts; also care to keep every growing thing below the level of gas-jets. Plants for dinner-table decoration should be fresh and frequently renewed, brought in from the greenhouse or frame in their full beauty, and replaced when not in use or past their best, the pots in which they are growing being inserted into the larger ornamental vessels at command for the time being, and the surface soil covered neatly with damp moss. There is scope here for the exercise of great taste, and much can be accomplished with comparatively limited resources and intelligent attention.

**Ipomœa purpurea.**—The "Morning Glory" of American verandas, a very useful climber, which goes prettily with the light leaves and yellow blossom of the canary creeper, when the two are permitted to interwine on trellises. This Ipomœa has convolvulus-like flowers of various colours—purple, pink, crimson, white, and blue—and large heart-shaped leaves, and will ramble to a height of ten feet or so. It likes a light soil, and being half-hardy, should be raised from seed over a gentle hotbed in March, and planted out in May.

**Iris.**—Hardy herbaceous plants bearing flowers of rich and varied beauty, some of them vying with the Cattleyas and Lælias in grandeur, and most are of peculiarly easy cultivation. White, yellow, purple, brown, with much variety of delicate veining, and blotching in some cases, the Irises are universal favourites. The three upper and inner petals of the flowers are erect, the lower three drooping and generally reflexed. The Bearded section is the more common, including the purple I. germanica, which does so well in town gardens, and puts up stems to 2 feet high. The Spanish and English sorts are smaller, comprise greater diversity of coloration and pencilling, and are bulbous-rooted. Irises are best planted in clumps for effect, and flourish in light, rich, garden soil, making admirable subjects for a shrubbery border. Propagation by division of the roots is accomplished with facility after flowering.

**Ismene (Hymenocallis) Calathinum.**—The Peruvian Daffodil, a sweet-scented, summer-blooming, bulbous-rooted plant, with large white, cup-shaped flowers, grows nicely on a south border, and makes a good subject for indoor display. Should be given light loam and leaf soil, rather rich, and ample drainage, and when planted outside, taken up in winter for rest and protection.

**Ivy.**—All the Hederas are invaluable for growing on unsightly walls, and are most accommodating as to situation and soil, and some of them look very pretty, especially the smaller-leaved, close-clinging and variegated sorts. Hedera Helix Canariensis, the Irish Ivy, is a very quick grower, and soon covers a screen. It should be clipped closely in March. Donerail's Ivy and Hedera atropurpurea are particularly attractive and graceful subjects; so are also Helix foliis argenteis and foliis aureis, the silver and gold Ivies. Slips root readily in sandy soil in spring-time in a shady position, if gently watered during dry weather.

**Ixia.**—A graceful Cape bulb, with long slender flower stalks, will succeed on a sunny outdoor border, but very suitable for the greenhouse if potted in autumn. May be raised from seed sown in September in light loam, in a cold frame. Peat or leaf mould should be liberally mixed with loam for the after culture of the Ixia.

**Jacobœa.**—The American groundsel, a gay and blooming annual, good for ribbon effects in the border, carrying crimson, blue, or purple bloom, and easily raised from seed or by cuttings, treated as are those of the verbena.

**Jacob's Ladder.**—A hardy, herbaceous plant, emitting a disagreeable odour, but possessing pretty fern-like foliage, and bearing showy blue flowers. The silver variegated variety, Polemonium coeruleum variegata, makes a good decorative pot plant, or may be utilised as a bedder, in rows or otherwise, being easily propagated by root division if firmly planted in any light soil, and well watered at the beginning. Its leaves are medicinally used in many places as a poultice ingredient in ulcerous ailments.

**Japanese Anemone.** (See Anemone.)

**Japanese Primula.** (See Primula.)

**Jasmine.**—Fragrant, free-flowering, and rambling shrubs, which may be trained as climbers or treated as trailers. The common white Jasmine, or Jessamine, is particularly attractive and powerfully perfumed. Nudiflorum, a yellow-bloomed variety, flowers in winter on the naked stems. There are sorts which require greenhouse culture, and are exceptionally beautiful. All may be raised from cuttings in sandy soil, started under a bell-glass.

**Jonquil.**—Hardy bulbs of the Narcissi order, very fragrant, flowering and elegant. Will last for years left alone out of doors if the old leaves are not cut away, and can be potted up for greenhouse and conservatory decoration, half a dozen in a pot. Both the doubles and singles propagate readily by division in September, and their yellow blooms are always attractive.

**Kalosanthes.**—Properly called Crassula, this plant belongs to the house-leek order, and flowers in May, making a tender rockery subject. It luxuriates in a mixture of sandy loam and brick rubbish, and is increased by cuttings and offsets. The white flowers, of jasmine-like formation, become suffused with red as they fade.

**Laburnum.**—The graceful tree cytisus, whose golden tassels of butterfly-shaped bloom are so attractive and familiar in spring-time, grows beautifully and steadily in any garden where afforded room, and can be raised from seed without trouble. The leguminous seeds are narcotic and poisonous to many animals, and very dangerous to children.

**Lantana.**—A capital genus of conservatory blooming shrubs, some sorts of which come in well for summer bedding. They are half-hardy perennials, in fact, and carry thick crowns of tiny verbena-shaped flowers in endless gradations of delicate colour shade. In warm, dry ground, light and rich, they do best out of doors, and come from March sown seed in heat or cuttings taken in autumn. Must have winter protection in Britain.

**Lapageria.**—A handsome Patagonian evergreen plant of climbing habit, requiring cool greenhouse culture, and may be trained on a balloon trellis effectively as a conservatory specimen, or round a pillar or on a back wall where the light has free play. They want rich sandy loam mixed well with peat, as a compost. They must have plenty of drainage, and need a lot of water. Their beautiful bell-shaped bloom, waxy white or rose, is very distinctive. Layering, at the growing period, affords the readiest method of propagation, but they may be grown by seeding in heat. Lapagerias are liable to insect attacks in spring, and must be kept scrupulously clean.

**Larkspur.** (See Delphinium.)

**Lathyrus.**—The sweet pea. Of the perennial description there are several strong growing varieties, rosy-pink, red, and white flowered, all old favourites for trellises or fences, propagated from seed or root division. They are useful for bouquets and table decoration, and should have the seed pods picked off if continuous bloom is desired. The annual sorts, now vastly improved and innumerable in variety, are referred to under the heading "Sweet Pea."

**Laurustinus.**—Belongs to the Viburnum family, which includes the Guelder rose, or Snowball tree, but is an evergreen. Bears clusters of pinkish-white bloom in winter and spring. Succeeds in deep sandy loam, and prefers a sheltered situation. Small shrubs make good subjects for window decoration. Increased by suckers or spring layering.

**Lavender.**—Lavendula vera, so much favoured as an old garden subject, and cultivated extensively for perfume production, is best propagated by autumn struck cuttings, which should be put in light soil under glass, or may be increased by transplanting offsets. Straggling shoots should be pruned in spring where shapely bushes are desired. April is the time to plant out, either the white or more familiar and typical lavender-coloured blooming sorts. Flowers for preservation should be gathered on a dry day, and not before they are fully opened and brown.

**Lemon Plant.**—A greenhouse shrub with scented foliage, propagated by cuttings taken from young April growth. Use sandy soil to start, over heat, repotting into stronger and richer mould. Must never be exposed to frost.

**Leucojum.**—Hardy bulbs with flowers of snowdrop shape, but very considerably larger in size. The variety verum, the Spring Snowflake, flowers naturally in March, and may be forced for window show earlier. The Summer Snowflake is a May bloomer. Both are very hardy and can be grown in clumps in ordinary soil.

**Lilac.**—Though they will grow anywhere, the syringas are shrubs which pay for planting in good, deep, dry soil. The flowering shoots should be shortened about midsummer. There are attractive cultivated varieties of the syringas, both white and reddish-purple, and double Persian and Chinese, blush pink and white as the typical shade. The latter, especially the white-flowering form, are much forced as pot plants in frames by the market gardeners, but should only be so treated for one season, or at any rate not in two successive years.

**Lilium.**—No British garden or greenhouse without lilies can be considered complete, though the lily is not a British bulb at all. The lovely old white candidum has been cultivated in our gardens for over 300 years, as has also the scarlet chalcedonicum, or Turk's cap. These should always be given outdoor treatment. So should the orange lily (croceum), the Martagon sorts and L. regale, all of which are very effective in borders. Light or medium soils want well digging for their reception, with the incorporation of plenty of well-rotted manure, and very heavy land is not suitable for lily growing at all. When the bulbs are planted in early autumn they are best surrounded by sand to save them from damping off before root growth has been established, and the clumps should not be disturbed for three years at least, though a top-dressing of leaf-soil and manure may be lightly forked in with advantage in early spring. The bulbs may be put 5 or 6 inches under the surface, firmly pressed upon sand, and for the first winter lightly covered with litter during extreme frost. For indoor culture the Lancifolium varieties, album, roseum, and rubrum, are grand, so are Longiflorum punctatum and astrosanguineum maculatum, besides the Harrisii, Brownii, parvum superbum, giganteum, cordifolium, and gorgeous golden-rayed Japanese auratum. Leaf-soil rough and half decomposed, with mellow loam, some peat and plenty of river sand, mixed with wood ashes, make a good general compost for the pot culture of lilies, which should be given extra liberal drainage, and a layer of charcoal over the crocks, planting the bulbs tightly an inch below the top of the soil. Sand is a good thing to cover the crown of the bulbs with, and if they be plunged, pots and all, in ashes or cocoanut refuse, tan, or leaf-soil to begin with, all the better. The firmest bulbs should be preferred, very loose-scaled ones not being so satisfactory even if of larger size than those of sound healthy development.

**Lily of the Valley.**—Thoroughly British lilies of the valley are not lilies at all, but convallaria. Propagation is best achieved by division of the root clumps, which should be planted in a shady and moist but well-lighted situation in good soil, containing a large proportion of leaf mould and some well-rotted manure. Place the clumps a foot apart. They do well in pots for out of season blooming in the greenhouse if retarded crowns are secured.

**Linum.**—Graceful annuals or perennials; flavum (the yellow flax) and grandiflorum (rosy crimson) are both under a foot.

**Lobelia.**—An invaluable plant for dwarf bedding purposes, making an admirable subject for the front of borders or window boxes. Grows readily from seed, cuttings, or root division. The blues, speciosa compactum Paxtonii, and others are most in vogue, and there are some pretty white sorts.

**Gracilis, bushy, is a fine pot subject; erinus, a trailer, does well for hanging baskets and vases, drooping elegantly over the edge; while there are tall varieties, including cardinalis, bearing scarlet blossom.** Some particularly pretty doubles are now to be had also, less free of growth, however, than the type, and requiring more care in cultivation.

**Locust Tree.** (See **Acacia.**)

**London Pride.** (See **Saxifrage.**)

**Lotus.**—The bird's-foot trefoil, a hardy rockwork plant of dwarf, spreading habit, delighting in dry, sandy soil, and readily grown from seed. The common sort bears bright yellow blossom. Lotus Australis has rose spikes, and the variety Jacobeus is a greenhouse perennial, purple-flowered.

**Love-in-a-Mist.**—Dark, violet-blossomed annual, very peculiar foliage, 18 inches.

**Love-Lies-Bleeding.** (See **Amaranthus.**)

**Lunaria Biennis.**—A pretty deep-violet flowering garden biennial, making 18-inch long leaf stems, the seed pods being serviceable for decorative purposes.

**Lupin.**—A free-flowering garden genus, annual or perennial, carrying long and stately spikes of bloom above robust and graceful undergrowth. Raised readily from seed, and increased by root division. There are various shades of white, yellow, and blue lupin, the seeds of the white sort being regarded as a highly nutritious farinaceous food in some European countries. Indigenous to the Mediterranean shores and temperate America.

**Lychnis.**—Lychnis chalcedonica is a useful garden perennial, producing large heads of brilliant scarlet bloom in July. Good soil gives splendid results. May be put out in the border in spring and autumn when the plants part up well. "Ragged Robin" is the British meadow lychnis, and the Corn Cockle and Campion belong to the genus. The double-flowered cultivated varieties may be propagated by cuttings from side-shoots taken in June.

**Lycopodiums** (Selaginellus).—An order of pretty, flowerless creepers, popularly known as club-mosses, many of the species being variegated. They grow well in ferneries and the shadier situations of the greenhouse, and spread with rapidity.

**Meconopsis.**—Poppy-worts, including M. Baileyi, the lovely blue perennial poppy from China. Suitable for moist, half-shady spots or cool woodland.

**Michaelmas Daisy.**—The starworts, or perennial asters, are all vigorous subjects and gross feeders. Multitudinous as to variety, the genus comprises almost every floral colour, and subjects of heights ranging from 2 to 5 feet, blooming between August and December. They spread rapidly, and should be cut up and replanted each second year, in spring-time for preference, though autumn will serve, destroying the central part of the old stools. The Michaelmas daisies rank amongst the best of town grown hardy perennials.

**Mignonette.**—Of this fragrant favourite there are endless varieties, all of them thriving best in an open situation. Seed may be sown early under glass for transplantation, which must be carefully done with as little root disturbance as possible, or scattered about on borders anywhere where the sun shines, in April or May. Light soil containing calcareous ingredients suits mignonette admirably, and if it be prepared beforehand by manuring well, and the plants are thinned out and watered copiously during drought, splendid results will be achieved. It is a good window plant, indoors or out, and the giant mignonette is an attractive conservatory subject.

**Mimosa.** (See **Acacia.**)

**Mimulus.**—The "Monkey Flowers" are handsome perennials, bearing large flowers in which bright yellow coloration predominates, often splashed and spotted with brown, chocolate, or coppery red. Mimulus moschatus is the common and pungently odoriferous musk, which delights in shade and moist warmth, Harrisonii being a large flowered variety. The minute seed should be scattered thinly and very slightly covered, and starts growth best in gentle heat. Mimulus seed sown in spring makes fine plants for summer bedding; autumn sown seed will produce early flowering plants for indoor embellishment. There **is a double-flowered "hose-in-hose" mimulus, luteus nobilis by name, which some people prefer before all others on account of its curious formation.** Rich soil should be employed, inclining to lightness, and plentiful watering is essential to their successful cultivation and management. All these plants are easily propagated by cuttings.

**Moneywort.**—The pretty trailer more commonly known as "Creeping Jenny," the botanical name of which is Lysimachia nummularia. Its long strings of loose-lying yellow flowers, fancifully supposed to resemble rows of small gold coin, gained it the popular title of moneywort. Propagated by division, will grow almost anywhere, and is very useful as a hanging basket subject. Likes plenty of moisture at the roots.

**Monkey Puzzle.** (See **Araucaria.**)

**Monk's Hood.** (See **Aconite.**)

**Montbretia.**—A bulbous and distinctly beautiful subject, akin to the smaller gladioli as to root appearance and foliage, and requiring similar culture. The long slender branches of bloom, which keep well after cutting, come in admirably for bouquets and dinner-table decoration placed in glasses with asparagus fern, maiden-hair, or other light greenery.

**Morning Glory.** (See **Ipomœa.**)

**Moustache Plant.**—A pale-blue blossomed late-flowering shrub (Caryopteris mastacanthus) with prettily silvered under leaves, reaching 3 feet high, thrives in a sunny sheltered border in any good soil.

**Mullein.**—A flowering perennial or biennial border subject, botanically called verbascum, carrying erect spikes of showy bloom. Phœniceum, 2 to 3 feet, has purple rose or white flowers, according to variety; formosum, 6 feet, dense pyramidal golden yellow; olympicum, which should be treated as a biennial, bears branching yellow bloom. The plant has valuable medicinal properties, and may be raised from seed sown in spring in light soil, and transplanted before placing in its final position in the April following. Propagation of the perennial sorts may be successfully practised by division in spring or autumn.

**Muscari.**—Dwarf spring flowering bulbs of the hyacinth order easily cultivated in good garden soil. Muscari moschatum has livid greenish spikes, musk-scented; botyroides (the grape hyacinth) is smaller and very attractive, with blue and white bloom; monstrosum (the feather hyacinth) has feather-like flowers; conicum, blue, is bright, beautiful and free growing. Should be planted out in September, and dealt with thereafter as advised for bedding hyacinths.

**Musk.** (See **Mimulus.**)

**Myosotis.** (See **Forget-me-not.**)

**Myrtle.**—A desirable half-hardy evergreen shrub, usually given greenhouse treatment, but amenable to outdoor culture in a sheltered, sun-warmed situation in this country. Should be well syringed when kept under glass, and grown in loam and leaf-mould well mixed with sharp sand. Strikes readily from growing shoots in light soil. Likes moisture, but should be guarded against frost. Its pretty white blossoms and glossy green, fragrant foliage make the myrtle very popular for conservatory and parlour window decoration.

**Narcissus.**—This tribe of hardy spring flowering favourites includes all the daffodils and jonquils. The bulbs may be treated as hyacinths for pot and general indoor blooming, and by planting them at intervals between the beginning of September and Christmas, a long succession of floral beauty may be provided. Either singly or several in a pot, they produce a pretty effect. Out of doors they are best planted first in well-drained and sheltered borders in September deeper than the hyacinth, say 5 inches down, and the beds lightly covered with dry leaves or litter. Good sandy loam grows all the narcissi nicely, and they may remain undisturbed for three seasons with advantage, except where the soil is poverty-stricken, when transplantation to a fresh position will help matters. The polyanthus sorts, though large of bulb, are the least robust, and the poeticus varieties should be planted or transplanted, as the case may be, as a rule, earlier than the rest.

**Nasturtium.** (See **Tropœolum.**)

**Nemesia.**—An effective half-hardy annual, a little over a foot high, carrying a profusion of bright orange, crimson, or scarlet bloom, sometimes showily blotched. Good for bedding masses or

for mixing with other border subjects. Sow seed in heat in January, pot the young plants off singly, harden off, and plant out at the end of May.

**Nemophila.**—A neat, dwarf-growing floriferous border annual, particularly suitable for the front of the bed. They are propagated readily from seed sown thinly in drills where blooming is desired. Insignis is a pretty and compact spreader, white eye and sky blue, and maculata blotched purple on white is robust and larger flowered. Phacelioides, blue and white, is a perennial, and may be divided for increase, but the varieties of insignis, of which the seedsmen offer many, are the best to employ for ribboning or masses, insignis grandiflora being recommended. Seed sown in August will bring about an early summer display, that got in on good soil in April comes on a little later and is perhaps the surer. Thin out to allow every plant room for free expansion. Cats always roll on this plant.

**Nicotiana.** (See Tobacco Plant.)

**Nigella.** (See Love-in-a-Mist.)

**Nile Lilies.** (See Arum.)

**Œnothera.** (See Evening Primrose.)

**Oleander (Nerium oleander).**—A handsome, tough-leaved, greenhouse shrub, bearing pink or white semi-double bloom. Should be grown in peaty loam and sand, and kept plentifully watered, the foliage being frequently sponged to ward off the brown scale attacks to which the genus is subject. Ripe shoots may be struck if root growth be started by immersion in rain-water exposed to the sun. The flowers and shoots of the Nerium, the proper botanical name of the oleander, are both poisonous. It flourishes out-of-doors along the Mediterranean, and may be stood in sunny shelter on south-fronting terraces in this country with safety when matured in pots if frost be guarded against.

**Olearia Haastii.**—A box-like evergreen, sometimes called the "Daisy Bush," suitable for growth in a sheltered town garden for hedge ornamental purposes. Reaches a height of 5 feet, and produces fragrant white flowers. It grows well in loamy soil, and may be clipped neatly in spring or autumn without injury if discretion be displayed.

**Orchids.**—The growth of tropical orchids is a thing for the expert only with "all appliances and means to boot," which include a well-planned and appointed hothouse or stove. But many beautiful orchids from the Cape of Good Hope and sub-tropical or temperate regions may be successfully cultivated in an ordinary greenhouse, if intelligently treated; but there are some charming species hailing from Southern Europe, which require but slight protection in this country against winter rigour. Therefore, almost everyone who wishes may venture to some extent upon orchid-culture without fear of absolute failure. The terrestrial, or ground-inhabiting, orchids present least difficulty to the novice, and many of the cypripediums and other attractive groups may be dealt with in a manner entailing comparatively little trouble beyond the employment of a plentiful admixture of good peat and clean silver sand and charcoal dust with the potting compost, proper attention to watering during the growing period; and the provision of particularly complete drainage in extra clean pots of suitable size for the subject. Most of them flourish best in maintained humidity, with steadiness of genial temperature and freedom from draught, ventilation being given near the pipes. Over-heating and atmospheric fluctuation must be sedulously avoided. A large range of orchids succeed where palms and the more delicate ferns flourish, and the combination always has a pleasing effect. An even winter warmth of 45 degrees and 60 in summer suffices for the healthy development of numerous lovely species from South America and the mountain districts of India, such as the masdevallias, lycastes, and odontoglossums, besides many of the oncidiums and others of the epiphytes, or tree-growing species, all of which must have management according to their natural need. Proper perforated pots, pans, or open teak baskets should be employed, or the plants may be secured to clean porous and undecaying wood blocks or pieces of tree-fern trunk. All these requisites may be obtained from the florist's without much outlay, and living sphagnum moss and specially selected fibrous peat are also readily procurable for use in lieu of soil where the species subsist on air and moisture alone. Practical advice should be sought by beginners from a professional gardener well up in this fascinating branch of horticulture, and a good manual on the subject studied, when it will be found that it is possible to compass much with limited resources in a direction not always confidently adventured upon.

**Oxalis.**—Bulbous plants well adapted for rock-work and border growth, also for pot culture, their fresh green foliage contrasting finely with the rich blossoms. Oxalis floribunda, with rosy-coloured flowers, is a good garden variety which will thrive in any light soil. Oxalis acetocella is the white, purple-veined, wild wood sorrel, which folds its flowers at night or under the influence of the hot sun.

**Pæony.**—Herbaceous pæonies are very hardy, so also are the larger shrubby section, sometimes called tree pæonies; these latter, in a very severe British winter, require slight protection. They will take up a great deal of nourishment, and should be planted in strong, deep, rich loam, into which a quantity of rotten cow-dung has been dug. They throw up above their large ornamental foliage great globular blooms of rich hues, crimson, rose, salmon, blush, and also pure white. A shady situation, yet open, suits them best, as strong sunlight will often cause the flowers to fade, and watering with weak manure decoction assists development. Some of the Chinese pæonies exhale a peculiar perfume. They are propagated by division after flowering, or from shoots carefully layered, and can also be raised from seed, but the young plants will not usually flower for 5 or 6 years. Some white-flowered varieties have sulphur or other tinted centre petals, and almost every season produce new hybrids. There are European pæonies with single flowers of great charm, not unlike those of the water-lily. Any of the tribe look well on large lawns, or in front of shrubberies.

**Palms.**—Many graceful palms flourish and endure for a lengthy period in full beauty in the greenhouse and conservatory, or as subjects for room decoration, and a goodly number will stand well out of doors in our climate with a little care in all but the severest weather. Phœnix sylvestris is one of these, and the variety dactylifera (the Date Palm) is easily managed. Cocos Weddeliana, which likes the shade; Latania Borbonica (the Fan Palm); Araucaria excelsa, Kentia Fosteriana, the dwarf-keeping Chamærops humilis, and Geonoma gracilis, Rhapis flabelliformis, and the Chilian Jubæa spectabilis, are all ornamental and easy to deal with. Inexpensive when young, they make handsome table plants, and most of them may be grown on by judicious shifts and outdoor hardening to a considerable size. They do not require large pots, comparatively speaking, at any stage, but should be very firmly planted, over ample drainage, when they will absorb any amount of root watering within reason, a good compost being fibrous loam, peat, and leaf soil in about equal proportions, with plenty of sharp sand.

**Pansy.**—The pansy, as we know it, large, rich, and beautiful, is what the florists have made it, from the basis of the viola, or wild pansy. Propagation of the choicest named pansies is by cuttings, for seedlings are apt to vary widely from the parent; though packets of seeds saved from the finest and most perfect flowers of every variety are pretty certain to produce some very satisfactory plants. Sowing should be done immediately following blooming for display in the succeeding spring, or in April for autumn flowering. Fibrous loam three parts, leaf mould two parts, and some clean sharp sand, form a serviceable pansy compost, and this should, for beds, be placed at least 4 inches thick over a well-dug and drained subsoil to get fine bloom. Pot plants must be well crocked and carefully watered.

**Papaver.** (See Poppy.)

**Passion Flower.**—This interesting and very peculiar-flowered climber is usually reckoned a greenhouse or conservatory subject, but the variety cœrulea will train up a sunny south wall in a sheltered spot out of doors, and do well in any good light soil. For pot culture, wound

round a trellis or a pillar, it requires plenty of drainage. Cuttings should be taken with a heel, young short shoots, and put into single pots of light, sandy compost in a close frame or under a glass to strike. Not only the blue sort, best known, and others like it may be grown easily in the greenhouse, but the rarer red coccinea and some white sorts, among which "Constance Elliott" is perhaps the best obtainable. The fruit of the Passiflora looks pretty on the plant, and that of P. edulis is considered a delicacy.

**Pelargonium.** (See Geranium.)

**Pentstemon.**—Pentstemons like a peaty soil or rather heavy loam, particularly if it be well worked and efficiently drained. The hardy species contains a wide range of variety as to colour and habit. They are propagated from cuttings, or from seed sown in gentle heat in March, and transplanted after previous pricking out in a cold frame, to the blooming bed in May. Some of the choice florist sorts of pentstemon almost rival the gloxinia in beauty of bloom, and these should be raised from June-sown seed, grown on and sheltered over the winter for spring planting, being treated as half-hardy perennials. The cuttings are treated the same as those of calceolarias.

**Perilla.**—A very useful annual for ornamental bedding purposes, Perilla Nankinensis may be raised from seed sown in gentle heat in March, the seedlings being pricked out in a cool frame subsequently, and planted in the garden beds at the end of May. Its foliage is deep maroon, almost black in some cases, and it carries panicles of pink bloom, which may be pinched off to maintain the full force of the colour effect of the dark leaves in ribboning work if necessary. It grows to a foot or 18 inches high.

**Periwinkle.**—An evergreen trailer, sweet scented, bearing pale blue flowers in spring-time, and of rapid growth. Likes a moist shady situation and light soil. Propagated with facility by root division.

**Pests of the Garden.**—Snails and slugs are among the most destructive of the gardener's enemies. Cleanliness and the removal of the harbourage of these marauders are essential. Flower-pots left lying in moist shady places, decaying vegetation, and rubbish of every description, afford shelter to shell snails which creep from under cover nightly to play havoc with young plant growth. All such hiding-places should be abolished as far as possible, and irremovable concealment positions thoroughly explored by daylight, the pests being captured and killed, while persistent nightly searches must be made by the aid of a torch at planting-out time for both snails and slugs on the prowl. Throw them into an old pail containing a little water made strongly saline whilst warm; this will quickly kill them all. Lime sprinkled round seedlings and tender transplanted subjects impedes the small fry until wet has exhausted its fire, and they may be trapped by laying about cabbage or lettuce leaves and then made an end of. The "leather jacket" or "daddy-long-legs" larvæ do a lot of damage by eating through the stems of carnations and other juicy plants just below the surface, mainly by night. They keep close to their food, and should be searched for sedulously where suspected and destroyed, whilst starlings and other birds which come insect hunting should never be scared away. Catch the wire-worm pest in pieces of carrot stuck into pansy and pink beds, and keep the hoe stirring in the sunshine to turn out all evil things that infest the garden, so that you or your friends the birds may sacrifice them. Entice earwigs into hay in small pots inverted on flower stakes, shaking them into scalding water. Get a few toads to help you to keep wood-lice under, especially in frames. If the reptiles are thin and active on receipt, they will soon be fat and sleepy, and many insects will have perished in effecting the change. Handpick and slay every ravenous creeping vegetarian you can find, looking most closely for a caterpillar that is generally endowed with protective mimicry. Throw the finest dry dust over the leaves of anything the turnip flea and his congeners attack, doing this when the leaves are damp. Hunt out the little brown grub that rolls himself in young rose leaves, and commit him and his shelter to the flames. Syringe every evening every plant, bush or climber, that any of the green flies or other aphides have got at, giving them, if you like, a dose first of weak tobacco water. Permit red spiders, the almost microscopic thrips, and all the rest of the tiny eaters of leaf substance no peace, syringing at them often in early morn and dewy eve under where they are seeking a lodgment and maintenance. Encourage the ladybird, the eater-up of these. When the insectivorous rascals get out of range amongst stuff that is forcing in frames or plant houses, it may be necessary to fumigate; then do the smoking with discretion, yet thoroughly. Mildew will go where cold draughts prevail. Then use flowers of sulphur on all affected parts. Proceed with cultural assiduity to keep plants in robust condition, and you will not be over-troubled by the multitudinous pests which are always springing into life to prey upon sickly subjects that cannot resist their attack. There are also bigger pests, more difficult to circumvent if they get into a garden on mischief bent—cats, dogs, mice, moles and fowls. Keep them out.

**Petunia.**—A half-hardy, soft-wooded, profusely flowering subject of great utility as a bedder and greenhouse or window blooming plant, luxuriating in a compost of rich fibrous loam with leaf soil to the extent of one-third, decayed cow droppings one-sixth, and sharp sand one-sixth. Sow in well-drained shallow pans, lightly sprinkling the seed with fine soil, and keeping close to the glass in a cool frame in April. Transplant the seedlings into single pots, grow on, watering freely, and pinching back to promote shrubby growth, gradually hardening as it proceeds. Peg down the longer shoots when in the borders, when the plants will throw up new growth bearing many flowers. Cuttings taken in August and put in light soil on a shady border will root readily, and may be transplanted to pots to shelter during the winter and bloom early in the following year.

**Phlox.**—Phloxes are magnificent garden plants, both the perennial and the half-hardy annual Drummondi variety. Their great trusses of delicate disced bloom, of many hues, always compel admiration, and the flowering period is lengthy. They require rich soil, deeply drained, and make large masses of matted root growth near the surface, so should be kept copiously watered and mulched with soft manure during dry weather. The perennials part readily when new growth is commencing, and cuttings may be made in spring and struck in sandy soil in a warm shady spot. The early flowering pyramidal section comes into full beauty in early June, while the decussant varieties of the perennial division are at their best a full month later. The annual Drummondi phloxes should be raised from seed sown in gentle heat in March, and planted out in May in good soil, when they will make a grand display. They reach a foot high, and may be sown safely out of doors in the blooming bed, thinly, in April.

**Physalis Franchetii.**—"The Chinese lantern," a species of winter cherry, well worth cultivation for the decorative properties of its pretty calyxes and fruits, which last long indoors when gathered in the autumn. A rather poor soil suits this subject, which may be divided at the roots in spring and transplanted.

**Picotee.**—These very pretty perennials require exactly similar treatment, both for pot and bedding culture, to their near relations, the carnations, from which they are distinguished by a narrow edging of dark coloration on the flower petals, varying in shade from rose to scarlet or purple, and in breadth from a mere line to an eighth of an inch. The more even and distinct the marking, the more picotees are esteemed.

**Pink.**—Garden pinks are no less acceptable than their lordlier congeners, the carnations, because of their sweet exhalations of perfume and robust and spreading growth. They propagate by root division as well as from seed and by pipings and cuttings, and make a delightful edging. There are laced and fringed varieties galore of the old-fashioned type, with a variety of coloration, white, however, being predominant, and even the single sorts are attractive. The florists have raised some very handsome, free-blooming, large-flowered pinks, amongst which Her Majesty and Mrs. Sinkins may be mentioned as specially excellent in all respects.

**Plumbago.**—A genus of climbing perennials, with flowers of pretty and delicate shades of blue,

pink, purple, and white. The variety capensis, light lavender hue, is much favoured for training round pillars or along the rafters of greenhouses. Rich, fibrous loam, with peat and sand, suits the plumbago, and it can be propagated by cuttings and rooting offshoots.

Polemonium. (See Jacob's Ladder.)

Polyanthus.—The bunch-flowered garden primula. There are gold-laced, fancy, and hose-in-hose sections, all readily raised from seed or root division, and each containing numerous varieties. They flourish in rich light soil and an airy situation, and young plants prefer shade from strong sun. Seed should be sown in summer, and the seedlings pricked off for later transplantation to commence blooming the following year. Clumps should not be allowed to remain unparted more than three years or the flowers will deteriorate. The colours vary from white, through cream and pearly blue to scarlet, maroon, and nearly black, and from golden-yellow to deep brown, some having several shades of colour in combination, while there are doubles as well as singles.

Polygonatum.—A genus of herbaceous perennials, which include the feathery "Solomon's Seal," with distinctive pendulous green and white flowers at the leaf axils. Likes shade and soft good soil, and may be increased by root division.

Poppy.—The Papavers are a numerous family, light and graceful generally, pretty of foliage, and bright if evanescent of bloom. The satiny Shirley poppies, white, rose, and crimson, are capital summer bedders, and should be sown thinly in March on the borders and again in September for early bloom the following season, allowing each plant plenty of room to develop. They like light soil, and glory in sunlight. Of the perennials, the Iceland poppies and the Oriental species, orange, red, or silvery, often with black centres, are great favourites; while some of the hairy sulphur and blue Himalayan sorts (see Meconopsis) are biennial and should be so treated. They need watering at the root freely in summer. The elegant little Alpine poppies—rose, salmon, buff, orange, pale yellow, and white—are gems for the rock garden.

Portulaca.—The "Sun Plant," a large and brilliantly flowered yet dwarf-growing half-hardy annual, delighting in a hot, dry situation. Best sown where it is to flower the end of April or early in May.

Potentilla.—A genus of herbaceous perennials, the smaller varieties of which resemble the wild strawberry. The wild Marsh Cinquefoil is a potentilla, but some of the garden sorts are shrubby subjects ranging from 1 to 3 feet in height, with floral coloration varying between white and scarlet or yellow and purple.

PRIMULA LITTONIANA.

A hardy species from Western China with closely arranged cylindrical spikes of purple and red. 2 feet high.

Primrose.—The common "pale rathe" primrose of the British woodlands, always a welcome harbinger of spring-time, grows readily in leafy soil in shady nooks of the garden. The double varieties, mainly raised from a Japanese stock, are very hardy and very beautiful. There is a good range of flower colour in these—white, yellow, lilac, mauve, blue, and crimson. They are closely allied to the polyanthus, and succeed with similar culture, being propagated by division.

Primula.—What is generally understood under this head is the Chinese genus, Primula sinensis, so much cultivated for greenhouse and general indoor display in spring, though of course all the true primroses really belong to the family. There are many varieties, the florists having paid much attention to their hybridisation improvement. Good seed having been secured, it should be sown in a compost of half leaf-mould and a quarter each of yellow loam and sharp sand from March to June, over slight bottom heat, shading until after germination. Transplant the seedlings as soon as they are big enough to handle into boxes or pans, well drained. Later shift into single pots, giving a greater proportion of loam to the compost, and hardening by exposure to the shade. Top-dressing and manurial watering (weak) may be given as the flowering time approaches, placing the plants near the glass in well-ventilated frames, or on shelves in the greenhouse. Primulas can be increased by division of the crowns with a portion of stem and root attached to each piece; when growth is established there may be repotting and treatment generally as for developing plants obtained from seed. The choicest primulas never need a temperature exceeding fifty degrees at night in winter to keep them in robust condition. Early sowing and forcing treatment will bring some into bloom in November, and successional flowering can be kept up into late spring. Primula obconica is a very persistent bloomer.

Pyrethrum.—"Coloured marguerites" many people call the varieties of Pyrethrum roseum, which rank among the most acceptable of early summer flowering border perennials of the hardy herbaceous order. From the type they have so far diverged as to include subjects bearing the bloom of white, yellow, and red in many shades, as well as rose, and both double and single in form. Pyrethrums may be raised from seed and cuttings, but are most safely increased by root division in early spring. A second crop of flowers may be obtained by cutting down the leaf stalks to the ground when blooming is over, forking round, and watering with liquid manure to encourage new growth. Wood ashes or soot may be employed as a dressing for the double purpose of fertilisation and keeping slugs away when the shoots begin to appear on the crowns. Mulching is advisable, too, for pyrethrums where the soil is light, especially in time of drought. Tchihatchewii is a close-growing evergreen pyrethrum, good for growing on slopes instead of turf, and also for rockery furnishing. It bears long-stalked white flowers. The strongly, and to many disagreeably, odoriferous feverfew, single and double white, also the useful golden-foliaged Pyrethrum parthenium aureum belong to this genus. For carpet bedding, lines of the latter should be pinched back to keep dwarf, and every flower bud removed.

Quaking Grass.—Briza maxima, the most popular of the curious annual trembling grasses, grows readily from seed, and is very useful for bouquet work and preservation for winter decoration.

Ranunculus.—Both Persian and turban ranunculuses may be planted in November, 2 inches deep and 5 inches asunder, care being taken to place the tubers the right way up, or they may be set out surrounded by sand in February in deep dug pits of rich loam, well enriched with decayed cow manure, and whilst growth is in progress there should be plentiful watering. Offsets from the tubers, each, however tiny, having its accompanying root claw, furnish the most reliable method of propagation, for the ranunculus rarely comes true from seed. The tubers should be stored in a drawer containing dry sand when taken up at the end of July after flowering, until planting time. The flowers of the variety acris, in its double form, are sometimes called "Batchelor's Buttons." Gramineus has blue-grey foliage and shining gold flowers. Gradations of white, crimson, scarlet, pink, rose, yellow, brown, purple, and black selfs may be met with among the ranunculuses, and some of the flowers present two or more colours in combination, the markings and edgings being in cases very attractive. The type originated in the Levant, and the Persian section should be shaped like a ball with one-third sliced off the top, the petals lying close and tight from outside to centre. The compact blooms of the turbans are all of positive colour, and there are variations to a semi-double condition classed as French ranunculi, which are particularly floriferous and vigorous of habit.

Red-hot-Poker Plant.—The tritoma, or kniphofia, as this singular and showy perennial is variously styled by the florists, is, in popular parlance, the "torch lily," "flame flower," or

"red-hot-poker plant." It has long and graceful sword-like leaves and gorgeous spikes of orange and scarlet bloom, changing to greenish-yellow. It should be grown in deep-dug, well-manured soil, and planted with the crown about an inch and a half below the surface, and protected in winter-time with a covering of litter or sawdust, firmly trodden, which may be removed in early May. The tritoma will absorb a large quantity of liquid manure in the growing period.

**Reseda.** (See **Mignonette.**)

**Rhodanthe.**—Beautiful, half-hardy everlastings, of neat and compact growth, very decorative in garden borders and the conservatory or parlour window. Requires light and rich soil and sheltered situation, and must be raised in gentle heat from seed, and hardened before planting out on a warm border in summer. The flowers in the variety Manglesii are light rose with silvery calyx, and should be gathered young for drying.

**Rhododendron.**—These magnificent evergreen, blossoming shrubs grow only to perfection in moist, peaty loam, quite free from lime, and must not have the ball broken or the stem loosened in replanting. There is very considerable diversity as to size and flower coloration. Rhododendrons like plenty of room, and the shelter of tall trees from north and east winds. They flourish in towns if not crowded too much. There are endless Chinese species introduced by plant collectors within the last half-century. The Dahurian variety flowers in early spring, when its pretty purple bloom is particularly welcome. Arboreum is hardy and reliable and the Catawbiense varieties are handsome both as regards flowers and foliage.

**Ribes.**—The "flowering currant," Ribes sanguinea, is familiar to most folk as a very pretty spring blooming shrub, whose abundant pinky and crimson racemes open with the opening leaves. Ribes grossularia is the gooseberry. There are other varieties bearing white and yellow florets, the latter being sometimes known as the "Buffalo Currant." Any soil and any position seem to agree with these bright and accommodating bushes, which are amenable to clipping for hedge-formation, and do not object to a seaside situation. They should be planted when the ground is not too wet and pasty, towards the end of October.

**Rockeries.**—The rockery, or rock garden, be it large or small, is largely a matter of individual taste, and the utilisation of opportunity in the choice and disposition of constructive materials. Stability in building up the rockery, coincident with avoidance of formality, and the provision of a plenitude of firmly-placed and nutritive mould between and behind the facing boulders, are the chief essentials, with perfect drainage under all. Every stone or whatever else be utilised should have its part in making a permanently fixed ledge, securing in position a sufficient depth and expanse of sunken soil to afford sustenance to one or more subjects, and to permit others being planted, watered, and otherwise attended to without structural disturbance. The right sort of plants, and there is a wide range of choice, should be carefully selected and introduced to the situation best adapted to their natural needs. Some require shade, some much moisture, some revel in strong sunlight. Perennials are preferable, as, once introduced, and properly established, they call for little after treatment beyond keeping within bounds and occasional superficial dressing. Auriculas and alpines generally, gentians, the saxifrages, the sedums, stonecrops, Creeping Jenny, aubrietias, arenarias, dwarfed trailing campanulas, arabis, rockcress, the houseleeks (sempervivums), soldanellas, the catchflies or silenes, the smaller achilleas or milfoils, the bugle flower or ajuga, the "gold dust," the thrifts (armeria), the alpine wallflower, cistus (the rock rose), the hardy cyclamens (requiring slight winter protection in most cases), the American cowslip (dodecatheon), Dianthus neglectus (the glacier pink), the rosette-like draba, the creeping mountain avens or dryas, Sarracenia purpurea (the hardy pitcher plant), the mountain thymes, the soapwort (saponaria), the vincas or periwinkle, some of the smaller veronicas, the sanguinaria or bloodroot, the Alpine primulas, the dwarf Alpine phloxes (particularly the profusely silvery-grey flowering variety stellaria), Platycodon Mariesii (the Chinese balloon flower), Papaver alpina (the Alpine poppy), Omphalodes verna (a creeper with flowers like the forget-me-not), the dwarf wood sorrel, the creeping cup flower (Nierembergia), Lychnis alpina, Lithospermum prostratum, Erica carnea (the winter flowering heath), the rock geranium or Crane's-bill, the Hawkweed, dwarf irises, Lamium maculatum (variegated foliage), all form admirable rockery subjects from which to make a selection, and many of the hardier ferns, such as Scolopendriums, spleenworts, and polypodiums, can be interspersed with effect in shady crevices.

**Rocket.**—Free-flowering and hardy herbaceous plants, annual, biennial, or perennial in duration, and very sweetly scented. Will flourish in any good soil, and are easily propagated; the annuals from seed, and others by division. There are double and single sorts, mostly with white or purple bloom.

**Room Plants.** (See **Indoor Decorative Plants.**)

**Roses.**—For bedding roses the soil should be deeply dug and richly manured, and the planting may take place at any time during propitious weather after leaf-shedding and before the buds begin to swell in April. Any damaged root terminals should be trimmed off with a sharp knife, the root masses being then spread out wide, and covered with fine soil in a sufficiently large hole and pressed firmly. Fill up the surface and tread well all round, then give a good soaking to settle the mould in place. Standards budded on a stock should be given a stake for support. Pruning must be practised with discrimination, standards having all weak growth eliminated and the strong outward-pointing shoots cut back to four or five eyes in April, in each case the centre being left open, while own root roses should have the thick vigorous new stems pruned to good buds and the thinner growth either removed entirely or shortened to a single bud, leaving no one shoot to cross another. It is better to prune a little late than too early, so that the new growth may not be nipped by severe spring frosts. In climbing roses the long ripe shoots may be pruned very much less drastically, and trained to wall or trellis with but a short length at the end removed, just before the buds begin to break. For all outdoor roses, plentiful root mulching with rich but well-rotted manure to be washed down by rain or artificial watering is good. The staple of the soil should be strong loam. Roses are propagated by cuttings from suckers and by budding. Cuttings should be taken from shoots made in late autumn, with a small portion of the preceding year's wood attached, and struck in sandy soil in the open. Suckers are easily removed and transplanted. Budding, to succeed, is an art best acquired from demonstration by a gardener. Green fly should be removed by syringing or the application of insecticide immediately upon its appearance, whether on indoor roses or those of the open, and the "Rose Maggot," or larva of the leaf-rolling moth, must be looked out for and destroyed before it can effect mischief. Black spot and mildew give trouble, when sulphur dusting should be resorted to whilst the foliage is moist.

**Salpiglossis.**—This is a curious half-hardy annual carrying petunia-like flowers, richly pencilled. It blooms in August, and reaches a height of 1½ to 2 feet. Sow in heat in March, potting off the seedlings singly and protecting them until the bedding out period—early in June—or they may be transferred to larger pots for conservatory or indoor decoration. The flowers are splendid for cutting. The plants like a sunny situation and very rich soil. Some of the varieties of salpiglossis have creamy-white flowers, veined with gold; others are velvety crimson, gold pencilled, and there is considerable variety.

**Salvia.**—Half-hardy perennials for greenhouse flowering or ornamental summer bedding. They make pretty plants, and carry very bright blue or scarlet blossom. They want winter protection, and cuttings or seed must be started in heat.

**Saponaria.**—Saponaria calabrica is an invaluable edging annual, dwarf and compact in growth, but a splendid spreader, studded with tiny stars of pink bloom, which continue through summer and autumn. There is a white variety, and both may be sown in drills in April in the border. If placed between Cerastium (Snow in Harvest) and

the blue Nemophila, it gives a grand ribbon effect. Saponaria ocymoides, the Rock Soapwort, is a trailer and a perennial, capital for rockery work.

**Saxifrage.**—Hardy plants, mainly perennial, very suitable for town gardens and rock garden. "London Pride" (Saxifraga umbrosa) is good for edging, especially in moist positions, and always looks pretty, especially when its light branching blossom is thrust up. The thick-leaved Saxifrage, or "Sow's Ear," is coarser but very utilitarian as a clother of barren soil, and the mossy varieties are most decorative. The curiously encrusted saxifrages require a sunny and dry situation, and longifolia and Tumbling Waters are much in vogue as pot plants because of their handsome bloom spikes. All these can be readily propagated by cuttings carrying root growth, and the distinctive Saxifraga sarmentosa, which is so great a favourite for hanging-baskets, and is commonly called the "Creeping Sailor" or "mother of thousands," increases by rooting runners, like the strawberry.

**Scabious.**—This is a sweet old garden subject, always welcome either in the annual or perennial form, and is often called the "pincushion flower." Its familar stamen-studded discs of bloom, lavender, rose, blue, purple, and sulphury white, are very useful for cutting. Some species grow wild in the cornfields, and atropurea, sometimes styled "the Mournful Widow," is a deep-hued and handsome cultivated favourite. Another popular scabious is arvensis, "the Gipsies' Rose" (blue), white and crimson, King, and the pure white Snowball, comparatively recent evolutions of the florist, find many admirers. The annuals grow freely from seed, and the perennials are propagated by division.

**Schizanthus.**—Half-hardy annual, which may be adapted to pot culture or for border growth in good rich soil. The peculiar shape of its pretty, vari-coloured bloom has procured for it the popular names of "Fringe Flower" and "Butterfly Flower." Sown in autumn, it will come out in the greenhouse in the following spring early.

**Schizopetalon.** — Useful flowering annual, almond-scented, twelve inches.

**Schizostylis coccinea.**—A late autumn flowering perennial, throwing up spikes of brilliant scarlet bloom, which may be protected by shelter for winter cutting.

**Scilla.**—The wild hyacinth, or "Azured harebell," cultivated varieties of the bluebell, are employed with effect in the garden for spring blooming. Bifolia has white and rose as well as blue flowering forms, and Sibirica comes amongst the very earliest of outdoor flowering bulbs. Planted in autumn, and top-dressed in succeeding seasons, they will stand and bloom well for years. Scilla maritima, a Mediterranean member of this genus, supplies the Squill so much employed in medicine.

**Scutellaria orientalis.**—The "Skull-cap," a hardy, flat-growing little subject, with lilac and yellow flowers, good for border edging and rockery cultivation.

**Sea Lavender.**—The great Sea Lavender (Statice latifolia), with its graceful light blue "Everlasting" blossoms borne in spreading panicles, makes a splendid border subject if cultivated in a sunny position. May be propagated by division in spring. There are pink and white varieties.

**Sedum.**—The Stonecrop, and its congeners, an extensive family (chiefly perennial) of thick-leaved and spreading growth, many of them bearing flowers profusely, white, pink, or yellow, handsome, having brown, purple, or mealy-white foliage. Amongst the best of rockery subjects. The variety Virens monstrosum is the curious cockscomb-headed sedum, whilst the variegated Sieboldi makes a good hanging basket plant. They will all grow well in shallow soil on rockeries or in pots in the strongest sunshine, and increase by division.

**Shrubs.**—Besides Rhododendrons and Laurels of various descriptions, there is a great diversity of suitable subjects for the furnishing of ornamental shrubberies in town and country, both amongst deciduous and evergreen species, while many bearing beautiful blossom are obtainable at any well-stocked nursery. There is the Pieris or Andromeda, of which the variety floribunda shows a wealth of white flowers not unlike Lilies of the Valley in March. Soil that would suit the Rhododendron does nicely for it, but good sandy loam without any peaty admixture will serve, if a sunny and open position be allotted. The Laurustinus or Viburnum comes in, so do the Euonymuses, Box, Barberry, Aucuba, the golden-leaved Thuya or Arbor vitæ, the tender green Cryptomeria Japonica, the variegated Cypresses or Retinispora, the Lilacs, the cream-white foliaged Taxus, the Guelder Rose, the Strawberry Tree (Arbutus Unedo), the Tree of Heaven (Ailanthus glandulosa) and the bold Paulownia Imperialis, which latter requires pruning hard back, autumnally, almost to the ground, to secure the best after-effect. Other useful shrubs are the flowering Currants, the Jew's Mallow (Kerria japonica), many decorative Hollies and dwarf Conifers, the orange-berried Cotonenster, the double Gorse, the Privets, the Snowberry (Symphoricarpus racemosus), the larger Veronicas, the feathery-leaved Tamarisks, the Sweet Bay, the white-flowered Escallonia, the glossy-leaved and yellow-catkined Garrya, the Rosemary, the metallic-looking and prickly-foliaged Mahonia, the bright and smoke-resisting Olearias, the Mock Orange (Philadelphus coronarius), the Californian Yellow Wood (Virgilia lutea), the shrubby Honeysuckles (of which Lonicera fragrantissima is one of the best), the hardy Azaleas and Heaths, and many more that might be mentioned. They require varied treatment as to soil and situation, respecting which consideration of their natural habitat furnishes the best guide, but in most cases good garden mould over a well-dug and judiciously manured subsoil will serve their planting and upkeep in vigour. There should be no attempt at crowding. Better a few well-chosen and shapely and good-growing plants than a cramped lot of starved stragglers. One must have space for a shrubbery, but a selection from what is here specified will be useful to many who have at their disposal banks and front gardens not occupied by small perennials or bedding plants. A great argument in favour of shrubs in ornamental horticulture is the little trouble most of them entail after discriminating plantation.

**Silene pendula.**—Rosy-pink border annual, one foot, good for growing on a rockery. There are double and single sorts.

**Slugs.** (See **Pests of the Garden.**)

**Snapdragon.** (See **Antirrhinum.**)

**Snowdrop.**—These sweet little spring-blooming bulbs are best planted in October, though they may be put out later at the expense of retarded flowering. They delight in shady and peaty loam, and should be two inches underground, one inch apart, and subjected to no after disturbance, which explains why they flourish in a grass-plot. There are autumn flowering as well as spring snowdrops, which should be planted as early in the year as procurable. Elwesii (the Giant Snowdrop) is a spring bloomer and does well in a pot, for indoor decoration, if given plenty of air.

**Soil.**—Suitable soil, matured as to its components, each containing the full quota of nutritive qualities, is very necessary to gardening success, both out of doors and as regards pot culture. Spent or soured soil, or soil otherwise out of condition, is worse than useless in horticulture. Therefore let there be, imprimis, prudent provision of essential ingredients, and afterwards their proper and thorough admixture. The preparation of soils and composts to supply the variant needs of plants is the elementary consideration which the amateur requires to get a mastery of. In practice he should have at hand as much as he will want of good fibrous loam, secured, if possible, by the stacking, root side uppermost, for six months, or until all vegetable life be dead, of closely shaven mellow pasture turves. Portions of the stack can be broken up and passed through a coarse or fine sieve as and when requisite, eliminating simultaneously any discoverable insectivorous germs, which may have obtained lodgment and retained vitality, a precaution which should have attention when all other compost ingredients are riddled and overhauled. Thoroughly rotted vegetable matter of almost any character will furnish the indispensable leaf soil, though, of course, leaf sweepings, pure and simple, are best. When decomposition has become complete in the heap, any convenient quantity may be removed to the potting shed to dry and facilitate handling. But, procured from

a common, and matured by heaping in an airy place where moss growth receives no encouragement, or purchased prepared for use, is another requisite. River sand, washed free of all other than silicate, must be provided. It may be sharp and coarse, or fine and smooth—as the silver sand so useful in the germination of seed or cutting-striking. Clean road drift furnishes valuable material for the gardener's service. Manure should be prepared by throwing short stable litter into a light pile and turning occasionally in the sun to sweeten it. That containing the excreta of cows should be kept separate from collections of horse-droppings. Horse manure is in the best condition for incorporation with garden soil after having done duty in a hotbed. Wood ashes, or the residuum of a bonfire of garden rubbish, possess fertilising properties of some potentiality and importance for the enrichment of mould, and decayed organic animal substances all have greater or less manurial value according to the amount and character of the phosphates and alkaline salts they contain. Burnt clay and marl can also be advantageously employed, while lime dressing lightens and mellows heavy land materially. To keep garden soil at its best there must be systematic digging, forking, and turning over, in order to promote aeration, drainage, and pulverisation, and composts used for pot plant culture should be cast away or worked in after impoverishment with stiff outdoor soil, to the lightening and consequent improvement of the bed or border earth.

**Solomon's Seal.** (See Polygonatum.)

**Sphagnum.**—A moisture-absorbing moss obtained from bogs and swamps, and employed in horticulture as soil for tree-growing orchids. Useful also for laying, after saturation, over seed-pans to keep the germinating seed damp and dark.

**Spiræa.**—A genus of shrubby and mainly perennial marsh plants of which the wild "Meadow Sweet" is an example. Carries feathery spikes of very decorative bloom. Spiræa japonica, the familiar white conservatory sort, is grown in great quantity by the market gardeners for indoor decoration, in winter and early spring. The Spiræas thrive in well-drained, sandy loam, mingled with leaf soil, and are propagated by root division. In the growing and flowering period, Spiræas must have copious and frequent watering to keep them going. There are golden-leaved, pink, and white-flowered varieties, double and single. The varieties Lindleyana (white) and Douglasii (rose) will grow up to six feet high on a shady shrubbery border, but the dwarf sorts are most in favour because of their pretty habit and adaptability to the conservatory.

**Southernwood.**—Artemisia abrotanum, an aromatic shrub with hair-like, segmental leaves, familiarly styled "Old Man," "Lad's love," or "Lad love lass." Very useful and pleasant for fringing flower bouquets, and easily rooted from cuttings. It may be grown to a good-sized bush and kept tidy by shortening the roots.

**Stocks.**—These sweetly scented flowers are mostly half-hardy biennials, though there is an extensive section which need re-raising annually from seed, and all thrive in a not over rich soil that contains old mortar. Matthiola annua, "the Ten Week Stock," is the most widely cultivated, and gets its distinguishing name from the fact of its generally coming into bloom at the age indicated. There are many colours of this, all beautiful, double or single, and they should be sown in March under shelter, pricked off to harden before bedding out. The Imperial or perpetual stock is an autumn bloomer, and will continue to flower up to Christmas almost during a mild season, if sown in early spring, or it may be sown in July to come on for the following June blooming. This variety is a robust German hybrid of the Brompton stock, a branching section of the genus which does not flower the first season, and is in consequence called the Winter Stock by some. It should be sown thinly in light sandy soil in an exposed situation during May, and transplanted after thinning in autumn, with great care. The Giant Cape stock, with glorious spikes of fragrant pyramidal bloom, is a variation of the Brompton and needs similar treatment, with unstinted watering in dry weather.

**Sunflower.**—The Sunflowers include Helianthuses and Harpalliums, the former genus containing the tall and imposing subjects, with their great yellow discs of bloom, which are so conspicuous in many gardens in the autumn, the latter comprising numerous varieties of dwarf flowering plants, almost black at the centre, yellow edged and stamened. All are easy of culture, but the gross-growing giants need plenty of room and a rich soil to come to their best. They should be sown in April in front of the shrubbery or where they are to stand anywhere. The Harpalliums are perennial and should be so treated. There is a double Harpalium which comes in nicely for cutting.

**Sweet Pea.**—Sweet peas, of which there is now endless variety, all of very great attractiveness, may be sown, in good soil, in March or April in a sheltered position out of doors, or in pots in a cold frame in October to be hardened for an early start in the borders. These should be planted out with great care, not breaking the ball or injuring the running roots, and pressed in firmly. Flower cutting should be constant, as this prolongs the blooming period materially, by preventing seeding, and plenty of room should be allowed for the development of the full beauty of this engaging garden subject. The Eckford variety and some others of the more recently introduced sweet peas of the florists, foreign as well as British, are exquisite as to delicacy and shading and flower size and richness of aroma, and the culture of a selection of the most distinctive descriptions should be entered upon by every possessor of a garden. They entail but little trouble if the soil be well prepared and worked before the sowing, and the support supplied be suitable, and no summer flower gives greater satisfaction and is brighter and more acceptable than the universally popular Sweet Pea. The perennial section is referred to under the botanical name of the genus, Lathyrus.

**Sweet William.**—The many varieties of Dianthus barbatus should be sown in well-tilled beds of enriched soil in June, and the seedlings pricked off as soon as large enough. Sweet Williams deteriorate greatly after the second season, and should be renewed from seed, or increased by off-sets. The auricula-eyed varieties bear immense heads of bloom, in which the individual flowers, white in the centre and edged with rich hues of crimson and other shades of red, are large and handsome. A good look-out should be kept for the "Leather Jacket" grub, which is very fond of eating through the stems of Sweet Williams just under the surface, and if not caught and killed will soon work devastation among and ultimately destroy the most promising plants.

**Syringa.** (See Lilac.)

**Thrift.**—Armeria, the pink Thrift, is a splendid dwarf edging or rockery plant, delighting in a sunny position, and flourishing in good loamy soil. The variety Vulgaris alba, with white flowers, is neat and dense-growing, while Cephalotes, the Giant Thrift, is very useful for cutting. Increase by division, planting firmly singly or in rows.

**Thuja.**—The Arbor vitæ, a very decorative shrubbery subject, good also for growing in little beds or lawns, will flourish in fibrous loam, and the variety Aurea variegata is especially effective. Should be transplanted in April.

**Tobacco Plant.**—Nicotiana affinis, of delicious odour in the evening, is a fine subject either for the greenhouse or outdoor culture, and should be raised from seed sown in February or March in gentle heat, the seedlings being transplanted into rich sandy soil and gradually hardened if intended for bedding. It spreads and branches freely, if kept well watered, making immense fleshy leaves under stimulation, and carrying pretty white tubular blossom of greenish tinge on the exterior. When the plants die down in the autumn they may be covered with ashes, when many of them will spring into growth again the following season, as the Nicotiana is, properly speaking, a half-hardy perennial. The variety Macrophylla gigantea is particularly large as to foliage, and sends up long flower spikes of a purplish shade, while there are some pink sorts; but the white type is the most generally useful and sweetly perfumed. It seeds readily in the border, and young plants coming up in summer bear moving.

**Trachelium cœruleum.**—A border or rock-work plant, bearing pretty blue flowers in August.

**Tradescantia.**—A genus of perennial trailers, containing varieties suitable for ornamental baskets in the window or conservatory, or for greenhouse culture, with leaves sometimes prettily striped, produced on long and gracefully pendant growth, also some of a sufficiently hardy nature for summer bedding. The common Spider-wort is the most familiar of this form of Tradescantia. The greenhouse sorts require rich moist soil, and root readily from cuttings over gentle heat, or may be propagated by root. Tradescantia Zebrina is a good green or variegated subject for hanging over the sides of vases or pots in the winter garden.

**Tritoma.** (See **Red-hot-Poker Plant.**)

**Trollius** (Globe Flower).—Showy border plants, producing from May to July handsome globe-shaped flowers; they thrive equally well in half-

Trollius or Globe Flower.

shady or sunny situations, and are also charming subjects for planting by the water-side.

**Tropæolum.**—These elegant climbers, with which may be included for the purpose of convenience all the hardy annuals. Nasturtiums, whether tall or dwarf growing, are easy of cultivation and profuse flowering. Their brilliance of colouring is untranscended, and given proper soil, which should be rich and sandy, they occasion little trouble. In the greenhouse they may be trained up canes or to the rafters, or allowed to hang over the sides of suspended pots. Nothing need be said as to how to grow the common Nasturtium. It grows itself wherever it has once been introduced, but the choice species, both single and double, should be sown in heat and carefully hardened when intended for pot bloom out of doors, and they require frequent watering. Tropæolum canariense, the Canary Creeper, is a pretty and very distinct climber, which may be sown and grown in window boxes or on the border as well as in the greenhouse. The tuberous-rooted Tropæolum azurium, bearing blue flowers, will not stand outdoor treatment, but succeeds well in a warm greenhouse, as does Tropæolum tricolorum, scarlet and black-tipped.

**Tuberose.**—This is a white-flowered and odoriferous bulbous-rooted plant of Indian origination, which should be started in sandy loam in a frame over gentle heat in January, giving each bulb a very small pot to itself, and giving no water till growth commences, and then but a very little, plunging the pots to the rim. Repot into larger-sized (say 3 to 4 inch) pots when the roots show through the drainage hole, then plunge again until the flower spikes show, when the plants may be placed in the greenhouse or conservatory to bloom, where they last long and exhale a delightful perfume.

**Tulip.**—Good old mellow loam, perfectly free from any insect life in any form, should be employed for tulip culture inside and out, all stones being carefully sifted out. The best time for planting the bulbs outdoors is from mid-October to mid-November, and the beds should be well drained. Press the bulbs in on a good layer of the prepared loam, six inches apart, then cover to a depth of about three inches of soil. In taking up the bulbs after blooming for storing until the following season, allow the leaves to turn yellow first, and dry the bulbs in paper bags in the air and sun before putting away. There are singles, doubles, and semi-doubles, some of the former, including the early-blooming Duc van Thol description, being particularly handsome. These are well suited for pot culture, and they may be grouped effectively in large pots. They require plentiful watering when blooming, and must be shaded from the sun if the rich coloration is to be prevented from deterioration. The parrot tulips, large and showy, are grand for out-of-door culture. The summer (or May-flowering) tulips comprise most of the handsome selfs, and will stand from year to year in a suitable border. They are tall and sturdy of growth, and require rather more room individually than suffices for the earlier sorts.

**Vallota.**—The Scarborough Lily, a handsome bulbous subject for greenhouse or window culture, requiring rich, sandy loam with a peat and old mortar admixture, and large deep pots to develop in properly. Plant six inches deep at midsummer, and do not water after first settling the soil, which should be well drained, until growth commences, when weak liquid manure may be occasionally administered.

**Verbena.**—One of the best of bedding plants, possessing much variety, readily raised from seed or from cuttings, while pegging down the growth will root it, facilitating increase by division. The treatment accorded to the petunia will succeed for verbena culture, and the best soil for them is a loam, leaf-soil and sand amalgam. Young plants in the cold frame should be hardened off for transfer to the flower-beds in late May, and pegging down after growth be well begun out of doors will induce new shoots and protracted blooming. What is commonly called the "Scented Verbena" is a plant botanically known as Lippia citriodora. It makes a very good greenhouse pot plant, the leaves emitting pleasing perfume on handling. The common verbane, or "Holy Herb," and the wild hyssop both belong to the true verbena family.

**Veronica.**—The evergreen speedwells are grand autumn bloomers for garden or greenhouse, and will flower all through the early months of winter if late planted, while the annual Veronicas (of which the little Germander Speedwell, or "God's eye," is an indigenous British variety) are invaluable for spring blooming. For early show these should be sown in autumn, and the taller-growing perennial sorts, with handsome white, mauve, or purple flower spikes, propagate either by root division or cuttings, and should be planted out in spring.

**Viburnum.** (See **Guelder Rose** and **Laurustinus.**)

**Vinca.** (See **Periwinkle.**)

**Viola.**—This genus includes all the pansies dealt with elsewhere, but the same is generally taken to signify the "tufted" bedding species so floriferous and so suited for ribboning in summer borders. Their proper cultivation is similar to that which the showier pansies succeed under, and there is a great variety of flower colour from white to plum-coloured, with many shades of mauve, lavender and blue between, as well as numerous gradations of yellow. A good top-dressing of short manure or rich leaf soil after planting out, and frequent watering at the roots, will be found very helpful. They seed prolifically, and can be increased readily from cuttings. The pretty little viola cornuta is a good outdoor edging subject still, despite the attractions of its more recent rivals. Neapolitan, Russian, and other imposing varieties of odorous violas or violets, as people call them, for distinction's sake, are readily grown and forced in greenhouses, if it be borne in mind that they are shade lovers.

**Wallflower.**—The hardy Cheiranthus holds its own, and always will, amongst spring blooming favourites of the garden. It is well worthy of such constant suffrage, for its culture calls for little care, and its odour and rich coloration are ever pleasing. From the light straw of the old type to blood red, with much striping, splashing, and intermingling of the browns, we have wallflowers galore, both single and double, the latter being increased by cuttings, and all the rest from seed, which will grow anywhere. Seedlings should be transplanted early. The wallflower likes a light soil containing old mortar.

**Window Garden.**—Some sorts of plants may be grown inside or outside any window, if a proper selection be made either in pots or wardian

indoors, or in pots or boxes exteriorly, protected or otherwise. The great thing is proper selection. Inside, the wardian case, or humbler bell-glass, is only requisite where humidity is essential to the health of the subjects included, otherwise judicious shade and ventilation will suffice to keep a properly placed and properly potted plant fresh and beautiful for as long as it is desirable to retain it in a room. A wardian case, fern case, or pot collection of any kind under glass in a parlour, should be planted by one who understands the subjects employed, and provision made for efficient drainage into an accessible bottom tray, charcoal being employed to facilitate filtration, for stagnation at the roots, combined with an atmosphere more or less unnatural, will kill any delicate plant, or at any rate reduce it to an unsightly and sickly state. But many pretty ferns may stand within a north-looking window, without overhead cover, and flourish exceedingly for a lengthy period if carefully tended, and many more, as well as numerous ornamental-leaved and pretty flowering plants, in a window with a northern aspect. For windows facing the east the range or selection of suitable subjects is still wider, while the window fronting the sunny south will only give trouble in requiring shading to obviate the scorching of most plants placed either outside or directly within for display. Little aucubas, arbor vitæs and clematises are amongst the plants which will adapt themselves to the first position. For the second aspect camellias and begonias are suitable, so are trailing plants of "Creeping Jenny" and polemonium, besides vincas and sempervivums, and snowdrops, narcissi, and other spring-blooming bulbs. Western window plants, and those which will flourish either there or to the south, need not be particularly specified, the range of choice is so large, but it may be well to hint that verbenas in pots, show pelargoniums, petunias, heliotropes, everlastings, fuchsias, cockscombs, calceolarias, and cacti, always do best in parlours looking due south, and the same may be said of the oleander. In all cases there should be daily opening of the upper window sashes to let out gas-fouled and otherwise vitiated air, and to let in "the wind of God," without exposing the plants to a draught. There must be neither parching nor over-watering, while the leaves of palms and indiarubber plants kept indoors will be better for an occasional sponging to prevent dust from choking their pores. Window boxes outside are a matter of taste as to construction, but if they be regarded as an ornamental plinth, from which to rear a beautiful floral wall, a good deal will be set up. Let the box be faced with virgin cork or plain (not brightly coloured or gaudily figured) tiles, and left hollow within to receive plants in pots, which may be removed and renewed readily, and surrounded by ashes or fibre to keep them cool. Thus you will find your window gardening to be facilitated. You can train your climbers up the window sides, and let your trailers hang over as well from plunged pots as if they were stuffed into one box, the soil in which is liable to caking and souring, and you will be readily able to keep the roots of all the plants cool, each in its own best-liked compost. If you go in for a glazed protecting case or frame outside, you increase your range of employable floral subjects, and construct, in a sense, a miniature conservatory. If you do this, do not omit to have the top light hinged to admit of efficient ventilation, and leave plenty of room for getting at the glass for cleaning everywhere. Those possessing available sunny windows, sheltered from wind, have the best chance of making a satisfactory and continuous floral outside display, but discriminate selection of plants and judicious treatment will accomplish much. Nothing brightens up a street more than a bit of really good window gardening, and he who provides it pleases not only himself but every passer-by, and receives praise and blessing accordingly.

Winter Cherry.—A very ornamental perennial, which will grow under shade, and produce its pretty decorative fruit anywhere in good sandy soil. It makes an acceptable conservatory or parlour-window subject, and is largely grown by market gardeners for dinner-table display.

Wireworms. (See Pests of the Garden.)

Wistaria.—A deciduous climber with pretty foliage, and handsome tassel-like flowers of purple, blue, or white colour, very suitable for a south wall. There is a double-flowering variety, and one with variegated leaves, which resemble those of the ash in formation. The wistaria may be increased by layering shoots at midsummer, and these should be severed and transplanted in spring.

Xeranthemum.—The annual "Everlasting" from which "immortelles" for wreath construction are made, a hardy annual, with purple or white flowers, requiring rich soil for its successful cultivation.

Yucca.—The sharp-pointed, sword-like leaved "Adam's Needle," some like Yucca gloriosa are hardy enough to stand out of doors and endure the British winter. Yuccas like strong but sandy soil. Yucca recurvifolia has curling leaves; filamentosa (the "Silk Grass") is a distinctive and decorative description of Yucca. They only flower occasionally in this country, white spikes tinged with green. Propagation by root division.

Zinnia.—Brilliant-flowered half-hardy annuals, good for border bedding or massing. Very free flowering and long lasting. Zinnia elegans has varieties with flowers in white and many colours, crimson, scarlet, rose, bronze, buff, lilac, and violet, some with double blossom. The seed of this should be sown in heat in early March, and the seedlings transplanted to make good stocky subjects for placing in the borders in June, the warmest situation possible being accorded them, and very well-enriched soil. The doubles make good pot plants. No British summer could be too hot for the Zinnia.

# GARDENING CALENDAR

**January.**—Manuring, digging, and trenching operations should be completed in propitious weather in the kitchen garden, and flower borders made or renewed, where this has not been done before the New Year. Gravel walks may be laid down and well rolled after wet, box and other edgings mended. Rose and fruit trees may be planted still in open weather where requisite; prune old and dead wood from such of the latter as are left stationary, and have not been attended to. Bulbs may be put out yet for late blooming, those which are showing above ground being protected from frost. Prepare hot-beds for asparagus and mushrooms as convenient. In gentle heat or in frames, primula, single begonias, ageratum, and other seeds may be sown as well as tomatoes and cucumbers for early cropping, and broad beans and lettuce on sunny borders; while peas for early planting out should be sown in pots, and chrysanthemum cuttings taken. Potatoes may be planted, too, in frames and dahlia roots overhauled in readiness for starting new sets. Rhubarb and seakale should be covered for blanching, or placed for forcing in warm unlighted sheds. Plum and other fruit trees on walls will, in many cases, be better for training, trimming, and nailing, and turfing may be advantageously undertaken now, when the ground is in proper condition. In vineries a temperature of sixty degrees or a little over ought to be maintained during the night for vines well started, but where later grapes are the object keep the temperature lower. A good greenhouse temperature for January is forty-five degrees for general purposes, not more than five degrees below by night or five above by noon. Ventilation should be carefully secured, and watering judiciously attended to as growth increases. Cleanliness is most essential and mildew must be guarded against. Soft-wooded plants of all kinds ought to be given the warmest places, near the glass, and bulbs for flowering afforded shade, the colder positions in the house being allotted to hard-wooded plants like heaths, camellias, or azaleas. Fuchsias may be cut down and re-potted, and cuttings taken from the new-started shoots for summer-bedding.

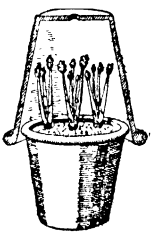
**February.**—Gooseberry bushes and strawberry beds should be manured, as also herbaceous borders, bulbs coming on in the ground being mulched lightly. Raspberries may be planted in prepared positions, shortening the canes whether they are transplanted or otherwise. Sow sweet peas and

half-hardy annuals of all sorts under shelter; and cauliflower, kidney beans, and other tender vegetables in hot beds. Celery, onions and salading should be sown in shallow pans or boxes, and parsnips on prepared beds. Tomato, cucumber, marrow, and melon seedlings coming on in heat must be thinned and transplanted, and more sowing done where wanted. Roses will repay liberal dressing with well-decayed manure, but pruning even the hardiest and best established should be deferred, except where the earliest possible blooming is the only desideratum, and then the risks incurred by the use of the knife before March are grave. Sow marjoram, thyme, and other pot-herb seeds towards the month end. Vines may now be forced to meet fruiting requirements and pot strawberries stimulated in growth. Plants in the greenhouse should be shifted and given a good start whenever necessary, any repotting being discriminately done. Amongst the favourite herbaceous pot plants such as cinerarias and calceolarias, green fly needs circumventing by timely fumigation, pelargoniums should be trained and kept free from damp foliage and draughts, and everything coming into flower well watered save the camellias, which want little, care being exercised also not to wet the hearts of the primulas. Bedding plants such as cuttings of geraniums, heliotropes, petunias, and calceolarias, must now be rooted for supplying the garden borders in due season, their temporary developing quarters being systematically prepared and protected against bad weather. Dahlia tubers indoor decoration, also in boxes pansies, polyanthus, etc. Pot on geranium, fuchsia, and other cuttings that are well rooted, affording increasing air after they are well established in their pots. Dahlia cuttings must be taken, the nearer the old stem the better, and planted in light, sandy compost separately in small pots, and plunged in hot beds to stimulate root development. As sunlight strengthens, the shading of glass structures in which growing stuff of almost all sorts is present will become more and more requisite to obviate flagging. In the case of young plants especially this is of more importance than the waterpot, which is often over-used. Water of the temperature of the air surrounding is what everything requires, be it in greenhouse, heated frame, or elsewhere, and that only when moisture is not reaching the roots with sufficiency.

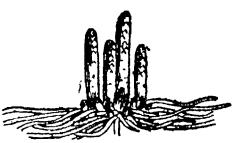
April.—Lawns require mowing and rolling, and rose-pruning should be tackled discreetly, remembering that comparatively late cutting to two or three buds on a rather weak variety, and to four or five buds on the stronger sorts, eliminating all weakly growth, is likelier to produce more satisfactory results than the too early and yet timorous handling of the knife. The hardier hybrid perpetual and bush roses should first be dealt with, standards next, and wall and tea roses generally last of all, these being pruned less drastically. In every case the soil should be well stirred round the roots, and the nutritive mulching applied, all briar suckers being removed. Keep the hoe going on all permanent borders to

SEED-SOWING.

The seed-box in section. 1. Layer of crocks; 2. layer of rough or coarse soil for drainage; 3. layer of firm soil; 4. the presser.



FORCING SEAKALE UNDER AN INVERTED POT.



ASPARAGUS CROWN MAKING GOOD GROWTH.

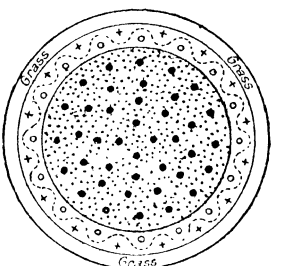
need excitement into steady healthy growth prior to division for cuttings being taken, and tender annuals and climbers for later outdoor planting may be carried forward a stage in cool pits or frames well sheltered from frost. Carnations, picotees, and auriculas in frames can now be fully exposed when the exterior air is well above freezing point; they must, however, not be over-watered, and the lights of the frames must be kept on during wet and foggy weather.

March.—Cut back and trim ornamental deciduous trees and privet and other hedges. Shrubs and bushes of all kinds, particularly such as have been transplanted, require staking, tying, and in some cases temporary shielding against high winds. Gladioli may be planted, in flowering positions for the main display, and hardy biennials placed in the borders, whilst the division and propagation of perennials must be proceeded with. Tulips and hyacinths should be carefully guarded during frosty weather in exposed situations. Sow hardy annuals in the beds. Complete dressing round fruit bushes, and finish pruning fruit trees, protecting those showing bud in severe spells. Put in potatoes; sow main crop peas, windsor beans, carrots and vegetables generally, and plant out cabbages, artichokes, etc., reserving cauliflower until as late in the month as possible, and covering them against frost until safely established. Mushroom beds and cucumber pits will want attention, and tomato plants coming on in bottom heat also. Growing vines should be syringed frequently, and young shoots encouraged. Most things in the greenhouse will now do with additional watering. Now is the best time for sowing in gentle heat primulas, begonias, and kindred subjects for subsequent prevent weed growth, and plant out shrubs that have been wintered under shelter, gradually withdrawing protection from the tenderer species which have stood in the open, forking and raking intervening ground. Stocks, carnations, hollyhocks, pansies, bedding calceolarias, and the like may be transplanted in suitable weather, affording slight cover against sun by day and possible night frosts, until a start has been made, besides circumventing the slug. Afford budding auriculas, polyanthuses, hyacinths, and tulips attention, guarding against heavy rain; sow more seed of annuals in the borders thinly, and prepare beds for their transplantation. Potato planting may continue in the kitchen garden, as well as the pricking out of cabbages and greens, celery and cauliflowers. Sow vegetables for autumnal handling, such as beet and turnips; also beans and peas, spinach, lettuce, radishes, etc., for succession. Protect pea rows and springing broad beans by earthing up, and look to the asparagus beds, sowing seed of the latter. Seed of runner and dwarf kidney beans must also be got in; and well-grown lettuces need tying. Where possible protect the blossoms of the finer fruit trees with light tiffany or herring nets. Give vine borders the requisite dressing, and ventilate the vinery with care, maintaining a suitably high temperature after the thinning of bunches has been accomplished. Greenhouse plants must be kept clean by the removal of dead leaves and flower growth, and the prevention of moss formation on the surface soil, while the propagation of tender subjects from cuttings and offshoots should engage attention. Fern spores may be sown in bottom heat, and young ferns and primulas potted off.

**May.**—This is the month in the flower-garden for finishing the planting of borders for summer display and clearing off the bulbs that have now finished blooming. Taste and care should be shown in the operation in order to secure the most pleasing effect, and plenty of room allowed for development. The most delicate species should be kept in shelter until frost risks are past, so that no stoppage succeeds the planting. Select a favourable relative position for every plant, spread out the roots nicely, and press ....ly, shade and water, and keep the snails and slugs away, replacing failures from reserve. Thin out growing annuals and other seedlings to prevent crowding; peg down petunias, verbenas, and trailing geraniums as they extend; stick fuchsias, zonal pelargoniums, carnations, and everything requiring support. Syringe the aphides off the roses, and from standards rub away growth buds on the briar stock as soon as they show, tying back growing shoots on the wall varieties to obviate injury. Judicious thinning of wall and tree fruit will be repaid; pick off caterpillars from currant and gooseberry trees as they appear. Sow salading, parsley, etc., and prepare outdoor marrow and ridge-cucumber beds; sow runner beans in rows for regular cropping, and continuo slightly to earth-up peas that are getting forward. Transplant cabbages, thin parsnips, carrots, and onions. Cucumber frames should be carefully ventilated, damping the soil and woodwork lightly before closing in the early evening, and pinch the trailing shoots back to within three leaves of a formed fruit. Conservatories, greenhouses, and frames are undergoing great clearance for bedding out and placing of pot plants on ornamental stands, as well as the filling of window boxes, vases and hanging baskets; opportunity should be taken to overhaul the larger specimen plants in the houses, trimming and repotting where necessary, and training up roof and pillar climbers, applying a top dressing of soil where shifting is not wanted. Pot on young stuff to fill the staging. Thinning and stopping of lateral shoots in the vinery for the later grapes, and feeding for those with ripening fruit, will be required.

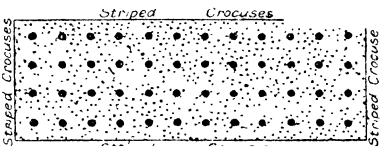
**June.**—Watch the filling out of the bedding plants according to design in the borders, trimming edgings and rows neatly and keeping creepers within bounds. Stake stems wherever the need is evident, stirring the ground and watering well when the sun is not up, to aid growth and flower formation. Seeds may be sown of calceolarias and other plants for next year's flowering. Establish outdoor tomatoes in sunny positions. Look after the marrows and re-spawn mushroom beds. Thin out seedling vegetables and eradicate weeds by hand and hoe, transplanting cabbage and other culinary greens on moist days as required. Disbud young growing vines, encouraging only a sufficiency of the likeliest shoots. Pot herbs should be cut and dried on attaining maturity. Where azaleas, heaths, epacrises and camellias are being brought on in the greenhouse, moist heat should prevail to encourage growth, prior to turning the plants into the open to harden for winter blooming. Gloxinias, achimenes, etc. should have shade and plentiful watering as the flowering period approaches; balsams must be shifted as rapidly as possible. Train standard fuchsias neatly, keeping the budding sprays to the light. Pot chrysanthemums for blooming, and place them in the open when the roots have gained good hold. Pelargoniums, show and fancy, as they finish blooming, are to be placed, if possible, in cool, well-aired frames for hardening their shoots, the best being used for cuttings.

**July.**—Rose-budding is most successfully accomplished this month. Pillar roses and climbers generally require training, tying, and thinning, while plentiful syringing will be helpful where green fly gives trouble. Secure dahlia shoots against wind, and trap earwigs before they can work damage. Feed chrysanthemums and remove side-shoots and tops of the tallest. Pinks may be divided as soon as flowering ceases, carnations layered, and verbena cuttings may be struck under glass. The various tuberous anemones, ranunculuses, and the like may be taken up and kept for autumnal replanting. Water everything in the border copiously in dry weather, and keep all in trim. Wireworms will do much mischief among carnations if not caught in pieces of potato inserted below the soil surface. Campanulas and other biennials and perennials may be sown, and flower seeds gathered from the garden as they ripen. Grass lawns and edgings call yet for great care, and weeds must be kept off the paths. Strong-growing bedding stuff and spreading herbaceous plants have to be held in check. Vacant places in the kitchen garden need preparation for the reception of winter maturing vegetables, and bearing beans and peas will yield the better for liberal supplies of weak manure well soaked in. Parsley should be thinned out, and lettuce transplanted; turnips may be sown where new potatoes have been dug. Full-grown onions may be taken up, and vegetables generally gathered as soon as they are ready. Mulch raspberries and secure strong strawberry runners when fruiting is over to form new plantations. Cucumber plants in frames and marrows out of doors should be watered freely, and tomatoes trained and stopped systematically. Shading will be necessary in all vineries where grapes are ripe, to prevent shrivelling, and fig trees may be advantageously pruned now. It is difficult in July to over-ventilate an ordinary greenhouse. Cape heaths repot now safely, should the shift be needed. Calceolarias may be sown.




Key.—
+ *Silene pendula compacta.*
o *Myosotis Royal Blue.*
● *Kaiser's Kroon Tulips.*
⁘ *Double White Arabis.*

DESIGN FOR PLANTING TULIPS IN CIRCULAR BED WITH SILENE, FORGET-ME-NOT AND ARABIS.

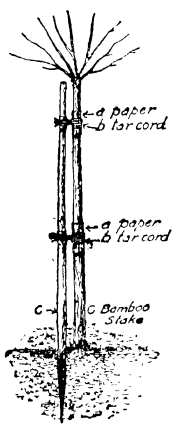



Key.—
*Border—Striped Crocuses.*
*Carpet (shown ⁘) Saponaria calabrica.*
● *4 doz. Single Blue Hyacinths.*

DESIGN FOR PLANTING HYACINTHS AND CROCUSES TO GOOD EFFECT.

**August.**—Watering and weeding is almost a daily duty in the flower garden, and surface dressings may be renewed round choice roses. Evergreens need pruning to prevent overgrowth, and thrift edgings should be trimmed. Keep the seed pods picked off annuals to prolong the blooming period, particularly in the case of the sweet pea family. Gross growth in dahlias must be checked. Layering of carnations and picotees will still succeed if a good compost be employed; layers already rooted should be lifted and potted off. Cuttings of bedding plants that are likely to be wanted should be taken now. Rose cuttings may be struck in light soil over a mild hot-bed, potted up and hardened gradually. Pinks, pansies and large double wallflower cuttings recently rooted may be placed in the open to stand the winter. London Pride and other saxifrages are propagated by the removal of offshoots in August with ease. The bast binding should be loosened

on budded rose stocks. Lime is effectually employed in the kitchen garden to lessen the ravages of snails, and caterpillars must be hunted and destroyed on savoys and the rest of the cabbage kind, while pea and bean haulm requires clearance as cropping concludes. Well soak runner beans at the roots, make a final sowing of endive to stand winter and get out the last of the transplanted celery. Ventilate vineries, and stop young canes when they reach the top of the house. Dust with flowers of sulphur any chrysanthemums which are showing signs of mildew, giving manure water liberally. Seedling auriculas, calceolarias and cinerarias may be potted when ready; and half-hardy annuals like nemophila, rhodanthe, and collinsia sown in pots for winter flowering. The tenderer pot plants removed from the greenhouse for summer exposure ought to be taken in again by the month end, particularly when there is continuous rain. Hoe and rake shrubbery borders. The selection and training of young shoots for next year's yield should be seen to in the orchard as the various fruit trees complete the season's growth.



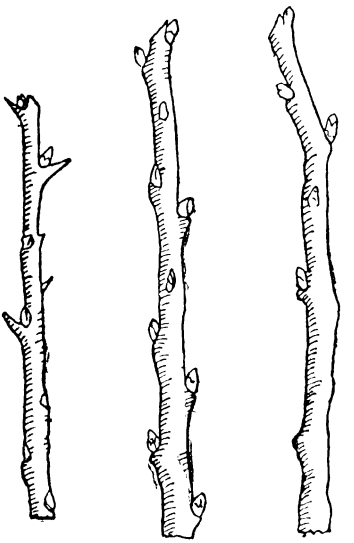

STANDARD TREE.
Newly planted and securely staked.

**September.**—Falling leaves give a lot of work on lawns and flower-beds now. Clear all up daily, and give unremitting attention to plants blooming in the borders to obviate overlapping and rank luxuriance. Dahlias should be tied in, and side shoots cut away. Late in the month put out bulbs for spring display, hyacinths and the like being placed simultaneously in pots and glasses for window decoration, varieties of the narcissus tribe being similarly treated. Earthing-up celery may be proceeded with, potatoes dug, and arrangements for the winter and spring cropping of the vegetable ground carefully completed. Lift onions, drying them well in the sun, and gather tomatoes; transplant lettuces into frames for winter cutting, and thin spinach. Apples for keeping should be allowed to hang as long as possible, and be laid carefully away in a dry storing place. Borders may now be made ready for planting young fruit trees, and strawberry beds for the ensuing main crop should be filled with healthy young plants. Damp must be avoided in the vinery where late grapes are ripening, and firing attended to. Early vines, pot or planted out, will want proper pruning. Cucumbers and melons still bearing in the pits need air by day more than moisture now, and mildew is a danger to be overcome by caution in this respect and by the timely sprinkling of sulphur over the leaves. Before the greenhouse is filled for the winter is a good time for a repainting, which should be quickly and efficiently done on dry days. From outdoors and the cold pits the heaths, azaleas, camellias, and the rest of the plants for winter growth and blooming can then be stood in the best positions to remain. Pelargoniums cut down after flowering and re-established for specimens, as also fuchsias, well hardened, will also come in to keep dry for the winter. The propagation of half-hardy plants by cuttings should be completed, frames as well as the warmest spots in the underpart of greenhouses and conservatories being fully utilised for the purpose. Striking having been accomplished on bottom heat, the cuttings will come on safely in a temperature of fifty degrees or so, which should not be exceeded in the greenhouse in autumn and early winter. Watering must be moderate, and ventilation free, so long as frost is never allowed access to the houses.

**October.**—From the summer flower-beds everything that has had its day having been removed, the time has come for substituting hardier species. After the clean sweep there must be a thorough forking and dressing, and then wallflowers and many useful biennials and perennials, brought on for the purpose, are to be planted in the places of the summer occupants of the borders, the taller-growing things farthest from the front. Polyanthuses, violets, narcissus, primroses, pansies, well-divided rockets, lychnis, and bordering of arabis, alyssum or other suitable frost-resisting, low-growing plants can now be put into position, spring-blooming bulbs being interspersed according to fancy. There is endless variety attainable at small cost and easy of cultivation. Permanent borders may now be dug, and all the dead wood from shrubs cut away. Take up dahlia and begonia tubers as well as gladioli corms, and put them by, well dried, for the winter rest. Transplant ornamental deciduous trees and flowering shrubs. Chrysanthemums in pots must be taken to their blooming quarters before the frost can injure them, and some of the choicest pansies as well as all calceolarias worth keeping put into unheated frames for protection. Prepare tulip beds for massing effect, using a good depth of light fibrous loam to receive the bulbs. Primulas and cyclamens should be kept warm in pits preparatory for removal to greenhouse or conservatory shelves for flowering when bloom is scarcest; and stocks, mignonette and many other things wanted in spring can be accommodated similarly. See that every plant in the greenhouse is clear of green fly, scale or other pests, and keep all kinds of succulent plants free from excessive water. All established vines which have finished fruiting may now be thoroughly pruned, if the wood is ripened hard, and a good general cleaning of the canes, by the removal of loose bark, is desirable, coincidently with a dressing of the borders as required. In the kitchen garden late planted cabbages, broccoli, and turnips should be well hoed. Young lettuces and cauliflowers may be planted on sunny borders, and pot herbs put in convenient places. The last of the potatoes having been lifted, and beet, carrots, parsnips, etc. safely stored, the ground should be well dug, trenched, and manured. New fruit trees may be planted, and old ones where necessary root-pruned to keep down gross and unproductive growth.

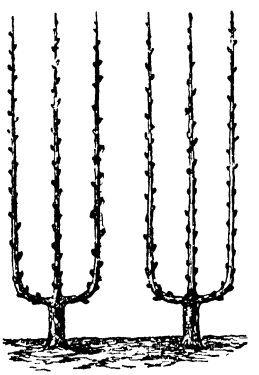
**November.**—Edgings of all kinds in the flower gardens need trimming up well, and new ones of box can be planted at the beginning of the month. Digging and manuring, wherever fork or spade can be got to work, are essential, and opportunity should be taken to amalgamate with the soil in the process as much manure as is required. Lawns should be cleaned up and well rolled when the last fallen leaves have been swept away, and then left till the grass begins fresh growth. This is the best time to transplant most roses; their roots should be carefully spread in prepared ground, and pressed into a good compost, a surface dressing being given to complete all. The tenderer tea and climbing varieties, where exposed, may advantageously receive protection against frosts to come. Liliums should be planted in the first week of the month, also the early flowering gladioli in pots. Phloxes divide and move now. In the general clear-up in the flower garden all stalks of stationary herbaceous plants should be cut away and burnt, with the rest of the accumulated rubbish and dead leaves carefully collected for rotting to mix in due course with potting compost. Prune gooseberry and currant bushes, also prune and nail wall fruit trees, and

thin the larger orchard varieties judiciously, replanting and manuring as necessary. Rhubarb must be covered with litter, also endive and seakale, and celery may be finally earthed up and protected. A soot dressing should be scattered about cauliflower and cabbage plants. Hot-beds should be renewed where exhausted, and fresh mushroom spawn placed in prepared beds for winter yield. Radishes, lettuces, and small salad stuff can be grown in frames, to come in handy before those produced out of doors are ready. Young vines may be started in bottom heat in pits, or in a frame within the vinery, which is usually utilised for the wintering of plants that do well there without injury to the grape-vines overhead. In the conservatory there should now begin to be a good show, the chrysanthemums, geraniums, and primulas affording the most colour, while ferns, begonias, palms, and other ornamental plants combine to form an agreeable and easily varied decorative arrangement. The Roman hyacinths, early started, and some of the powerfully scented giant mignonettes are also among the flowering plants available for the end of the year in glass structures. The temperature ought to be equably maintained, overheating being guarded against quite as much as cold draughts. Remove all dead leaves and loose dirt to keep the air sweet and clean.



CUTTINGS OF BUSH FRUITS.

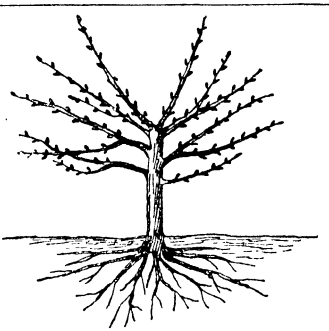
Gooseberry, Black Currant and Red (or White) Currant. The lower buds of the Black Currant are left to form basal growths. In the Gooseberry and Red Currant the lower buds are removed to retain a clean stem at the base.



RED OR WHITE CURRANTS AS TRIPLE CORDONS.

Suitable for planting against walls or training on wires.

December.—Everything liable to injury by severe frost in the garden should receive some slight protection during its prevalence, and cocoanut fibre may be strewn upon bulb beds. Sweep snow from lawns, shake it from conifers, and roll grass when not too frosty. Gravel or other walks ought to be kept tidy. Turfing may be done early in December; good sods, firm flat fixture, and frequent rolling thereafter are essentials of success. Following severe frosts, it is well to press carnations and pinks firmly into the earth, and pansies may be treated likewise. Manure dressing may be applied advantageously to borders, which have previously been well forked, either between growing plants, or where vacant entirely for the time being. It is a good plan to be active with the spade and fork in the garden in the winter, without disturbing the vegetation, dormant or otherwise. Any alterations, such as making fresh paths, or laying out new beds, can now be carried out. Nothing is worse than leaving the garden to look after itself all through the cold months. Horticulture must be systematic and practically ceaseless. In dry weather trenching and manuring may be pursued in the kitchen garden, and early-sown peas and beans peeping through should have the loose earth gently drawn up on each side of the rows for protection. A light covering of litter will be helpful to strawberry beds in frost. Give air cautiously during severe spells to pits and frames, and cover those containing delicate things with mats at night. Keep cinerarias and calceolarias near the glass, and water carefully as necessary when the flowers are coming out. Auriculas in frames, also carnations stood on ashes, should be kept cool and dry. Damp the early vinery floor on bright days as branching proceeds, and keep an eye on the outside border to see that the vine roots are practically as warm from the fermentation of material employed outside as is the border within the structure. Keep the greenhouse dry, and not too warm. Plants wanted for earliest flowering should be placed nearest the glass. Fancy pelargoniums and other subjects liable to harbour green fly must be watched and cleansed on the first appearance of the pest.



RED CURRANT PLANTED AT THE RIGHT DEPTH.

Note the clean stem at the base, 4" to 6" above ground. Above all avoid deep planting and see that the roots are well spread out.

# PHOTOGRAPHY

PEARS—THE PURE SOAP

*For particulars of Pears Famous Toilet Preparations turn to end of Book*

# Pears' Dictionary of Photography

## Giving Particulars of Terms, Formulæ, and Processes employed in Photography. With numerous Practical Hints on Camera Work and its Applications.

By F. J. MORTIMER, F.R.P.S.

*Editor of "The Amateur Photographer and Cinematographer," "Photographs of the Year," and "The Dictionary of Photography."*

**Accelerator.** The constituent of a developer that is used to hasten the process of development. Thus in a pyro-soda developer the carbonate of soda is the accelerator. An increase of accelerator in a developer has the effect of quickening the action and at the same time tends to soften the character of the developed image. (See **Development.**)

**Acetic Acid.** A strong-smelling corrosive acid. Should be kept in stoppered bottle. "Glacial" Acetic Acid is the strength usually employed in photography. This contains 99 per cent. of acid and 1 per cent. of water. It crystallises at about 34° F. The commercial "strong" acetic acid is one-third of the strength of the glacial acid. It is a solvent of pyroxyline.

**Achromatic.** A lens that has been corrected for chromatic aberration is termed achromatic. An achromatic lens brings the rays of light of all colours of the spectrum to the same focal plane. Lenses uncorrected for chromatic aberration are sometimes used as soft-focus lenses for obtaining a blurred effect in pictorial photography. (See **Chromatic Aberration.**)

**Acid-Fixing Bath.** The use of an acid-fixing bath is recommended by many plate and paper makers. The bath keeps clear longer and generally tends to give brighter and cleaner results than when plain hyposulphite of soda is used. The acid-fixing bath must not be used for printing-out-papers.

A convenient formula is—

| | |
|---|---|
| Hypo | 4 ozs. |
| Metabisulphite of potash | ¾ oz. |
| Water | 20 ozs. |

A cheaper form of acid-fixing bath which works well is—

| | |
|---|---|
| Hypo | 1 lb. |
| Sodium bisulphite lye | 1½ ozs. |
| Water | 80 ozs. |

(See **Fixing.**)

**Actinic.** A term applied to that visible portion of light which effects chemical change in photographic work. The actinic value of the light is responsible for the length of exposure necessary for sensitive plates and papers.

**Actinometer.** An instrument for measuring the actinic value or strength of light. (See **Exposure and Exposure-Meter.**)

**Adapter.** A contrivance consisting of supplementary flanges or rings for fitting a smaller lens to a camera-front in place of a larger one. An adapter may be extemporised for occasional use out of thick cardboard, or strips of paper may be bound round the thread of the smaller lens until it can be firmly screwed home into the ring of the larger lens which is attached to the camera front. A film-pack adapter is a special carrier fitting the back of a plate camera for use with film packs.

**Adurol.** A developer for plates and bromide and gaslight papers. It combines the qualities of metol and hydroquinone. A concentrated one solution formula is—

| | |
|---|---|
| Sodium sulphite | 4 ozs. |
| Potassium carbonate | 3 ozs. |
| Water | 10 ozs. |
| Adurol | ½ oz. |

For use dilute with 4 parts of water.

**Aerial Perspective.** A term used to denote the idea of distance in a landscape (or photograph of the same), which depends upon the obstructive or dispersing influence of the atmosphere. The correct rendering of the "tone-values" of the composition depends largely upon the presence of, and adequate regard for, the aerial perspective.

**Agar-Agar** is a vegetable gelatinous material obtained from species of white seaweeds common on the coasts of Singapore and Straits Settlements. It has been suggested as a substitute for gelatine in photographic emulsion making.

**Agfa Colour Plate.** A screen plate for direct colour photography—similar in principle to the autochrome plate (*q.v.*), but grains of gum arabic or shellac are used instead of the dyed starch grains of the autochrome. A higher degree of translucency is secured thereby in the finished coloured transparency.

**Air-Brush** is an instrument employed largely by professional photographers and others for working up and finishing photographs and enlargements in monochrome or colour. Air is pumped by means of a foot-blower through a tube into a small instrument similar in size and appearance to a pencil or fountain-pen. The point of this "brush" terminates in a chamber containing liquid colour, and at the extreme end is a fine orifice through which the colour is driven in a very fine spray on to the picture. The strength and width of the line of spray is regulated by a movable needle in the orifice. This is actuated by finger pressure, which also controls the air passage. The spray of colour is directed like a paint-brush to the parts of the picture that require darkening or altering.

**Albuminised Paper** is the name generally applied to a form of printing-out-paper that has now been practically superseded by gelatino-chloride and collodio-chloride printing-out papers. It is prepared by sensitising in a nitrate of silver bath, paper that has been previously coated with albumen (white of egg) and a chloride in solution. The paper after printing under a negative is toned in a gold-acetate bath.

**Alum.** There are several varieties of "alum" known to chemists, but "potash alum" (the ordinary common powder alum) and chrome alum are the two employed in photography. The ordinary alum is used to harden the gelatine film of negatives or prints and to prevent frilling in hot weather. Chrome alum is used as a constituent in the manufacture of dry-plate emulsion. A five per cent. solution of alum is the usual strength for a hardening bath for prints or plates, or chrome

alum, 1 ounce, water, 80 ounces, may also be used.

**Amidol** is diamidophenol. It is a very useful developer for plates, and is specially suitable for bromide paper on account of the fine black colour of the image produced. It has the property of developing without the addition of alkali and for this reason is sometimes recommended as an ideal developer in hot weather. In solution it will not keep well and soon loses its developing power. The developer should therefore be made up as required.

The following is a good formula—

| | |
|---|---|
| Amidol . . . . . | 50 grains. |
| Sulphite of soda . . . . | 1½ ozs. |
| Bromide of potassium . . | 10 grains |
| Water . . . . . | 20 ozs. |

(See **Development** and **Bromide Printing.**)

**Ammonia.** A very volatile pungent gas known to photographers as a solution in water and termed liquor ammoniae fort. s.g. ·880. It should be kept in a cool place in well-stoppered bottles. The fumes should not be inhaled. It is used as the alkali in pyro-ammonia developer.

**Ammonium Bichromate.** Made by neutralising chromic acid with ammonia. It is often used in place of potassium bichromate in processes depending upon the action of light on bichromatised gelatine, such as the carbon process and the oil process.

**Ammonium Persulphate.** Used in photography principally as a reducer in the density of negatives.

**Ammonium Sulphocyanide** is used in conjunction with chloride of gold for toning gelatino-chloride printing papers. It is a very deliquescent salt and for this reason should be made into a 10 per cent. solution when quite fresh. It has a softening effect on gelatine. (See **Toning.**)

**Amyl-Acetate.** A colourless liquid with a fruity smell. It is used as a solvent of pyroxyline in the preparation of celluloid and celluloid varnish. A good celluloid varnish for application cold can be made by dissolving 120 to 150 grains celluloid in 16 ozs. amyl acetate. (The celluloid may be old films with the gelatine removed.) Amyl-acetate is used as a cement for joining broken cinematograph film. The gelatine should be scraped away from the broken ends before applying the solvent.

**Anaglyph** is a form of stereoscopic print in which one half of the pair of pictures is printed in one colour (red) and the other is printed over it in a complementary colour (green). The stereoscopic effect is obtained by looking at the print through two pieces of glass or coloured gelatine, one of which is coloured red and the other green. One eye looks at the green image through the red glass, the other eye sees the red image through the green glass.

**Anastigmat, Anastigmatic, Astigmatism.** Astigmatism is a defect in photographic lenses whereby it is impossible to focus sharply vertical and horizontal near the margin of the field of view. It should not be confounded with "curvature of field," as in this case the alteration of the focus will improve the marginal definition, though destroying the focus in the centre. An anastigmat lens is one free from astigmatism. The best forms of modern lenses are corrected for astigmatism. A simple test is to make a vertical cross of white paper (not too large) and focus it sharply in the centre of the ground glass screen of the camera. Then without refocussing, swing the camera on the tripod top until the small image of the white cross is at each edge of the plate in turn. If the lens is corrected for astigmatism, the image should remain as sharply defined as it was at the centre (with lens at full aperture). If the vertical or horizontal arms of the cross are blurred, the lens has not been corrected.

**Angle of Lens** is determined by the focal length of the lens in relation to the size of plate with which it is used. Thus one lens of a given focal length may be wide-angle, mid-angle, or narrow-angle, according to whether it is used on a large plate or a small plate. A normal-angle or mid-angle lens is one of which the focal length is about the same as the diagonal of the plate it covers. Thus a 5-inch lens would be a normal angle for a quarter plate (4¼ in. × 3¼ in.). If, however, the same lens is used on a half plate (6½ in. × 4¼ in.), it becomes a wide angle lens, as the angle of view it embraces is larger or wider. If the same lens is used on a 2½ in. × 3¼ in. plate it becomes a narrow-angle lens, as the amount of view included in the area of the plate is smaller and embraces a narrow angle.

**Angle of View** is the angle included by lines drawn from the lens to the edges of the plate it is covering when the image is sharply focussed.

**Anhydrous** means free from water. Many chemicals contain water in their composition which can be expelled on heating them sufficiently. If an anhydrous chemical is recommended in a formula and crystals are used instead, it is necessary to ascertain how much more of the crystals is required to have the same effect.

**Aperture** is the term denoting the size of the diaphragm or opening in the lens through which the light passes to the sensitive plate. The entire surface of the glass of a lens is seldom used, the outer edge being cut off by the diaphragm or "stop" (*q.v.*).

**Aplanat.** The name given to a lens that has been corrected for spherical and chromatic aberrations, but not corrected for astigmatism.

**Aquatint.** Another and earlier name for the gum-bichromate process (*q.v.*).

**Architectural Photography.** The photography of architecture (houses, churches, cathedrals, etc.) both interior and exterior calls for a rigid camera with adjustments for rising front, swing-back, and wide-angle lens. It is usual to stop the lens down to obtain the finest detail and give fairly long exposure, using backed plates. (See **Halation.**) To secure the best results the back of the camera must be perfectly perpendicular, no matter how much the front is swung or raised, otherwise the vertical lines of the building will, in the photograph, converge towards the top or bottom according to the direction of the swing. It is not wise to use a lens including too great an angle. A very wide angle lens tends to give distorted perspective in architectural work.

**Artificial Light Photography.** (See **Flash-light.**)

**Autochrome Plates** are the invention of MM. Lumière of Lyons and are intended for the production of photographs in natural colours. The results are extremely true to nature but are, so far, only in the form of glass transparencies. Thus each exposure yields but one colour transparency. The photograph is produced with the aid of minute transparent starch grains which are stained—some blue-violet, some green, and some orange—the proportion of each being of course definite. These grains form a layer or substratum on the glass plate on which is then coated a panchromatic emulsion. A special light filter is used in exposing and the exposure is made through the glass side. In this way the colours of the image are filtered through the screen of coloured starch grains before reaching the sensitive film. The constituents of this screen permit certain colours to pass according as they approximate the colours of the starch grains. Exposure varies according to light and subject, but as a rough guide one second f/8 at midday in summer sunshine for an open landscape subject will be about right (this is with the correct yellow screen in position on the front of lens). Other exposures can be calculated from this. The development needs two separate treatments. A negative in colours complementary to the original colours is produced first, and this is then reversed into a positive with the correct colours. It is best to adhere as much as possible to the makers' instructions.

**Azol.** A patent one-solution concentrated developer that requires only the addition of water for use. Gives negatives of very fine quality and gradation, and brings up detail in under-exposure. Azol is good also for bromide and gaslight papers and lantern slides.

**Background.** There are many kinds of background in photography, as anything that is behind the principal figure or object in a picture may come under this name. Natural backgrounds are most pleasing, but for portraiture painted backgrounds or sheets may be employed. (See **Portraiture.**)

Brown cartoon paper (obtainable in long rolls and various widths) is also very useful for some subjects. The colour or tone of the background will affect the colour or tone of the figure or object photographed. Thus a dark background will make it look lighter than normal, while a white background will have the reverse effect; contrasts should therefore be avoided, but a gradated back-

ground passing from dark on one side to light on the other, or diagonally, will be found handy for portraits. To prepare a home-made background, unbleached calico of sufficient size should be stretched on a light deal frame, or if it is to roll up when not in use, the calico can be tacked to a convenient wall while being prepared. The following mixture should be freely painted over the surface :—

| | |
|---|---|
| Common whiting | 1 lb. |
| Glue powder | ½ lb. |
| Treacle | ½ pint. |
| Water | ½ gallon. |

Mix thoroughly and add

| | |
|---|---|
| Ivory black | 1 oz. |
| Ultramarine | ½ oz. |
| Red ochre | ½ oz. |

Ground down into a fine cream with water. It can be darkened or lightened according to the amount and proportions of colour added. The coating will dry lighter. The above gives a pleasing neutral colour of normal depth of tone suitable for most portraiture.

**Backing Plates** consists of coating the back of plates with some black or non-actinic substance to prevent Halation (*q.v.*). The essentials of a perfect backing mixture are that it should reflect no rays of actinic light, and that it should be in absolute optical contact with the back of the glass plate.

Most makers now supply their plates ready backed at a small extra charge. Backed plates should be used always if possible. The backing mixture can be removed with damp sponge previous to development. A good backing mixture is made of strong gum, 1 oz.; caramel or burnt sugar, 1 oz.; burnt sienna in powder, 1 oz.; water, 5 ozs. This mixture is spread on the back of the plate in the dark room with a brush, and a piece of tissue-paper of the same size as the plate pressed over it in contact.

**Baryta Paper** is pure paper coated with an emulsion of sulphate of barium, made partly insoluble by chrome alum. This is used as a support for gelatino-chloride printing-out emulsions and in collotype printing, etc.

**Bellows.** The folding portion of the camera which unites the back and front portions is called the bellows and is usually made of blackened calico or leather. The folds have to be carefully designed and well constructed so that they close up evenly into the smallest possible space and are quite light-tight.

Slight damage to camera bellows can usually be repaired with black sticking-plaster—or with small pieces of thin black kid glove applied with seccotine or glue.

**Blacking.** The interior of all cameras, dark-slides, and lens tubes should be coated with a dead black to prevent the reflection of light and consequent fog on the plate. A good black for the purpose can be made by grinding lamp- or ivory-black into a paste with japanners' gold size.

Another formula for blackening wood is as follows :—

| | |
|---|---|
| Extract of logwood | ½ oz. |
| Chromate of potash | 30 grains. |
| Water | 35 ozs. |

Dissolve the extract in boiling water, add the chromate also in solution. This is a deep violet liquid which changes to black in contact with the wood.

**Blanchard's Brush** consists of a piece of swans-down calico doubled and fastened by means of an indiarubber band round the end of a strip of glass 2 inches wide and 6 inches long. It is used for applying various sensitising solutions to papers, giving a streak 2 inches wide, of evenly distributed solution with each sweep of the brush across the surface of the paper.

**Bleacher.** See **Bromoil, Intensification,** and **Toning.**

**Blisters** occasionally occur in printing papers in hot weather and very occasionally in plates. A bath of alum in solution will usually prevent blistering; formalin (1 part in 20 water) is also a preventative.

If blisters have already formed on the surface of bromide or printing-out paper, they may be reduced with a bath of methylated spirit.

Changes of temperature in different solutions when a print is being passed from one to the other is a frequent cause of blistering.

**Blocking-out.** A term used to describe the application of black, red, or other opaque paint to those parts of a negative that are not required, when the print is made. The parts that are "blocked out" do not allow the light to pass and remain white in the print.

**Blue Print Process,** called also "ferro-prussiate" or "cyanotype" process. This process, in which salts of iron are used for the production of the image, gives a picture of a bright blue colour. One method of preparing it, so that a positive image is obtained from a negative, is as follows :—Good smooth drawing-paper is pinned on to a board and coated by means of a Blanchard brush (*q.v.*) with :

| | |
|---|---|
| *a.* Potassium ferricyanide | 75 grains. |
| Water | 1 oz. |
| *b.* Ammonio-citrate of iron | 96 grains. |
| Water | 1 oz. |

Mix equal parts of *a* and *b* for use.

Dry the coated paper in the dark and print under the negative in a printing frame in the ordinary way until the image is clearly seen of a greenish colour. The prints are then well washed in plain water till the high lights are quite white. Rinse in hydrochloric acid 1 dram, water 10 ozs., and then again in plain water. The print is then dried. The process, on account of its cheapness and ease of making, is largely used by architects and engineers in copying plans and tracings, etc.

**Bolting Silk or Cloth** is a fine-mesh translucent fabric used in photography for diffusing both light and definition of detail when making enlargements. Interposed between the lens and the bromide paper various degrees of diffusion or softening of the image can be introduced according to the distance from the paper. It is best stretched on a light frame for use.

**Broken or Cracked Negatives** can generally be printed from if the gelatine film is not broken as well as the glass. First, to prevent further fracture, cement a clean piece of glass (same size) to the glass side of the broken negative. This can be easily done by applying small spots of seccotine or fish glue to the corners, pressing the two surfaces together, and allowing to set hard under light pressure (such as a book placed on top). The negative should then be printed from in an ordinary frame, but should be placed at the bottom of a deep box so that vertical light only strikes the cracked surface. An alternative is to place the printing frame in a shallow tray suspended by strings from the corners. If the tray is then rotated while the negative is printing, the crack will scarcely show in the print. The same principle may be applied in a modified form to bromide or gaslight printing, or the film may be stripped from the broken glass and transferred to another plate. (See **Stripping.**) If both the film and glass are broken the first method is best, taking care to assemble the pieces carefully and in exact register on the surface of the new glass, using a spot of, or a drop of, Canada balsam for each piece. If the cracks still show, and the negative is a valuable one, an enlargement should be made from it, the cracks carefully painted or worked out, and the enlargement then copied to make a new negative. A positive may also be made from the broken negative and a new negative made from it after careful retouching.

**Bromide Paper and Printing.** Bromide paper is paper coated with an emulsion of bromide of silver in gelatine, with or without other silver haloids, and is used for obtaining prints by development either by contact printing or enlarging with daylight or artificial light. There are a great number of bromide papers on the market, and obtainable from all photographic dealers. They vary only in surface textures (glossy, matt, smooth, rough, etc.), and slightly in speed. The paper is sold in packets and rolls. Packets of cut sizes are most convenient to handle. It should be opened and used in the dark room in yellow or orange light. The sensitive surface is easily seen by the tendency to curl inwards. If further evidence is needed, the corner of the sheet may be nipped between the teeth; the sensitive (or emulsion) side will stick to the teeth.

For contact printing the paper is placed in a printing frame with the negative, sensitive side to the film of the negative in the same manner as for daylight printing with P.O.P. (*q.v.*). The loaded printing frame is then taken out of the dark room and exposed to gas, electric, or lamp-

light, or the white light may be turned up in the dark room (take care that the remainder of the bromide paper in the packet is covered up).

The exposure varies according to the intensity of the light, the distance of the negative from the light, and the density of the negative. The speed of the paper also affects the exposure. The makers' instructions, given with each packet of paper, should therefore be followed as to correct exposure, or trial slips may be exposed and developed until the right time is ascertained. As a rough guide, with a negative of average density, an exposure of fifteen to twenty seconds may be tried at a distance of 18 inches from the light of an ordinary fish-tail gas burner, or four to eight seconds with an incandescent burner. The worker should try to work with the same light and always at the same distance from it; by this means, when the varying densities of negatives are gauged, good prints can be made with every exposure.

Development of the print is conducted in the dark-room with Amidol (*q.v.*) or Metol Hydroquinone (*q.v.*). Prints up to and including 10 × 8 inches can be placed dry in a developing dish and flooded at once with the developer. Larger prints should be soaked first in plain water, taking care in both cases to avoid air-bells forming on the surface. If the print is over-exposed, the image flashes up quickly and soon goes grey and dark all over, with no contrasts. If it is under-exposed, the image appears slowly, and the shadows clog up and get very black, while the high lights remain thin or light. If correctly exposed, the image will come up gradually and evenly, the shadows first, then the half-tones, and finally the details in high-lights. The dish is rocked during development, and when the print is fully developed, it is fixed (see **Fixing**), washed, and dried.

For making enlargements and toning bromides. (See **Enlarging** and **Toning**.)

**Bromoil** is the name of a process for the production of photographic pictures in oil-pigment upon a base consisting of a bromide print or enlargement. The outlines details, and masses of the original photograph are retained, but the tones can be darkened or lightened generally or locally at the will of the operator, and the success of the final picture depends upon his artistic skill. The procedure is as follows:—A bromide print of good quality (fully exposed and developed—preferably in amidol developer) is bleached in the bromoil bleaching solution sold by all dealers for the purpose, or the following may be made up—

| | |
|---|---|
| 10 per cent. sulphate of copper solution | 6 drs. |
| 10 per cent. potass. bichromate solution | 2 drs. |
| 10 per cent. potass. bromide solution | 4 drs. |
| Pure hydrochloric acid | 2 drops. |
| Water | 9 ozs. |

This bleacher should be used at a temperature of 65°–70° F. When the print is bleached, wash well in water at a temperature of 70°–80° F. and then fix in

| | |
|---|---|
| Hypo. | 2 ozs. |
| Sulphite of soda | ½ oz. |
| Water | 20 ozs. |

Finally, wash again and place the print on a pad of wet blotting-paper when it is ready for pigmenting, or it may be hung up to dry and then re-wetted at some future time for pigmenting when required. The bleached print must be surface dry before applying the pigment, but the back of the print remains in contact with the wet pad. This is the best method to adopt if the weather is warm or the gelatine inclined to be too soft. The pigmenting is conducted with special fitch and hog-hair brushes with shaped flat tops. The pigment, which is similar to artists' oil colour but stiffer, is spread on a palette and taken up and applied to the print with a light dabbing action. The image gradually develops under this treatment until the picture is complete. The oily pigment "takes" more readily to the shadow portions than to the high lights where the gelatine retains more water.

**Bromoil Transfer.** This is a development of the bromoil process in which the image after pigmenting is transferred to another surface, such as drawing-paper. The drawing-paper, which should be slightly damp, is placed in contact with the newly-pigmented bromoil, and, with suitable backing sheets, is passed between rollers. The pressure of the rollers transfers the image to the new surface. An ordinary mangle with good wooden rollers can be used, but special transfer presses are sold for the purpose.

**Bulb Exposure.** Every instantaneous shutter that is fitted with a pneumatic ball and tube arrangement for actuating the mechanism, can be kept open at will by pointing the index of the shutter to "B" (bulb) and keeping a steady pressure on the indiarubber ball. The term "bulb exposure," *i.e.* keeping the shutter open at will, is now also used with shutters that have no pneumatic release.

**Camera.** The term is now so well known as hardly to need a definition. It is an apparatus consisting of a light-tight box with a lens or its equivalent at one end and place for the light sensitive plate or film at the opposite end. The image of external objects is projected by the lens on to the screen or plate within the camera. In form it may be a wooden-sided box, leather covered or polished, or it may consist of merely the back for the plate and the front for the lens connected with a light-tight collapsible bellows and held apart by struts or a baseboard, both of which will fold up when the apparatus is closed. Cameras may be divided roughly into three groups: (1) stand cameras, (2) hand cameras, and (3) hand and stand cameras combined (*q.v.*).

**Carbon Process.** This process consists of the formation of the photographic image in carbon or coloured pigment mixed with bichromatised gelatine. It depends upon the action of light on gelatine which has been treated with bichromate of potash or ammonium. Gelatine so treated becomes insoluble when exposed to light. If coloured pigment is mixed with the gelatine, which is then treated with bichromate, and paper is coated with the mixture, a sensitive surface is produced that, when exposed under a negative in a printing frame, will reproduce all the gradations of the negative in degrees of varying insolubility according to the relative densities of the image. As the surface of the pigmented gelatine is dark no visible image can be seen when printing, and it is therefore necessary to use an actinometer to time the correct exposure, or the time taken to print a piece of P.O.P. under a similar negative may be taken as a guide. The negative must be given a "safe-edge" before printing. This is a narrow band of black paper stuck round the extreme edges of the negative and prevents the picture frilling up in development. To make the positive or print it is necessary, however, that the pigmented gelatine, or "tissue" as it is called, should be transferred to another support before development. Development is conducted with hot water only, and the object is to dissolve away all those portions of the tissue which were unacted upon by light and remain soluble, leaving only the picture which is formed of the insoluble tissue. It is obvious that as the light acted upon the sensitive tissue from the top downwards the upper portions become insoluble first and development or washing away of the soluble parts must proceed from the bottom. To achieve this the tissue, after printing is complete, is placed face to face with a piece of "transfer" paper (sold for the purpose) and both are immersed in cold water until the first tendency to curl has ceased and the tissue remains flat. They are then withdrawn, still face to face, and vigorously squeezed into perfect contact. They are then placed between blotting boards for five or ten minutes under pressure (a large book will do) and immersed in a bath of water at a temperature of 105° or 110° F. When the pigmented gelatine begins to ooze out at the edges of the paper, strip off the paper upon which the gelatine was originally spread and keep washing the print which remains on the transfer paper with the hot water by throwing the hot water on to it with the hand or by means of a cup or small soft sponge. As soon as development is complete, and the picture remains perfectly clear upon its new support, it is plunged into a bath of cold water to set the gelatine and then placed in a bath of the following—

| | |
|---|---|
| Powdered alum | 1 oz. |
| Water | 20 ozs. |

This both fixes the print and clears it also. The print is finally washed in several changes of water and hung up to dry.

**Carbro.** A printing process combining carbon tissue and bromide paper. The tissue is saturated

with a special bleaching bath, squeegeed in contact with the bromide print, and subsequently separated from it and developed on transfer paper in the same manner as for carbon printing; or, alternatively, the tissue can be developed on the bromide print as a base. Carbro enables large prints in carbon to be obtained without the use of an enlarged negative. Working instructions and materials are supplied by the Autotype Coy.

**Celluloid,** a transparent material, the chief constituent of which is pyroxyline or gun-cotton. It dissolves in amyl acetate or acetone and forms a useful varnish. It is chiefly used in photography as a substitute for glass, and as the base for "cut films," "roll films," and "film packs" is familiar to every amateur. It is also used as the base for cinematograph films, and when coloured is employed for the production of developing dishes, etc. It is very inflammable and must not be used near a naked flame.

**Changing Bag.** A very portable form of dark tent used for changing sensitive plates in daylight. As a convenient accessory for the outdoor photographer it is very useful. The bag is usually made of several thicknesses of opaque material and is shaped somewhat like a pillow-case with sleeves. The dark-slides and plates are inserted into the bag, the hands of the operator are introduced through the sleeves, which fit closely to the arms, and the plates are changed inside the bag in perfect darkness by sense of touch.

**Chloride of Gold.** Used in making the gold-toning baths for various silver printing-out papers. It is sold in small 15 or 7½ grain tubes, the contents of which should be dissolved in 15 or 7½ drams of water.

**Chloro-Bromide Papers** are slower forms of bromide paper in which chloride of silver and bromide of silver appear in the emulsion. They are suitable both for contact printing and enlarging. They give prints of warm tones of great beauty by direct development, and are supplied by all the leading makers under various trade names.

**Chromatic Aberration.** Every simple single lens suffers from this defect, which is due to the fact that rays of light of different colours are refracted at different angles; and each differently coloured ray of light that goes to build up a picture has a different focal length. Moreover, the principal "visual" rays are focussed further from the lens than the "chemical" rays. Chromatic aberration is corrected by combining one lens with another of different power so as to bring the visual and chemical rays to the same focus.

**Chromium Intensifier.** (See **Intensification.**)

**Cinematograph.** An apparatus for the projection of animated pictures. The pictures are taken in a special machine on a continuous film at the rate of about twenty per second. The pictures are projected on to a screen—magic-lantern fashion—by means of a lens and strong light enclosed in the apparatus, and the effect of motion is given to the incident depicted by the rapid sequence of continuous series of succeeding exposures taken of the original subject. As each separate picture in the series is brought before the lens, a revolving shutter uncovers it and allows the light to strike through; the shutter then covers the lens for a fraction of a second at the instant when the film is moved on, and the following picture of the series is then uncovered. This is repeated with great rapidity, and the retention of vision assists in giving an impression of the continuing action rather than any individual phase of it.

*Amateur Cinematography* is largely practised with sub-standard size film. The standard size film is 35 mm. in width and the sub-standard size films for amateur use are 16 mm. and 9 mm. Numbers of taking and projecting machines for sub-standard film are available and are all very efficient. In most cases the amateurs' films are developed by the makers after exposure and returned ready for projection without any trouble to the amateur.

*Colour Cinematography* is now firmly established, Technicolour films being among the most successful. These are made by cementing together, back to back, two sets of colour films from two-colour negatives. For the amateur, the Kodacolour film is one of the best.

**Clearing Bath.** When negatives become stained in development, a clearing bath is sometimes necessary to remove the stains. The following is a good formula—

| | |
|---|---|
| Alum | 2 ozs. |
| Citric acid | 1 oz. |
| Water | 20 ozs. |

The alum may be replaced with 1 oz. of chrome alum. This has a tanning effect on the film, and is specially useful for pyro-developed negatives, changing the yellow stain into a fine olive-green. (See also **Thiocarbamide.**)

**Cloud Negatives** are produced most readily on orthochromatic plates used in conjunction with a yellow light filter. Strongly-marked clouds may, however, be easily photographed on ordinary plates, using a fairly small stop and rapid exposure. The utility of cloud negatives for printing suitable skies into landscape subjects is great (see **Combination Printing**), but great care must be taken that the lighting of the landscape and that of the clouds printed-in is from the same direction. Cloud negatives should not be too dense, but rather on the thin side and full of delicate gradation. A soft working developer, such as rodinol or metol, is most suitable.

**Collodio-Chloride** printing-out papers are similar in many respects to the familiar gelatino-chloride P.O.P., but are made with a collodion base for the sensitive emulsion instead of gelatine. These papers (sometimes known as C.C.) are printed out under a negative in daylight, and are toned and fixed as in the case of gelatino P.O.P. (*q.v.*). They are also made "self-toning," and need fixing only. One great advantage of C.C. paper is its hard surface. It can be dried between blotters or in front of a fire if prints are wanted quickly.

**Collodion** is used in wet-plate processes, and also in preparing an enamel surface for prints. It is made by dissolving pyroxyline (gun-cotton) in a mixture of equal parts of alcohol and ether.

**Collotype** is a photo-mechanical process by which prints in a greasy ink are obtained by means of a film of gelatine used as a printing surface. The picture is produced in the gelatine by the action of light through a negative—the gelatine being previously treated with bichromate of potash. After exposure, the film of gelatine is washed and inked with the greasy ink by means of a printer's ink-roller. The ink adheres only to those places which have been affected by light. By using a suitable press, many proofs can be obtained.

**Colour-Sensitive.** (See **Orthochromatic and Panchromatic.**)

**Colouring Photographs.** There are many special sets of tints sold by all photographic dealers for the purpose of colouring or tinting photographs. These are mostly aniline dyes in solution, and are applied in thin washes with a brush direct to the surface to be coloured. Aniline dyes—obtained in crystals of almost any colour—dissolved in water, to which a drop of liquid ox gall and a little gum arabic have been added, will serve the purpose well. Ordinary transparent water-colours can also be used. A little ox gall in gum water serves as a medium, and overcomes all tendency to greasiness that occurs with some prints. Several thin washes of colour applied evenly are better than one full wash. Ordinary oil-colours thinned with megilp and turpentine can also be used effectively on glossy or matt-surfaced prints. Use the transparent colours only. The air-brush is also an effective method of applying colours. (See **Air-Brush.**)

**Colour Photography.** The Autochrome, Agfa and Finlay processes (*q.v.*) are at present the most satisfactory and successful forms of direct colour photography. There are several other processes, all of which appear to be founded on the same idea of a screen plate, and the results are all in the form of colour transparencies. Colour photography on paper is still only possible in a satisfactory manner by means of the three-colour process. This necessitates the taking of three separate negatives of the subject through three different colour screens (red, blue-violet, and green). Prints from these three negatives are produced in the primary colours, superposed on one piece of paper, and in combination reproduce the colours of the original.

**Colour Screen.** (See **Light Filter.**)

**Combination Printing.** It is frequently necessary in the production of a pictorial photograph to combine the best or most effective portions of two

or more negatives to make an effective whole. To do this successfully requires both skill and knowledge, otherwise results may be produced that betray their method of production too clearly. The most general application of combination printing is the addition of clouds from a suitable sky negative to a landscape subject. This is done by covering over—or masking—the sky portion of the landscape negative by means of a piece of opaque paper, the edge of which follows the general outline of the horizon. The landscape or foreground portion of the picture is then printed, and the negative is replaced with the sky negative. The print is arranged under this, so that the sky comes in the portion left blank, and the landscape part is now protected by masking with another piece of opaque paper in the same manner as the sky was protected before. The paper masks should be pinned to the front of the printing frame, and printing should be conducted in diffused daylight, so as to secure as soft an outline as possible. In this way it is possible for the landscape and sky portions of the picture to be printed on the same piece of paper without showing a join. Foreground, middle distance, distance, and sky, can, if necessary, be printed from four separate negatives in this manner. Great care should be taken, however, to see that the lighting of the sky and landscape is from the same direction. The same method can be applied in making enlargements. The masks are then used between the lens and the easel on which the image is projected. The margins of the horizon must be marked in pencil on the bromide paper as a guide for the second printing.

**Composition** is a term denoting the grouping of the parts of a picture so as to form a pleasing and harmonious whole. Composition in the strict sense of the word simply means placing together (com- together; position- placed); but the artist by this word means a good deal more than merely putting things together as one might put a row of books together on a shelf. The artist thereby means: (1) selecting some things and rejecting others, and (2) arranging the things selected in such a way as to express an idea, *e.g.* strength, grace, activity, repose, etc. Further information on this large subject will be found in the books devoted to pictorial photography.

**Concave, Concavo-convex, etc.** Concave is the term applied to the inner side of a curve or the inner curved surface of a lens. Concavo-convex means that one side of a lens curves inwards and the other side bulges out (convex). If one side dips in and the other side is flat this is called plano-concave. A double concave lens is one in which both sides curve in and the lens is thinner at the middle than at the margins. This form of lens is called a "negative" lens.

**Condenser** is the name of a combination of lenses mounted in a metal cell, which have for their purpose the condensing or collecting of rays of light which would otherwise be scattered and lost. These rays of light from a source of illumination behind the condenser are then thrown forward in a beam of parallel or slightly convergent rays. A condenser is a necessary part of every optical lantern ("magic lantern") and artificial light enlarging apparatus. By its beams the light of the illuminant inside the lantern is collected and thrown forward through the transparency or negative in the most evenly distributed manner and with the greatest intensity. The usual form of lantern condenser is two plano-convex lenses mounted in a brass ring or collar with the convex surfaces nearly touching, and the flat surfaces outwards. (See Lantern.)

**Conjugate Foci.** The distances from object or original (in copying) to lens, and from lens to focussing screen or plate. In enlarging, the distances from negative to lens, and from lens to bromide paper are the conjugate foci of the lens.

**Contrast** is the term usually applied to a negative or print in which the densities of high-light and shadow are very abrupt, *i.e.* without much half-tone. Contrast can be reduced in a negative by a selective reducer such as ammonium persulphate, or in a print by "sunning down" the high lights, or staining the paper. (See **Reduction.**)

**Convex.** The opposite to concave. The outside of a curve, *i.e.* the surface of a lens that "bulges" out. (See **Concave.**)

**Copper Toning.** (See **Toning.**)

**Copying Photographs** can be conducted by either daylight or artificial light, the chief thing to watch being the evenness of the lighting. The camera must be so arranged that the picture to be copied is parallel with the focussing screen of the camera, both vertically and horizontally. Unless this is done the lines of the copy will not be straight. The lens should point to the middle of the original, and if the picture has a glossy surface the lighting should be so arranged that there are no reflections. A wall at the back of a well-lit room is a good position for diffused light, while a couple of incandescent burners, one on each side of the picture, and well shielded from the lens, will serve for copying at night. Focus with a large stop in the lens, and then stop down to get maximum sharpness. Orthochromatic plates should be used, and if the original has colours, a colour screen should be employed. The plates should not be too rapid. Exposure should be full, and can be ascertained only by trial. As a rough guide, with medium speed plate and stop f/16 in a brightly lit room, half a minute's exposure may be sufficient. Development should be conducted with a clear working developer, such as metol-hydroquinone (*q.v.*).

**Cover Glass.** The name given to the piece of plain glass placed over the film side of a lantern slide (*q.v.*) and bound up with it to protect it from scratches.

**Crystoleum.** A method of obtaining coloured photographs on glass. The process consists of squeezing a silver print in optical contact with a piece of glass, rendering it transparent, and applying paint or other colours to the details of the picture (the colours are applied to the back and show through the transparent photograph); then applying broad masses of colour to a second piece of glass, which is bound up with the first. When viewed from the front the effect, if the painting has been well done, is that of a photograph in natural colours.

**Curvature of Field.** In a single or uncorrected lens the rays of light do not come to a focus at the same time on a plane surface—such as the surface of a dry plate—but fall along a curve having the centre of the lens as its centre, and the focal length of the lens as its radius. To secure sharpness of focus at all points with such a lens, the plate would have to be concave, or saucer-shaped. Lenses with curvature of field will give an image sharp in the middle but blurred at the edges, or sharp at the edges and blurred at the centre, according to the distance of the focussing screen from the lens. This form of aberration is corrected in the better-class lenses.

**Cyanotype.** Another name for the Blue Print process (*q.v.*).

**Daguerreotype.** The earliest practical method of obtaining a direct permanent photograph of a person or an object. Invented by Daguerre, hence "daguerreotype." The process consisted of exposing (in a camera) a silvered copper plate, previously subjected to the action of silver iodide and silver bromide, and then developing the image by exposure to a bath of mercury. The picture was fixed in a bath of cyanide of potassium and toned in hyposulphite of gold. The exposure usually extended to 20 min. or ½ hour, in bright sunshine.

**Dark-Room.** The room in which all operations requiring actual handling of the sensitive plates or films used in photography must be conducted. It is usually lighted by a "dark-room lamp" in which oil, gas or electric light is used. The light is filtered through a red, orange or other non-actinic medium (glass or fabric). Dark ruby glass is generally safe for all but colour-sensitive plates which require special "safe-lights." Yellow or orange medium is sufficiently safe for bromide paper and lantern plates. Safe-lights specially manufactured for dark-room lamps are now obtainable from all large dealers and should be used in preference to "home-made" varieties. The general arrangement of the dark-room depends largely upon its size. It should be well ventilated (see that the ventilators do not admit light as well as air), and if possible water should be laid on. A lead-lined deep sink for developing in is very convenient, and racks should be fitted for storing dishes, etc. There should be plenty of shelves within handy reach for bottles, and all bottles should be plainly labelled so that they can

be read by the light of the dark-room lamp. Provision should be made for turning on white light for printing bromide paper, etc., and if sensitive materials, such as plates, papers or films, are stored in the dark-room, they should be kept in a dry corner *below* any gas-burners, otherwise the fumes which ascend will soon spoil them. The dark-room light should be tested from time to time by leaving a dry-plate on the work bench in full view of the light but with half of the plate covered up. If the light is safe no trace of fog should appear on the exposed half when the plate is developed.

**Dark-Slide** is the name given to the piece of apparatus containing the dry-plate used in the camera when making an exposure. It may be "single" when it is made to hold one plate only, or "double" when containing two. The first is usually made of metal, the latter of wood with wooden or metal draw-shutters. It is called "book-form" when it opens like a book and a plate is placed one on each side. Dark-slides are sometimes termed "plate-holders."

**Deliquescent.** This term applied to a chemical substance means that it is liable to become liquid on exposure to the air.

**Depth of focus** or "depth of definition" is the term applied to the distance between the nearest and most distant objects in a view that are rendered in sharp focus at the same time. A long-focus lens with large aperture has less depth of focus than a short-focus lens with small aperture. All lenses of the same focal length and working at the same aperture have the same depth of focus.

**Desensitiser.** The name given to certain chemicals for reducing the sensitiveness of panchromatic and other highly sensitive plates or films after exposure to enable them to be manipulated in ordinary dark-room light. The two best known desensitisers are saffranine, of which a solution of 1 part in 2,000 parts of water is used for bathing the plates, or pinacryptol green, in which 1 part to 10,000 parts of water forms a satisfactory solution. The plates or films are placed in the desensitiser in total darkness for one or two minutes and can then be developed in yellow light.

**Developing Machine** and **Developing Tank.** Mechanical contrivances for holding a number of films or plates in a vertical position during development. The film- or plate-holder stands in a tank or metal box containing the developer, and development is conducted automatically. (See **Stand** and **Tank Development.**)

**Development.** Development is the production of a visible picture or image in dry plate, film, or sensitive paper by chemical means from an invisible or latent impression. As applied to the production of a visible image on a plate coated with sensitive emulsion, that has been exposed to light in a camera, development consists of the application of a "developer." The developer is generally made up of (1) the developer proper; (2) the accelerator, which hastens the action of the developer; (3) the restrainer; and (4) the solvent or water. The developing agent may be pyro, hydroquinone, metol, amidol, etc. (*q.v.*). The accelerator is usually an alkali, and the restrainer is usually a bromide. Development is conducted in the dark-room (*q.v.*). The plate or film is placed in a flat-bottomed developing dish, and the developer poured over it, with a sweeping action, so that air-bubbles do not form on its surface. The plate should be protected as much as possible from the rays of the dark-room lamp, and the dish should be rocked so that the developer is kept in constant motion. After a time, if a plate has been correctly exposed, the image will begin to appear and gain density. With some developers, such as metol, rodinal, etc., the image flashes up quickly, but takes some time to gain density. With other developers, such as pyro-soda, the appearance of the image is more gradual. If the plate has been over-exposed, the image will come up quickly in any case. If this happens, it should be quickly washed in plain water, and some restrainer (bromide of potash in 10 per cent. solution) added to the developer, and development continued. If the plate is under-exposed, it will take a very lohg time for the image to appear, and then perhaps only the high lights will come up (as black patches in the negative). In this case, more accelerator should be added to the developer, and an extra quantity of water also, to dilute it. When development is complete, the plate is rinsed and placed in the fixing bath (*q.v.*). Correct development can only be determined by experience, but generally it is safe to continue until the high lights are clearly seen as dark patches at the back or glass side of the negative. (See also **Stand Development, Tank Development** and **Time Development.**)

**Diaphragms,** or stops, are the apertures used in a lens to cut out marginal rays and enable the middle portion only to be employed. Iris diaphragms consist of a number of very thin leaves of metal or other stiff opaque material opening and closing circularly to various sizes in the centre of the lens mount between the front and back combination. These are the kind of diaphragm most frequently met with, and the sizes of openings or "apertures" are determined by the focal length of the lens to which they bear a definite ratio. The usual markings of stops are f/5·6, f/8, f/11, f/16 f/22, f/32, f/45, f/64. These signs mean that the apertures are 1–5·6th, 1–8th, 1–11th, 1–16th, 1–22nd, 1–32nd, 1–45th, and 1–64th of the focal length of the lens. These apertures have also a settled ratio one to the other, and it will be found that the area of any one is just one-half of the next larger, and consequently lets one-half the amount of light through the lens to the plate. It therefore follows that double the exposure will be required for, say f/11 than for f/8, or half the exposure required for f/16, and so on. This ratio is useful to remember when the correct exposure for any one stop has been ascertained. A smaller stop inserted in the lens increases the depth of definition, and is necessary sometimes when considerable detail is wanted, but the proportionate increase of exposure with the smaller stop should not be overlooked. The U.S. or "Uniform System" of stop marking is used by some lens-makers, and the stops are marked 2, 4, 16, 32, 64, 128. These indicate the ratio of exposures, and the actual f values are f/5·6, f/8, f/11, f/16, f/22, f/32 respectively.

**Diffusion of Focus** can be produced in various ways: (1) By optical means in the construction of the lens itself, and a picture in which the details and outlines are softened and the masses broadened is obtained; (2) it can be brought about by putting the lens out of focus; (3) or by the obstruction of some translucent material when making the print, printing through the glass side of the negative, interposing a piece of film or glass between negative and sensitive paper when making contact prints, or by the use of **Bolting Silk** (*q.v.*) when making enlargements.

**Distortion** occurs in a photograph when (1) a lens of too short focus has been used; the perspective in this case is distorted. (2) When the camera has been tilted in taking architectural pictures or copying subjects in which there are straight vertical lines. The lines in such a case will converge towards one end of the picture. (3) When a single lens is used for subjects containing straight marginal lines, these will be bent outwards or inwards at the ends according to the position of the stop in the lens.

**Double Extension** is the term applied to a camera that can be extended double the focal length of the normal lens used with it.

**Doublet.** A term applied to a lens that possesses two combinations or separate lenses (usually similar in construction) mounted at opposite ends of the lens tube; one lens correcting aberrations of the other.

**Dry-Mounting** is the name given to a form of mounting photographs in which the prints are mounted dry on to cardboard or paper mounts with the aid of special tissue and heat. The tissue is prepared with a coating of shellac on both sides, and is first affixed to the back of the print with a touch from a hot iron. Both print and tissue are then trimmed together and placed on the mount in the correct position. Print and mount are then put under even pressure between two hot plates; the shellac on the tissue melts and the print firmly adheres to the mount without cockling.

**Dry Plates.** Glass of certain specified size coated with a film of gelatine in which a sensitive salt of silver is emulsified. These can be bought commercially so perfect in preparation and so cheaply that it is not worth while to attempt their manufacture at home. The dry-plate which varies in speed from slow or "ordinary" to ex-

treme rapidity becomes the negative after exposure in the camera and development and fixing. (See **Development and Sizes.**)

**Enlarging** is the operation of obtaining a larger image of a negative or positive upon some sensitive surface such as bromide paper. It may be done by daylight or by artificial light, in an enlarging camera or by projection of the image on to an easel. The negative that is enlarged from should be sharp in detail, and not too dense or with strong contrasts. The operation of enlarging tends to increase contrast and magnify other faults. A thin negative with plenty of good gradations and detail gives the best enlargement. The great number of small cameras that are now used renders some form of enlarging almost a necessity if prints of any size are required. The negative must be fixed up so that it is evenly illuminated from behind. The simplest method of enlarging is to place the negative in position in the back of the camera with which it was made. Have the back of the camera open so that light can be freely admitted. Place the back of the camera against a hole cut in a shutter that entirely blocks out the light of a window. Fix the camera on a shelf in front of the hole so that the only light that enters the room is through the camera. The camera thus acts as a sort of magic lantern, and projects the image of the negative on to a screen that is fitted up in front of it. Focussing is done by means of the rack and screw of the camera, and the daylight outside the window can be rendered more even (if there are obstructions such as houses on the other side of the street, etc.), by placing a large piece of white cardboard at an angle of 45 degrees just outside the hole in the shutter, so as to reflect the light from the sky through the negative. When the image is sharply focussed on a piece of white paper fixed to the screen or easel (which should be quite firm and placed so that it is perfectly parallel vertically and horizontally with the camera back) the lens can be covered with a cap made with a piece of orange coloured glass in the top. This will allow the image to be still seen but will not fog the bromide paper, which is then pinned on the easel in the place occupied by the white paper. The exposure is then made by uncapping the lens, and after exposure the enlargement is developed in the manner described under **Bromide Paper.** Enlarging cameras are also sold for daylight enlarging. These consist of what is practically a small camera and a large camera front to front on a long baseboard. The negative is placed in a holder at the back of the small camera and focussed on the ground glass screen of the large camera, the image being projected by means of a lens fitted in the middle at the junction of the two cameras. The bromide paper in this case is fixed (in the dark room) in a large dark slide which is placed at the end of the big camera, and the smaller end is then pointed towards the sky or other even source of illumination. The dark slide containing the paper is opened and the lens in the middle is uncapped by means of a small shutter worked from the side.

Artificial light enlarging is usually done by means of an enlarging lantern which is practically the same in principle as the magic lantern. It is made of metal or wood lined with metal, and contains the illuminant, which may be either oil, gas, electric light or lime-light. A condenser (*q.v.*) is placed in front of this, then the carrier for the negative and the lens for projecting the image on to the screen or easel. By alteration of the distances between lens to negative and lens to easel, enlargements of different sizes can be made. The greater the enlargement the nearer the lens will be to the negative and the further away from the easel, and vice versa. Vertical enlargers are also available. In these the camera element holding the negative is fixed vertically above the support for the sensitive paper, which is adjusted horizontally on a table. In most cases these vertical enlargers are automatically adjusted, so that the image is always in focus at all degrees of enlargement. The exposure in making enlargements is best ascertained by means of trial strips of paper giving varying times, doubling the exposure each time until the best result is obtained. This will serve as a permanent guide for future work. It is impossible to give an exact guide, as so much depends upon the strength of light, density of negative and size of enlargement. It will be useful, however, to bear in mind that the exposure increases in ratio with the square of the enlargement. Thus, if an exposure of four minutes is required for an enlargement of two diameters (*i.e.* four times the *area* of the original negative), an exposure of sixteen minutes will be required for an enlargement of four diameters (*i.e.* sixteen times the area of the original negative).

**Exposure** is the generally accepted term for the period of time during which the light acts on the sensitive surface of the plate or film in the camera while a photograph is being taken. Exposure varies according to the following factors, all of which have to be taken into account if a good negative of any subject is to be secured—

(1) Actinic quality of the light. This depends on time of day, time of year, and position of the object photographed.

(2) Speed of plate or film.

(3) Aperture or "stop" of lens.

(4) Colour and distance of the object photographed.

It is obvious that shorter exposures are possible when the light is very bright than when it is dull, or later in the day, that a rapid plate needs a shorter exposure than a slow one, and a small stop in the lens will lengthen the exposure in the ratio described under **Diaphragms.** A dark subject will also need a longer exposure than a light one. A reliable and useful table of plate exposures is given on page 166, showing the alterations of light values for each month, and variations for different plate speeds and stops in the most simple form for immediate application. For local and general variations in light exposure meters are invaluable. Several excellent meters (no larger than a small watch) are on the market—notably, Watkins' meter and Wynne's meter. These also take into account all the other factors mentioned and are perfectly reliable for all problems of exposure. Exposure meters for visual inspection of the image without calculations, of which the Justophot is a good example are also of great use.

**Exposure Meter.** (See **Exposure.**)

**Factorial Development** is the name applied by Mr. Alfred Watkins to that form of development which depends upon the time of the first appearance of the image in relation to the time of complete development.

**Ferrotype Plate.** A specially prepared thin iron plate with a highly enamelled surface. Used in glazing prints. (See **Glazing.**)

**Ferrotypes** (the familiar tin-types of the seaside photographer) are positives taken by the wet collodion process on thin iron plate which is coated with brown or black varnish.

**Ferro-Prussiate.** (See **Blue Print.**)

**Film-Pack.** (See **Films.**)

Films offer many advantages over glass plates on the score of lightness and convenience in carrying. Their disadvantages are that they are not so rapid as the quickest plates and they do not keep so well. The flexible support which forms the base of films is made of celluloid. This is coated with sensitive emulsion similar to that on glass dry-plates. All modern makes of films are what are termed "non-curling," *i.e.* they do not curl when placed in the developing solution and they dry comparatively flat. This is effected by a coating of thin colourless gelatine on the reverse side of the film to counteract the "pull" of the emulsion. Films are obtainable in three forms: (1) Roll-films ("spools" or "cartridges"). In this form the film is in a continuous band wound with a black paper backing round a wooden spool which fits a receptacle in the camera. The end of the film, with its red paper backing is passed across the back of and inside the camera on to another spool on the other side. Sufficient film is wound off for the picture to be taken on it, the exposed portion is then wound forward again and a new unexposed portion takes its place. In this way a dozen pictures can be taken on one length of film, which is finally wound entirely on the second spool. It can be removed from the camera in bright daylight and replaced with a new spool or cartridge of unexposed film. (2) "Film packs," in which a dozen films cut to size are ingeniously assembled and changed one after the other after exposure from the front to the back of the holder by pulling out paper tabs. (3) "Cut films," which are supplied in packets like plates and are loaded into dark slides or holders, and exposed in a similar manner to plates. The development of

out films and films from film-packs presents no difficulty. They may be treated separately and developed in a dish like plates, or in special tanks made for the purpose, or, what is perhaps best of all, they may be developed, a dozen or more at a time, in a large deep dish full of diluted developer.

Roll-films are treated somewhat differently. They may be developed in one piece by passing backwards and forwards through a dish of developer, holding one end in each hand and see-sawing up and down, or the best plan is to develop in one of the special developing tanks sold for the purpose. When developed, the films are fixed and washed in the same manner as plates and hung up to dry in a good current of air.

**F/6, F/8, F/11, F/16, etc.** These symbols appearing on a lens mount indicate the stops or diaphragm apertures, and bear a relation to the exposure. (See **Diaphragm**.)

**Final Support.** (See **Carbon Process.**)

**Finder.** (See **View Finder.**)

**Finlay Colour Process.** This is a screen-plate colour process in which the taking screen is used in contact with a panchromatic plate with a suitable compensating filter on the lens. Positives from the negative so obtained—when fixed in contact with a polychrome screen—give a transparency in the original natural colours. The positives can be duplicated indefinitely from the original negative.

**Fixed Focus.** A term applied to a lens when working at a point beyond which objects are in sharp focus. This varies according to the focal length of the lens and its aperture. A short focus lens with fairly small stop may give everything in sharp focus beyond, say, 12 or 14 feet, whereas a longer focus lens with a big aperture may not present all objects sharply on the focussing screen until they are 30 or 40 feet away. Everything beyond these distances would be also in focus, so if the lens is set for this distance, it will not require re-focussing for any objects beyond. Objects nearer to the camera would not be in focus.

**Fixing** is the chemical action which removes from the plate, film, or paper any sensitive salts unacted upon by light or by the developer, thus rendering the negative or print unalterable by the further action of light. It is then said to be fixed. Hyposulphite of soda—commonly called Hypo—is the chemical generally used for the purpose. The average strength of the fixing bath for plates is—

| | |
|---|---|
| Hypo. . . . . | 4 ozs. |
| Water . . . . . | 1 pint |

while for prints it may be a trifle weaker. When fixing both negatives and prints, care should be taken for the process to be thorough, or stains and fading will result. Negatives should be fixed for at least five minutes after the final disappearance of the milky appearance of the film when viewed from the back. (See also **Acid Fixing.**)

**Flare** and **Flare Spot** An optical defect due sometimes to the bright edges of the stops producing internal reflections in a lens. It shows itself in the developed plate in the shape of a circular fog-patch.

**Flash-light** is one of the most useful forms of artificial lighting for portraiture at night, as it needs no costly apparatus and can be accomplished satisfactorily by any amateur. Flash-light is produced by the rapid burning of magnesium, either alone or in conjunction with some other substance rich in oxygen, such as chlorate of potash. If burnt alone it may be fired in a reservoir lamp, in which case the magnesium powder is driven through a methylated spirit flame by air pressure with a ball and tube; if a mixture is used it must not be fired in an enclosed lamp or an explosion may occur. As the mixtures are best, giving the brightest and quickest flash, a lamp may be dispensed with altogether (although there are several excellent ones on the market specially constructed for the purpose). The flash mixture may be fired on a tin tray or tile, and is ignited by the application of a lighted match or taper or by placing it on a train of touch-paper or gun-cotton. A reliable flash-light mixture is made as follows—

| | |
|---|---|
| Chlorate of potash . . . . | 60 grains |
| Magnesium powder . . . | 30 grains |
| Sulphide of antimony . . . | 10 grains |

The ingredients should be dried and sifted *separately*, and then mixed carefully with a feather or spill of paper. Avoid friction with any hard substance, or the mixture may explode. The best position of the light for flash-light portraiture is fairly high at an angle of 45° with the sitter's head, and about on the same plane, or a little in front of the camera. Shield the lens from the light. Focussing can be done by means of a light held near the sitter's face. All lights in the room may be kept burning during the actual exposure provided none is shining direct into the lens. The lens does not need to be capped, as the exposure is made by the flash itself. The smoke that arises after the flash can be quickly cleared by opening doors and windows to create a draught. A bigger light or two placed apart should be used for a large room or group. The quantity of flash powder necessary for correct exposure varies with the speed of the plate, stop, colour and distance of subject. As a guide, it will be found that with lens at F/8, rapid plate, sitter in light clothes at 5 feet from light, 12 grains will be sufficient, at 10 feet 30 grains, at 15 feet 70 grains, at 20 feet 100 grains.

**Focal Length,** focus, or equivalent focus. The focal length of a lens is the distance from the ground glass (or focal plane) to a point in the lens when a very distant object is in sharp focus. This point is, roughly, midway between the combinations in a doublet, or in the centre of the lens itself if a single lens. When the focal length of a lens has been correctly ascertained the exact apertures of the stops may be measured and their values determined, if they are not already marked. (See **Angle of View** and **Angle of Lens.**)

**Focal-plane Shutter** is the name given to the type of high-speed shutter that works directly in front of the plate, inside the camera, or at the focal plane. It is actuated by spring rollers and consists of an opaque blind that rapidly winds on one roller at the bottom of the shutter as it unwinds at the top. In the centre of the blind is an adjustable opening or slit—this can be made wide or narrow at will. The speed of the shutter and the exposure of the plate depend upon the tension of the spring rollers and the width of the slit in the blind. With a very narrow slit and a high tension it is possible to make the blind travel across the surface of the plate at a great speed, exposing on one portion for 1/1000 second only. The focal-plane shutter is of high efficiency and speed, for speed passes more light to the plate than any other type.

**Focussing Cloth,** an opaque cloth used to exclude light when examining the image on the ground-glass focussing screen of a stand camera. It is most conveniently made of black velvet or silicia or mackintosh cloth. The last is perhaps best, as the camera can be protected with it in wet weather.

**Focussing Scale.** This is the engraved scale of distances that is affixed to most hand cameras and other cameras in which the picture is not focussed on the ground-glass screen. Its function is to serve as a guide for the position of the camera front or lens in obtaining sharp focus. The scale is usually marked in distances of feet or yards, and when the pointer attached to the camera front or lens is opposite any marked distance, objects at that distance will be in sharp focus in the resulting photograph.

**Focussing Screen,** the ground glass at the back of certain types of cameras, upon which the image formed by the lens is seen. The focussing screen, although fitted to most cameras, is not used much by the hand-camera worker and "snapshotter," who prefers to rely upon the focussing scale or scale of distance engraved upon the base board or side of the camera.

**Fog** is a term applied to that fault occurring in negatives and prints which have received accidental exposure to light whereby the picture image has been obliterated by a general darkening. In the case of negatives the plate may have received accidental exposure to light before, during, or after exposure. During exposure the principal cause of fog is light leaking into the camera through some crack or crevice. Chemical fog may arise from the use of too energetic a developer, the use of unsuitable chemicals or by forcing development.

**Formalin,** a 40 per cent. solution of formic aldehyde in water. It possesses the property of hardening gelatine, and renders it insoluble. Is valuable in the prevention of frilling which some-

times occurs with plates and papers in hot weather. A little may be added to the fixing bath.

**French Chalk**, used for polishing glass or ferrotype plates when glazing prints. (See **Glazing**.)

**Frilling.** Negatives and prints are said to frill when the film leaves its support at the edges. Occurs most frequently in hot weather. A solution of alum or a little formalin in water will prevent the frilling spreading. A bath of methylated spirit applied to the negative or print after washing will reduce the frilling and cause the gelatine to contract to its original size. In this condition it can be carefully replaced in its original position, and when dry will show no marks. If plates show a tendency to frill and no alum or formalin is obtainable, a wax or tallow candle rubbed round the edges before development will keep the solutions from these parts altogether.

**Gaslight Paper.** A variety of slow bromide paper, or a paper coated with very slow gelatino-bromide emulsion, or a chloro-bromide emulsion. Gaslight papers are so called because they can be manipulated in ordinary gaslight or artificial light without the necessity of a dark-room or other chamber illuminated by non-actinic light. Gaslight prints are made by contact with a negative in a printing frame and need approximately five to ten times the exposure of bromide paper, according to the grade used. Development is similar to that followed in bromide printing (*q.v.*), and the same developing formulæ, but undiluted, can be used. Working instructions and formulæ are supplied with each packet of gaslight paper sent out by makers.

**Gelatine**, an animal substance obtained by boiling bones, hoofs, horns and other animal matter. Used in the production of photographic emulsions and for coating plates and papers for various photographic processes.

**Gelatino-Chloride Emulsion Paper.** (See "P.O.P.")

**Glazing** or **Glossing** prints. The production of a high glaze or gloss on photographs is accomplished by "enamelling," or, in the case of gelatine-surfaced prints (*i.e.* gelatino-chloride, P.O.P., bromide and gaslight papers, etc.), by squeegeeing the prints in a wet condition into optical contact with a perfectly clean piece of glass, or ferrotype plate. The glass should be thoroughly cleaned and washed to remove all trace of grease, etc., and then polished with a little French chalk well rubbed in. The wet print face downwards is brought into contact with the glass plate under water, withdrawn and well squeegeed to remove all air bubbles between the surfaces. A piece of paper on the back of the print will protect it from abrasion. When quite dry, the print will peel off with a highly glazed surface.

**Glycerine** is obtained from oils and fats as a bye-product in saponification. It is used as a preservative of pyro and as a physical restrainer in various developing processes.

**Glycin.** A clean-acting developer, somewhat slow in action, but well suited for stand or tank development (*q.v.*).

**Gold Toning.** (See **Toning** and **Chloride of Gold.**)

**Gum-Bichromate.** A printing process in which pigment is mixed with gum-arabic in water and a certain amount of bichromate of potassium. The mixture is spread on paper and when dry is exposed under a negative. The picture is then "developed" by soaking in water until the unexposed portions of the pigmented gum are sufficiently washed away.

**Halation** is the spreading of the light when photographing a brightly-lit object surrounded by dark shadows, such as an open window photographed from the interior of a room. Halation also occurs when photographing landscapes with branches of trees, etc. against a brightly-lit sky. Here the encroachment of the strong light will sometimes cut out the thin lines of the branches altogether. The most ordinary occurrence of halation is in interior work, when the windows will appear as if surrounded by a halo of light. It is caused by light reflected from the back of the plate. Backing the plate is a preventive of halation. (See **Backing.**)

**Half-Plate**, a photographic size, 6½ × 4¼. (See **Sizes.**)

**H. and D.** An abbreviation of "Hurter and Driffield," the names of two investigators in the subject of plate-speeds. These initials, accompanied by a number, seen on a box of plates, indicate that the speed of the plates has been calculated according to the sensitometric scales of Hurter and Driffield, and are comparable one with another. Thus a plate marked "H. and D 200," is twice as fast as one marked "H and D. 100."

**Hand Camera** is the name usually applied to any camera that can be effectively used in the hand, and for which a tripod or other support is unnecessary. This fact alone points to the need of an instantaneous shutter, as it is difficult to give a "time" exposure when merely holding the camera in the hands. Exposures of half a second can, however, be easily given by holding the breath during the release of the shutter. Any camera of the type usually associated with a stand or tripod can, if fitted with an instantaneous shutter, view-finder, and focussing scale, be used quite well as a hand camera. The essentials of a good hand camera are portability, readiness for use, a reliable and silent shutter, rapid lens, quick and certain plate-changing arrangement (either changing box, magazine, or dark slides), a good view-finder, and unobtrusiveness in appearance. Hand cameras are of many types, *e.g.* box-form, folding, small folding pocket-cameras, focal plane folding, and reflex (*q.v.*). (Also see **Instantaneous Photography** and **Camera.**)

**High-Lights.** The brightest parts of a picture, which are represented by the greatest density or opacity in the negative, as the face in portraits, the sky, and other bright portions in a landscape.

**Howard Farmer Reducer.** (See **Reduction in Density.**)

**Hydrochloric Acid.** A strong corrosive fuming acid used in dilute form as a clearing bath for platino-types and in other photographic formulæ. The yellow "spirits of salts" can be used for cleaning bottles and measures, etc.

**Hydroquinone**, known also as hydrokinone, hydrochinone, and quinol. A useful developing agent, giving negatives of clean black and white character.

A good one-solution formula is—

| | |
|---|---|
| Hydroquinone . . . . . | 90 grs. |
| Sulphite of soda . . . . . | 2 ozs. |
| Carbonate of soda . . . . . | 2 ozs. |
| Water . . . . . | 10 ozs. |

This keeps well, and for use is diluted with four times its volume of water. For over-exposure add a little 10 per cent. solution of bromide of potassium. For under-exposure dilute still further with water. Hydroquinone works best in combination with metol, unless great contrasts are required, for which purpose (especially when copying black and white subjects) it is specially suited. (See **Metol-Hydroquinone.**)

**Hypo**, an abbreviation of hyposulphite of soda. (See **Fixing.**)

**Hypo Eliminator.** The best hypo eliminator is water. Negatives and prints should if possible be well washed in at least twelve changes of clean water after fixing in the hypo bath, or placed in running water for an hour. Allowing them to soak in plain water will not remove the hypo. To hasten the removal of hypo when time is short or when on tour various chemicals have been suggested, such as potassium percarbonate. To use this effectively, rinse the plate after fixing, cover with clean water and add three to five grains of the potassium for every quarter-plate. As soon as the liquid ceases to effervesce remove and rinse in clean water for a few minutes. (See **Washing.**)

**Instantaneous** or **Snapshot Photography** is the term applied to that phase of camera work in which pictures of moving objects are taken in a fraction of a second by means of "instantaneous shutters." These are placed either on the front of the lens, between the components of the lens, behind it, or immediately in front of the plate. The first are called "before-lens" shutters and are usually of the roller-blind "time and instantaneous" type, the second are called "diaphragmatic shutters," and are usually of metal with thin blades that open and shut in the centre of the lens, the third are called "behind-lens" shutters and are similar in construction to the first, and the last are called "focal-plane" shutters (*q.v.*). Success in instantaneous photography depends largely upon correct exposure at the right moment so as to catch the moving object in the right position on the plate. The variations in speed attained by

different moving objects have first to be considered. An engine crossing the line of view at right angles at 30 miles an hour needs a much quicker exposure than when it approaches the photographer at an angle or nearly end on. Again, the exposure necessary for a galloping horse does not depend on his rate of progression, but upon the rate of progression plus the rapid local movements of the legs. An appreciation of these points is rapidly gained by experience, and allowance made when making the exposure.

The essentials to be considered when dealing with high-speed work with the camera are: (1) good light, (2) a rapid plate, (3) a reliable instantaneous shutter, (4) a lens working at a large aperture, (5) as full an exposure as is consistent with the movement of the subject, and finally (6) careful development in dilute developer. The rule for ascertaining the required exposure for any moving object is as follows: Divide the distance of the object from the camera (measured in inches) by the number of yards per hour at which the object is travelling multiplied by the focus of the lens. Thus, if an object is 100 feet from the camera and the focal length of the lens is 6 inches and the object is moving at 20 miles an hour, the formula is:—

$$\frac{100 \text{ (feet)}}{20 \text{ (miles)} \times 6} = \frac{1{,}200 \text{ (inches)}}{35{,}200 \text{ (yards)} \times 6} = \frac{1{,}200}{211{,}200}$$

The following table will be found an approximate guide for snapshot work, assuming the object to be about 50 feet distant:—

| | |
|---|---|
| Street scenes with people walking slowly | 1–20 sec. |
| The same but with people walking more rapidly | 1–45 sec. |
| Cattle feeding, sheep, etc. | 1–15 sec. |
| Children playing or people walking very quickly | 1–100 to 1–150 sec. |
| Horse trotting | 1–150 sec. |
| Cycling or man running | 1–150 to 1–200 sec. |
| Horse galloping | 1–200 to 1–500 sec |

If the object is nearer the camera the exposure must be shortened, if further away it may be lengthened. (See **Hand Camera** and **Focal-plane Shutter**.)

**Intensification** is the means employed for increasing the deposit or printing density of a negative. The most generally used method is the application of a solution of mercuric chloride and a subsequent darkening. To intensify a negative it is essential that it has been thoroughly fixed and washed. The mercuric solution is made up as follows:—

| | |
|---|---|
| Mercuric chloride | 2 parts. |
| Hydrochloric acid | 1 part. |
| Water | 100 parts. |

The image completely bleaches in this. When the negative is white right through to the back it is well washed and immersed in

| | |
|---|---|
| Sodium sulphite | 1 part. |
| Water | 6 parts. |

or in a hydroquinone developer or in

| | |
|---|---|
| Strong liquid ammonia | 1 part. |
| Water | 10 parts. |

In either of these the image is blackened and is much denser and darker than it was originally.

For those who object to the poisonous character of the mercury intensifier, chromium is recommended. The following formula can be used without being affected by traces of hypo in the film, and the process can be repeated several times if extra density is required.

| | |
|---|---|
| *a*. Potassium bichromate | 1 oz. |
| Water | 25 ozs. |
| *b*. Hydrochloric acid | ¼ oz. |
| Water | 25 ozs. |

For use mix equal parts of *a* and *b* and bleach the image of the negative in the mixture. When bleached, wash well and apply strong developer containing no bromide. This can be used also for bromide prints and lantern plates.

There are several other methods of intensification, such as the use of uranium, lead or silver, but the above are most generally useful for all purposes.

**Isochromatic.** (See **Orthochromatic.**)

**Kinematograph.** (See **Cinematograph.**)

**Labels** for bottles in the dark room are best made from stout white paper, on which the names of the contents of the bottles are plainly written in waterproof black ink. If the bottles contain developers, toners, or other made-up solutions, the formula should be written on the label also. The labels should be firmly stuck to the bottle with good paste, and then sized and varnished. The solutions should always be poured out of the bottle on the side opposite to the label. This will prevent the chemical that may run down the side staining the label.

**Landscape Lens** is the term sometimes applied to a "single" lens. It is used with a fairly small stop to give good definition, owing to its lack of correction, but gives a brilliant image.

**Lantern.** The lantern as used in photography may be either the (1) "optical" lantern (the modern equivalent and development of the "magic" lantern). (2) The enlarging lantern or enlarger (*q.v.*). Both are similar in general construction, and principles, and consist essentially of a lantern body made of metal or wood lined with metal, an illuminant inside the lantern body, a condenser (*q.v.*) in front of the illuminant to collect and condense all the available light, a carrier or stage for holding the lantern slide, transparency or negative in position, an objective or projection lens in front. Adjustments are included for altering the relative positions of the light and lens, and the image (*i.e.* the lantern slide or negative) illuminated by the light coming through the condenser is projected by the front lens on to an easel or screen in front. The size of the image or picture thrown on to the screen depends upon the distance the screen is from the front lens. The further away it is the larger the picture will be, and vice versa. The alteration of the distance of the screen will necessitate adjustment of the distance of the light from the lens. The light is centred (*i.e.* made to give a clear white disc on the screen) by moving it up or down or to right or left, or nearer or further away from the condenser. A combination of these movements will ensure the correct position being attained at which the best light is given.

**Lantern Slides** are small positive transparencies on glass, usually 3¼ by 3¼ inches, and are made by contact or reduction from negatives. These little pictures are projected by means of an optical lantern on to a white sheet or screen and appear enlarged a great many times their original size. Lantern slides are made on specially prepared "lantern plates" which are coated with a fine silver-chloride emulsion and are either "rapid," for black and white tones, or "slow" (gaslight) for warm tones. The former can be used for reduction from large negatives by means of a reducing camera as well as for contact; the latter are generally used for contact only. For contact printing the plates are exposed behind a negative in a printing frame the same as when making a bromide or gaslight print. Exposure varies according to the speed of the plate, density of the negative, and intensity of the light. Correct exposure is found by trial, but is about the same as for bromide or gaslight papers respectively (*q.v.*). After exposure the plates are developed in developers similar to those for bromide or gaslight papers, or other formulæ may be used. Hydroquinone developer (*q.v.*), restrained with ammonium bromide, potassium bromide, and ammonium carbonate, will give a great range of tones from sepia to red according to the amount of over-exposure. Pyro developer also gives good brown tones. Full instructions will be found with each box of plates. Lantern slides, when developed, fixed, washed, and dried, are bound up in contact with a "cover-glass." This is a piece of thin clear glass, same size as the slide, and is bound to it by thin strips of gummed paper or linen stuck longways round the edges holding the two together. A cut-out mask of black paper is held between the two, showing only the required portion of the picture. Two white spots are placed on the front of the slide at the two top corners. These enable the lanternist to tell which is the right way up when placing the slides in the lantern carrier in semi-darkness.

**Latent Image.** The invisible image impressed upon the silver salts in the emulsion on a dry plate or bromide paper, etc., and brought into visibility by means of a developer.

**Lens.** This is probably the most important part of the photographer's outfit, and enables the image to be formed on the sensitive dry plate in the camera. Photographic lenses are of various types,

from the single or landscape lens to the more complex modern anastigmat (*q.v.*) and telephoto lens. The better the lens the more highly it has been corrected for aberrations. Lens aberrations indicate some departure from the ideal performance of the instrument, and may be "chromatic," "spherical," "distortion," "curvature of field," or "astigmatism," etc. (*q.v.*). (See also **Aperture.**) Great care should be taken of a good lens to preserve it from scratches; the highly-polished surfaces are easily abraded, and the quality of the lens then suffers. (See also **Supplementary Lens.**)

**Light Filters.** These are of coloured glass or gelatine, and are employed to cut out or block certain rays of light when using colour sensitive plates. Called also "colour-screens," "ortho-," or "iso-screens," and "ray-filters." (See **Orthochromatic** and **Panchromatic.**) When used to filter the light from a dark-room lamp, they are usually termed "safe-lights" (*q.v.*).

**Light Fog.** (See **Fog.**)

**Magazine Camera.** A form of hand camera containing a magazine of plates (in metal sheaths) at the back. They are changed automatically by pressing a lever outside the camera.

**Magnesium.** (See **Flash-light.**)

**Magnifier.** (See **Supplementary Lens.**)

**Masks and Discs.** Masks are pieces of black paper the same size as a negative, with a square, round, oval, or oblong opening cut in the middle. Placed between the negative and sensitive paper when printing, the mask protects the covered parts from light action, and they remain white. A portrait can thus be masked out of a group. The piece cut out of the middle of the black paper is called a disc, and if placed on the portrait or other portion that has been printed through the mask, will permit the surrounding white paper to print to a suitable tint. Cut-out black paper masks are also used in lantern slides (*q.v.*). (See also **Combination Printing.**)

**Matt Surface Paper.** The term applied to printing papers that are not glossy surfaced, but are not absolutely rough in texture.

**Matt Varnish.** (See **Varnish.**)

**Meniscus.** A term applied to a lens that is concavo-convex in form.

**Mercuric Chloride.** (See **Intensification.**)

**Methylated Spirit.** Used in photography principally for the purpose of quickly drying negatives and prints. If these are placed in methylated spirit for five or ten minutes after leaving the washing water, and then set up in a current of air or in front of a fire, they will dry in a few minutes.

**Metol.** A quick-acting developer, highly suitable for instantaneous exposures, develops shadow detail without rendering high lights too dense. Produces negatives soft in quality; also suitable for bromide and gaslight papers and lantern slides.

**Metol-Hydroquinone,** known also as Metol-Quinol or M.Q., an ideal combination of developers for all-round work combining the detail-giving qualities of metol with the density-producing characteristics of hydroquinone. Suitable for negatives, lantern slides, and bromide and gaslight papers. A reliable formula is—

| | | |
|---|---|---|
| *a.* | Metol | 40 grains. |
| | Hydroquinone | 50 ,, |
| | Sulphite of soda | 120 ,, |
| | Bromide of potash | 15 ,, |
| | Water to | 20 ozs. |
| *b.* | Carbonate of soda | ½ oz. |
| | Water to | 20 ozs. |

Use equal parts of *a* and *b* mixed for normal exposure. For over-exposure decrease the proportion of *b* and add a few drops of 10 per cent. solution of bromide and potash. For under-exposure increase *b* and dilute with equal bulk of water.

**Mountant.** There are several forms of pastes and other adhesives suitable for mounting photographs, the best known being starch-paste. This is made by mixing one ounce of starch (in powder) with one ounce of water, forming a thick even cream. Add to it, constantly stirring, eight and a half ounces of *boiling* water in which twenty grains of alum and five drops of carbolic acid have been dissolved. A clear translucent jelly of strong adhesive qualities should be formed; if it is not, heat it in a pan until it clears. This will keep about a week. Ordinary flour can be similarly treated and makes a good paste (not translucent), but perhaps the best both for sticking and keeping qualities is dextrine.

Take—

| | |
|---|---|
| Best white dextrine | 1 lb. |
| Cold water sufficient to make smooth stiff paste. | |
| Add water | 10 ozs. |
| Oil of wintergreen or cloves | 1 drachm. |

Mix the dextrine and water together until quite clear of lumps, add the further quantity of water, then the oil, and then bring the whole mixture to the boil, when it should be like clear gum. Pour into pots, cover up, and in from twelve to twenty-four hours it will set to a hard white paste that can be spread easily on backs of prints, etc., with the finger or a brush.

**Mounting and Mounts.** Mounting is the operation of affixing photographs to suitable mounts by means of an adhesive. Prints mounted wet are apt to cockle and bend the mounts unless specially pressed and flattened when dry. With larger sizes this tendency to curl can be counteracted by pasting another piece of wet paper to the back of the mount. Mounting the print dry is generally best. It can be pasted all over the back and applied carefully to the correct position on the mount (marked with a fine-pointed pencil beforehand—a dot for each corner), or it can be mounted by applying the adhesive to one edge only. A strong dextrine mountant or fish glue is best for this purpose. Thick neutral-coloured "art" papers are largely used for mounts, and a series of two, three, or four of these, showing a thin line of tint one under another, can be built up into a very effective surround for the picture. This is termed multiple-mounting. (See also **Dry-mounting.**)

**M.Q.** An abbreviation for "Metol-Quinol" or metol-hydroquinone developer (*q.v.*).

**Nature Photography.** The photography of animals, birds, fishes, insects, plants and geological subjects may be included under this heading. A camera with long extension and great rigidity is needed. A reflex camera is specially adapted for birds and animals. A lens of large aperture is necessary and a silent shutter is essential. Rapid plates (orthochromatic preferred) and a great store of patience are also required. Animals and birds may be stalked in their nature surroundings and the photographs thus secured after careful watching and waiting are more valuable from the natural history point of view than when the subjects are photographed in captivity. Fishes are generally photographed in glass tanks with back and front very close together—practically holding the fish in position. The longest possible exposure that the subject permits should be given in nature photography, to secure all detail.

**Negative** is the term applied to the glass plate or film on which a picture appears, but with the lights and shadows reversed. A negative is produced either in the camera by direct action of light through the lens or by printing in a frame from a positive. (See **Exposure** and **Development.**)

**Negative Storing.** Boxes with grooved interiors are sold specially for storing glass negatives. Film negatives may be stored in envelopes, and books of envelopes are supplied by dealers for the purpose. Glass negatives may also be stored in paper bags (obtainable from the photo-dealer) and kept in sets or series in boxes with all particulars written outside. Another convenient method of storing large quantities is to keep the negatives (in twos, film to film) in their original plate boxes, marking the outside of each box with a distinctive catalogue number for easy reference to the contents. The boxes should be stored standing on edge and not flat.

**Nitric Acid,** called also "aquafortis." A corrosive, fuming acid used as a preservative in pyro-developer.

**Oleobrome.** A modification of the bromoil process (*q.v.*) in which a specially prepared bromide paper is printed and bleached as for a bromoil print, surface dried, and then inked up by means of a roller, under water, the entire process being finished by means of rollers instead of brushes.

**Optical Contact.** An expression used to indicate the cohesion of two surfaces with no air spaces between. When a print is squeegeed on to glass and all air-bubbles are pressed out, it is said to be in optical contact.

**Optical Lantern.** (See **Lantern.**)

**Orthochromatic, or Isochromatic,** means "colour correct." The term is applied to dry-plates that are more sensitive to yellow and green than the "ordinary" plates. As they are still very sensitive to blue and ultra-violet, a yellow screen or light-filter must be used with them to cut these rays out. The "ortho" plate used in conjunction with a yellow screen will give a comparatively colour-correct rendering of a landscape with clouds, or any other natural scene. "Ortho" plates must be developed in a deep ruby light, as the ordinary dark-room light will generally prove too actinic for their extra sensitiveness to colour. In other respects the treatment for "ortho" plates is the same as for ordinary plates.

**Over-Exposure.** When a plate has been exposed in the camera for a longer period than would be necessary to give a good negative with all gradations reproducing the original, it is said to be over-exposed. An over-exposed negative is flat and lacking in contrast, but with plenty of detail. It may be remedied sometimes by intensification (*q.v.*).

**Panchromatic,** applied to dry plates, means sensitive to all colours of the spectrum as distinguished from orthochromatic (*q.v.*). Panchromatic plates and films must be handled and developed in total darkness or with special safelights in the dark-room, or they can be desensitised before development. To obtain the best results with panchromatic material, colour or light filters should be used when making the exposures.

**Panoramic Camera.** A specially constructed camera for taking panoramic views.

**Paper Negatives** are useful in making enlargements. They are on specially prepared, nearly grainless, thin paper, coated with dry-plate (slow) emulsion. Paper negatives are developed in the same manner as ordinary glass negatives or films. Thin bromide paper may be used for making negatives for enlargements, but is too slow for exposures in the camera. If the grain of the paper shows, it may be obviated and the paper rendered more translucent by rubbing in melted paraffin wax or vaseline.

**Papier Minéral.** A fine tracing paper, very translucent and used for affixing to the backs of negatives for working upon in pencil or crayon.

**Passe Partout.** A form of finishing prints for exhibition by binding them by the edges to a piece of glass cut to the same size as the mount. An effective and economical form of framing. A backboard is used to prevent damage to the back of the print, and rings are fixed to the backboard to hang the picture up. The binding strips may be paper or coloured tape and are stuck on with gum, glue, or paste.

**Paste.** (See **Mountant.**)

**Photo Aquatint.** A term applied originally to a form of photogravure and then to the gum-bichromate process (*q.v.*).

**Photo-micrography** is the process of obtaining photographic enlargements of microscopic objects by the aid of the microscope used in conjunction with a camera.

**Photo-telegraphy.** An application of photography by means of which photographs can be transmitted over long distances by electrical means. The telegraph and telephone lines can be employed, and "wireless" transmission of photographs has also proved successful.

**Pigment Processes.** The various printing processes used in photography in which a pigment is incorporated or otherwise used in conjunction with some colloid which is rendered sensitive to light by chemical action. (See **Carbon, Gum-Bichromate, Bromoil, Oleobrome,** etc.)

**Pinacryptol Green.** (See **Disensitiser.**)

**Pinhole Photography.** Taking photographs by means of a camera with a pinhole instead of a lens. The pinhole is made with a pin or needle in a piece of thin metal (thin sheet brass answers well). The edges of the hole must be clean and free from burr. No focussing is necessary, as the image is always in focus and the size of the picture depends only on the camera extension. The exposure varies according to the size of the hole, which depends on the diameter of the needle that made it. It is roughly thirty to one hundred times the ordinary exposure.

**Pinholes** are small transparent spots that occur in negatives, and may be due to dust settling on the plate while in the dark slide or during exposure. They are also sometimes due to minute air-bubbles in the developer. They can be stopped out with a little water-colour paint applied with the fine point of a small sable brush.

**Plate-sunk Mount.** A term applied to a photographic mount with an indented centre—on which the print is mounted—an imitation of the plate-mark round an engraving.

**Platino-Bromide.** A name applied to a certain type of bromide paper with a surface approximately resembling a smooth platinotype print, which is further imitated by the colour and tone of the print when developed. Called also Platino-matt.

**Platinotype.** A beautiful printing process in which iron and platinum salts are utilised. The pictures obtained are in pure platinum and are absolutely permanent. The paper as sold is of a yellowish colour on the coated side. This is exposed under a negative in a printing frame and exposed to daylight until all details are just visible in a brownish tint on the yellow ground. The image is developed by placing the print in a solution of potassium oxalate (1 in 6 approximately) or in developer specially prepared by the makers of the paper. This gives perfect black tones. A different paper is supplied for sepia tones and is developed in a hot bath of oxalate solution 10 parts, saturated solution oxalic acid 1 part. Used at 150° to 160° F.

After development the prints are cleared and fixed in several successive baths of hydrochloric acid 1 part, water 60 parts. Finally washed and dried. Platinum papers must be kept in a calcium tube to protect them from moisture in the air.

**P.O.P.** An abbreviation for Printing-Out-Paper. All photographic printing papers that print under a negative in daylight and give a fully visible image are termed printing-out-papers, in contradistinction to development papers, in which the image is invisible or only partly seen after exposure. By P.O.P. is generally understood the gelatino- and collodio-chloride papers and self-toning paper. These papers are exposed under a negative in a printing-frame and examined from time to time in subdued light to note the progress of printing. Printing is conducted in full daylight, but not in direct sunlight, unless the negative is very dense. Printing is carried further (darker) than is required in the finished print. In self-toning papers the printing is carried further still. When printing is complete, the print is ready for toning, after which it is fixed in hypo 3 ozs., water 1 pint, washed thoroughly and dried. (See **Toning**; also **Glazing, Self-toning.**)

**Portraiture** by photography is probably the most popular form of camera work, and is the branch that attracts most amateurs, although its special application is confined largely to professionals. Successful pictorial portraiture is comparatively difficult. To achieve something more than a mere snapshot of a person several things have to be considered. The background and environment of the figure need careful consideration. These should always be as simple as possible, so as not to detract from the interest of the portrait. (See **Background.**) The lighting is important. This will make or mar the portrait. The pose should be as natural as possible, and the sitter should not stare at the camera or appear "camera-conscious." Dark shadows, caused by strong top or side light, or by the sitter being too close to the light, can be rectified by reflectors of white material placed on the shadow side, or by translucent muslin diffusers placed between the sitter and the light. The most effective form of lighting for general portraiture is a good top side light, not too near, but a little in front of the sitter. A high window facing north or a sloping skylight answers well. This lighting with a reflector should serve for most portrait studies. Ordinary rooms with a fairly large window can also be used for home portraiture by blocking up the lower half of the window, and using the upper portion only with the assistance of a reflector to light the shadow side of the face. Do not put the figure too close to the window or the lighting will be too hard. Long-focus lenses of big aperture are best for portraiture. Short-focus lenses give distorted perspective, and small apertures increase the exposure too much. Home

portraiture can also be accomplished by flash-light (*q.v.*). Rapid plates (preferably ortho-chromatic) should always be used for portraiture and the largest stop in the lens. A full exposure gives the best results, and the negatives should be developed with a soft-acting developer such as metol (*q.v.*), azol, or a well-diluted pyro-developer with an extra amount of alkali. (See also **Retouching.**)

**Positive** is the name applied to the print or transparency made by contact, reduction, or enlargement from a negative.

**Potassium Bichromate,** a chemical of considerable importance in photography. It is met with commercially in fine orange-red crystals. Dissolves in water, and when incorporated with certain colloids, such as gelatine, possesses the property of rendering them insoluble on exposure to light. Is used in photo-mechanical processes, and collotype, etc. (See **Carbon, Gum Bichromate** and **Bromoil.**)

**Potassium Bromide,** used principally as a restrainer in development, and in emulsion making. As a restrainer it keeps the image clear and assists in building up contrast and preventing general fog in cases of over-exposure. It is most conveniently used as a ten per cent. solution in water, *i.e.* 10 ozs. of solution contains 1 oz. bromide. A few drops are added to the developer.

**Potassium Cyanide,** used in making the cyanide-reducer for negatives. It is a deadly poison and should not be handled more than necessary.

**Potassium Ferricyanide,** or Red Prussiate of Potash. Used in the iron or "blue-print" process (*q.v.*), also in bromoil and other formulæ. Used in conjunction with hypo in making a useful reducer for negatives. (See **Reduction,** also **Toning.**)

**Potassium Iodide,** used in making emulsions with silver nitrate.

**Potassium Metabisulphite,** used as a preservative in pyro and other developers and preventing staining of the gelatine film. Used also in making a non-staining acid fixing bath (*q.v.*).

**Potassium Percarbonate.** (See **Hypo Eliminator.**)

**Printing** is the process of making a positive from a negative so that a picture is obtained in which the gradations of light and shade are represented as seen in nature. The term is usually applied to contact work in a printing frame rather than to making enlargements. (See **Combination Printing, Carbon, Bromide, Gaslight Paper, Bromoil, Platinotype, P.O.P.,** etc.)

**Printing Frame.** A wooden frame made to hold the negative while making contact prints. The negative and printing paper (film to film) are held in the rebate of the frame by a flat wooden back which is hinged in the middle, so that one end can be lifted to inspect the progress of printing. The back is held securely in position by two cross springs which clip into the sides of the frame.

**Pyro.** The abbreviated name of pyrogallol (sold as pyrogallic acid), an extensively used developing agent. Gives negatives with a tendency to yellow colour according to the formula employed. Sold in light, white, feathery crystals, very soluble in water, or in heavier crystals or "tabloids." The earliest formula for a pyro-developer for dry plates was pyro-ammonia. This has been practically discarded now in favour of pyro-soda, of which the following is a good formula :—

| Stock Solution : *a*. | |
|---|---|
| Water . . . . . | 10 ozs. |
| Potassium metabisulphite . | ½ oz. |
| Potassium bromide . . . | 60 grains. |
| Pyro . . . . . | 1 oz. |
| Stock Solution : *b*. | |
| Sodium carbonate. . . . . | 2 ozs. |
| Sodium sulphite . . . . | 3 ozs. |
| Water . . . . . | 10 ozs. |
| For use take *a* : 3 ozs. water to make 20 ozs. | |
| *b* : 5 ozs. water to make 20 ozs. | |

Use equal parts.

Increase the quantity of *b* for under-exposure and dilute with more water. For over-exposure increase the proportion of *a* and add 10 to 20 drops of a 10 per cent. solution of bromide of potash.

**Pyroxyline.** The chemical name for gun-cotton. It is produced by the action of nitric and sulphuric acids on pure cotton-wool. It dissolves in a mixture of alcohol and ether, and is then known as collodion. This is employed as the base for the silver salt in the wet-plate process and in the preparation of collodion emulsions. Gun-cotton is also used as a means of rapidly igniting flash-powders. (See **Flash-light.**)

**Quarter-Plate.** A photographic size, 4¼ × 3¼ inches. (See **Sizes.**)

**Quinol.** (Another name for **Hydroquinone** (*q.v.*).

**Rapid Rectilinear.** A doublet lens that has been corrected for distortion of line. Usually abbreviated to "R.R. lens." Called also a "symmetrical lens" or "rapid symmetrical." When the two components forming the lens are the same in construction, one component or one-half of the lens can generally be used as a single lens of double the focal length of the complete lens. (See **Lens.**)

**Reduction in Density** in negatives is secured by means of a reducer. A useful formula is the ferricyanide-hypo reducer (called also "Howard Farmer's" Reducer, after its inventor). It is prepared by adding a small quantity of potassium ferricyanide (10 per cent. solution) to hypo ½ oz., water 5 ozs. The mixture should be of a light yellow colour and keeps acting for only a few minutes. Negatives can be placed in the reducer straight from the fixing bath. If hypo preponderates in the solution, reduction affects the high lights, but when the ferricyanide is in excess, the shadows are attacked first. As soon as the required reduction is complete, wash well and dry. Persulphate of ammonia is also a favourite reducer. The action of this reducer is to attack the darker portions of the negative first. It is thus very useful for reducing and levelling up harsh contrast negatives. Local reduction can be effected physically by rubbing the required part of the *dry* negative with a wad of cotton-wool soaked with methylated spirit. The hypo-ferricyanide reducer in a weaker solution may also be used for the reduction of density in bromide and gaslight prints. Thorough washing should be quickly applied after reducing or the prints may be stained.

**Reflex Camera.** A form of camera, usually used as a hand camera, in which the image cast by the lens is reflected (by means of a mirror placed at an angle of 45 degrees inside the camera) to a focussing screen at the top of the instrument. This serves the purpose of a full-sized view-finder, and the image can be focussed up to the moment of exposure. The plate is in position in its usual place at the back of the camera, and at the desired moment the mirror is released. It springs up and shuts out the top focussing screen, and simultaneously a shutter exposes the plate. Reflex cameras are specially useful for instantaneous work that requires great precision of focus, and also for natural history photography, *e.g.* birds, etc.

**Rembrandt Effect** is a term frequently applied to that type of portraiture in which the outline of the features in profile is strongly lighted, while the remainder of the face and the background are in comparative shadow.

**Restrainer.** A chemical added to a developing solution to restrain its action. Usually potassium bromide in a 10 per cent. solution is used with developers for negative work.

**Retouching** is the process of spotting out defects in photographic negatives or prints. It is generally accomplished with a fine-pointed pencil —after the film has been prepared to "take" the black-lead—or with a fine sable brush and water-colour of the right tint (for prints). To prepare the surface of a negative for retouching, a little special varnish must be rubbed over the film to give it a "tooth." A formula for preparing this is—

| | |
|---|---|
| Powdered resin . . . . | 60 grains. |
| Turpentine . . . . . | 2 ozs. |

The retouching pencil must be of hard lead—H.H. or H.H.H.—and must be sharpened to a fine needle point (by rubbing on fine glass-paper after using the knife). The pencil is used on the parts requiring retouching with a loose "dotting" sort of stroke, making a series of tiny commas, or with a very light and small circular action. The point of the pencil must not be pressed hard and the density must be built up gradually. Spots, freckles, lines, etc., on the face in a portrait, which appear as almost transparent places in the negative, are readily filled up in this manner and the texture of the skin can be smoothed considerably. It is not wise to overdo the retouching or all

character will be removed from the features. An occasional rough print may be taken to see the progress of the retouching, and if unsatisfactory it can be entirely removed by wiping the film with a rag dipped in turpentine. The process can then be started *de novo*. The retouching desk on which the work is done is a sloping board with side struts to hold it in position. A rectangular hole is cut in the middle of the desk and the negative held (film upwards) over this hole in grooves. As the retouching has to be done by transmitted light, a mirror is placed below the negative to reflect light from a window or lamp up through the hole in the desk. A top screen of wood or cloth cuts out extraneous light while working.

**Reversal** is when those parts of the image which should appear dark in the negative come up light, and vice versa. It is due to the extreme action of light on the sensitive film and is also known as solarisation.

**Reversed Negative** is one in which the position of the picture is reversed as regards right and left. Reversed negatives are used for certain photo-mechanical work and in carbon printing in single transfer. They are made (1) in the camera direct by taking the picture through the glass side of the plate or by means of a prism, (2) by stripping and reversing the negative film itself, (3) by reproduction from other negatives.

**Rising Front** is a movable panel of wood fitted to the front of the camera and holding the lens, which can be moved up and down so as to exclude or include more or less of the foreground of a picture without shifting the camera.

**Rodinal.** A concentrated one-solution developer for plates, films, papers, lantern slides, etc., needs only the addition of water for use. Made from paramidophenol.

**Roll Film.** A popular form in which sensitive films are supplied for use in cameras. The films are in a long strip backed with black paper and wound on a spool. (See **Film.**)

**Roller-Blind Shutter.** A form of instantaneous shutter in which a continuous strip or blind of thin opaque material, containing a rectangular opening or slit in the middle, passes from a roller at the top of the shutter and rapidly winds on another spring roller at the bottom. During its passage from one roller to the other, the opening in the middle uncovers the lens to which the shutter is attached. (See **Instantaneous Photography.**) The body of the shutter itself is in the form of a narrow shallow box with an opening right through its smallest dimension. The rollers are fitted inside the box at top and bottom, and the lens of the camera fits into the opening at one side, leaving the other side free. The principle of the roller-blind is also applied to the Focal-plane Shutter (*q.v.*).

**Rytol.** A concentrated "tabloid" developer of great utility for films, plates, bromide and gaslight papers, and lantern slides.

**Safe-edge.** (See **Carbon.**)

**Safe-Lights.** This term is applied generally to the media or coloured screens employed in dark-room lamps, and may vary according to the sensitiveness of the plates or papers used. For bromide papers a good yellow light (orange glass or two thicknesses of special yellow fabric—sold for the purpose) will suffice. For ordinary and rapid non-ortho plates, ruby and orange glass combined, or two thicknesses of yellow fabric and one of ruby fabric will be safe. For ortho-chromatic plates a very deep ruby light is necessary or one of the commercially prepared safe-lights made for the purpose should be used. For panchromatic plates and films a dark green safe-light is supplied by the makers of the materials, but in most cases total darkness is advocated. (See **Dark-Room.**)

**Screen, Colour.** (See **Orthochromatic.**)

**Screen, Lantern.** The screen or sheet upon which the picture in the lantern-slide is projected by the optical lantern (*q.v.*). To get the most brilliant result the screen should be white with a little blue in it and should be opaque.

**Self-Toning Papers** are printing-out papers in which the amount of gold necessary for toning the image is incorporated in the emulsion itself. Prints on self-toning paper only require fixing in a plain hypo bath to give finished pictures of a pleasing colour. Thorough washing is necessary after fixing.

**Short-Focus Lens.** A lens of which the focal length is less than the length of the longest side of the plate for which it is used may be called a short-focus, or wide-angle lens so far as that particular size of plate is concerned. Generally, however, the term means a lens with a focal length less than five inches. Such lenses have greater depth of focus (or definition) than long-focus lenses.

**Shutters, Instantaneous.** Mechanical contrivances for exposing the sensitive plate or film in the camera to the action of light for the fraction of a second, and allowing the image formed by the lens to impinge on the surface of the plate during that period. (See **Instantaneous Photography, Focal-plane Shutter,** and **Roller-Blind Shutter.**)

**Silhouette Photography** is that form of portraiture in which the face or figure is shown in profile in solid black against a plain white background. The method of producing these effects is to pose the sitter in profile against a white sheet. Focus the camera carefully and then exclude all light that may illuminate the near side of the figure or sheet. The whole of the light must come *through* the sheet and may be daylight or flash-light. Use a slow plate and develop with a well restrained developer to give great contrast and density.

**Sizes, Photographic.** The principal sizes of photographic plates and papers are $1\frac{1}{4} \times 2\frac{5}{8}$; $3\frac{1}{4} \times 2\frac{1}{4}$; $3\frac{1}{4} \times 3\frac{1}{4}$—(lantern plate); $3\frac{1}{4} \times 4\frac{1}{4}$—(quarter plate); $5 \times 4$; $5\frac{1}{2} \times 3\frac{1}{2}$ (postcard); $6\frac{1}{2} \times 4\frac{1}{2}$ (half plate); $6\frac{1}{2} \times 3\frac{1}{2}$ (stereoscopic); $7 \times 5$; $8\frac{1}{2} \times 6\frac{1}{2}$ (whole plate); $10 \times 8$, $12 \times 10$; $15 \times 12$. The principal sizes of continental plates are $6\frac{1}{2} \times 9$ centimetres; $9 \times 12$ cm.; $12 \times 16\frac{1}{2}$ cm.; $13 \times 18$ cm.; $18 \times 24$ cm.; $21 \times 27$ cm.

**Sodium Carbonate** : ordinary washing soda. It is best to use the pure carbonate of soda prepared for photographic purposes instead of the common variety. Should be in clear crystals.

**Sodium Hyposulphite.** (See **Hypo.**)

**Sodium Sulphite.** Used largely in photographic formulæ as a preservative for various developing agents, such as pyro, metol, hydroquinone, amidol, etc. It also prevents staining the film during development. Should be obtained in clear crystals. When it turns white or gets partly white it has oxidised and become sulphate and is then of no use for its original purpose.

**Soft Focus Lenses.** A term applied to lenses which have not been fully corrected for spherical and chromatic aberration. With these lenses a "soft focus" effect is obtained in which a primary image is formed surrounded by a secondary image or halo, giving very pleasing diffusion effects, suitable for certain pictorial subjects.

**Solarisation.** (See **Reversal.**)

**Spherical Aberration** is a defect in a lens and consists in bringing the rays passed by the centre of the lens to a focus at a point nearer than where the rays passed through the margins. Occurs most commonly with "single" lenses.

**Spool.** The name given to the rolled-up length of sensitive film backed with black paper and wound on a wooden spindle, used in a roll-film camera. A "spool" of film may contain sufficient for two, six, or twelve exposures, and is sometimes called a film-cartridge, and can be loaded into the camera without the need of a dark-room. (See **Film.**)

**Squeegee.** A useful accessory employed for squeezing a print into optical contact with a sheet of glass, or for expelling the air from between two pieces of paper (as in the carbon process) or other surfaces. It is made in two forms: the roller-squeegee, a tube of seamless rubber on a wooden spindle revolving in a convenient handle, or a flat straight-edged strip of rubber cemented or otherwise held in a long wooden holder. The latter form is more satisfactory in practice. When squeegeeing, start pressing out the air from centre of print towards the margins. Place a sheet of clean blotting-paper and then a sheet or two of ordinary paper over the back of the print to prevent abrasion.

**Stains on Negatives.** (See **Clearing Bath** and **Thiocarbamide.**)

**Stand Development.** This term is applied to the system of slow development in dilute developer, in which a number of plates are dealt with simultaneously. A grooved porcelain or metal tank is employed to hold the plates vertically, and almost

any non-staining developer, such as metol, hydroquinone, adurol, rodinal, azol, may be used in a considerably diluted state. Development is allowed to proceed slowly (for many hours if the developer is very dilute), and this treatment generally tends to balance faults of exposure and make the most of each negative.

**Starch Paste.** (See **Mountant.**)

**Stenopaic Photography.** Synonymous with **Pinhole Photography** (*q.v.*).

**Stereoscopic Photography** is that form of camera work in which two photographs are taken simultaneously (if the subject is moving) with the same exposure, and with a camera having two similar lenses placed approximately the same distance apart as the human eyes. The resulting prints from the two negatives (usually taken side by side on one plate) when mounted, and viewed in a stereoscope, give the illusion of solidity to the objects photographed. This is due to the two points of view in the two halves of the pair of pictures. Two separate cameras may be used, or two exposures given with one camera—moving it a few inches to right or left before making the second exposure. Special stereoscopic cameras are sold for the purpose. When mounting the prints from a stereoscopic negative, care must be taken to mount the right-hand print on the left and vice versa, as it must be remembered the negative has reversed the two views. The pictures may also be seen to advantage as transparencies.

**Stock-Solution** is the term applied to a concentrated form of any formula of which a portion is taken from time to time and diluted for use.

**Stops.** (See **Diaphragm.**)

**Stripping Negatives.** The film of a negative can be stripped from the original glass or celluloid base by treating with the following solution :—

| | |
|---|---|
| A. Methylated spirit . . . | 2 ozs. |
| Water . . . . . | 2 ozs. |
| Formalin . . . . . | 1½ ozs. |

Take 8 parts of this solution and add 1 part hydrofluoric acid. Place negative in this, first cutting film all round about ¼ inch from edge. The film readily loosens in this and can be taken off. It can then be transferred to a new piece of glass. (See **Cracked Negatives.**)

**Sulphide Toning.** (See **Toning.**)

**Sulphite of Soda.** (See **Sodium Sulphite.**)

**Sulphocyanide of Ammonium.** A very deliquescent chemical. Used in the gold toning bath. (See **Toning.**)

**Sulphuric Acid.** A strong corrosive acid used in the Bromoil process (*q.v.*). Develops great heat when diluted with water. Always add the acid to the water, and not vice versa.

**Supplementary Lenses,** or magnifiers, are single lenses applied to the front of the ordinary lens for the purpose of increasing or decreasing its focal length. By careful calculation of the amount of this increase or decrease, objects at different distances can be brought into focus without altering the position of the original lens on the camera. These lenses are largely used in hand cameras that are not provided with focussing adjustments. To find the focal length of a supplementary lens necessary to reduce or increase the focal length of a given lens, multiply the focal length to be altered by the focal length desired, and divide the product by the original focal length less the final focal length. A "positive" lens will reduce the focal length. A "negative" lens must be used to increase the focal length.

**Swing Back.** The movable back of the camera that can be swung vertically so as to get the plate truly perpendicular when the camera is pointed up or down.

**Swing Front.** The front of the camera holding the lens can in many cameras be swung from the centre so that the lens points up or down at will. Both the swing front and the swing back are useful movements for architectural photography.

**Symmetrical Lens.** (See **Rapid Rectilinear.**)

**Tank Development.** This term is applied to the development of plates or films in a grooved metal tank or box. The plates (a dozen or more can be treated at once according to the number of grooves) are held vertically in the tank and a clean-acting developer of known strength is poured on. The constitution of the developer may be so arranged that the development is complete in a certain time, say five, ten, or twenty minutes. This is arrived at by trial with a correctly exposed plate. A great number of developing tanks are now made, and are obtainable from photographic dealers. They all embody the same principle, and many are made so that the plates can be reversed top to bottom at intervals during development. This prevents uneven development. (See also **Stand Development.**)

**Telephotography** is that branch of camera work in which a telephoto lens is used. The effect of this lens is to bring distant objects into focus on the plate on a large scale, but without a long camera extension. The telephoto lens consists of a combination of an ordinary large-aperture photographic lens with a "negative" (or double concave) lens. This negative lens acts as a magnifier, and the size of the image varies with the distance of the separation between it and the positive lens. To obtain the same sized rendering of distant objects with ordinary lens would require a camera of many times the length.

**Temporary Support.** (See **Carbon Printing.**)

**Ten per Cent. Solution.** (See **Weights and Measures.**)

**Thiocarbamide.** A chemical used for making a clearing solution for negatives and for the removal of stains. The following is a useful formula :—

| | |
|---|---|
| Thiocarbamide . . . . | 20 grs. |
| Citric acid . . . . . | 10 grs. |
| Water . . . . . | 2 ozs. |

Thiocarbamide used in the developer will bring about reversal. (See also **Clearing.**)

**Three-Colour Photography.** (See **Colour Photography.**)

**T. and I.** An abbreviation for "Time and Instantaneous," applied to photographic shutters that are capable of giving "time" exposures as well as "instantaneous."

**Time Development.** A system of developing negatives in which the time of first appearance of the image bears a definite relation to the total time taken to develop the image fully. (See **Development.**)

**Time Exposure** is the term generally applied to an exposure given by uncapping the lens of the camera for any time more than a second. Less than one second's exposure is usually regarded as "instantaneous." When using an exposing shutter on the lens, exposures of from half a second to three or four seconds are sometimes referred to as "bulb" exposures (*q.v.*).

**Tissue.** (See **Carbon.**)

**Toning** is the process whereby the tone or colour of a photographic print is altered or changed by chemical means. Nearly every form of print is capable of being toned, but gelatino-chloride, or collodio-chloride papers (P.O.P.) and "bromide" or "gaslight" papers are most frequently treated in a toning bath. A favourite toning bath for gelatine P.O.P. is—

| | |
|---|---|
| Ammonia sulphocyanide. . | 20 grs. |
| Chloride of gold . . . . | 2 grs. |
| Water . . . . . | 20 ozs. |

Dissolve the sulphocyanide in half the water and gold in remainder. Add gold to sulphocyanide, a little at a time, until all is mixed. The prints should be well washed in plain water first, and then placed in above bath until all warm colour has disappeared from all but the darkest shadows when the print is viewed by transmitted light. Rinse the prints (a dozen or more can be dealt with at once in the toning bath), and place in the fixing bath composed of—

| | |
|---|---|
| Hypo . . . . . | 3 ozs. |
| Water . . . . . | 20 ozs. |

Fixation is complete in about ten minutes. Then wash prints for two hours, and dry. It is generally well to undertone, as the prints become much colder in colour when dry. A toning bath for giving fine brown tones is :—

| | |
|---|---|
| Phosphate of soda . . . . | 60 grs. |
| Chloride of gold . . . . | 2 grs. |
| Water . . . . . | 40 ozs. |

Brown and brown-black tones are obtained, especially on matt-surfaced P.O.P., by platinum toning. Use the following bath :

| | |
|---|---|
| Potassium chloroplatinite . . | 3 grs. |
| Sodium chloride (salt) . . . | 50 grs. |
| Citric acid . . . . . | 50 grs. |
| Water . . . . . | 20 ozs. |

Immerse dry prints in 10 per cent. salt bath for five minutes, wash and tone in above. P.O.P. prints can also be toned and fixed in one operation.

Bromide and gaslight prints—usually black and

white in colour—can be toned to almost any hue, from red to brown or blue. The best method of getting a rich brown or sepia colour is to bleach the prints in—

| | |
|---|---|
| Potassium ferricyanide . . | 40 grs. |
| Potassium bromide . . . | 60 grs. |
| Water . . . . . | 10 ozs. |

When the image has quite disappeared, rinse and place in—

| | |
|---|---|
| Pure sodium sulphide . . | 40 grs. |
| Water . . . . . | 10 ozs. |

until the image reappears in a strong brown tone. Then wash well and dry. Red and blue tones are obtained, or bromide and gaslight prints by using the following solutions :—

| | |
|---|---|
| *a*. Neutral potassium citrate | 4 ozs. |
| Water . . . . . | 40 ozs. |
| *b*. Potassium ferricyanide . | 1 oz. |
| Water . . . . . | 10 ozs. |
| *c*. Copper sulphate . . . | 1 oz. |
| Water . . . . . | 10 ozs. |
| *d*. Uranium nitrate . . . | 50 grains. |
| Water . . . . . | 1 oz. |
| *e*. Ferric ammonium citrate | ½ oz. |
| Water . . . . . | 10 ozs. |

For tones from warm black, through sepia to red use *a*, 5 ozs.; *b*, ½ oz.; *c*, ½ oz., mixed and poured over the wet print.

For a different series of warm sepias to red-chalk colour use *b*, 2 drams; *d*, 1 dram; glacial acetic acid, 2 drams; water, 10 ozs. After toning rinse in dilute acetic acid (1 in 100) and then wash in several changes of water.

Blue tones are obtained by immersing the prints in—

| | |
|---|---|
| Water . . . . . | 10 oz. |
| *b* . . . . . | 1 oz. |
| *c* . . . . . | 1 oz. |
| Nitric acid . . . . . | ½ dram. |

Wash in several changes of water after toning and hang print up to dry. The methods of toning bromide and gaslight prints given above can also be used for lantern slides.

**Transfer Paper.** (See **Carbon.**)

**Triple Extension** means that the camera is capable of an extension of bellows three times the focal length of the lens ordinarily used.

**Tripod** is the name of the three-legged stand used for supporting the camera while the photograph is being focussed and taken. They vary in construction from heavy wooden affairs for bulky cameras to telescopic, aluminium, pocket tripods for small, light cameras. The best forms have adjustable sliding leg-joints, to permit ready levelling of the camera on uneven ground. The tripod top is the section to which the legs are attached and to which the camera is screwed.

**Under-Exposure** occurs when the amount of light that reaches the plate or sensitive film through the lens is insufficient to record completely all details of the image—especially in the shadows. (See **Development.**)

**Uranium.** (See **Toning.**)

**U.S. Numbers.** (See **Diaphragm.**)

**Varnish, Negative.** Varnishes specially prepared for application to negatives and obtainable from all photographic dealers. The varnish is poured over the film side of the plate, which is then set up on end to dry in a warm place.

**View Finder** is the little instrument attached to most hand cameras for the purpose of determining the amount of subject or view that will be included on the plate at the moment the photograph is taken. The reflector form is, in effect, a tiny reflex camera, and the image formed by the small lens is reflected up t[illegible] of the top of the finder. The direct vision-finder is usually a simple double-concave lens, rectangular in form, which presents the view in miniature when looked through. This type of finder affixed to the top of the camera with a sighting-pin arrangement permits the camera to be used at the eye-level and the object sighted as with a gun. Another form of direct-vision finder is made of a wire frame with intersecting wires crossing in the middle at right angles. This is fixed to the camera front (above the lens) and a sighting-pin is placed at the back. This wire finder may be same size as the plate, and the object is looked at through it.

**Vignette and Vignetting.** This is the method of softening off the edges of a picture until the margins are perfectly blank. It is generally used in portraiture and is accomplished by covering the negative with an opaque paper mask—fixed a little distance in front of the printing-frame, during printing. An opening is made in the mask approximating the outline of the portrait, and tissue paper placed over the opening still further softens the effect. Vignetting, when making enlargements, is accomplished by moving a piece of cardboard to and fro between the lens and bromide paper, a hole being cut in the card to allow the required portion of the image to show through.

**Washing Negatives and Prints** is best accomplished in running water. The removal of hypo or other chemicals from the film cannot be done by allowing the plate or print simply to soak in water. Constant movement should be imparted to the washing water by means of a stream of water entering the washing trough (a large circular basin is good for prints) through a rubber pipe at an angle. Negatives should be washed vertically or film downwards, but not touching anything. Washing-racks and tanks are not expensive accessories, so it is better not to risk the permanency of the negatives by not employing one to wash them thoroughly. The next best plan is to give the plates or prints a series of complete changes of clean water. Twelve changes with five minutes' soak between each will generally prove sufficient. (See **Hypo Eliminator.**)

**Weights and Measures, Photographic.** Formulæ are usually made up by apothecaries' weight :—

20 grains = 1 scruple.
3 scruples = 1 drachm = 60 grains.
8 drachms = 1 ounce = 480 grains.

Chemicals are usually sold by avoirdupois weight :—

437½ grains = 1 ounce.
16 ounces = 1 pound.

The fluid measure is :—

60 minims = 1 drachm.
8 drachms = 1 ounce.
20 ounces = 1 pint.
2 pints = 1 quart.
4 quarts = 1 gallon.

**Whole Plate.** A photographic size measuring 8½ × 6½ inches. (See **Sizes.**)

**Wide-angle Lens.** A lens is said to be wide-angled when its focal length is much shorter than the diagonal of the plate it covers. It embraces an angle of view that is comparatively wide. The same lens, however, used on a much smaller plate might be a mid-angle or narrow-angle lens. (See **Angle of Lens.**)

**Xylonite.** A form of celluloid, used in making light, unbreakable developing dishes. Spirit should not be used in these dishes or they will quickly get out of shape.

# SPORTS AND PASTIMES

PEARS—THE PURE SOAP

*For particulars of Pears Famous Toilet Preparations turn to end of Book*

# Pears' Dictionary of Sports and Pastimes

## INTRODUCTION

In the present issue, the Dictionary of Sports and Pastimes has been revised by Lillywhites, the famous Sports Firm of Piccadilly, London, who have brought the rules thoroughly up-to-date. The publishers feel that many of the minor pastimes given in previous issues being so well known, descriptions of them can well be omitted. The space thus gained allows of the rules of the more important sports being set forth, and although in some cases the laws governing the games are not printed in their entirety, the vital rules given are practically complete. It is felt that they will prove of great service to Referees and Umpires of modern outdoor sports, and not inadequate for the tyro.

The same remarks apply to the rules of indoor pastimes where given. In a work of this description it is of course impossible to fully set forth the whole of the rules and laws concerning such games of intellectual skill as Chess, Whist, etc.

Although books on such subjects can be purchased at all prices, the best way to make yourself proficient is to play with those more accomplished than yourself. A "stroke" at cricket, the "leads" of Whist and the "moves" of Chess can be acquired in infinitely less time by actual practice than by reading.

To excel in any game of physical or intellectual skill it is necessary to practise continually, and training and fitness are more advantageous than exceptional strength in any sport.

## SECTION I. OUTDOOR SPORTS.

### ARCHERY.

This sport was greatly encouraged in olden days, and it is still a favourite pastime with many people.

The Bows are made of Lance-wood, Yew, Hickory, Snake-wood, etc., and one should be selected which is adapted to the player's height and strength. A man's bow may have a pull of fifty or sixty pounds, but a lady, as a rule, will find a pull of thirty to thirty-six pounds quite sufficient. A good weight of pull for general use is forty-two pounds for distances of not more than one hundred yards, and fifty pounds for longer distances. The distance of the string from the centre of the bow when strung should be between five and six inches.

The arrows used should be proportioned in length and weight to the bow for which they are intended. For bows of five feet, twenty-four-inch arrows are used; for five feet nine inches, twenty-seven inch arrows, and for six feet, from twenty-eight to thirty inches. The notches should be lined with horn. The feathers are of goose or turkey, and three in number; one is of a different colour from the others and is called the "cock" feather; this is always to be placed uppermost.

The part of the string which receives the arrow is whipped with silk to prevent the string being rubbed and weakened.

The usual mark is a target some four feet in diameter, placed at distances varying from fifty to one hundred yards or more. The target has a gold centre, surrounded by rings of red, blue, black, and white, with an outside border of green. The gold, when hit, scores nine; the red, seven; the blue, five; black, three; and white, one; and the player who scores the greatest value in hits wins the match.

In the act of shooting with the bow the whole muscles of the body are called into play, and it is particularly necessary that the legs should be planted firmly on the ground, otherwise the body will be thrown off its equilibrium and the aim destroyed. In discharging the arrow from the bow the string should be quickly loosed but without a jerk or jar, nor should the hand or elbow be either elevated or depressed, for the slightest derangement in the delivery of the arrow weakens its aim. The archer should study the wind so as to make allowances for the various currents of air.

### BACKGAMMON.

Owing to the renewed popularity of this game, a brief summary of the generally accepted rules is given. Other rules, of which mention may be found in other descriptions of this game, have been omitted as too drastic or as unnecessary for practical use. The following will be found all that is necessary for correct play and full enjoyment.

1.—The dice must be thrown into the table on the player's right hand; and if either die jumps from one table to the other, or off the board, or on to the bar or frame, the throw is void; and the dice must be thrown again by the same player (who does not lose his turn).

2.—If one die rests on top of the other, or is tilted against the other or against the bar or against a counter, the throw is void; and both dice must be thrown again by the same player (who does not lose his turn).

3.—A man is considered "played" when it has been moved the correct number of points, in accordance with the dice, and has been quitted.

4.—If a player moves a man an incorrect number of points, the adversary may require the move to be corrected; but this must be done before another throw is made.

### THE LAWS OF BADMINTON.

1.—The Courts are marked out by white or black lines, 1½ in wide.

2.—The Net may be 17 ft. to 24 ft. in length, according to the position of the posts and 2 ft. 6 in. in depth. The top of the net shall be 5 ft. in height at the centre, and 5 ft. 1 in. at the posts, and shall be edged with a 3 in. white tape doubled and supported by a cord run through the tape, and strained over and flush with the top of the posts.

3.—The Posts shall be 5 ft. 1 in. in height, and shall be sufficiently firm to keep the net strained as above.

4.—The Shuttles shall weigh from 73 to 85 grains, and have from 14 to 16 feathers fixed in a cork 1 in. to 1¼ in. in diameter. The feathers shall be from 2½ in. to 2¾ in. in length, have from 2¼ in. to 2½ in. spread at the top, and be firmly fastened and cemented at a height of about 1 in. above the cork, with thread.

5.—*The Choice of Courts.*—The side winning the toss shall have first choice of—

(A) Serving first;
(B) Not serving first;
(C) Ends.

The side losing the toss shall then have choice of any alternative remaining. The side winning a game shall always serve first in the next game, but in doubles either of the winners may continue

serving and either of the losers may receive the service.

6.—The four-handed game consists of 15 or 21 aces, as may be arranged. Provided that in a game of 15 aces, when the score is 13 all, the side which first reached 13 has the option of "setting" the game to 5, and that when the score is 14 all the side which first reached 14 has the option of "setting" the game to 3. After a game has been "set" the score is called "love all," and the side which first scores 5 or 3 aces, according as the game has been "set" at 13 or 14 all, wins the game. In either case the claim to "set" the game must be made before the next service is delivered after the score has reached 13 all or 14 all. Provided also that in a game of 21 aces the same method of scoring be adopted, substituting 19 and 20 for 13 and 14.

*Note.*—"Setting" is not permitted in handicaps.

7.—A rubber is the best of three games. The players shall change ends at the commencement of each game. In matches decided by a single game the players shall change ends as for the third game of a rubber as follows:—When the leading score reaches 8 in a game of 15 aces, at 6 in a game of 11 aces, or 11 in a game of 21 aces, or, in handicap games, when either side has scored half the total number of aces required to win the game (the next highest number being taken in case of fractions).

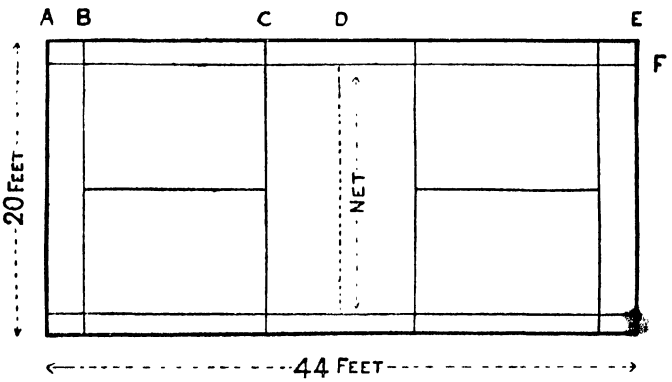
striker may, however, follow the shuttle over the net with his racket.

(F) If, while the shuttle is "in play," a player touch the net or its supports with racket, person, or dress.

(G) If the shuttle be hit twice in succession by the same player, or be hit by a player and his partner successively.

(H) If a player obstructs his opponents.

10.—It having been decided which side is to have the first service, the player in the right-hand half court of that side commences the game by serving to the player in the opposite right-hand half court. If the latter player returns the shuttle before it touches the ground it is to be returned by one of the "in" side, and then returned by one of the "out" side, and so on, till a fault is made or the shuttle ceases to be "in play." If a fault is made by the "in" side the server's hand is out, and as the side beginning a game has only one hand in its first innings (*vide* Law 11), the player in the right-hand opposite half court now becomes the server; but if the service is not returned, or the fault is made by the "out" side, the "in" side scores an ace. The "in" side players then change from one half court to the other. So long as a side remains "in" service is delivered alternately from each half court into the one diagonally opposite, the change being made by the "in" side when, and only when, an ace is added to its




A to B 2 ft. 6 in. A to C 15 ft. 6 in.
A to D 22 ft. E to F. 1 ft. 6 in.

NET:—Depth 2 ft. 6 in. Height 5 ft. 1 in. at posts. 5 ft. at centre. Top edged with 3 in. white tape.

*Diagram of Ground as marked out for Badminton.*

8.—A fault made by either player of the side which is "in" puts the server out; if made by a player whose side is "out," it counts an ace to the "in" side.

9.—It is a fault—

(A) If the service is overhand. (A service shall be deemed to be overhand, within the meaning of this rule, if the shuttle at the instant of being struck be higher than the server's waist.)

(B) If in serving the shuttle falls into the wrong half court (*i.e.* into the one not diagonally opposite to the server), or falls short of the short-service line, or beyond the long-service line or outside the side boundary lines of the half court into which service is in order.

(C) If the server's feet are not in the half court from which service is at the time being in order, or if the feet of the player taking the service are not in the half court into which service is at the time being in order until the service is delivered.

*Note* 1.—A "Service" is delivered as soon as the shuttle is struck by the server's racket.

*Note* 2.—A foot *on* the line is out of court.

(D) If, either in service or play, the shuttle falls outside the boundaries, or passes through or under the net, or falls to pass the net, or touches the roof or side walls, or the person or dress of any player. A shuttle falling on any line is held to have fallen in the court.

(E) If the shuttle "in play" be struck before it crosses to the striker's side of the net. The score. The first service of a side in each innings shall be made from the right-hand half court. After the service is delivered, the server and the player served to may take up any positions they choose on their side of the net, irrespective of any boundary lines.

11.—No player may take two consecutive services in the same game.

12.—The side beginning a game has only one hand in its first innings. In all subsequent innings each partner on each side has a hand, the partners serving consecutively.

13.—It is a "Let" if the shuttle touches the net in service, but if in play it does not invalidate the stroke. It is a good return if the shuttle, having passed outside either post, drop on or within any of the boundary lines of the opposite court.

14.—If a player standing in his wrong half court takes the service, and his side wins the rally, it shall be a "Let" provided that such "Let" be claimed or allowed before the next succeeding service is delivered.

15.—In games of one player on each side, the above rules hold good except that—

(A) The players shall serve from and receive service in the right-hand half courts only when the server's score is 0, or when he has scored an even number of aces in the game, the service being delivered from and received in the left-hand half courts when the server has scored an odd number of aces.

(b) Both players shall change half courts after each ace has been scored, and consecutive services shall be received by the same player.

## BASEBALL.

The complete rules for Baseball—the national game of the U.S.A.—are so very voluminous that we cannot give them *in extenso* here. The following general outline, however, will probably give some idea of the field and play.

The game is played on a diamond-shaped ground measuring 90 ft. each side and about 127 ft. along the diagonals. This is termed the "infield," and the bounds and proper ground should extend to at least 235 ft. from the "Home Base."

The four Bases are termed the Home Base, at which the batter takes his stand (with the catcher behind him), and the 1st, 2nd, and 3rd Bases at the corners of the infield diamond.

Nine players form a team, who naturally take turns at batting, the teams changing when three men of the inning team are "put out." The fielding side may be placed in any position their captain may select, but the "pitcher" and catcher have fixed stations.

The Bat is round, 2½ inches in diameter at the thickest part, not more than 42 inches in length.

The Ball is hide-covered, with cork or rubber core, wound with yarn, measuring 9 inches in circumference and weighing 5 ounces.

The "pitcher's plate," 24 inches by 6 inches, is near the centre of the diamond, about 60 feet 6 inches from the striker's stand, or "Batsman's Box," which measures 6 feet by 4 feet, behind which are the "catcher's lines"—a triangular space extending to 10 feet behind the batsman.

The Bases are white canvas bags 15 inches square filled with soft material and secured in their places.

The pitcher must face the batsman, and when delivering the ball should hold it in both hands before delivery, keeping one foot on the "plate." A fairly delivered ball must also pass over the Home Base before touching the ground, and must not be lower than the batsman's knee or higher than his shoulder.

The Home Plate is a five-sided figure, 17 inches in width and about the same from back to front, placed between the Batsman's Boxes, the space between the "Boxes" being 29 inches.

The general umpire judges whether a ball is fair or not, and he calls "Strike" if it is a fair delivery, whether struck at or not, and "Ball" if not properly delivered. After three "Strikes" or four "Called Balls" the batsman runs to 1st Base, unless, of course, he has batted the ball previously, when he runs for 1st Base at once.

Two runners cannot be at one Base; if a man on 1st Base cannot run to 2nd, that being occupied, the later comer to 1st Base is out if touched by a fielder with ball in hand.

Nine innings a side are usually played, unless the team who have only batted in eight innings have scored more runs than the other side in their nine innings.

"Foul" ground is that part of the field outside the lines of the diamond between Home and 1st and Home and 3rd Bases.

There are 86 Rules—many with several sections—in the Official Guide, and it is advisable for those desiring to play the game properly to obtain the rules from a reliable source, such as Spalding & Bros., High Holborn, W.C. 1.

## LAWS OF BOWLS.

**Rinks or Divisions of the Green.**—The green shall be divided into spaces, called rinks, not less than 19 nor more than 21 feet in width, numbered consecutively. The side boundary of the rink shall stretch from bank to bank.

**Bowls: Size and Bias.**—1.—No bowl shall exceed 16½ inches in circumference, nor 3½ lb. in weight, nor shall it have a less bias than the standard bowl adopted by the Association.

2.—Any bowl to which objection is taken shall be tested by comparison with a standard bowl of the Association, bearing the Association's stamp. Any objection must be taken not later than the sixth head of a game.

3.—*Markers.*—In single-handed tournaments one marker only shall act in each game. The marker may answer queries as to position of bowls and their distance from the jack, but shall not give directions to, consult with, nor assist either player as to the play. In no circumstances shall a marker display any object in the hand or otherwise, for the guidance of a player. Markers shall be appointed by the Directors of the tournaments, Local Secretaries, or Umpires, whom failing, by the competitors themselves.

**Size of the Jack.**—The jack shall be about 2½ inches in diameter.

**Conditions of a Game.**—1.—A game may consist of any number of shots or heads, or may be played for any length of time, as previously agreed upon.

2.—When a game consists of a stated number of heads, and there is only one rink on each side, should it be found when the given number of heads has been played that the scores are equal, an extra head shall be played, and should the result again be a tie, another head shall be played, and so on until a decision is arrived at.

**Rink or Team of Players.**—1.—A rink or team shall consist of four players, each playing two bowls, and called respectively first or lead, second player, third player, and skip or driver, according to the order in which they play. It shall be in the power of either skip before beginning a competition or tie, or on the resumption on another day of an unfinished competition or tie, to require that not more than one trial head each way shall be played. On the day of a competition or tie no player shall play on the green before such competition or tie starts, except in these trial heads. Unless otherwise mutually agreed upon, the skips shall toss to decide which side shall play first, the winner of the toss to have the choice. In all subsequent heads the side which won the previous head shall play first. The leaders play their two bowls alternately, and so on, each pair of players in succession, to the end. The order of playing shall not be changed after the first head has been played. No one shall play until his opponent's bowl has come to a rest; a bowl so played may be stopped by the opposing side and sent back to be played over again, and in the event of the bowl so played having moved the jack or a bowl, the opposing skip may allow the head to remain as it is after the bowl so played has come to rest or he may have the head begun anew.

2.—A bowl played by mistake shall be replaced by the player's own bowl.

3.—When a player has played before his turn, the opposing skip may cause the bowl to be stopped in its course, and it shall be played in its proper order.

4.—Any bowl which comes to rest within 15 yards of the front of the mat shall be counted dead.

5.—If fewer than three players appear on either side, the game, so far as that side is concerned, shall not proceed, and the side at fault shall be held as having *failed to appear* and shall forfeit the game. Should such forfeiture take place where more rinks than one from each side are concerned, and where the aggregate or average scores are to decide the contest, the scores of the remaining rinks only shall be counted, but such average shall, as a penalty in the case of the defaulting side, be arrived at by dividing the aggregate score by the number of rinks which should have played, and not, as in the case of the other side, by the number actually engaged in the game. In the absence of a single player, from one or both sides, in an ordinary club match or friendly game, the number of bowls shall be made up by the playing of odd bowls, these odd bowls being played by the first and second players, one each at each end. In a match for a trophy or other prize, where more rinks than one from each side are engaged, odd bowls must, in the absence of one of the players of any rink, be played in the manner above provided, but one-fourth of the total shots scored by such rink shall be deducted from its score at the end of the game.

**Skips or Drivers.**—1.—The skips shall have sole charge of their respective rinks, and their instructions must be obeyed by their own players.

2.—When not in the act of playing or directing, players must stand behind the jack or behind the mat, and as soon as a bowl is delivered the player directing, if in front of the jack, must retire behind it.

3.—The last player shall remove the mat to the bank.

**The Mat.**—1.—At the beginning of the first head, the player to play first shall place the mat in the centre of the rink, not less than one yard from

the ditch, and in all the subsequent heads the leader of the rink which won the immediately preceding head shall place the mat as before stated. It shall, however, be in his option to lay the mat (A) at the place where the jack lay at the finish of the head, if that place be in the centre of the rink; (B) or if the place be not in the centre of the rink, then in a line straight across towards the centre thereof; (C) or between where the jack lay at the finish of the head and any place in the centre of the rink, so that the mat shall be not less than one yard from the ditch; but also (D) if the jack, at the finish of a head, lies in the ditch, or less than one yard from it, the mat shall, in beginning the new head, be placed not less than one yard from the ditch as above provided. On all occasions there must be a clear distance of not less than 27 yards between where the front of the mat is placed and the ditch at the opposite end.

2.—Each player, when delivering his bowl, must have one foot entirely on the mat. Should a player, after warning, persist in infringing this Rule, the Umpire shall order his bowl to be stopped and removed to the bank.

**Size of Mat.**—The E.B.A. recommends that the mat shall not exceed 22 by 14 in. and not less than 20 by 12 in., and shall be made of rubber.

**Throwing the Jack.**—1.—The leader of the side which is to play first shall throw the jack from the mat.

2.—If the jack run into the ditch, or outside the boundary of the rink, at the first throw in a game, it shall, in the case of its running into the ditch, be placed two yards from it in the centre of the rink, and in the case of its resting outside the boundary of the rink, it shall be straightened to the centre. If it be thrown into the ditch or outside the boundary of the rink at any subsequent head, the opposing player shall throw it anew, but shall not play first. When thrown fewer than two yards from the ditch, the jack must be moved out to that distance.

3.—The jack shall be thrown not fewer than 25 yards from the front of the mat, and if it do not rest in the centre of the rink, it shall be moved straight across and placed in the centre. If it be thrown fewer than 25 yards either inside or outside the boundary of the rink, it shall be treated according to clause 2 of this law, and with the right to the opposing side to take back the mat as provided in rules governing the mat.

**Movement of the Jack and of Bowls.**—1.—If the jack be driven into the ditch within the limits of the rink, its place shall be accurately marked, and it shall not be moved except by a toucher. Should it be driven by a bowl (whether a toucher or no) in play wholly beyond the limits of the rink, that is to say, over the bank or past the side-boundary of the rink, or into any opening or inequality of any kind in the bank (*e.g.* a step cut in the bank) or on to any steps resting against the bank, *it shall be counted dead.*

2.—Whenever the jack is "dead" the head shall in no case be counted a played head, not even though all the bowls have been played.

3.—The jack, though driven to the side of the rink, if not wholly beyond its limits, may be played to on either hand, outside the limits of the rink. A bowl played outside the limits of the rink which in its natural course (if not interfered with outside the rink) comes to rest within the limits of the rink shall not be counted dead, but any bowl so played which, when it comes to rest, lies *wholly* outside the rink shall be counted dead.

**Jack or Bowl Rebounding.**—If the jack runs against the bank or a toucher in the ditch, and rebound on to the green, or after being played into the ditch it be so operated upon by a toucher as to find its way on to the green again, it shall be played to in the same manner as if it had never been moved off the green. But a bowl similarly rebounding shall be counted dead, *unless it be a toucher*, and any bowl or jack moved in the rebound of a non-toucher shall be put back to its former position.

**Jack or Bowl Burned.**—The term "burned" is applied to a jack or bowl which has been interfered with or displaced otherwise than by a bowl in play.

JACK BURNED.—1.—*While in motion on the green.* If a jack while in motion on the green is burned—(A) By one of the players, the opposing side shall have the option of letting it lie where it rests and playing the head out, or of beginning the head anew. (B) By a neutral person, or by a bowl belonging to a neutral person, the players shall come to an agreement as to its position, otherwise the head shall be begun anew.

2.—*While in motion in the ditch.*

If a jack while in motion in the ditch within the limits of the rink comes into contact with a bowl which is not a toucher, it shall lie where it rests, but such bowl must then be immediately removed from the ditch.

3.—*While at rest.*

If a jack while at rest on the green or in the ditch is burned—(A) By one of the players, the opposite side may replace it in its original position, or allow it to remain where it rests. (B) By a neutral person, or by a bowl belonging to a neutral person, the sides shall come to an agreement as to its position otherwise the head shall be begun anew.

BOWL BURNED.—1.—*While in motion.*

(A) If a bowl, during its original course, and before it has passed the jack is burned—(A) By the side to which it belongs, the opposing side may—(1) declare it dead; (2) let it lie where it rests; or (3) have the head begun anew. (B) By an opponent, the player's side may claim—(1) to have it played over again; (2) to let it lie where it rests; or (3) to have the head begun anew. (C) By a neutral person, or by a ball belonging to a neutral person, it shall be played over again.

(B) If a bowl which, in its original course has passed the jack, whether it has touched the jack or not, and, being still in motion, is burned—(A) By the player's side, it shall be counted dead, or in the option of the opposing side, remain where it finally rests. (B) By an opponent, the player's side may choose to let it lie where it comes to rest, or to have the head begun anew. (C) By a neutral person, or by a bowl belonging to a neutral person, it shall lie where it rests if both sides cannot agree as to where it would have come to rest (D) By contact with a non-toucher in the ditch, the burned bowl, if it be itself a toucher, shall be allowed to rest where it lies, and the non-toucher shall be removed to the back.

(C) If a bowl which had come to rest is afterwards set in motion by a bowl in play, and, while still moving, is burned—(A) By the side to which it belongs, it shall be counted dead, or, in the option of the opposing side, remain where it finally rests. (B) By an opponent, the side to which it belongs may choose to let it lie where it comes to rest, or place it where they consider it would probably have rested had it not been interfered with. (C) By a neutral person, or by a bowl belonging to a neutral person, it may be placed to the mutual satisfaction of both sides! where agreement cannot be attained the bowl shall lie where it finally rests.

2.—*While at rest.*

If a bowl while at rest is burned—(A) By either side, it may be replaced by the opposite side, or, in the latter's option, be allowed to remain where it lies. (B) By a neutral person, or by a bowl not in play, it should be replaced as near its original position as possible.

**Touchers.**—1.—A bowl which touches the jack during its original course on the green, although previously it may have also touched one or more bowls, is called a *toucher*, and is accounted in play wherever it rests, if within the rink, but should a bowl, after it has ceased running, fall over and touch the jack *after another bowl has been delivered*, it is not to be accounted a toucher. In no circumstances can a bowl become a toucher by touching the jack when the jack is in the ditch.

2.—Should a bowl, not a toucher, and which has not been off the green, come to rest on the green after touching the jack or a bowl (which is a toucher) in the ditch, it shall not be counted dead. In the event of its resting on a bowl in the ditch not a toucher, the bowl in the ditch must be removed, and should the bowl (not a toucher) so resting then fall into the ditch, it shall be counted dead.

3.—If a toucher run into the ditch when played, or be driven into the ditch during the course of the subsequent play, the place where it rests shall be marked, but its position shall not be altered except by the action of another toucher or the jack.

4.—A toucher must be distinguished by a mark put on it by the side to which it belongs. Unless marked before delivery of the second succeeding bowl it is not counted a toucher. If the mark is

not removed from the bowl before being played in the succeeding head, the opposing side may regard it as a "burned" bowl and can remove it to the bank.

5.—Touchers may act on the jack, or on touchers, in the ditch.

**Ditchers.**—1.—A bowl which does not touch the jack in its original course on the green, and runs against the bank or into the ditch, or is driven into the ditch by the effects of the play, is called a *ditcher* and shall be immediately removed to the bank by the side to which it belongs.

2.—Should a ditcher in any circumstances return to the green it must be placed on the bank.

**Result of Head.**—1.—When the last bowl in a head stops running, half a minute shall elapse, if either side so require, before the shots are counted.

2.—No measuring shall be allowed until the head has been played out.

3.—When a tie for the first shot occurs, it shall, in a game of ends, be counted a played head.

4.—The duty of keeping the score, and of announcing the state of the game at the end of each head, should be assigned to the second player.

**Objects on the Green.**—In a rink game, under no circumstances is any object to be allowed on the green, or on a bowl, or on the jack; but it may be displayed in the hand for the guidance of the player. It must, however, be withdrawn immediately the player delivers his bowl.

## LAWS OF CRICKET.

**The Game.**—1.—A match is played between two sides of eleven players each unless otherwise agreed to.

**Runs.**—2.—The Score shall be reckoned by runs. A run is scored so often as the batsmen after a hit, or at any time while the ball is in play, shall have crossed, and made good their ground from end to end

*Neither side can be compelled to continue playing after the match is finished.*

*In One-Day Matches when each side has completed an innings, the Umpires have power to determine whether any apparent end is to be gained by continuing the game.*

3.—Two Umpires shall be appointed; one for each end. *Umpires are appointed for each* END, *not one for each* SIDE.

**The Ball.**—4.—The ball shall weigh not less than 5¼ ozs. nor more than 5½ ozs. It shall measure not less than 8¼ inches nor more than 9 inches in circumference. Either side may demand a new ball at the beginning of each innings, and after every 200 runs. *At any time a new ball can be called for if deemed necessary by the Umpires.*

**The Wickets.**—5.—The wickets shall be pitched opposite and parallel to each other at a distance of twenty-two yards. Each wicket shall be eight inches in width, and consist of three stumps, with two bails upon the top. The stumps shall be twenty-seven inches out of the ground and of equal and sufficient size to prevent the ball from passing through.

**The Bowling Crease.**—6.—The Bowling Crease shall be in a line with the stumps: eight feet eight inches in length; the stumps in the centre; with a Return Crease at each end, at right angles behind the wicket.

**The Popping Crease.**—7.—The Popping Crease shall be marked four feet from the wicket, parallel to it, and be deemed unlimited in length.

**The Ground.**—8.—The Ground shall not be rolled, watered, covered, mown, or beaten during a match, except before the commencement of each innings and of each day's play, when, unless the In-side object, the ground shall be swept and rolled for not more than ten minutes.

*The batting side can have the wicket rolled and swept before the commencement of each innings.*

**The Bowler. No Ball.**—9.—The ball must be bowled; if thrown or jerked, either Umpire shall call "No Ball."

10.—The Bowler shall deliver the Ball with one foot on the ground behind the bowling crease, and within the return crease, otherwise the Umpire shall call "No Ball."

*Should a Bowler knock the wicket with his foot when delivering the Ball, it is wrong for an Umpire to call "No Ball."*

*One of the Bowler's feet must be grounded behind the bowling and within the return crease when he delivers the ball.*

**Wide Ball.**—11.—If the Bowler shall bowl the ball so high over or so wide of the wicket that, in the opinion of the Umpire, it is not within reach of the Striker, the Umpire shall call "Wide Ball."

*Should the Batsman hit the ball, it cannot be termed a "Wide Ball," although the Umpire may have called it.*

**The Over.**—12.—The ball shall be bowled in overs of six balls from each wicket alternately. When six balls have been bowled, and the ball is finally settled in the Bowler's or Wicket-keeper's hands, the Umpire shall call "Over." Neither a "No Ball" nor a "Wide Ball" shall be reckoned as one of the "Over."

13.—The Bowler shall not bowl two Overs consecutively in one innings.

**Scoring off No Balls and Wide Balls.**—14.—The Striker may hit a "No Ball," and whatever runs result shall be added to the score; but he shall not be out from a "No Ball," unless he be run out, or break Law 23. All runs made from a "No Ball," otherwise than from the bat, shall be scored "No Balls," and if no run be made, one run shall be added to that score. From a "Wide Ball" as many runs as are run shall be added to the score as "Wide Balls," and if no run be otherwise obtained one run shall be so added.

*If a Batsman strike a "No Ball" the run or runs count, but not the "No Ball" as well. The bowler is allowed another delivery, nevertheless.*

**Bye.**—15.—If the ball, not having been called "Wide," or "No Ball," pass the striker without touching his bat or person, and any runs be obtained, the Umpire shall call "Bye," but if the ball touch any part of the Striker's person (hand excepted), and any runs be obtained, the Umpire shall call "Leg Bye," such runs to be scored "Byes" and "Leg Byes" respectively.

**Definitions.**—16.—A Batsman shall be held to be "out of his ground" unless his bat in hand or some part of his person be grounded within the line of the Popping Crease.

*Part of a Batsman's foot, if grounded within the line is deemed sufficient.*

17.—The wicket shall be held to be "down" when either of the bails is struck off, or, if both bails be off, when a stump is struck out of the ground.

*Should one of the bails be off, the remaining one must be struck off with the ball if the Batsman is to be run out or stumped.*

**The Striker.**—THE STRIKER IS OUT: 18.—If the wicket be bowled down, even if the ball first touch the Striker's bat or person:—"Bowled."

19.—Or, if the ball, from a stroke of the bat or hand, but not the wrist, be held before it touch the ground, although it be hugged to the body of the catcher:—"Caught."

*Should no boundaries be arranged, the Batsman can be caught off a tree or building. A ball struck on to the roof of a building can be caught as it rolls off by any one of the field.*

20.—Or, if in playing at the ball, provided it be not touched by the bat or hand, the Striker be out of his ground, and the wicket be put down by the Wicket-keeper with the ball, or with hand or arm, with ball in hand:—"Stumped."

*One bail is sufficient to be removed, but* MUST BE KNOCKED OFF BY THE BALL.

21.—Or, if with any part of his person he stops the ball, which in the opinion of the Umpire at the Bowler's wicket shall have been pitched in a straight line from it to the Striker's wicket, and would have hit it:—"Leg before wicket." *This is a very difficult rule to enforce.*

*A Batsman can be out l.b.w. whether the ball breaks or not.*

22.—Or, if in playing at the ball, he hit down his wicket with his bat or any part of his person or dress:—"Hit Wicket."

*A Batsman is not out if he knocks down his wicket when in the act of running.*

23.—Or, if under pretence of running, or otherwise, either of the Batsmen wilfully prevent a ball from being caught or fielded:—"Obstructing the field."

**The Batsmen.**—EITHER BATSMAN IS OUT: 24.—If in running, or at any other time, when the ball is in play, he be out of his ground, and his wicket be struck down by the ball after touching any fieldsman, or by the hand or arm, with ball in hand, of any fieldsman; but the Striker may not be given out thus unless the ball has touched the bat or

hand when, in playing at a No Ball, he is out of his ground and the wicket be put down by the Wicket-keeper with the ball, or with hand or arm with the ball in hand:—"Run Out."

*Should the Striker hit the ball into his partner's wicket and the latter be out of his ground, neither man is out.*

25.—If the Batsmen have crossed each other, he that runs for the wicket which is put down is out; if they have not crossed, he that has left the wicket which is put down is out.

26.—The striker being caught, no run shall be scored. A Batsman being run out, that run which was being attempted shall not be scored.

27.—If the ball, whether struck with the bat or not, lodges in a Batsman's clothing, the ball shall become "Dead."

28.—If the ball in play cannot be found or recovered, any fieldsman may call "Lost Ball," when the ball shall be "Dead"; six runs shall be added to the score; if more runs than six have been run before "Lost Ball" has been called, as many runs as have been run shall be scored.

29.—After the ball shall have been finally settled in the Wicket-keeper's or Bowler's hand, it shall be "Dead"; but when the Bowler is about to deliver the ball, if the Batsman at his wicket be out of his ground before actual delivery, the said Bowler may run him out; but if the Bowler throw at that wicket, and any run result it shall be scored "No Ball."

*Should the Batsman be out of his ground when the Bowler is about to deliver the ball, the latter may strike down the wicket. The bails may be knocked off from either side of the wicket.*

**Substitute.**—30.—A substitute shall be allowed to field or run between wickets for any player who may, during the match, be incapacitated from illness or injury, but for no other reason, except with the consent of the opposite side.

*Even if a player is allowed a substitute to run for him he cannot be prevented from bowling.*

*A side can field short, and bat with full number.*

31.—In all cases where a substitute shall be allowed, the consent of the opposite side shall be obtained as to the person to act as substitute, and the place in the field which he shall take.

32.—In case any substitute shall be allowed to run between wickets, the Striker may be run out if either he or his substitute be out of his ground. If the Striker be out of his ground while the ball is in play, that wicket which he has left may be put down and the Striker given out, although the other Batsman may have made good the ground at that end, and the Striker and his substitute at the other end.

*When the injured Batsman is not the Striker there is no penalty.*

**The Fieldsman.**—33.—The fieldsman may stop the ball with any part of his person, but if he wilfully stop it otherwise, the ball shall be "Dead," and five runs added to the score; whatever runs may have been made, five only shall be added.

**Wicket-Keeper.**—34.—The Wicket-keeper shall stand behind the wicket. If he shall take the ball for the purpose of stumping before it has passed the wicket, or if he shall incommode the Striker by any noise or motion, or if any part of his person be over or before the wicket, the Striker shall not be out, excepting under Law 24.

**Duties of Umpires.**—35.—The Umpires are the sole judges of fair or unfair play, fitness of ground, the weather, and light for play; all disputes shall be determined by them; if they disagree the actual state of things shall continue.

36.—They shall change ends after each side has had one innings.

37.—They shall allow two minutes for each Striker to come in, and ten minutes between each innings. When they shall call "Play," the side refusing to play shall lose the match.

38.—They shall not order a Batsman out unless appealed to by the other side.

39.—The Umpire at the Bowler's wicket shall be appealed to before the other Umpire in all cases, except in those of stumping, hit wicket, run out at the Striker's wicket, or arising out of Law 34; but in any case in which an Umpire is unable to give a decision, he shall appeal to the other Umpire, whose decision shall be final.

40.—If either Umpire be not satisfied of the absolute fairness of the delivery of any ball, he shall call "No Ball."

41.—The Umpire shall take especial care to call "No Ball" instantly upon delivery; "Wide Ball" as soon as it shall have passed the Striker.

42.—If either Batsman run a short run, the Umpire shall call "One Short," and the run shall not be scored.

43.—After the Umpire has called "Over," the ball is "Dead," but an appeal may be made as to whether either Batsman is out; such appeal, however, shall not be made after the delivery of the next ball, nor after any cessation of play.

**Following Innings.**—44.—The side which bats first and leads by 150 runs in a three-days match, or by 100 runs in a two-days match, shall have the option of requiring the other side to follow their innings.

45.—The In-side may declare their innings at an end in a three-days match at any time on the second day; in a two-days match the captain of the batting side has power to declare his innings at a close at any time, but such declaration may not be made on the first day later than one hour and forty minutes before the time agreed upon for drawing stumps; in a one-day match at any time.

46.—When there is no play on the first day of a three-days match Laws 44 and 45 shall apply as if the match were a two-days match, and if in a three-days match there is no play on the first two days, Laws 44 and 45, "One-day matches," shall apply as if the match were a one-day match. When there is no play on the first day of a two-days match, Law 1 "One-day matches" shall apply as if the match were a one-day match.

**One-Day Matches.**—1.—The side which bats first and leads by 75 runs shall have the option of requiring the other side to follow their innings.

2.—The match, unless played out, shall be decided by the First Innings.

## CROQUET.

"May be played by any number of players, but should not exceed 8. Several variations of the game may be made, but a good type is that shown on the ground plan."

**Terms Used in Croquet.**

1.—*Roquet.*—To strike another ball with your own.

2.—*Croquet.*—When two balls are in contact, the player strikes the other away, either with or without putting his foot on his own ball, as may be previously arranged.

3.—*A loose croquet* is made by striking your opponent's ball without putting your foot on your own ball. In taking "two off" it is, however, necessary that the ball should be seen to move.

4.—*Wired.*—When a ball is in contact with a hoop, so as to prevent it going through.

5.—*Bridge Ball.*—One that has passed the first arch.

6.—*Dead Ball.*—One in hand after having roqueted another.

7.—*To Peg.*—To play for either of the pegs in regular order.

8.—*The Tour.*—The run given to each player till he fails to strike through a hoop.

9.—*To Dismiss* a ball is to croquet it to a distance.

10.—*Rover.*—You become a rover when you have completed the hoops from point to point, and instead of hitting the starting-peg and retiring, you prefer to strike your ball to any part of the ground, croqueting friends or foes.

11.—The terms side stroke, straight stroke, following ball, over-running a bridge, etc., explain themselves.

**Laws of Croquet.**

1.—There shall be no restriction to the number, weight, size, shape, or material of the mallets; nor as to the attitude or position of the striker; nor as to the part of the mallet held, provided the ball is not struck with the handle, nor the mace stroke used. The balls used in matches must be 3½ inches in diameter.

2.—The players shall toss for choice of lead and of balls; and in a succession of games shall take the lead alternately and keep the same balls.

3.—In commencing, each ball shall be placed at one foot from the first hoop in a direct line between the pegs, and a ball having been struck is at once in play, and can roquet another to be roqueted, whether it shall have made the first hoop or not.

4.—A stroke is considered to have been taken if a ball is moved in the act of striking, but should the player in taking aim have struck it accidentally, and the umpire be satisfied that the stroke was accidental, the ball is replaced and the stroke taken again. If a ball be moved in taking aim, and then struck again without being replaced, the stroke is foul.

5.—If the player make a foul stroke he loses his turn and all the points and roquets made therein, and the balls remain where they lie, at the option of the adversary. The following are considered foul strokes:

(*a*) To strike with the mallet another ball instead of or besides one's own in making the stroke. (*b*) To spoon, that is to push a ball without an audible knock. (*c*) To strike a ball twice in the same stroke. (*d*) To touch, stop, or divert the course of a ball when in play and rolling, whether this be done by the striker or his partner. (*e*) To allow a ball to touch the mallet (or any part part of the player's person) in rebounding from a peg or wire. (*f*) To move a ball which lies close to a peg or wire by striking the peg or wire (i.e. to touch with the mallet a wire or peg in making the stroke). (*g*) To press a ball round a peg or wire (crushing stroke). (*h*) To play a stroke after roquet without taking croquet. (*i*) To fail to move both balls in taking croquet. (*k*) To croquet a ball which the striker is not entitled to croquet.

6.—A player continues to play so long as he makes a point or hits a ball. A point consists in making a hoop or hitting the turning peg in order.

7.—The ball has made its hoop when, having passed through from the playing side and ceased to roll, it cannot be touched by a straight-edge placed across the wires on the side from which it was played.

8.—A player who hits a ball must take croquet: that is, must strike his own ball while in contact with the other, so as perceptibly to stir both. In doing this he is now not allowed to place his foot on his ball. A player, when his turn comes round, may hit and croquet each ball in succession, and can do this again after each point made, but between the points can only take croquet once off each ball.

9.—A playing ball which hits another after making a point is in hand, and the striker can score no point till he has taken croquet. After hitting, another ball may be stopped by any player; but should it, in rolling, displace any of the other balls, such balls must remain where they are driven.

10.—When, at the commencement of a turn, two balls are found touching, roquet is deemed to be made, and croquet must be taken at once.

11.—When a player, in his stroke, hits one or more balls, he must take croquet off the ball that is struck first; but if he has hit two simultaneously, he may choose from which of them he will take it, and in both cases a second hit is required before he can take it from the other ball.

12.—Should the ball in making its hoop strike another that lies beyond the hoop and then pass through it, the hoop and the hit count to both; but, should any part of the ball that is hit have been lying beneath the hoop, the croquet must be taken, but the hoop does not count.

13.—A rover which strikes or is driven by another ball against the winning peg is out of the game, and must be removed from the ground.

14.—A player who pegs out a rover by a first hit cannot take croquet from it, as the ball is out of the game, and he is not entitled to another stroke.

15.—Should a player play out of his turn, or with a wrong ball, and this be discovered by his antagonist before a second stroke in error has been made, the turn is lost, and all points made after the mistake, and the balls shall remain as they lay at the time the mistake was discovered, or be replaced to the satisfaction of the antagonist. But if he has made a second stroke before the error is discovered, he continues his break, and the next player follows with the ball that is next in rotation to the one with which he has played, and is liable to lose his turn, and all points made therein, if he plays with that which would have been the right ball if no mistake had been made.

16.—Should a player make the wrong hoop by mistake, or croquet a ball that he is not entitled to croquet, and the mistake be discovered before he has made a second stroke, he loses his turn, and any point so made in error; but if he has made a second stroke before the discovery, he shall be allowed to continue his break.

17.—In order to prevent the occurrence of the errors noticed in the above rules (Nos. 15 and 16) a player is bound, upon being appealed to, to declare truly what is his next hoop or point in order, and is entitled to demand of his antagonist what he had played last, and to insist upon his clip being properly placed.

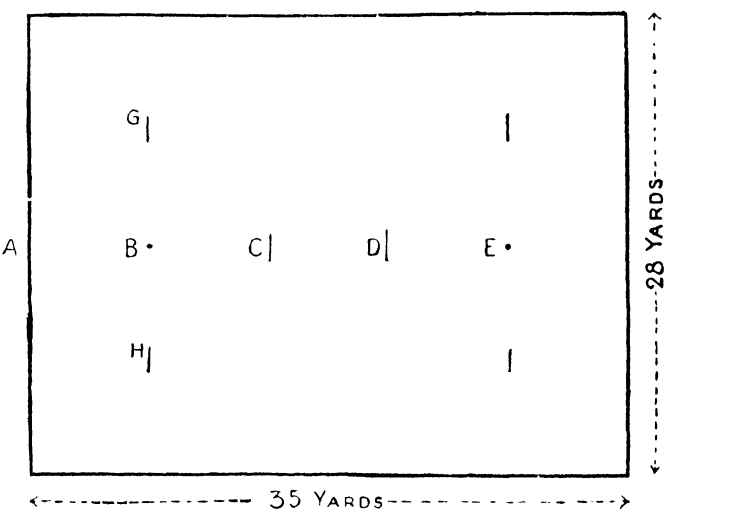



*Diagram of Ground as marked out for Croquet.*

18.—When clips are used they should be moved by the umpire, or with his cognisance, at the end of each turn, and their position shall be conclusive as to the position of the balls in the game.

19.—Should a ball in play be accidentally stopped or diverted by the umpire, he places it where he considers that it would have rolled to. Should it be stopped by a player, it will rest with the side opposed to that player to say whether the ball shall remain where it stopped, or be placed by the umpire, or the stroke be taken again.

20.—If a ball lies within a mallet's length of the boundary, and is not the playing ball, it must at once be put out three feet at right angles from the boundary; but if it is the playing ball it may, at the discretion of the player, either be put out or played from where it lies.

21.—If it is found that the height of the boundary interferes with the stroke, the player may, at the umpire's discretion, bring in the balls a longer distance than three feet, so as to allow of a free swing of the mallet. Balls so brought in must be moved in the line of aim.

22.—Should a player in trying to make his hoop, knock a wire out of the ground with his ball the hoop does not count. The ball must be replaced, and the stroke taken again; but if by the same stroke a roquet be made, the striker may elect whether he will claim the roquet or have the balls replaced.

23.—Any player may set upright a peg or hoop except the one next in order; and that, however loose, awry or slanting it may be, must not be altered except by the umpire.

24.—No ball may be moved because of its lying in a hole or on bad ground, except by the umpire or with his permission. The ball must be put back—*i.e.* away from the object aimed at—and so as not to alter the line of aim.

25.—Where there is no umpire present, permission to move a ball, or to set up a hoop or peg or other indulgence for which an umpire would have been appealed to, must be asked of the other side.

26.—The decision of the umpire shall in all cases be final.

## FIVES RULES.

The Court is enclosed on three sides and open at back. The "front" wall is the wall facing player, and "right-hand" and "left-hand" walls are on his right and left hand respectively. The "step" is a shallow step dividing the Court into two portions, an inner and an outer Court. The vertical face of the "step" does nor reckon as part of the floor of the Court. "On-wall" and "off-wall" denote floors of the inner and outer Courts respectively. The "pepper-box" is a buttress projecting from the left-hand wall. With the "step" it encloses a small square portion of floor called "hole." The "line" is the ledge running across front-wall at height of 4 ft. 6 in. A vertical line is marked on front-wall at a distance of 3 ft. 8 in. from right-hand wall.

**Rules.**—1.—The ball must in every case be hit "up," *i.e.* it must be returned against the front-wall on or above lower angle of the "line." Any ball except "the service," which drops on the top of any walls of the inner court, or which, after going "up," touches ground first outside court, or touches any object or person outside court, INVARIABLY counts against striker, and is called a "good 'un."

2.—The ball must be fairly hit with a single blow of hand or wrist and not touch any other part of striker's person under penalty of losing a stroke. It must not be caught or held in any way except to "serve" or to stop a "blackguard" (see Rule 6), or to save a 'good 'un" (see Rule 13.)

3.—*Position of the Players.*—The game is played by four persons. Thus, if A and B (with first innings) play C and D; A, who goes in first, stands upon the "on-wall" near the "pepper-box"; B, his partner, on the off-wall near the right-hand outer corner; C stands near middle of "off-wall" ready to return "service," and is said to be "in holes"; and D, his partner, on "off-wall," near left-hand outer corner.

4.—"*Holes Innings.*"—In first innings A (who goes in first) is said to have "holes innings," *i.e.* when both A and B have been put out, A will be "in holes." This rule only applies to side which goes in first at beginning of a game; afterwards partners take it in turns to be "in holes." If in first game A has "holes innings' and C is "in holes," then in second game C has "holes innings" and A is "in holes," in third game B has "holes innings" and D is "in holes," and in fourth game D has "holes innings" and B is "in holes."

5.—"*The Service.*"—The ball when served must hit first front wall above "line," and then right-hand wall, and must fall on "off-wall." The player "in holes" need not return first or any "service" till he gets one to his mind, and if he fails to return the "service" above "line" no stroke is counted. Serving a "good 'un" does not put a player out.

6.—*The "First-Cut."*—The player "in holes" must not return "service" before first bound. This return is called "first-cut." He must return it so that it should hit either (1) first the right-hand wall and then front-wall above "line"; or (2) front-wall above "line" between right-hand side wall and vertical line marked on front-wall. In both these cases ball may afterwards hit any wall or walls, and may fall anywhere on "on-wall" or "off-wall." Only the player "in holes" may return "service." A "first-cut" which is "up," but not in accordance with these conditions, is called a "blackguard." The player "in holes" or his partner may then touch or catch ball before first bound, and if this is done, no stroke is counted. If ball is not touched or caught, it may be returned or not by either of opposite players at their option, and if it is not returned above "line" no stroke is counted.

7.—"*The Bully.*"—After "service" and "first-cut" the ball is returned alternately by either side. It may be returned by either partner before first or before second bound, and may or may not hit side walls. A "bully" is lost to his side by player who fails to return ball above "line" or hits a "good 'un."

8.—"*Lets.*"—A "let" may be claimed when player is in any way prevented from returning or impeded in his attempt to return ball by one of opposite side.

9.—If a ball while being returned first strikes one of opposite side and then front-wall above "line" it counts as "up"; if it first strikes one of the same side it counts against striker, whether it goes "up" or not.

10.—If a ball returned by A or B strike A or B after going "up" before the second bound it may be returned or not by C or D at their option, and vice versa. If not returned "it counts as a let." If returned above "line" no "let" can be claimed.

11.—*Scoring.*—The game consists of fifteen points. Only the "in" side can score points. When A is put out B takes his place; when B is put out the side is out and their opponents go in, the player "in holes" having first innings. The result of each bully (except in case of a "let") is either to add one to score of "in" side, or to put one of them out, as case may be.

12.—"*Two Out.*"—If C "in holes" loses one point to opposite side, he is said to be "one out"; if he loses a second point, he is said to be "two out" and D takes his place; if D in his turn loses two points he is "two out" and C is "in holes" again, and so on till A and B are put out; provided that he who was "two out" first is then first to go in. If the "out" side lose a point by failing to return a ball out of "hole" it does not count as "one out" against player "in holes."

13.—*Saving "Good 'Uns."*—If player "in holes" hit the "first-cut" in such a way that it will probably fall out of court and count as a "good 'un," he or his partner may, if they can, prevent it from doing so, by touching or catching the ball before it falls, provided that the player touching it has one or both feet on the floor of the court, or, if he jumps for the purpose, alights on floor of court with foot which first touches ground. If the ball is caught no stroke is counted; if only touched the opposite player may, if he pleases, return ball as in Rule 10; if he fails to do so, no stroke is counted. This rule only applies to "first-cut."

14.—"*Blackguard Cut.*"—When side "in" reaches 14 points, following rules must be observed:—(1) The player serving must stand quite close to "pepper-box" with one foot on "on-wall" and other on "off-wall," and he may not place both feet on "on-wall" until player "in holes" has hit the ball. If he forgets to stand thus, and serves ball with both feet on "on-wall" the player "in holes," or his partner, may try to be the first to

touch the ball before it falls. If they succeed in this, player serving is out. If the player serving or his partner touch ball first or if it hits the ground before being touched, it counts neither way. A player may remind his partner of this rule. (2) When ball is properly served, player "in holes" may return the "first-cut" against any part of front-wall above "the line," with or without hitting side walls, and it is therefore called "blackguard cut." Rule 6, except first sentence, is suspended at this point of game.

15.—*"Setting."*—If players are "13 all," game, as in Rackets, may at the option of out side be "set" to 5 or 3; if "14 all" to 3. Rule 14 must then be observed at 4 and 2 respectively

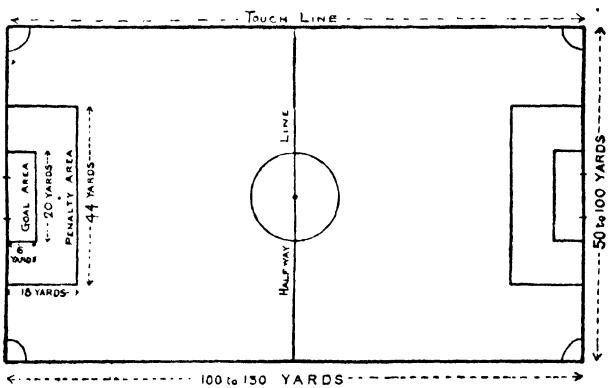
## LAWS OF ASSOCIATION FOOTBALL.

1.—*Number of Players.*—Game played by eleven players on each side.

*Dimensions of Field of Play.*—Maximum length, 130 yards; minimum, 100 yards; maximum breadth, 100 yards; minimum, 50 yards.

*The Goals.*—Goals shall be upright posts fixed on goal-lines, equidistant from corner flag-staffs 8 yards apart, with bar across them 8 ft. from ground. The maximum width of goal-posts and maximum depth of cross-bar shall be 5 inches.

*The Goal Area.*—Lines marked 6 yards from each goal-post at right angles to goal-lines for a distance of 6 yards.




GOAL POSTS.—8 yards apart. Cross Bar 8 feet from ground. PENALTY KICK MARK.—Opposite centre of Goal; 12 yards from Goal Line. CORNERS.—Flag with staff not less than 5 feet high. KICK-OFF CIRCLE.—Centre of Ground, radius 10 yards.

*Diagram of Ground as marked out for Association Football.*

*The Penalty Area.*—Lines marked 18 yards from each goal-post at right angles to goal-lines for a distance of 18 yards; space within these lines shall be penalty area. A suitable mark, 12 yards from goal-line, shall be the penalty kick mark.

*The Ball.*—The circumference of the ball: not less than 27 inches nor more than 28 inches.

**International Matches.**—*Dimensions of Field of Play and Weight of Ball.*—In International matches the dimensions of the field of play shall be—length, 120 yards; breadth, 80 yards; and at commencement of game weight of ball shall be from 13 to 15 ounces.

2.—*Duration of Game* shall be 90 minutes, unless otherwise mutually agreed upon.

*Choice of Goals.*—Winners of the toss shall have option of kick-off or choice of goals.

*Kick-Off.*—Game shall be commenced by a place-kick from centre of field in direction of opponents' goal line; opponents shall not approach within 10 yards of ball until it is kicked off.

3.—Ends shall only be changed at half-time.

*Interval at Half-Time. Re-starting Game.*—The interval at half-time shall not exceed five minutes, except by consent of Referee.

4.—*How a Goal is Scored.*—Except as otherwise provided by these Laws, a goal shall be scored when the ball has passed between goal-posts under bar, not being thrown, knocked on, nor carried by any player of the attacking side.

*If Ball Rebound from Goal-Posts, etc.*—Ball is in play if it rebounds from a goal-post cross bar, or corner flag-staff into field of play. The ball is in play if it touches Referee or Linesman when in field of play.

*Ball Crossing Lines, Out of Play.*—The ball is out of play when it has crossed goal-line or touch-line, either on ground or in the air.

5.—*Throw-in.*—When the ball is in touch a player of the opposite side to that which played it out shall throw it in from point on touch-line where it left field of play. The player throwing ball must stand with both feet on the ground outside the touch-line facing field of play, and shall throw ball in over his head with both hands in any direction. A goal shall not be scored from a throw-in, and the thrower shall not again play until ball has been played by another player.

6.—*Off-Side.*—When a player plays the ball, any player of the same side who at such moment of playing is nearer to his opponents' goal-line is out of play, and may not touch the ball himself, nor in any way whatever interfere with an opponent, or with play, until ball has been again played, unless there are at such moment of playing at least two of his opponents nearer their own goal-line. A player is not out of play when the ball is kicked off from goal, when a corner kick or a throw-in is taken, when the ball has been last played by an opponent, or when he himself is within his own half of the field of play at the moment the ball is played by any player of same side.

It is not a breach of Law for a player to be in an off-side position, but only when in that position he interferes with an opponent, or with the play. If a player who is in an off-side position advances towards an opponent, or the ball, and in so doing causes play to be affected, he should be penalised.

7.—*Goal-Kick and Corner Kick.*—When the ball is played behind goal-line by a player of the opposite side it shall be kicked off by any one of the players behind whose goal-line it went, within that half of the goal area nearest the point where the ball left the field of play; but, if played behind by any one of the side whose goal-line it is, a player of the opposite side shall kick it from within one yard of the nearest corner flag-staff. In either case an opponent shall not be allowed within 10 yards of the ball until it is kicked off.

8.—*Goal-Keeper Handling.*—The goal-keeper may within his own penalty area use his hands, but shall not carry ball.

The goal-keeper shall not be charged except when he is holding the ball, or obstructing an opponent, or when he has passed outside goal area.

9.—*Dangerous Play.*—Neither tripping, kicking, striking, nor jumping at a player shall be allowed. A player (the goal-keeper within his

own penalty area excepted) shall not intentionally handle the ball.

*Hands, Holding, Pushing.*—A player shall not use his hands to hold or push an opponent.

*Charging.*—Charging permissible, but must not be violent or dangerous.

*Charging Behind.*—A player shall not be charged from behind unless intentionally obstructing an opponent.

10.—*Free Kick.*—When a free kick has been awarded, kicker's opponents shall not approach within ten yards of the ball, unless they are standing on their own goal-line.

11.—*Goal may be Scored from Free Kick.*—A goal may be scored from corner kick, or from free kick awarded because of any infringement of Law 9, but not from any other free kick.

12.—*Bars, Studs, etc.*—A player shall not wear any nails, except such as have their heads driven in flush with the leather, or metal plates or projections, or gutta percha, on his boots, or on his shin guards. Boot bars or studs shall not project more than ½ inch. Referee shall, if required, examine the players' boots before commencement of a match, or during interval.

13.—*Duties and Powers of Referee.*—A Referee shall be appointed, whose duties shall be to enforce Laws and decide all disputed points; and his decision on points of fact connected with play shall be final, so far as the result of game is concerned. He shall also keep a record of the game and act as timekeeper. In the event of any ungentlemanly behaviour on the part of any players, offender or offenders shall be cautioned, and if any further offence is committed, or in case of violent conduct without any previous caution, Referee shall order the offending player or players off the field, and transmit the name or names of such player or players to his or their National Association, who shall deal with the matter. Referee shall allow for time wasted, through accident or other cause, suspend or terminate the game whenever, by reason of darkness, interference by spectators, or other cause, he may deem necessary. Referee shall award a free kick in any case in which he thinks conduct of a player dangerous.

14.—*Duties and Powers of Linesmen.*—Two Linesmen shall be appointed, whose duties (subject to the decision of the Referee) shall be to decide when the ball is out of play, and which side is entitled to corner-kick, goal-kick, or throw-in and to assist Referee in carrying out the game in accordance with Laws.

15.—*Ball in Play until Decision Given.*—In the event of supposed infringement of Laws, the ball shall be in play until a decision has been given.

16.—*Re-starting the Game after Temporary Suspension.*—In the event of any temporary suspension of play from any cause, the ball not having gone into touch or behind goal-line, Referee shall drop ball where it was when play was suspended, and it shall be in play when it has touched the ground. If the ball goes into touch or behind goal-line before it is played by a player, the Referee shall again drop it. Players on either side shall not play the ball until it has touched ground. A free kick shall be given for any infringement of this Law.

17.—*Free Kick.*—In the event of any infringement, or of a player being sent off the field, a free kick shall be awarded to the opposite side from the place where infringement occurred.

*Penalty Kick.*—In the event of any intentional infringement of Law 9 by defending side within the penalty area, Referee shall award the opponents a penalty kick which shall be take from the penalty kick mark under the following conditions:—All players with the exception of the player taking the penalty kick and the opponents' goal-keeper, shall be outside penalty area, and at least ten yards from where the kick is being taken. The opponents' goal-keeper shall not advance beyond his goal-line. The ball must be kicked forward. The ball shall be in play when kick is taken, and a goal may be scored from penalty kick; but the ball shall not be again played by kicker until it has been played by another player. If necessary, time of play shall be extended to admit of penalty kick being taken. A free kick shall also be awarded to the opposite side if ball is not kicked forward, or is played a second time by player who takes penalty kick until played by another player.

## LAWS OF RUGBY FOOTBALL.

### I. Introduction.

1.—The Rugby Game of Football should be played by 15 players each side. Field-of-play shall not exceed 110 yards in length, nor 75 in breadth. Lines defining boundary of field shall be suitably marked, and called goal-lines at the ends and touch-lines at sides. On each goal-line and equidistant from the touch-lines shall be two upright goal-posts, exceeding 11 feet in height, 18 feet 6 inches apart, joined by a cross-bar 10 feet from the ground; the object of game shall be to kick the ball over cross-bar and between posts. The game shall be played with an oval ball as nearly as possible the following:—length 11 to 11¼ inches; length circumference, 30 to 31 inches; width circumference, 25½ to 26 inches; weight, 13 to 14½ ounces. Hand sewn and not less than eight stitches to the inch.

### II.—Glossary—Duties of Officials—Scoring.

Glossary of Terms.—2.—The following terms occur in the laws, and have the respective meanings attached to each:—

*Dead-Ball Lines.*—Not more than 25 yards behind. If the ball or player holding ball touch or cross these lines the ball shall be dead.

*In-Goal.*—Those portions of the ground immediately at the ends of the field-of-play and between the touch-lines, produced to the dead-ball lines.

*Touch.*—Those portions of the ground immediately at the sides of the field-of-play and between the goal-lines.

*Touch-in-Goal.*—Those portions of the ground immediately at the four corners of the field-of-play and between the goal and touch-lines.

*A Drop Kick.*—Made by letting ball fall from the hands to the ground and kicking at first rebound as it rises.

*A Place Kick.*—Made by kicking ball after it has been placed on ground for the purpose.

*A Punt.*—Made by letting ball fall from the hands and kicking before it touches ground.

*A Tackle* is when the holder of ball is held by players of opposite side so that he cannot pass or play it.

*A Scrummage*, which can only take place in the field-of-play, is formed by one or more players from each side closing round the ball when it is on the ground, or by their closing up in readiness to allow ball to be put on ground between them.

*A Try* is gained by the player who first puts his hand on the ball on ground in his opponents' in-goal.

*A Touch-Down.*—When a player touches down in his own in-goal.

*A Goal* is obtained by kicking the ball from the field-of-play, by any place kick except a kick-off, or by any drop kick, except a drop-out, without touching ground or any player of either side, over opponents' cross-bar, whether it touch such cross-bar or either goal-post or not.

*Knocking-on and Throwing Forward*, are propelling the ball by hand or arm in direction of opponents' in-goal; a throw-out of, touch not claimed as a throw-forward.

*A Fair Catch* is made direct from a kick or knock-on, or throw-forward by one of the opposite side; catcher must immediately claim the same by making a mark with his heel at spot where he made the catch.

*Kick-Off* is a place kick from centre of field; the opposite side may not stand within ten yards of the ball, nor charge until the ball be kicked, otherwise another kick-off shall be allowed. If the ball pitch in touch, opposite side may accept kick, have ball kicked off again, or scrummage in centre of the ground.

*Drop-Out* is a drop kick from within 25 yards of kicker's goal-line; within which distance the opposite side may not charge. If the ball pitch in touch, the opposite side may accept kick, have ball dropped out again, or scrummaged in centre of twenty-five-yards line.

At kick-off the ball must reach the limit of 10 yards, and at drop-out must reach twenty-five-yards line.

*Referee and Touch-Judges.*—3.—In all matches a Referee and two Touch-Judges must be appointed. Referee must whistle in the following cases:—

(A) When a player makes and claims a fair catch.

(B) When he notices (1) Rough or foul play; (2)

Misconduct; (3) Persistent infringement of the rules. In cases (1) and (2) he shall on the first offence either caution player or order him off the ground, but for the second offence he must order him off. In case (3) he must order the player off the ground.

(C) When he considers that continuation of the play is dangerous.

(D) When he wishes to stop game for any purpose.

(E) If the ball or a player running with ball touch him, in which case it shall be scrummaged at the spot.

(F) When he notices any irregularity of play whereby the side committing such gain an advantage.

(G) When a player is disabled through injury.

(H) When he wishes to enforce any penalty.

(I) When a goal is kicked.

(J) When the ball goes into touch-in-goal.

The Touch-Judges shall carry flags, and shall each take one side of the ground, outside the field, and the duty of each shall be to hold up his flag when and where ball goes into touch. Also to take position by goal-posts of defending side and signal result of kicks at goal.

(C) When it is on the ground after a player has been tackled.

It may be passed or knocked from one player to another provided it be not passed, knocked or thrown forward. If a player while holding or running with the ball be tackled, he MUST at once put it fairly down between him and his opponents' goal-line.

*Off-Side.*—7.—A player is placed off-side if he enters a scrummage from his opponents' side, or if the ball has been kicked, touched, or is being run with by one of his own side behind him. A player can be off-side in his opponents' in-goal, but not in his own, except where one of his side takes a free kick behind his goal-line, in which case all of his side must be behind the ball when kicked.

8.—An off-side player is placed on-side—

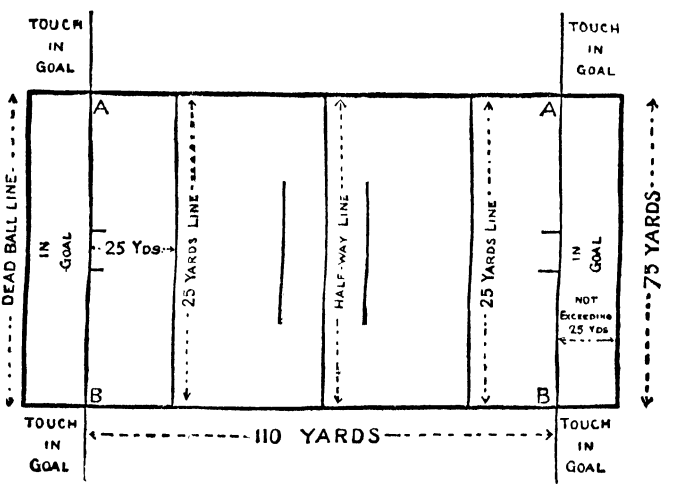
(A) When an opponent has run five yards with the ball.

(B) When the ball has been kicked by, or has touched, an opponent.

(C) When one of his side has run in front of him with the ball.

(D) When one of his side has run in front of him, having kicked the ball when behind him.

An off-side player shall not play the ball, nor




A to B GOAL LINE. A to A and B to B TOUCH LINE.
GOAL POSTS.—11 ft. high. 18 ft. 6 in. apart. CROSS BAR 10 ft. from Ground.

*Diagram of Ground as marked out for Rugby Football.*

*Rules.*—4.—The Captains of respective sides shall toss for the choice of in-goals or kick-off.

*Scoring.*—The following shall be the mode of scoring:—A Try equals 3 points; a Goal from a Try (in which case the try shall not count) equals 5 points; a Dropped Goal (except from a Mark or a Penalty Kick) equals 4 points; Goal from a Mark or Penalty Kick equals 3 points.

*Kick-Off.*—5.—At the time of kick-off all kicker's side shall be behind the ball; if any be in front Referee shall blow his whistle and order a scrummage where kick-off took place. The game shall be started by a kick-off:—

(A) After a goal or unsuccessful try by the side losing such goal or try, and

(B) After half-time by the opposite side to that which started the game.

**III.—Mode of Play.—Definitions.**

*Mode of Play.*—6.—When once the game is started, the ball may be kicked or picked up and run with by any player who is on-side, at any time; except that it may not be picked up—

(A) In a scrummage.

(B) When it has been put down after a tackle.

actively or passively obstruct an opponent, or approach or wilfully remain within 10 yards of any opponent waiting for the ball; on any breach of this law, the opposite side shall be awarded, at their option—

(E) A free kick, or

(F) A scrummage at the spot where ball was last played by offending side before such breach occurred.

Except in the case of unintentional off-side, when a scrummage shall be formed where such breach occurred.

*Fair Catch.*—9.—If a player makes a fair catch a free kick shall be awarded, taken by player making the fair catch.

*Free Kicks.*—10.—All free kicks may be place kicks, drop kicks, or punts, but must be in direction of opponents' goal-line, and across kicker's goal-line, if kicked from behind same. They may be taken at any spot behind mark in line parallel to touch-lines. In all cases the kicker's side must be behind ball when it is kicked, except the player who may be placing ball for place kick. In case of any infringement of this law Referee shall order a scrummage at the mark. The opposite side may

come up to, and except in the case of free kick by way of penalty, charge from anywhere on or behind a line drawn through the mark and parallel to goal-lines, and may charge as soon as the kicker commences to run or offers to kick or the ball be placed on ground for a place kick, but in case of a drop kick or punt kicker may always draw back, and unless he has dropped the ball the opposite side must retire to the line of the mark. But if any of the opposite side do charge before the player having the ball commences to run or offers to kick, or the ball has touched the ground for a place kick (and this applies to tries at goal as well as free kicks), provided the kicker has not taken his kick, the charge may be disallowed.

**IV.—Penalties.**

11. Free kicks by way of penalties shall be awarded if any player—

(A) Intentionally either handles ball, or falls down in scrummage, or picks ball out of scrummage, or picks it up in scrummage, either by hands or legs.

(B) Does not immediately put it down in front of him, on being tackled.

(C) Being on the ground, does not immediately get up.

(D) Prevents an opponent getting up, or putting ball down.

(E) Illegally tackles, charges, or obstructs.

(F) Wilfully tackles an opponent who has not got ball.

(G) Wilfully hacks, hacks-over, or trips-up.

(H) Wilfully puts ball unfairly into a scrummage, or, ball having come out, wilfully returns it by hand or foot into scrummage.

(I) Not himself running for ball, charges or obstructs an opponent, not holding ball.

(J) Shouts "all-on-side" or words to that effect when his players are not on-side.

(K) Not in a scrummage, wilfully obstructs opponents' backs.

(L) Being in a scrummage, lifts a foot from ground before the ball has been put into such scrummage.

(M) Picks up ball after a tackled player has put it down in order that it may be played with foot.

Places of infringement shall be taken as mark, and any one of side granted free-kick may place or kick ball.

**V.—General.**

*Ball in Touch.*—12.—Ball is in touch when it, or player carrying it, touch or cross touch-line; it shall then belong to the side opposite to that last touching it in field, except when a player carrying ball is forced into touch by opponent. One of side to whom ball belongs shall bring it into play at spot where it went into touch, by one of following methods:—

(A) Throwing it out so as to alight at right angles to touch-line, or—

(B) Scrummaging it at any spot at right angles to touch-line, 10 yards from place where it went into touch.

If Referee blows his whistle because ball has been thrown out so as not to alight at right angles to the touch-line, the opposite side shall bring it out as in (B).

*Try at Goal.*—13.—When the side has scored a try, ball shall be brought from spot where try was gained into field in line parallel to touch-lines, such distances as placer thinks proper, and there he shall place the ball for one of his side to try and kick a goal.

*Unfair Play Allowing or Disallowing A Try.*—Referee shall award a try if, in his opinion, one would undoubtedly have been obtained but for unfair play or interference of defending side. Or, he shall disallow a try, and adjudge a touch-down, if, in his opinion, a try would undoubtedly not have been gained but for unfair play or interference of attacking side.

*Ball Held in In-Goal.*—14.—If Ball, when over goal-line and in possession of player, be fairly held by an opposing player before it is grounded, it shall be scrummaged 5 yards from goal-line, opposite spot where ball was held.

*Drop-Out.*—15.—After touch-down, or if ball after crossing goal-line go into touch-in-goal or touch or cross dead-ball line, it shall be brought into play by means of a drop-out, when all kicker's side must be behind ball when kicked.

*Knock-on, Throw-Forward.*—16.—In case of a throw-forward or knock-on, the ball shall be brought back to place where such infringement occurred and there be scrummaged.

16*a*.—If player shall wilfully pass, knock or throw ball into touch, the opposite side may claim either free kick or scrummage.

*Pass or Carry Back over own Goal-line.*—17.—If a player shall wilfully kick, pass, knock, or carry ball back across his goal-line, and if there be made dead, opposite side may claim that ball shall be brought back and a scrummage formed at spot whence it was kicked, passed, knocked or carried back. Under any other circumstances a player may touch ball down in his own in-goal.

*Hacking, Tripping.*—18.—Hacking, hacking-over or tripping up are illegal. If studs are worn, they shall be circular, not more than ¾ inch long, measured from sole of boot, and not less than ¾ inch diameter at base and ½ inch at top, and shall be fastened with not less than three nails.

*Other Irregularities Not Provided For.*—19.—If when a Law is broken or any irregularity of play occurs not otherwise provided for, and any advantage is gained therefrom by opposite side, Referee shall not blow his whistle but shall allow game to proceed, but if no advantage is gained by such side, and if no other procedure is provided, ball shall be taken back to place where breach of Law or irregularity occurred and scrummage formed there.

## GOLF CLUB RULES.

**General and through the Green.**

1.—*Mode of Play.*—(1) The game of Golf is played by two sides, each playing its own ball, with clubs and balls made in conformity with the directions laid down in the clause on "Form and make of golf clubs and balls." The game consists in each side playing a ball from a teeing-ground into a hole by successive strokes. The hole is won by the side which holes its ball in fewer strokes than the opposing side, except as otherwise provided for in the Rules. The hole is halved if both sides hole out in the same number of strokes.

*Priority on the Course.*—(2) Matches constituted of singles, threesomes, or foursomes shall have precedence of and be entitled to pass any other kind of match. A single player has no standing, and shall always give way to a match of any kind. Any match playing a whole round shall be entitled to pass a match playing a shorter round. If a match fail to keep its place on the green, and lose in distance more than one clear hole on the players in front, it may be passed, on request being made.

2.—*Priority of the Teeing-Ground.*—(1) A match begins by each side playing a ball from the first teeing-ground. If a ball, when not in play, fall off a tee, or be knocked off a tee by the player in addressing it, it may be re-teed without penalty; if the ball be struck when so moving, no penalty shall be incurred.

*The Honour.*—(2) The option of taking the honour at the first teeing-ground shall, if necessary, be decided by lot. A ball played by a player when his opponent should have had the honour may be at once recalled by the opposing side, and may be re-teed without penalty. The side which wins a hole shall take the honour at the next teeing-ground. If a hole has been halved, the side which had the honour at the previous teeing-ground shall retain it.

3.—*Order of Play in Threesome and Foursome.*—In a threesome or foursome the partners shall strike alternately during the play of each hole.

4.—*Asking Advice.*—(1) A player may not ask for, nor willingly receive, advice from anyone except his own caddie, his partner, or his partner's caddie.

*Information as to Strokes Played.*—(2) A player is entitled at any time during the play of a hole to ascertain from his opponent the number of strokes the latter has played.

*Advice from Forecaddie.*—(3) A player may employ a forecaddie, but may not receive advice from him.

*Indicating Line of Play.*—(4) When playing through the green, or from a hazard, a player may have the line to the hole indicated to him, but no mark shall be placed nor shall anyone stand on the proposed line, in order to indicate it while the stroke is being made. The penalty for a breach of this Rule shall be the loss of the hole.

5.—*Ball be Fairly Struck at.*—The ball must be

fairly struck at with the head of the club, not pushed, scraped, nor spooned. The penalty for a breach of this Rule shall be the loss of the hole.

6.—*Ball played Wherever it Lies.*—A ball must be played wherever it lies, or the hole be given up, except as otherwise provided for in the Rules and Local Rules.

7.—*The Ball Farther from Hole played First.*—When the balls are in play, the ball farther from the hole shall be played first. Through the green, or in a hazard, if a player play when his opponent should have played, the opponent may at once recall the stroke. A ball so recalled shall be dropped as near as possible to the place where it lay, without penalty.

8.—*How to Drop a Ball.*—A ball shall be dropped in the following manner: The player himself shall drop it. He shall face the hole, stand erect, and drop the ball behind him over his shoulder. If the ball touch the player, he shall incur no penalty; and if it roll into a hazard, the ball may be re-dropped without penalty.

9.—*Balls not to be touched, except as provided for in Rules.*—(1) A ball in play may not be touched before the hole is played out, except as provided for in the Rules. The penalty for a breach of this Rule shall be one stroke.

*Ball not to be touched, except in Addressing.*—The player may, without penalty, touch his ball with his club in the act of addressing it, provided he does not move the ball.

*Ball not to be touched, except for Identification.*—A ball in play may, with the opponent's consent, be lifted for the purpose of identification, but it must be carefully replaced.

*Opponent's Ball moved by Player's Ball.*—(2) If the player's ball move the opponent's ball through the green or in a hazard, the opponent, if he choose, may drop a ball, without penalty, as near as possible to the place where his ball lay, but this must be done before another stroke is played by either side.

10.—*Removal of Irregularities of Surface.*—In playing through the green, irregularities of surface which could in any way affect the player's stroke shall not be removed nor pressed down by the player, his partner, or either of their caddies.

11.—*Removal of Obstructions.*—Any flag-stick, guide-flag, movable guide-post, wheelbarrow, tool, roller, grass-cutter, box, vehicle, or similar obstruction may be removed. A ball moved in removing such an obstruction shall be replaced without penalty. A ball lying on or touching such an obstruction or lying on or touching clothes, or nets, or ground under repairs, or covered up, or opened for the purpose of the upkeep of the course, or lying in one of the holes, or in a guide-flag hole, or in a hole made by the greenkeeper, may be lifted and dropped without penalty as near as possible to the place where it lay, but not nearer to the hole. A ball lifted in a hazard, under such circumstances, shall be dropped in the hazard.

12.—*Removal of Loose Impediments.*—(1) Any loose impediment lying within a club length of the ball, and not being in or touching a hazard, may be removed without penalty, but if the ball move after such impediment be removed the penalty shall be one stroke. (2) A loose impediment lying more than a club length from the ball may not be moved under penalty of the loss of a hole, unless the loose impediment lie on the putting green.

*Ball Accidentally Moved.*—(3) When a ball is in play, if a player, or his partner, or either of their caddies accidentally move his or their ball, or by touching anything cause it to move, the penalty shall be one stroke.

*Ball moving after Club Grounded.*—(4) If a ball in play move after the player has grounded his club in the act of addressing it, or if a ball in play being in a hazard move after the player has taken his stance to play it, he shall be deemed to have caused it to move, and the penalty shall be one stroke.

13.—*Playing a Moving Ball.*—A player shall not play while his ball is moving.

14.—*Striking Ball Twice.*—If a player, when making a stroke, strike the ball twice, the penalty shall be one stroke.

15.—*Moving or Bending Fixed or Growing Objects.*—Before striking at a ball in play, a player shall not move, bend, nor break anything fixed or growing, except so far as is necessary to enable him fairly to take his stance in addressing the ball, or in making his backward or forward swing. The club may only be grounded lightly, and not pressed on the ground. The penalty for a breach of this rule shall be the loss of the hole.

16.—*Balls within a Club Length of each other.*—When the balls lie within a club length of each other through the green or in a hazard, the ball lying nearer to the hole may, at the option of either the player or his opponent, be lifted until the other ball is played, and shall then be replaced as near as possible to the place where it lay.

17.—*Moving Ball Stopped.*—(1) If a ball IN MOTION be stopped or deflected by any agency outside the match or by a forecaddie, it is a rub of the green, and the ball shall be played from the spot where it lies.

*Ball Lodging in Anything Moving.*—(2) If a ball lodge in ANYTHING MOVING, a ball shall be dropped, or if on the putting-green placed, as near as possible, to the place where the object was when the ball lodged in it, without penalty.

*Ball at Rest displaced by Outside Agency.*—(3) If a ball AT REST be displaced by any agency outside the match, except wind, the player shall drop a ball as near as possible to the place where it lay, without penalty; and if the ball be displaced on the putting-green, it shall be replaced without penalty.

18.—*Ball striking the Player, etc.*—If a player's ball strike or be stopped by himself, or his partner, or either of their caddies, or their clubs, his side shall lose the hole.

19.—*Playing Opponent's Ball.*—(1) If a player play the opponent's ball, his side shall lose the hole unless—

(A) The opponent then play the player's ball, in which case the penalty is cancelled, and the hole shall be played out with the balls thus exchanged.

(B) The mistake occur through wrong information given by an opponent or his caddie, in which case there shall be no penalty; if the mistake be discovered before the opponent has played, it shall be rectified by dropping a ball as near as possible to the place where the opponent's ball lay.

*On the putting-green the ball shall be replaced.*

20.—*Looking for Ball in Bent, etc.*—(1) If a ball lie in fog, bent, bushes, long grass, or the like, only so much thereof shall be touched as will enable the player to find his ball.

*In Sand.*—(2) If a ball be completely covered by sand, only so much thereof may be removed as will enable the player to see the top of the ball; if the ball be touched in removing the sand, no penalty shall be incurred.

*Accidentally Moved by Opponent in Search.*—(3) If a player or his caddie, when searching for an opponent's ball, accidentally touch or move it, no penalty shall be incurred, and the ball, if moved, shall be replaced. The penalty for a breach of this Rule shall be the loss of the hole.

21.—*Lost and Unplayable Ball.*—If a ball be lost (except in water or casual water), or be deemed by the player to be unplayable, the player shall play his next stroke as nearly as possible at the spot from which the ball which is lost or unplayable was played, adding a penalty stroke to the score for the hole.

22.—*Ball out of Bounds.*—(1) If a ball lie out of bounds, the player shall play his next stroke as nearly as possible at the spot from which the ball which is out of bounds was played, adding a penalty stroke to the score for the hole. If the stroke was played from the teeing-ground, a ball may be teed; in all other cases a ball shall be dropped. In the case of a ball played out of bounds, the penalty stroke may be remitted by a Local Rule.

*Provisional Ball Played.*—(2) In order to save delay, if a player, making a stroke, considers that his ball may be out of bounds, he may at once play another ball in the manner provided for in this Rule, but if it be discovered that his first ball is not out of bounds, it shall continue in play without penalty.

*Ascertaining Location of Ball.*—(3) A player has the right at any time of ascertaining whether his opponent's ball is out of bounds or not, before his opponent can compel him to continue his play.

*Standing out of Bounds.*—(4) A player may stand out of bounds to play a ball lying within bounds.

.—*Ball Unfit for Play.*—If a ball split into separate pieces, another ball may be dropped where any piece lies. If a ball crack or become

unfit for play, the player may change it on intimating to his opponent his intention to do so. Mud adhering to a ball shall not be considered as making it unfit for play.

**Hazards and Casual Water.**

24.—*Conditions of Play in Hazards.*—When a ball lies in or touches a hazard, nothing shall be done which can in any way improve its lie; the club shall not touch the ground, nor shall anything be touched or moved, before the player strikes at the ball, subject to the following exceptions:—

(1) The player may place his feet firmly on the ground for the purpose of taking his stance; (2) in addressing the ball, or in the backward or forward swing, any grass, bent, bush, or other growing substance, or the side of a bunker, wall, paling, or other immovable obstacle, may be touched; (3) steps or planks placed in a hazard by the Green Committee for access to or egress from such hazard or any obstruction mentioned in Rule 11 may be removed, and if a ball be moved in so doing, it shall be replaced without penalty; (4) any loose impediment may be lifted from the putting-green; (5) the player shall be entitled to find his ball as provided for by Rule 20. The penalty for a breach of this Rule shall be the loss of the hole.

25.—*Ball moving in Water.*—When a ball is in water, a player may, without penalty, strike at it while it is moving, but he must not delay to make his stroke in order to allow the wind or current to better the position of the ball, under penalty of the loss of the hole.

26.—*Ball in Water Hazard. Ball in Casual Water in Hazard.*—(1) If a ball lie or be lost in a recognised water hazard (whether the ball lie in water or not) or in casual water in a hazard, the player may drop a ball under penalty of one stroke either (A) behind the hazard, keeping the spot at which the ball crossed the margin of the hazard between himself and the hole, or (B) in the hazard, keeping the spot at which the ball entered the water between himself and the hole.

*Ball in Casual Water through the Green.*—(2) If a ball lie or be lost in casual water through the green, the player may drop a ball, without penalty, within two club lengths of the margin, as near as possible to the spot where the ball lay.

*Ball in Casual Water on the Putting-Green.*—(3) If a ball on the putting-green lie in casual water, or if casual water intervenes between a ball lying on the putting-green and the hole, the ball may be played where it lies, or it may be lifted without penalty and placed by hand, either within two club lengths directly behind the spot from which the ball was lifted, or in the nearest position to that spot which is not nearer to the hole, and which affords a putt to the hole without casual water intervening.

**Putting-Green.**

27.—*Removal of Loose Impediments.*—(1) Any loose impediments may be lifted from the putting-green, irrespective of the position of the player's ball.

*Removal of Dung, etc.*—(2) Dung, wormcasts, snow, and ice may be scraped aside with a club, but the club must not be laid with more than its own weight upon the ground, nor must anything be pressed down either with the club or in any other way.

*Touching Line of Putt.*—(3) The line of the Putt must not be touched, except by placing the club immediately in front of the ball in the act of addressing it, and as above authorised.

The penalty for a breach of this Rule shall be the loss of the hole

28.—*Direction for Putting*—(1) When the player's ball is on the putting-green, the player's caddie, his partner, or his partner's caddie may, before the stroke is played, point out a direction for putting, but in doing this they shall not touch the ground on the proposed line of the putt. No mark shall be placed anywhere on the putting-green.

*Shielding Ball from Wind.*—(2) Any player or caddie engaged in the match may stand at the hole, but no player or caddie shall endeavour, by moving or otherwise, to influence the action of the wind upon the ball.

29.—*Ball within Six Inches, Lifted.*—(1) When the balls lie within six inches of each other on the putting-green (the distance to be measured from their nearest points), the ball lying nearer to the hole may, at the option of either the player or the opponent, be lifted until the other ball is played, and the lifted ball shall then be replaced as near as possible to the place where it lay.

*Playing out of Turn.*—(2) On the putting-green, if a player play when his opponent should have played, the stroke may be at once recalled by the opponent, and the ball replaced.

30.—*Removal of Flag-Stick.*—(1) Either side is entitled to have the flag-stick removed when approaching the hole; if a player's ball strike the flag-stick, which has been so removed by himself, or his partner, or either of their caddies, his side shall lose the hole. If the ball rest against the flag-stick which is in the hole, the player shall be entitled to remove the flag-stick, and if the ball fall into the hole, the player shall be deemed to have holed out at his last stroke.

*Displacing and Replacing of Balls.*—(2) If the player's ball knock the opponent's ball into the hole, the opponent shall be deemed to have holed out at this last stroke. If the player's ball move the opponent's ball, the opponent, if he choose, may replace it, but this must be done before another stroke is played by either side. If the player's ball stop on the spot formerly occupied by the opponent's ball, and the opponent declare his intention to replace his ball, the player shall first play another stroke, after which the opponent shall replace and play his ball.

*Ball on Lip of Hole.*—(3) If the player has holed out, and the opponent then plays to the lip of the hole, the player may not knock the ball away, but the opponent, if asked, shall play his next stroke without delay. If the opponent's ball lie on the lip of the hole, the player, after holing out, may knock the ball away, claiming the hole if holing at the like, and the half if holing at the odd, provided that the player's ball does not strike the opponent's ball and set it in motion: if the player neglects to knock away the opponent's ball, and it fall into the hole, the opponent shall be deemed to have holed out at his last stroke.

**General Penalty.**

31.—*Loss of the Hole.* Where no penalty for the breach of a Rule is stated, the penalty shall be the loss of the hole.

## HOCKEY RULES.

1.—*Teams.*—A game of Hockey shall be played by two teams of eleven players. The usual constitution of a team is five forwards, three half-backs, two backs, and a goal-keeper. The duration of the game shall be 70 minutes (unless otherwise agreed by the respective captains), half-time being called after 35 minutes' play, when the teams shall change ends.

2.—*Ground.*—The ground shall be rectangular, 100 yards long, and not more than 60 yards, nor less than 55 yards, wide. The ground shall be marked with white lines, the longer boundary lines to be called the side-lines, and the shorter boundary lines to be called the goal-lines. A flag-post shall be placed at each corner, also at the centre of each side-line, one yard outside the line. All flag-posts shall be at least four feet high.

3.—*Goals, Posts, etc.*—The goals at the centre of each goal-line shall consist of two perpendicular posts, four yards apart (inside measurement), joined together by a horizontal cross-bar, seven feet from the ground. The posts shall be two inches broad, and not more than three inches in depth, and the posts and cross-bars shall have rectangular edges to the sides facing the field of play. Nets shall be attached to the posts, cross-bars, and to the ground behind the goals. It shall be permissible to have a piece of wood, or similar material, not more than eighteen inches high, around the foot of the goal nets.

4.—*Striking Circle.*—In front of each goal shall be drawn a white line, four yards long, parallel to, and fifteen yards from, the goal-line. This line shall be continued each way to meet the goal-line by quarter circles, having the goal-posts as centres. The space enclosed by these lines and the goal-lines, including the lines themselves, shall be called the striking circle.

5.—*Ball.*—The ball shall be a leather cricket ball, painted white, or made of white leather; an unpainted red leather-covered cricket ball may be used when snow is lying on the ground.

6.—*Sticks.*—A stick shall have a flat face on its left-hand side only. The head of a stick (*i.e.* the part below the top of the splice) shall not be edged with or have insets or fittings of hard wood or of any other substance, nor shall there be any sharp edges or dangerous splinters. Each stick must be of such size that it can be passed through a two-inch ring. An indiarubber ring, four inches in external diameter when on the stick, may be used, but, everything included, the total weight must not exceed 28 ozs. The extremity of the stick must not be cut square or pointed, but must have rounded edges.

7.—*Bully.*—The game shall be started (and re-started after each goal and half-time) by one player of each team together bullying the ball in the centre of the ground. To bully the ball, each player shall tap first the ground on his own side of the ball, and then his opponent's stick three times alternately. Every other player shall be nearer to his own goal-line than the ball is (except in the case of a penalty bully), and no other player shall stand within three yards of the players participating in the bully. An ordinary bully in the circle shall not be taken nearer than five yards from the goal-line.

8.—*Off-Side.*—When the ball is hit, or rolled in from touch, any other player of the same team as the striker or roller-in who is at that moment nearer his opponents' goal-line shall be off-side unless there be at least three of his opponents nearer than he is to their own goal-line. A player who is off-side may not play or attempt to play the ball nor in any way interfere with any other player until the ball has been touched or hit by one of his opponents.

No player shall be off-side: (A) if he is in his own half of the ground; or (B) if the ball was last touched or hit by one of his opponents or by one of his own team who is nearer the opponents' line than himself.

9.—*General Details.*—The ball may be caught or stopped, but if caught must be immediately released to fall perpendicularly towards the ground. The foot, if used for stopping the ball, shall be removed immediately. The ball may not be picked up, carried, kicked, thrown, or knocked on or back, except with the stick. The flat side of the stick only shall be used. There shall be no charging, kicking, shoving, shinning, tripping, holding or striking at sticks. Hooking sticks is only permissible when the stick hooked is within striking distance of the ball. A player shall not obstruct by interposing himself between an opponent and the ball, nor by interposing himself or his stick in any way as an obstruction, nor shall he tackle from an opponent's left, unless he touches the ball before he touches the person or stick of his opponent. The goalkeeper shall not be penalised for kicking the ball in his own striking circle unless taking part in a penalty bully.

*Penalties.*—(1) *Outside the Circles.*—For any breach the penalty shall be a free hit for one of the opposing team on the spot where the breach occurred. (2) *Inside the Circles.*—(A) For any breach by the attacking team the penalty shall be a free hit for the defending team; (B) for any breach by the defending team, the penalty shall be a "penalty corner" or a "penalty bully" on the spot where the breach occurred. A penalty bully shall only be given for a wilful breach of a rule when, had the breach not occurred, a goal would probably have been scored.

10—"*Sticks.*"—When striking at the ball, no part of the stick shall be raised above the shoulder, either at the beginning or end of the stroke.

11.—"*Undercutting.*"—No player shall intentionally undercut the ball. The scoop stroke, which raises the ball, is permissible, but the Umpire shall penalise it in any particular instance if it is dangerous in itself, or likely to lead to dangerous play. The ball may be hit whilst in the air.

12.—*Free Hit.*—When a free hit is being taken, no other player shall stand within five yards of the striker.

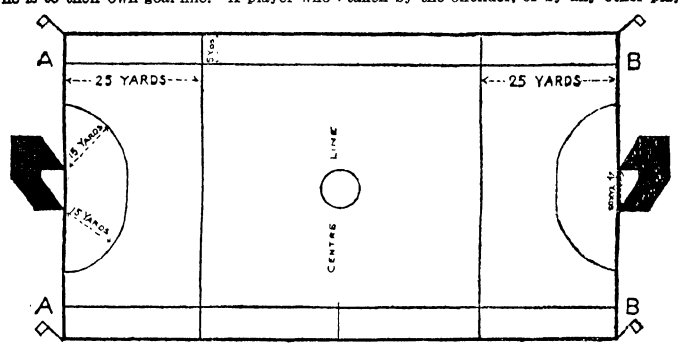
*Penalties.*—If any player, other than the striker, be within five yards of the ball at the time of a free hit, the Umpire shall order the hit to be taken again, except as specially provided for in this Rule.

If the striker, after taking such hit, participates in the game again before the ball has been touched or hit by another player: (1) *Inside the Circles*—the Umpire shall give a "penalty corner"; (2) *Outside the Circles*—the Umpire shall give a free hit to one of the opposite team to the offender.

13.—*Penalty Bully.*—A penalty bully shall be taken by the offender, or by any other player of the defending team if the offender is incapacitated, or has been suspended for misconduct, and by any player of the attacking team, on the spot where the breach occurred. All other players shall remain beyond the nearer twenty-five yards line until the penalty bully has been completed.

14.—*Roll-In.*—When the ball passes wholly over the side line, it shall be rolled in (and not bounced) by hand along the ground, in any direction, from the point where it crossed the side line. The roll-in shall be taken by one of the team opposed to the player who last touched the ball. Players may cross the seven-yards line immediately the ball leaves the hand of the roller-in. The ball may be rolled in at once, but no other player shall stand (himself or his stick) within the seven-yards line or outside the side line. Should the Umpire consider that a player is standing within the seven-yards line or outside the side line, to gain time, he shall not stop the game. The roller-in must have both feet and stick outside the side line, and may only play the ball again after it has been touched by another player.

15.—*Behind.*—(A) If the ball is sent over the goal-line by one of the attacking team, or glances off the stick or person of, or in the opinion of the Umpire be unintentionally sent over the goal-line by, one of the defending team who is farther away from his own goal-line than the twenty-five yards line, it shall be brought out twenty-five yards in a direction at right angles to the goal-line from the point where it crossed the line, and there "bullied." (B) If the ball glances off, or is, in the Umpire's opinion, unintentionally sent over the goal-line by




A, B, 7 Yards Line, Men; 5 Yards, Ladies. GROUND.—100 yards by 55 to 60 yards. OPENING OF GOAL.—7 feet by 12 feet.

*Diagram of Ground as marked out for Hockey.*

one of the defending team who is behind the twenty-five-yards line, a corner shall be awarded to the attacking team. (c) If, however, the ball is intentionally, in the Umpire's opinion, sent behind the goal-line by any player of the defending team, the Umpire shall give a penalty corner to the attacking team.

16.—*Corner.*—A player of the attacking team shall have a hit from a point on the side or goal-line within three yards of the nearest corner flag, and at the moment of such hit the feet and sticks of all the defending team must be behind their own goal-line, and the feet and sticks of all the attacking team must be outside the circle in the field of play. Provided that no player shall stand within five yards of a striker when a corner hit is taken, and that no goal can be scored from a corner hit by the attacking team unless the ball has been stopped, not necessarily motionless, on the ground, or has touched the person or stick of one of the defending team before the last stroke of the attacking team. A player taking a corner hit cannot participate in the game again until the ball has been touched or hit by another player. On taking a corner hit, if the striker miss the ball he shall take the hit again.

*Penalties.*—If any member of the attacking team takes a flying hit at goal, without attempting to stop the ball, the Umpire shall award a free hit.

17.—*Penalty Corner.*—A penalty corner hit shall be taken from any point on the goal-line at a distance of not less than ten yards from the nearer goal-post. Other rules apply as for an ordinary corner.

A ball striking an Umpire shall remain in play.

Umpires shall only blow the whistle: (A) To start the game, to signal half-time, and to re-start after half-time, and to end the game. (B) To signal a goal. (c) To indicate when necessary that the the ball has passed wholly over the goal or side lines. (D) During the course of the game, in order to enforce a penalty, or for an injury, or when for any other reason they wish to stop the play.

## ICE HOCKEY.

Owing to the erection of Ice Skating Rinks throughout Great Britain, permitting actual skating on ice irrespective of weather conditions, this sport has become very popular in this country, and as a natural consequence the game of Ice Hockey is now no longer limited to the Continent, America and Canada, but is being played extensively in all parts of England.

The following is a brief synopsis of the rules of this game:—

The game is played for three periods of fifteen minutes each, excluding all stoppages.

The game is played with a rubber disc, called a "puck." This is three inches in diameter and one inch thick.

Six players of each side are allowed on the ice together. Substitutes are allowed, and whenever there is a stoppage a substitute can take the place of a player who needs a rest, or is injured.

The ice is divided into three parts by two lines drawn parallel to the goals. A player cannot be offside in the section of ice containing his own goal.

A player is offside if he is between the puck and his opponents' goal, except as stated above.

No free-hits are awarded in Ice Hockey. If the offence is not serious the game is stopped and resumed with a face-off. If it is serious the offending player may be sent off the ice by the Referee for a number of minutes, according to the seriousness of the offence. No substitute may take the place of a man sent off for a foul.

The rules do not allow kicking, tipping, throwing sticks, raising sticks above the shoulder, holding the puck, and unnecessary roughness.

## LAWS OF LACROSSE.

1.—*The Crosse.*—The crosse may be of any length. In its widest part it shall not exceed one foot. The wood must be on the right-hand side of the bridge. A string must be brought through a hole at the side of the tip of the turn to prevent the point of the stick catching an opponent's crosse. A leading string resting on the top of the stick may be used. No string may be fastened so as to form a pocket. The length strings shall be woven to within two inches of their termination, so that the ball cannot catch in the meshes. No metal of any kind shall be allowed upon the crosse.

2.—*The Ball.*—The ball shall be of indiarubber sponge, not less than 7¾ in., nor more than 8 inches in circumference. It shall weigh not less than 4½ oz., nor more than 5 oz.

3.—*The Goals.*—(1) Each goal shall consist of two square poles 6 feet apart and 6 feet high out of the ground, joined by a rigid top cross-bar. Netting of not more than 1½ inches mesh shall be attached to posts and cross-bar, and to a point on ground 6 feet behind the centre of goal, and shall be firmly pegged to ground. Goals shall be placed not less than 100 nor more than 130 yards apart. Posts may be supported by back stays within the netting. A line called goal line is drawn from post to post.

(2) Goal crease shall be a marked line enclosing an oblong space 18 by 12 feet, laid out 6 feet in front, behind, and to either side of goal-posts.

4.—*The Boundaries.*—The boundaries of the field of play shall be agreed upon by Captains before commencement of match. Should ball be thrown out of bounds Referee shall call "Stand," and the ball shall be "faced" by two nearest players not less than five yards within bounds at point where ball went out.

*Stand.*—The ball is dead when Referee calls "Stand," and no player shall move, unless otherwise directed by Referee, until Referee calls "Play." (N.B.—The blowing of a whistle may be substituted for the above calls, or such hereinafter mentioned.)

*Draw.*—The ball shall be placed by the Referee, between the backs of the crosses, which shall be held in the air, about hip level, wood to wood, and parallel to the ground, by the two opponents. The opponents shall stand at right angles to an imaginary line, drawn from the centre of the nearest goal to the centre of the field, or to the spot either where the ball went out of bounds, or where the foul occurred, and the defence's crosse shall be between the ball and the goal being defended

On the word "Draw" from the Referee, the two opponents shall immediately draw their crosses up and away from one another. No draw shall be within 10 yards either of the goal line or of the boundary. No other players shall be within 10 yards of the centre draw and 5 yards of any other draw.

The Referee must use his discretion as to the position of the draw when it takes place near the boundary.

5.—*The Teams.*—*Number.*—Twelve players shall constitute a full team.

6.—*The Referee.*—(1) The authority of Referee shall commence from time of his appointment, shall continue until the end of match, and his duties shall be to enforce these Laws and Regulations. His decision shall be final and without appeal.

(2) If he observes any infringement of the rules, or when a "foul" claimed by any player has been allowed, or in any case of injury or accident, Referee is empowered to immediately call "Stand." If ball enters goal after "Stand" has been called by the Referee it shall not count.

7.—*The Umpires.*—There must be only one Umpire at each goal. They shall stand behind the posts and not change ends during a match. No person shall be allowed to speak to them, or in any way distract their attention.

8.—*The Game.*—(1) The playing time shall be two periods of forty-five minutes each, or such other time as shall be agreed to by the Captains.

(2) Ends shall be changed at "half-time," when either side may claim not more than ten minutes' rest, which shall not be counted as playing time.

(3) Each game shall be started by the centres facing at the centre mark, and no player shall be within ten yards of those facing. When both sides are ready the Referee shall call "Play."

(4) A goal shall be scored by ball passing between goal-posts and under cross-bar from in front, and not being propelled by foot or leg of an attacking player.

(5) Should the ball be put through either goal-space by players defending it, by whatsoever means, it shall be counted a goal to the opposite side. Should it be put through by anyone not a player, it shall not count.

(6) The goal-keeper, while defending goal within the goal-crease, although not allowed to catch or throw with his hands, may put ball away with his hand, or block it in any manner with his crosse or body.

(7) Any player is at liberty to propel ball with foot or leg.

(8) When the ball lodges in a place inaccessible to crosse, or about the clothing of a player, or becomes ensnared in goal netting, Referee shall call "Stand," and the player must at once remove it with the hand and "face" with nearest opponent.

(9) Should the ball catch in netting the crosse must be struck on the ground and ball dislodged immediately, otherwise Referee shall call "Stand," and ball shall be "faced" where player caught it.

9.—*Fouls.*—A player shall not—(1) Deliberately charge or shoulder an opponent. This does not prevent use of "body check," or pushing opponent with shoulder in ground scuffles. *Charging* or *shouldering* implies motion and unnecessary force, and is forbidden.

(2) Hold or trip an opponent, nor push with hand or crosse. *Holding* means clutching with hand or arm, or detaining an opponent between the two arms and crosse, or placing crosse against him so as to impede his movements. *Tripping* is the use of legs, feet or crosse to throw an opponent.

(3) Use "square" or "crosse" check which consists of one player "charging into" another with both hands on crosse, so as to make stick meet body of opponent.

(4) Grasp an opponent's crosse with hands, hold it with arms, between legs, under feet, or kick it.

(5) Throw crosse under any circumstances.

(6) Move from position when "Stand" has been called until game has been re-started.

(7) Claiming a foul on trivial grounds when, in the opinion of the Referee, no foul was intended, cannot be tolerated. Referee shall first caution the player so offending, and, if persisted in, the offence shall be deemed a foul.

10.—*Penalties.*—The penalty or penalties for a foul shall be at discretion of Referee.—"Free Position."—The Players shall "stand," except goal-keeper, who may resume his place, and the player to whom the Referee awards "free position"; and no player may be nearer than five yards to last-mentioned. If anyone be within prescribed distance, he must move to any position decided on by Referee. The player awarded "free position" shall then take ball on his crosse in front of him, and at the word "Play" from Referee game shall proceed. The "free position" shall never be within ten yards of the goal-line, and Referee may, under extreme circumstances, order any player or players, including goal-keeper, from between such "free position" and goal. The ten yards shall be measured in a straight line from goal-line through place where foul occurred.

## RULES OF LAWN TENNIS.

### The Singles Game.

1.—*The Court.*—A rectangle, 78 feet long and 27 feet wide, divided across the middle by a net, suspended from a cord, or metal cable of a maximum diameter of one-third of an inch, the ends of which shall be attached to, or pass over, the tops of two posts, 3 ft. 6 in. high, which shall stand 3 feet outside the Court on each side. The height of the net shall be 3 feet at the centre, where it shall be held down taut by a strap not more than 2 inches wide. There shall be a band covering the cord or metal cable and the top of the net for not less than 2 inches nor more than 2½ inches in depth on each side. The lines bounding the ends and sides of the Court shall respectively be called the Base-lines and the Side-lines. On each side of the net, at a distance of 21 feet from it and parallel with it, shall be drawn the Service lines. The space on each side of the net between the Service-lines and the Side-lines shall be divided into two equal parts called the service-courts by the centre-service-line, which must be 2 inches in width, drawn half-way between, and parallel with, the side-lines. Each base-line shall be bisected by an imaginary continuation of the centre service-line to a line 4 inches in length and 2 inches in width called the centre-mark drawn inside the Court, at right angles to and in contact with such base-line. All other lines shall not be less than 1 inch nor more than 2 inches in width, except the base-lines, which may be 4 inches in width, and all measurements shall be made to the outside of the lines.

2.—The outer surface of the ball shall be smooth and without stitches. The ball shall be not less than 2½ inches, nor more than 2 1/8 inches in diameter and not less than 2 oz., nor more than 2½ ozs., in weight. The ball shall have a minimum bound of 53 inches and a maximum bound of 58 inches, when dropped 100 inches, at a temperature approximating to 68 degrees Fahrenheit, upon a concrete base.

3.—The players shall stand on opposite sides of the net; the player who first delivers the ball shall be called the Server, and the other the Receiver.

4.—Immediately before commencing to serve, the Server shall stand with both feet at rest on the ground behind (*i.e.* further from the net than) the base-line and within the limits of the imaginary continuation of the centre-mark and side-line. Throughout delivery of Service, the Server shall (A) not change position by walking or running; (B) maintain contact with the ground; (C) keep both feet behind the base-line.

5.—The service shall be delivered alternately from behind the right and left halves of the court, beginning from the right in every game. The ball served shall pass over the net and hit the ground within the Service-Court which is diagonally opposite, or upon any line bounding such Court, before the Receiver returns it.

6.—The service is at fault—(A) if the Server commit any breach of Rules 4 or 5; (B) if he miss the ball in attempting to strike it; (C) if the ball served touch a permanent fixture (other than the net, strap or band) before it hits the ground.

7.—After a fault (if it be the first fault) the Server shall serve again from behind the same half of the Court from which he served that fault, unless it was a fault because he served from behind the wrong half, when he shall be entitled to deliver one service from behind the other half. A fault may not be claimed after the next service has been delivered.

8.—The service is a let if the ball served touch the net, strap or band, provided the same be otherwise good. In case of a let the service counts for nothing, and the Server shall serve again, but a let does not annul a previous fault.

9.—At the end of the first game the Receiver shall become Server, and the Server Receiver; and so on alternately in all the subsequent games of a match.

10.—A ball is in play from the moment at which it is delivered in service (unless a fault or a let), and remains in play till the point is decided.

11.—The Server wins a point—(A) if the ball served touch the Receiver or anything which he wears or carries before it hits the ground; (B) if the Receiver otherwise lose a point as provided by Rule 13.

12.—The Receiver wins the point—(A) if the Server serve two consecutive faults; (B) if the Server otherwise lose the point as provided by Rule 13.

13.—A player loses the point if—(A) he fail, before the ball in play has hit the ground twice consecutively, to return it directly over the net (except as provided in Rule 15 (B); or (C) he return the ball in play so that it hits the ground, a permanent fixture, or other object, outside any of the lines which bound his opponent's Court; or (C) volley the ball and fail to make a good return even when standing outside the Court; or (D) touch or strike the ball in play with his racket more than once in making a stroke; or (E) he or his racket (in his hand or otherwise) or anything which he wears or carries touch the net, posts, cord, or metal cable, strap or band or the ground within his opponent's Court when striking at the ball or at any other time while the ball is in play; or (F) volley the ball before it has passed the net; or (G) the ball in play touch him or anything that he wears or carries, except his racket in the act of striking.

14.—A ball falling on a line is regarded as falling in the Court bounded by that line.

15.—It is a good return—(A) if the ball touch the net, posts, cord or metal cable, strap or band, provided that it passes over any of them and hits the ground within the Court; (B) if the ball, served or returned, hit the ground within the proper Court and rebound or be blown back over the net, and the player whose turn it is to strike reach over the net and play the ball, provided that neither he nor any part of his clothes or racket touch the net, posts, cord or metal cable, strap or band or the ground within his opponent's Court, and that the stroke be otherwise good; (C) if the ball be returned outside the post, either above or below the level of the

top of the net, even though it touch the post, provided that it hits the ground within the proper Court; (D) if a player's racket pass over the net after he has returned the ball, provided the ball pass the net before being played and be properly returned.

16.—If a player wins his first point, the score is called 15 for that player; on winning his second point, the score is called 30 for that player; on winning his third point, the score is called 40 for that player, and the fourth point won by a player is scored game for that player, except as follows:—If both players have won three points, the score is called deuce; and the next point won by a player is scored advantage for that player. If the same player wins the next point, he wins the game; if the other player wins the next point the score is again called deuce; and so on, until a player wins the two points immediately following the score at deuce when the game is scored for that player.

17.—The player who first wins six games wins a set, except as follows:—If both players have won five games, the score is called games-all, and the next game won by a player is scored advantage game for that player. If the same player wins the next game, he wins the set; if the other player wins the next game, the score is again called games-all; and so on until a player wins two games more than his opponent, when the set is scored for that player.

18.—The players shall change sides at the end of the first, third and every subsequent alternate game of each set, and at the end of each set, unless the total number of games in each set be even, in which case the change is not made until the end of the first game of the next set.

19.—The maximum number of sets in a match shall be 5, or, where women take part, 3.

**The Doubles Game.**

20.—The foregoing rules shall apply to the Doubles Game, except as below:—

21.—For the Doubles Game the Court shall be 36 feet in width, *i.e.* 4½ feet wider on each side than the Court for the Singles Game, and those portions of the Singles side-lines which lie between the two service-lines shall be called the service-side-lines. In other respects the Court shall be similar to that described in Rule 1, but the portion of the Singles side-lines between the base-line and service-line on each side of the net may be omitted if desired.

22.—The pair who have the right to serve in the first game of each set may decide which partners shall do so, and the opposing pair may decide similarly for the second game. The partner of the player who served in the first game shall serve in the third; the partner of the player who served in the second game shall serve in the fourth, and so on in the same order in all the subsequent games of a set.

The order of service having been arranged may not be altered during the set, but it may be changed at the beginning of each new set. Similarly, the Receivers may not change places with each other for the purpose of receiving the service before the end of a set, but they may do so at the beginning of a new set.

23.—The ball shall be struck alternately by one or other player of the opposing pairs, and if a player touches the ball in play with his racket in contravention of this rule his opponents win the point.

## RULES OF POLO.

**General Rules.**

1.—Ponies of any height may be played.

2.—(A) Full-sized ground, 300 yards by 200 yards, if unboarded; and 300 yards by 160 yards if boarded.

(B) Goals not less than 250 yards apart, each goal to be 8 yards wide. (C) Goal-posts at least 10 feet high, and light enough to break if collided with. (D) The board not to exceed 11 inches in height.

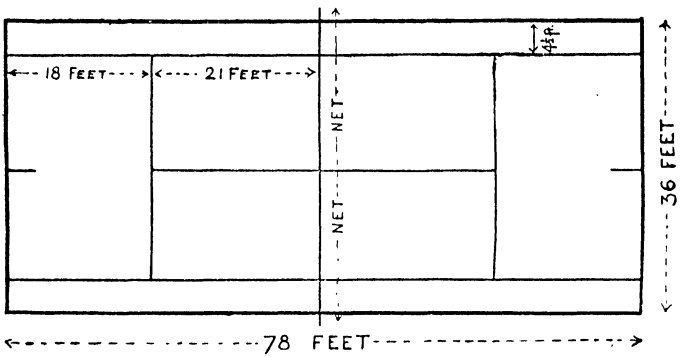
3.—The ball shall not exceed 3½ inches in diameter, and 5½ ozs. in weight.

4.—(A) Number of players is limited to four a side in all games and matches. (B) No player shall play with his left hand, except left-handed players registered at Hurlingham.

5.—The maximum duration of play in a match shall be seven periods of eight minutes each, with intervals of three minutes after each period.

**Field Rules.**

1.—The game commences by both sides taking up their position in the middle of the ground, and




NET:—Height 3 ft. 6 in. at posts, 3 ft. at centre.

*Diagram of Ground as marked out for Lawn Tennis.*

the Umpire throwing the ball into the centre of the ground between the opposing ranks.

2.—Ends shall be changed after every goal, or, if no goals have been obtained, after half-time.

3.—When the ball is hit out, it must be thrown into the ground by the Umpire under-hand and hard from the exact spot where it went out. No player to stand within five yards of the side-line.

4.—A player may ride out an antagonist, or interpose his pony before his antagonist, so as to prevent the latter reaching the ball; but he may not cross another player in possession of the ball.

5.—No player shall crook an adversary's stick, unless he is on the same side of an adversary's pony as the ball, or in a direct line behind, and his stick is neither over nor under the body nor across the legs of an adversary's pony. The stick may not be crooked or struck unless an adversary is in the act of striking at the ball.

## RULES OF WATER POLO.

1.—*Field of Play.*—The distance between the goals shall not exceed 30 yards or be less than 19 yards; the width shall not be more than 20 yards and shall be of even width throughout the field of play. The two-yard and four-yard penalty lines and the half-distance shall be clearly marked on both sides of the field of play.

2.—*Depth.*—The water shall not be shallower than 3 feet.

3.—*Goals.*—Goal-posts shall be fixed at each end of the field of play. These must be at least 1 foot from the end of the bath or from any obstruction. The width between the posts to be 10 feet, and the cross-bar to be 8 feet from the

bottom. Nets must be attached to the goal-posts in such a way as to enclose the whole goal area, and hang below the surface of the water. The back of the net must be at least one foot behind the goal line and hung from the height of the cross-bar, and at least 3 feet from surface of the water.

4.—*The Ball.*—The ball shall be leather covered, round and fully inflated, and measure not less than 27 inches or more than 28 inches in circumference. It shall be waterproof, with no strapped seams outside and no grease or other objectionable substance on the surface. The ball may not be punched by a player.

5.—*Time.*—The duration of a match shall be fourteen minutes, seven minutes each way. Three minutes shall be allowed at half-time for change of ends.

6.—*Teams.*—Each side shall consist of seven players, who shall wear drawers, or costumes, with drawers underneath the costumes. In baths no oil or grease or other objectionable substance shall be rubbed on the body.

7.—*Starting.*—The players place themselves in a line with their respective goals. The referee shall stand in a line with the centre of the course, and having ascertained that the captains are ready shall give the word "Go," and immediately throw or release the ball into the water at the centre of the field of play. From the start or re-start a goal cannot be scored until the ball has been handled.

11.—*Goal and Corner Throws.*—A player throwing the ball over his own goal line shall concede a free corner throw to his opponents, and such free corner throw shall be taken from the two-yard line at the side of the bath, by the player on the opposing side nearest the point where the ball leaves the field of play.

## QUOITS.

Quoits are used in a game which comes down from the discus-throwing days of the Greeks and Romans. "Hobs" of iron are driven into the ground at a distance of 18 to 25 yards, and the players endeavour to cast over one "hob" steel quoits pitched from the other. These are flattened rings, convex on the upper side, 8¼ inches to 9¼ inches in diameter, and from 1 to 2 inches wide in the ring; their weight varying from 4 to 5 pounds the pair. The nearest cast to a "ringer" wins the throw; and, to count, the quoit must lie rounded side up. The opponents pitch up a quoit alternately, playing in a single-handed game from end to end in succession; and one of each side from either end in turn at the four-handed game. Usually 15 points is reckoned game when four players participate and 11 when only two are engaged.

## LAWS OF RACKETS.

These Laws also govern Squash Rackets in so far as they apply (see p. 861).

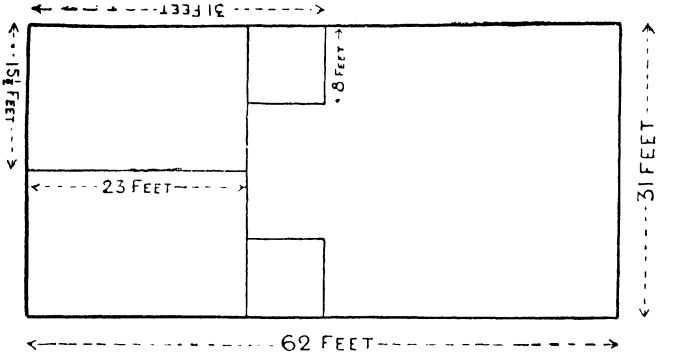



*Diagram of Ground as marked out for Rackets.*

8.—*Scoring.*—A goal shall be scored by the entire ball passing beyond the goal-posts, and under the cross-bar. If, on the notification of half-time or time, the ball be not fully through the goal-posts, no goal shall be allowed.

A goal may be scored by the head or feet, providing the ball has been previously handled by two players.

9.—*Ordinary Fouls.*—It shall be a foul:

(A) To touch the ball with both hands at the same time.

(B) To hold the goal-posts, rail, or side, during any part of the game.

(C) To walk about the bath.

(D) To stand on or touch the bottom during any part of the game, unless for the purpose of resting.

(E) To interfere with an opponent or impede him in any way, unless he is holding the ball.

(F) To hold the ball under water when tackled.

(G) To jump from the bottom or push from the side—except at starting or re-starting—in order to play the ball or duck an opponent.

(H) To hold, pull back, or push off from an opponent.

(I) To turn on the back and kick at an opponent.

[Dribbling or striking the ball is not "holding," but lifting, carrying, pressing under water, or placing the hand under or over the ball when actually touching, is holding. Dribbling the ball up and through the posts is permissible.]

10.—*Goalkeeper.*—The goalkeeper may stand to defend his goal, but he must not throw the ball beyond half distance. The goalkeeper must keep within 4 yards of his own goal line.

### The Singles Game.

1.—The server, in serving, must stand with at least one foot within service-box, and not touching any lines which bound it.

2.—In each game server may begin serving from right or left service-box, as he pleases; but after serving from the right he must next serve from left, or vice versa, and so on alternately, as long as he remains hand-in.

3.—The ball served must strike front wall before touching any other part of court, and must strike it above cut-line, and must drop within lines (that is, the short-line and the half-court line) which bound court on side opposite to the box from which ball was served, and must not touch either line.

4.—Hand-out may take a fault; but if he do so, rally must be played as if service had been good.

5.—Aces are scored by hand-in only.

6.—Hand-in wins and scores an ace—(A) if hand-out fail to return ball served or in-play to the front wall, above board, before ball has touched floor twice, *except in case of a "let"*: or (B) if hand-out return ball served or in-play so that it goes out-of-court; or (C) if ball in-play touch hand-out, or anything that he wears or carries, except his racket in act of striking.

7.—Hand-in becomes hand-out—(A) if he serve ball so that it touches him before touching floor twice, as provided in Law 3; or (B) if he serve ball on board or out-of-court; or (C) if ball served touch any part of the court before striking front wall; or (D) if he serve two consecutive faults; or (E) if he fail to return ball in-play to front wall, above the board, *except in case of a "let"*; or (F) if he re-

turn ball in-play so that it goes out-of-court; or (c) if ball in-play touch him, or anything that he wears or carries, except his racket in act of striking. Then, in any of these cases, hand-out becomes hand-in, and serves in his turn.

8.—Ball served or in play may be returned by striker's opponent at the volley, or after it has touched floor once; but not after it has touched floor a second time.

9.—Each player must get out of his opponent's way as much as possible; if either player claim that his opponent hindered him from returning ball served or in-play, marker shall decide whether it shall be a "let," or not.

10.—If a player hit at and miss ball in course of a rally, he may make another attempt to return it; but should his opponent, in the opinion of the Referee, accidentally prevent him in any way from making such second attempt, no "let" can be claimed; but wilful obstruction in such case may be subject to an appeal for a "let" in usual manner.

11.—The game is 15-up; that is, the player who scores 15 aces first wins game, excepting that—(A) immediately on the score being called 13-all, hand-out may "set" game to 5 or 3, and the player winning 5 or 3 aces first wins game; or (B) immediately on score being called 14-all, hand-out may "set" game to 3, and the player winning 3 aces first wins game.

**Squash Rackets.**

The game of "Squash Rackets" has so wonderfully improved in popularity of late, owing to its adaptability to circumstances of size of court, as well as its undoubted advantage as a means of physical exercise, that now we have courts all over the country, and even a professional championship.

It is a game which is also suitable for lady players, as well as men, and Lawn Tennis experts are taking it up with interest.

The Rules are essentially the same as those for Rackets, but the ball is of a different make.

The scoring is the same as in ordinary Rackets and Hand Fives—the best of five games of nine points each for matches, with an optional setting of 2 at 8-all.

Squash Courts (as adopted by the Tennis, Rackets and Fives Association).

The standard dimensions of a court are as follows:—(1) Size: Length, 32 ft.; Breadth, 21 ft.; Height of front wall line, 15 feet; Height of back wall line, 7 ft. Distance of "short line" from front wall, 18 ft. Height of "service line" on front wall, 6 ft. Internal dimensions of service-box shall be 5 ft. 3 ins. Standard Balls are officially stamped by the Rackets Association. The Racket shall be 27 inches in length.

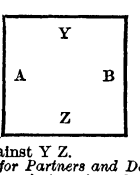
# SECTION II. INDOOR GAMES.

## BÉZIQUE.

This requires a pack of cards for each player, all the low cards from six downwards being dispensed with. Four or three may play the game, though two is best. The cards being shuffled together and cut, the dealer gives eight cards to his opponent, and the same number to himself, the seventeenth card being turned up to indicate trumps. Then the non-dealer takes a card, to which dealer plays, the best card winning the trick; play proceeding as at whist, save that ten will take any card except ace. The winner of the first trick takes the top card from the undealt remainder of the pack, his opponent takes the next. Then another trick is played, and another card taken by each and so on till the pack is used up; whereupon the remaining eight are played out in tricks, till all are lost and won. Scoring depends on the combinations held and declared after each trick, the player first reaching 1,000 being accounted the winner. Thus, the winner of a trick who thereby becomes the holder of all four aces registers 100 points towards game, four kings 80, four queens 60, four knaves 40. Simple marriage (king and queen, same suit) scores 20 points, royal marriage (king and queen, trump suit) 40; bézique (queen of spades and knave of diamonds) 40; double bézique (the two queens of spades and both knaves of diamonds) 500; sequence (ace, ten, king, queen, and knave of trump suit) 250. Seven of trumps played or turned up reckons 10, taking the last trick 10, and finally every ace and ten in the captured tricks counts 10 to the taker.

## RULES OF AUCTION BRIDGE.

1.—*Position of Players.*—Bridge is a partnership game for four players. Two partners play against the other two. The partners sit opposite each other thus:—




A B playing against Y Z.

2.—*Drawing for Partners and Deal.*—To determine partnership, choice of cards and seats and first deal, all the four players draw a card from a full pack of 52 cards spread face downwards on the table. The two players drawing the lower cards play against the two drawing the higher cards. Ace counts as the lowest card in the draw.

The deal goes to the player who draws the lowest card of all. The dealer has choice of cards and seats.

Two packs of cards are used, one pack being reserved of each side. The pack not in use is shuffled during the deal by the dealer's partner and placed on his right-hand side ready for the next deal. Each player deals in turn.

3.—*The Cut.*—Having settled deal and partnership the players seat themselves at the card-table and the cards on the table are gathered up. The chosen pack is shuffled and cut by the player seated on the dealer's right. The dealer joins the divided portions, placing the bottom portion on the top. This is called the "Cut."

In dividing the pack for cutting there must be not fewer than four cards in one portion. If less than four cards are left in one portion it is a foul cut and the cards must be cut again.

4.—*The Deal.*—The cut being completed, the dealer deals the cards from the top of the pack one by one face downwards to each player, commencing with the player on his left, until each player has thirteen cards and the pack is exhausted.

If a card is exposed during the deal there must be a fresh deal. If one player is found to have too few cards and one too many, it is a misdeal and the cards must be dealt again.

No player may look at his cards during the deal.

5.—*Arranging the Cards.*—Each player now gathers up the cards dealt to him and sorts them into suits, Spades, Hearts, Diamonds, Clubs. He must not allow his cards to be seen by any other player. If after the deal or during the Auction a player exposes a card, the player on his left can, if he so desires, demand a new deal.

6.—*The Auction.*—The dealer starts the bidding. According to the strength of his hand he makes a bid stating how many tricks he thinks he can win with one suit as trumps or with No-Trumps. Or if his hand is weak he passes, saying, "No Bid."

The player on his left now makes a bid. Or he may pass saying "No Bid."

Any player may pass, but no player may make a bid lower than the previous bid. Each player in rotation makes a bid. The bid must be either in a higher valued suit or of a sufficient number of tricks to outbid the previous call.

7.—*Under-Calling.*—A player making an under-call can be penalised. The player on his left can if he chooses compel him to raise his call to a sufficient number of tricks, in which case his partner is debarred from further bidding unless the opposing side "double" the call or make another bid. Or the bidding can be closed at the bid preceding the under-call. Or the underbid may be allowed to stand, in which case there is no penalty.

8.—*Bid Out of Turn.*—If a player bids out of turn the player on his left can, if he chooses, claim a new deal. Any player can draw attention to a bid out of turn or to an under-call, but only the player on the left of the offender can claim a penalty.

9.—*Pass Out of Turn.*—If a player says "No Bid" out of turn he is debarred from bidding when his turn comes, but he can take part in subsequent rounds of bidding.

10.—*Suit Values.*—The values of the suits are—Spades 9 per trick; Hearts 8 per trick; Diamonds 7 per trick; Clubs 6 per trick; No-Trumps 10 per trick.

One Spade will overbid One Heart.
One Diamond will overbid One Club.
One No-Trump will overbid One Spade.
Two Clubs will overbid One No-Trump, but Three Clubs (value 18) will not overcall—
Two No-Trumps (value 20).
When the value is the same, *i.e.* Two Spades 18, Three Clubs 18, the extra trick Three Clubs overcalls the Two Spades.

11.—*Scoring.*—Only the tricks won score towards game. Game is 30 points made by tricks alone. The rubber is two games. The trick points are marked on the lower half of a score block. All bonuses and honour points and penalties are marked on the upper half—above the line.

A bonus of 250 is added for the rubber. A side first gaining two games wins the rubber.

The first six tricks made do not score at all. The seventh trick is counted as One.

Honours are—Ace, King, Queen, Jack, 10 in any suit declared to be trumps.

At No-Trumps the Honours are Aces.

*Score.*

| | S. | H. | D. | C. |
|---|---|---|---|---|
| When the Trump suit is . . | 9 | 8 | 7 | 6 |
| Each trick above six counts . | 18 | 16 | 14 | 12 |
| Three Honours . . . | 36 | 32 | 28 | 24 |
| Four Honours . . . | 45 | 40 | 35 | 30 |
| Four Honours in One Hand. | 72 | 64 | 56 | 48 |
| Four in One Hand and One in Partner's . . . | 81 | 72 | 63 | 54 |
| Five Honours in One Hand . | 90 | 80 | 70 | 60 |

When there are No-Trumps:

| | |
|---|---|
| Each trick above six counts . | 10 |
| Three Aces . . . . | 30 |
| Four Aces . . . . | 40 |
| Four Aces in One Hand . | 100 |

*Little Slam.*—Making every trick except one in any suit or at No-Trumps scores a bonus of 50 points above the line.

*Grand Slam.*—Making every trick scores a bonus of 100 points above the line.

For each trick short of contract opponents score above the line 50 points. If doubled 100. If re-doubled 200.

If Declarer makes his contract when doubled he scores above the line a bonus of 50 points for contract, and 50 for each trick above contract.

If re-doubled, 100 points for contract and 100 for each trick over contract.

He also scores doubled and re-doubled values for his tricks won below the line.

*Doubling.*—Any player in his turn may double an opponent's bid. A Double counts as a bid. No player can double his partner's bid. *Penalty.*—The player on his left can, if he desires, demand a new deal.

12.—*The Declarer.*—When each player has bid his hand and the final declaration has been reached (*i.e.* the bidding has gone on until no one has anything more to say), the play begins.

The player who first named the suit for his side which has been left in as Trumps, or No-Trumps as the case may be, becomes the Declarer. He has now to try and fulfil his contract and the opponents play to defeat it. Only the Declarer can score below the line for tricks won.

13.—*Dummy.*—The player on the Declarer's left has the first lead. After he has played a card, the Declarer's partner puts his hand on the table face upwards so that all the cards are exposed and the Declarer plays the cards. The partner becomes "Dummy" and takes no part in the play of the cards. He should watch the game and has certain rights, but he must not draw attention to any irregularity of play or to a revoke nor can he claim any penalty. He should, when his partner has not followed suit, ask him if he has no more of that suit. He can speak if too few or too many cards have been played to a trick; if a trick has been gathered by the wrong side; correct the claim of the opponents to a penalty to which they are not entitled; take part in any discussion of a question of fact, or correct score, or mis-statement of law, and, if consulted, advise upon the penalty for an established revoke.

14.—*The Play.*—After the player on the Declarer's left has led a card and the Dummy hand has been exposed, each player plays a card in turn, Declarer playing from the Dummy hand next, the leader's partner next, and last the Declarer from his own hand. Each player must follow suit if he holds a card of the suit led. The highest card of the suit wins the trick.

15.—*The Trick.*—The four cards played complete the trick. They are gathered up and placed face downwards on the table in front of the winner of the trick, *i.e.* the player who played the highest card. When the cards are gathered up and placed face downwards the trick is quitted. The winner of a trick leads to the next trick.

16.—*Trumping or Ruffing.*—If a player has no card of the suit led, when playing in a trump declaration, he can trump or ruff the trick by playing a card of the trump suit. This will win against a high card of the suit led.

17.—*Discarding.*—When playing in a No-Trump Declaration or when he does not desire to trump, a player having no cards of the suit led must discard a card from his hand. He can choose any card he likes to throw away, but every player must in turn play a card to every trick.

18.—*Incomplete Trick.*—If a player omits to play a card to a trick the opponents can demand a new deal, unless attention is not drawn to the irregularity before it is too late to rectify the mistake. A card that properly could have been played to the trick can be added to it, but the ownership of the trick is not altered thereby.

19.—*Revoke.*—If a player plays a card to a trick that is not one of the suit led and is found to have a card of the suit led, he has revoked.

The penalty for a revoke is severe, and the partner of the player, who has not followed suit, should always ask before the trick is turned and quitted whether he has none of the suit led in order to save a possible revoke. A revoke is established if the trick is turned and quitted or if the offender's partner has led or played to the next trick, or if the offender has exposed his remaining cards.

If the error is discovered before it is too late, the offender may play a card of the correct suit, but if he is the Declarer's opponent, the Declarer can treat the card played in error as an exposed card, or may demand that the card played shall be the highest or the lowest which the offender holds of the proper suit. If the offender is the Declarer, the player on his left can claim that the card he plays of the correct suit shall be the highest or the lowest he holds in the suit. There is no penalty for a revoke from the Dummy hand, nor can any of the Declarer's cards be treated as exposed cards.

20.—*Revoke Penalty.*—When the Declarer has revoked, the opponents can take 100 points above the line for each revoke.

When opponents revoke, the Declarer can (*a*) either take two tricks from them and score them as his own, thus giving him Game or Contract which would otherwise have failed, or (*b*) he can take 100 points above the line. If opponents revoke twice he can take two tricks for the first revoke and 100 points for the second revoke, but he can in no case take more than two tricks. The revoke penalty is claimed at the end of the hand. A revoke cannot be claimed after the cards have been cut for the next deal. The revoking side can score nothing for the hand in which the revoke occurred except for Honours. Dummy cannot revoke.

Tricks taken for the revoke penalty will not entitle Declarer to any bonus for Slam or Little Slam, but he may thereby score for game and rubber, but he can take no bonus for a doubled contract above the line. The tricks below the line are, however, scored at the doubled rate.

21.—*Lead out of Turn.*—If a player leads when it is not his turn to lead, there is a penalty. Declarer leading out of turn or from the wrong hand may not withdraw the card unless an opponent requests him to do so and to lead from the right hand, in which case the cards played are taken back and cannot be treated as exposed

cards. Declarer cannot be penalised for exposed cards.

If either of the Declarer's opponents leads when it is his partner's turn to lead, the Declarer can demand that a certain suit be led by the right player, or he can treat the card led as an exposed card and allow the lawful player to lead what card he likes, but the exposed card remains on the table and can be called by the Declarer when it is the player's turn to play. The Declarer cannot make a player revoke, but he can go on calling for an exposed card, until it is played, but he cannot prevent a player from playing the exposed card himself when it is his turn to play if the suit is led, or as a discard to a suit in which he is bare.

If an opponent of the Declarer leads when it is the Declarer or Dummy's lead, the Declarer can lead from the right hand and the opponent's card is an exposed card, and the Declarer can also, if he has not already called the exposed card, call a suit to be led by that opponent when next it is his lead. In this case the exposed card, if not previously played by the owner, may be taken up and ceases to be an exposed card.

If an opponent of the Declarer leads out of turn at the same time as the lawful leader, the card played out of turn is an exposed card, and that is the only penalty.

22.—*Play out of Turn.*—If an opponent of the Declarer plays out of turn or exposes any cards in his hand before it is his turn to play or lead, the Declarer can call upon the player's partner to win the trick, or not to win the trick, or to throw a card of any suit named.

If the Declarer plays a card out of turn from either his hand or Dummy he cannot claim a penalty from an opponent for playing out of turn.

23.—*Too Many Cards in a Trick.*—If a quitted trick has more than four cards, the decision as to which card was included in error rests with the opponents of the player whose hand is a card short. The card is restored to the player and he is deemed to have held it and is responsible for any revoke.

24.—*Incomplete Hand.*—If at the end of the game a player is found to have one card too few, the other players having thirteen cards, the missing card must be searched for. If it cannot be found or if, by the position when found, it is proved never to have been in the player's hand, there must be a new deal, but if found in a position where it is likely to have been dropped by the player it is deemed to have been always in his possession and he is responsible for any revoke.

25.—*Drawing Attention to Cards Played.*—If a player other than the Declarer draws attention to the cards played to a trick by saying "That's mine," or by pointing to his card or naming it or in any way, the Declarer can request the offender's partner to play the highest or lowest card of the suit led or to win the trick by trumping or forbid him to trump.

26.—*Dummy Suggesting Cards.*—If Dummy suggests the play of a card by touching it, or in any way, either of the Declarer's opponents can insist that the card shall be played or shall not be played.

27.—*Declarer Claiming Tricks.*—If, during the play of the cards, Declarer states that some or all of the rest of the tricks are his, he can be required to expose all his cards on the table, and he must say exactly how he proposes to play them, including any finesse he means to take. If he does not announce any finesse he intended to make he will not be allowed to make it after his cards are exposed. He must play in the manner he has stated he would play.

28.—*Wrong Penalty.*—If a player claims a penalty which is not the correct penalty for the offence he loses the right to claim any penalty.

29.—*Wrong Player Claiming a Penalty.*—If the player on the right of the offender claims a penalty when only the player on the left is entitled to claim one, then no penalty can be exacted.

Any player except Dummy can claim a revoke penalty. If Dummy draws attention to or claims a penalty for a revoke the Declarer loses the right to any penalty.

Any player except Dummy can call his partner's attention to an offence against the laws, but only the player entitled to claim can exact a penalty.

30.—*Quitted Tricks.*—No player (including Dummy) may look at a trick that has been turned. If he does so the opponents can claim 50 points above the line.

There is one exception to this rule. If there is a doubt as to which side has won the trick, it may be inspected with the consent of all four players, or if after counting the cards face downwards it has too few or too many cards in it.

*General.*

*Bets.*—Bets on a rubber are decided by points won, not by games. If the difference in points is too small to involve any money changing hands between the players the bet is void.

*Substitute.*—If a player is obliged to leave the card table before the rubber is over he can appoint a substitute with the consent of the other players.

*Time Limit.*—If an agreed time has been specified for a rubber and it is not finished within the time, the score as it stands is made up and 125 points are added to the score of the side who has won a game.

*Marked Cards.*—If any card or cards are damaged or marked so that they can be recognised, a new pack must be procured.

## RULES OF CONTRACT BRIDGE.

Many of the rules for Contract are the same as for Auction, but there are several important variations.

Before considering them, however, the newcomer to Contract Bridge should note the fundamental difference between the two games.

At Contract he can score below the line towards Game only for the number of tricks he has contracted to make. Unless a Game bid is declared it cannot be scored below the line. Extra tricks in excess of contract are scored above the line in the Honours column, but they do not count towards Game. Thus Z bids Two Spades and all pass. However many tricks beyond two he wins, he scores below the line only for the tricks made, viz. 60 points.

This feature in Contract has led to the many conventions devised to assist partners to arrive at a Game Contract or at least to bid their hands to their full value. At Auction you score below the line for every trick you have succeeded in making. It is therefore not in your interest to put the bidding up, but at Contract it is very galling to find that you and your partner could safely have bid a game, say Four Spades, or Four Hearts, and have actually made five tricks in it and can score only for two tricks below the line, so you naturally try to bid as many tricks as you hope to get.

The following are the chief differences between Auction and Contract Bridge.

1.—*Rank of Bids.*—At Contract what is known as Majority Bidding is used. That is to say, the bid of a greater number of tricks overcalls the bid of a lesser number irrespective of suit value.

Thus "Three Clubs" overbid "Two No-Trumps"; "Four Clubs" overbid "Three Spades"; "Five Clubs" overbid "Four Hearts," "Four Spades" or "Four No-Trumps," and so on.

Game is won by the side which in one or more hands first scores 100 points for tricks bid and won.

2.—*Partnership.*—For the purposes of determining partnership and deal the cards rank by SUITS and not by pips. Thus Clubs being the lowest suit, any card in Clubs is considered as lower than any card in any other suit. Suppose four players draw: (1) King of Clubs; (2) Two of Hearts; (3) Queen of Spades; and (4) Five of Diamonds, numbers 1 and 4 become partners against numbers 2 and 3.

The drawer of the King of Clubs—the lowest—has the deal and choice of seats and cards.

3.—*Vulnerable Feature.*—The Vulnerable Feature is entirely new. A side is vulnerable when it has won a game. When both sides have won a game, both are vulnerable. Before winning a game neither side is vulnerable.

All points are higher. Game is 100 points. No Slam bonus is scored unless a Slam is bid. Rubber goes to the side first winning two games, but if the rubber is won in three games, viz. both sides winning one game and one side winning two, the rubber counts only 500 points; but if one side wins two games and the other side has not won a game at all the rubber points are 700.

When a side is vulnerable, penalties for under-tricks are higher.

4.—*Table of Scoring.*

| | Not Vulnerable. | | | Vulnerable. | | |
|---|---|---|---|---|---|---|
| | Undbd. | Doubd. | Redbd. | Undbd. | Doubd. | Redbd. |
| Points per trick : | | | | | | |
| No-Trumps . | 35 | 70 | 140 | 35 | 70 | 140 |
| Spades . . | 30 | 60 | 120 | 30 | 60 | 120 |
| Hearts . . | 30 | 60 | 120 | 30 | 60 | 120 |
| Diamonds . | 20 | 40 | 80 | 20 | 40 | 80 |
| Clubs . . | 20 | 40 | 80 | 20 | 40 | 80 |
| Making Contract | Nil | 50 | 100 | Nil | 100 | 200 |
| Overtricks . | 50 | 100 | 200 | 50 | 200 | 400 |
| Bonus for game : | | | | | | |
| For final game of two-game rubber. . | — | — | — | 700 | 700 | 700 |
| For final game of three-game rubber. . | — | — | — | 500 | 500 | 500 |
| Slams (if bid) : | | | | | | |
| Small Slam | 500 | 500 | 500 | 750 | 750 | 750 |
| Grand Slam | 1000 | 1000 | 1000 | 1500 | 1500 | 1500 |
| Honours in One Hand : | | | | | | |
| 4 Aces No-Trumps . | 150 | 150 | 150 | 150 | 150 | 150 |
| 5 Honours of the Trump Suit | 150 | 150 | 150 | 150 | 150 | 150 |
| 4 Honours of the Trump Suit | 100 | 100 | 100 | 100 | 100 | 100 |
| Undertricks : | | | | | | |
| First . . | 50 | 100 | 200 | 100 | 200 | 400 |
| Second . | 50 | 100 | 200 | 200 | 400 | 800 |
| Third . . | 50 | 200 | 400 | 200 | 400 | 800 |
| Fourth . | 50 | 200 | 400 | 200 | 400 | 800 |
| Subsequent . | 50 | 400 | 800 | 200 | 400 | 800 |

5.—*Revoke.*—The revoke penalty at Contract differs from Auction. If the Declarer revokes the opponents can, if they prefer it, take two tricks instead of 250 points above the line. These tricks are scored above the line if Declarer has failed in his contract. When the Declarer is vulnerable it often pays better to take these tricks than to score points for the revoke. The points for the revoke are 250 instead of 100 as at Auction.

When the opponents revoke the Declarer can take two tricks to make good his contract, viz. if he contracts to make Four Tricks in Hearts (a game contract) and fails in his contract by two and opponents revoke he can take two tricks from them, which gives him game and contract. Also if he has bid a Slam and is two tricks short and an opponent revokes, he can take two tricks and score his Slam contract and bonus, but he can never in any circumstances score for more tricks below the line than he has contracted to make. If he has bid Three Hearts and is one short of his contract he can take two tricks from the revoking side and score one to make good his contract below the line, but the other trick must be scored only as an overtrick above the line, or he can score 250 points above the line instead of taking tricks.

6.—*Goulashes.*—Goulash is a term given to a certain feature of Contract which is now very seldom played at London Clubs.

If all players say No Bid, in the ordinary way the hands would be abandoned and a new deal by the next dealer would ensue, but if the players desire to play a Goulash, the cards can be re-dealt by the same dealer in this manner.

Each player, before surrendering his hand, must sort his cards into suits, arranging each card in each suit according to its value. The dealer then places his cards face down on the table and each player in turn, beginning with the player on the right of the dealer, puts his cards face down on the top of them. No shuffling is allowed. The player on the dealer's right cuts the cards and the dealer deals them out, beginning with the player on his left, five at a time to each player and finally three at a time to each player.

This procedure often produces extraordinary results and freakish hands.

## HINTS ON BIDDING.

To succeed at Contract it is necessary to have a definite standard of high card valuation.

The following table of Quick Tricks will be a useful guide.

*Table of Quick Tricks.*

| Honours | Average Values. |
|---|---|
| A, K, Q (or A, K, J) . . . . . | 2½ |
| A, K . . . . . | 2 |
| A, Q, J . . . . . | 2 |
| A, Q, x . . . . . | 1½ |
| A, J, 10 . . . . . | 1½ |
| K, Q, J (or K, Q, 10). . . . . | 1½ |
| A . . . . . | 1 |
| K, Q . . . . . | 1 |
| K, J, 10 (or K, J, x) . . . . . | 1 |
| K, x . . . . . | ½ |
| Q, J, x (or Q, 10, x) . . . . . | ½ |
| Q, x, plus J, x (different suits) . . . | ½ |
| Q, x, plus K, x ( ,, ,, ) . . . | 1 |

1.—*Initial Bid of One of a Suit* should show the possession of at least 2½ quick tricks and not less than four of the suit called.

In choosing between two or more suits, bid first the suit of the greatest length if it contains an Honour. If two suits are of equal length, bid first the higher ranking suit if it be a major suit (Spades or Hearts). If both are minor suits and the lower ranking is headed by A, K, bid that suit. If both are six-card suits, the weaker one may be called, although without an Honour provided the quick tricks are in the hand.

Nine-tenths of original bids are of One.

*Partner's Response to a Bid of One of a Suit.*—After an initial bid of One of a suit and a pass by second hand, partner should say either—

(1) No bid—if he holds a hand containing less than 1½ quick tricks and no sound bid himself.

(2) Bid his own hand if he has a sound call.

(3) Raise his partner's bid to Two—if he holds three of his suit headed by Queen or four small ones and four probable tricks.

(4) Give a jump raise—if he holds a better hand and can invite partner to game.

(5) Take-out into No-Trumps.—A bid of One No-Trump after an initial bid of One of a suit does not indicate necessarily a Game hand. If partner has little or no support in the suit bid but a strong hand otherwise he should take-out into Two No-Trumps unless he has a good suit call. [made on weakness.

It is to be noticed that no take-out should be

2.—*Bid of One No-Trump.*—Minimum requirements for an original bid of One No-Trump (with no sound suit bid) are :

2½ quick-tricks (3 for third and fourth hands) distributed in three suits (if vulnerable, ½ quick-trick more is wiser).

Four probable tricks in all, all suits guarded, or five probable tricks and three suits guarded.

A guarded suit means a suit in which you must make one trick if it is opened by a player on your left. [as a guard.

An exception is that Q, x in one suit is reckoned

*Partner's Response.*—Raise to Two No-Trumps with 2½ quick tricks and no five-card suit bid.

Raise to three No-Trumps with three quick tricks and no five-card suit bid.

Take-out (never on weakness) with average strength to Two of a five-card suit headed by King or Queen Jack.

A take-out in Three of a suit is a forcing bid. With a Two-suiter take-out into each in turn unless partner likes the first one.

3.—*Bid of Two of a Suit on the Forcing System.*—The opening Forcing Bid of Two of a suit requires at least five Honour tricks in three suits, and seven tricks as a whole. May be four cards in suit as partner MUST respond with no intervening bid; the object being to find the best declaration for the two hands for Game or Slam.

Must be headed by A, Q; A, J, 9 or K, Q, 9 (*i.e.* 1½ Honour tricks) or better.

The full value of raises should be made at once, but not take-outs.

(A) Partner raises the suit if he holds normal support in it of Q xx, or x. x. x. x, and one Honour trick. Partner raises Two with normal support and two probable tricks. Partner raises Three with normal support and three probable tricks; one must be an Honour trick.

(B) Without normal trump support he bids Three of a five-card suit headed by King or

Q, J, with half an Honour trick outside, *i.e.* one Honour trick in the hand.

(C) Without normal trump support and without a biddable suit, but with 1½ Honour tricks he bids Three No-Trumps, as this means 6½ Honour tricks in the two hands.

Similarly bid Four No-Trumps with 2½ Honour tricks, and Six No-Trumps with three Honour tricks.

(D) Lacking *A*, *B* and *C* he bids Two No-Trumps, the "minimum response," as this does not increase the contract and the five Honour tricks of the opener should be good for Two No-Trumps generally. Both partners should bid until a Game Contract is reached.

4.—*Bid of Two No-Trumps.*—Minimum requirements for an original bid of Two No-Trumps are:—

Four quick tricks and six probable tricks in all.

All suits guarded and with no suit bid of Two.

Two No-Trumps is not really a forcing bid, though it demands little support from partner for a game bid.

*Partner's Response.*—Bid Three No-Trumps with an Ace and a Jack, or with a King and a Queen.

Take out to Three in a five-card suit headed by Queen plus one sure trick.

Bid Three of a major suit with a poor suit of six cards and nothing else.

Bid Four of a major suit with a good suit of six cards and nothing else.

5.—*Pre-emptive bids of Three or More.*—A bid of Three of a major shows seven probable tricks.

Partner raises with two to three probable tricks.

Four of a major suit shows eight probable tricks.

Five of a major is a Slam invitation and partner raises with one probable trick.

Four of a minor shows eight probable tricks.

Partner raises with two probable tricks.

Five of a minor shows nine probable tricks.

Partner should not count the double value of his quick tricks in supporting a pre-emptive bid.

A Game bid is not a Forcing Bid, as the bidder has bid his limit, nor is it a Stop Bid, but partner should raise to a Slam if he sees it is a practical certainty.

6.—*Bids when Vulnerable by all Four Players.*—Bids when vulnerable affect declarer and his partner whether opponents are vulnerable or not.

Penalties for under-tricks are increased, *e.g.* 300 instead of 100 for two, and 700 instead of 200 for four under-tricks even when undoubled.

Premiums for over-tricks are not increased unless doubled.

Slam premiums are only increased 50 per cent.

So reckless bidding for Game and Slams will not be rewarded by an occasional successfully bid Slam.

Prudence and daring should be shown at the right moments, as it is also a Contract crime to be too cautious.

Generally speaking half a quick trick more is better in bidding when vulnerable.

At any rate the minimum requirements for all bids should be rigidly adhered to, and those for pre-emptive bids of Four increased.

7.—*Slam Bids.*—Slam bid invitations or hopes are made in several different ways.

(1) A bid of more than game, when a Game bid is possible, is a real Slam invitation, and partner should raise One for each quick trick he holds.

(2) A bid of an opponent's suit when partner has not bid, or—

(2*a*) A bid of an opponent's suit when partner has bid, shows support for partner's suit.

Both guarantee that no trick will be lost in the adverse suit.

(3) Original demand bids of Two of a suit when the suit is supported by partner.

(4) Jump bids after partner has opened with a bid of One of a suit.

A Jump bid is a bid of one more than is necessary to overcall partner, but it must be of a different suit. [Jump bid.

Over One No-Trump any suit bid of Three is a

## RULES OF THE AMATEUR BOXING ASSOCIATION.

1.—In all open competitions the ring shall be roped, and not less than 12 ft. or more than 16 ft. square.

2.—Competitors to box in light boots or shoes (without spikes), and in socks, running shorts or drawers, and a vest covering chest and back. Competitors must wear distinguishing colours, such as red or blue sashes round the waist, to be supplied by authorities controlling the meeting.

A Competitor will be excluded from competing unless properly attired. The gloves to be of a Standard weight of eight ounces each.

No Competitor to be accepted for an open Competition under the age of 17.

3.—Weights to be, for Championships Competitions—Fly, not exceeding 8 st.; Bantam, not exceeding 8 st. 6 lbs.; Feather, not exceeding 9 st.; Light, not exceeding 9 st. 9 lbs.; Welter, not exceeding 10 st. 7 lbs.; Middle, not exceeding 11 st. 6 lbs.; Light Heavy, not exceeding 12 st. 7 lbs.; Heavy, any weight. Competitors to weigh on the day of competition in boxing costume, without gloves.

4.—In all open competitions the number of rounds to be contested shall be three. The duration of rounds shall be—Open Competitions: two rounds of three minutes each, and one round of four minutes. Open Novice Competitions: three rounds of two minutes each. Open Intermediate Competitions: two rounds of two minutes and one round of three minutes. In all cases one minute interval between each round must be allowed.

5.—All competitions and contests shall be decided by two judges and a referee, who shall be stationed apart from each other.

In all open competitions, and other competitions where the duration of the rounds is not of equal length, the judges and referee shall award to the better man at the end of each of the first two rounds five marks, and at the end of the third round seven marks, and shall award a lesser number of marks to the other man for each round, according to his merit. In competitions and contests where the duration of the rounds is of equal length, five marks shall be awarded to the better man at the end of each round, and a lesser number to the other man, according to his merit. Such marks shall be put down on the scoring paper.

When the men are equal, the maximum number shall be given to each.

6.—At the end of each bout in a competition the judges' scoring papers shall be collected by an official appointed for that purpose, and, in cases where the two judges agree in deciding a winner, such official shall announce their decision. If the two judges disagree, the official shall so inform the referee, and collect his scoring paper, and, if two of three scoring papers agree in deciding who is a winner, the official shall announce such decision. If two of the three scoring papers do not agree in deciding on a winner, the referee shall order a further round of two minutes.

7.—Marks will be awarded for "attack," as follows:—Direct clean hits with the knuckle part of the glove of either hand, on any part of the front or sides of the head, or body above the belt; and for "defence":—Guarding, slipping, ducking, counter-hitting, or getting away. Where competitors are otherwise equal, the majority of marks shall be given to the one who does most of the leading off, or who displays the better style.

8.—The referee shall have power to disqualify a competitor for any of the following acts:—For hitting below the belt, for hitting with the open glove, the inside or "butt" of the hand, or with wrist or elbow; for striking a competitor when he is down; for holding, butting, shouldering, intentionally falling without receiving a blow, wrestling, or roughing, or for any other act he may deem foul.

9.—In the event of a competitor being down, his opponent shall retire out of distance, and shall not recommence boxing until told to do so by the referee. A man is to be considered down when he is on one foot or both feet, if at the same time any other part of his body is touching the ground. The referee shall not allow a competitor to be down longer than ten seconds.

The referee shall be empowered to stop a round if in his opinion a man is outclassed or unfit to continue.

*Definition of an Amateur.*—1.—An Amateur is one who has never competed for a money prize, staked bet, or declared wager; who has not competed with or against a Professional for any prize (except with the express sanction of the Amateur Boxing Association), and who has never taught, pursued, or assisted in the practice of athletic

exercises as a means of obtaining a livelihood or for pecuniary gain.

*Definition of a Novice.*—A novice is one who has never won a competition, *i.e.* "open to novices," "open to intermediates," or "open to amateurs." The winner of a club "novice" competition, or a competition limited to certain competitors, is eligible to compete in an "open" novice competition, providing he is otherwise eligible.

*Rulings of the Council.*—1.—An "M.C." receiving payment for his services as "Master of the Ceremonies" forfeits his Amateur status.

2.—Under no circumstances can a competitor win more than one "Open Novices" Competition.

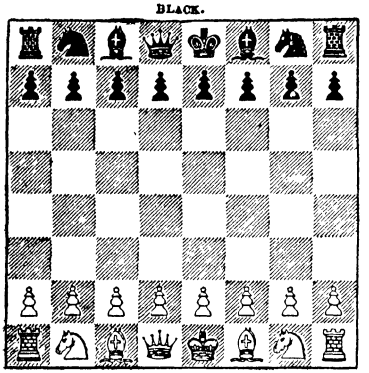
3.—No bandages of any description may be worn on the hands or wrists by competitors in Tournaments held under A.B.A. Rules.

4.—At all competitions held under the Rules of the A.B.A., a programme must be printed, stating value of each prize to be awarded, and all competitors not members of an affiliated Club must be entered thereon as unattached.

5.—Not more than three contests shall be allowed at tournaments held under A.B.A. Rules either by affiliated Clubs or by permit of the Association.

## CHESS

BLACK.



WHITE.

The game of Chess is played by two persons, each having at command a little army of sixteen men, upon a board divided into sixty-four squares, eight on each of the four sides. The squares are usually coloured white and black, or red and white, alternately; and custom has made it an indispensable regulation that the board thall be so placed that each player has a white square at his right-hand corner.

The diagram above represents the board with all the men arranged in proper order for the commencement of a game.

Each player, it will be observed, has eight superior Pieces or officers, and eight minor ones which are called Pawns; and for the purpose of distinction, the Pieces and Pawns of one party are of a different colour to those of the other.

The eight superior Pieces on each side, are—

A King . . . . .  

A Queen . . . . .  

Two Rooks, or Castles . . . .
(as they are indiscriminately called)

Two Bishops . . . . .

Two Knights . . . . .

And each of these Pieces has his Pawn or Foot-soldier . . .

making in all an array of sixteen men on each side.

The white King always stands on a black square, and the black King on a white one. The Pieces on the King's side of the Board are called King's Bishop, King's Knight, King's Rook, etc. The Pieces on the Queen's side are, in like manner, called the Queen's Bishop, Queen's Knight, and Queen's Rook, etc.

*Movement of the Pieces and Pawns.*—A knowledge of the moves peculiar to these several men is so difficult to describe in writing, and so comparatively easy to acquire over the chess-board, from any competent person, that the learner is strongly recommended to avail himself of the latter means when practicable: for the use, however, of those who have no chess-playing acquaintance at command, the subjoined description will, it is hoped, suffice.

*The King.*

The King can move one square only at a time (except in "Castling," which will be explained hereafter), but he can make this move in any direction, forwards, backwards, laterally, or diagonally. He can take any one of the adversary's men which stands on an adjoining square to that he occupies, provided such man is left unprotected, and he has the peculiar privilege of being himself exempt from capture.

*The Queen.*

The Queen is by much the most powerful of the forces. She has the advantage of moving as a Rook, in straight lines, forwards, backwards, and sideways, to the extent of the board in all directions, and as a Bishop, diagonally, with the same range.

*The Rook.*

The Rook, or Castle, is next in power to the Queen. He moves in a straight line, forwards, backwards, or sideways, having a uniform range, on a clear board, of fourteen squares, exclusive of the one he occupies.

*The Bishop.*

The Bishop moves diagonally forwards or backwards, to the extent of the board. It follows, therefore, that he travels throughout the game only on squares of the same colour as the one on which he stands when the game begins, and that each player has a Bishop running on white squares, and one on black squares.

*The Knight.*

The action of the Knight is peculiar, and not easy to describe. He is the only one of the Pieces which has the privilege of leaping over another man. The Knight is the only one of the eight capital Pieces which can be played before the Pawns are moved—his move is one square *in a straight line*, and *one in an oblique direction*. (See diagram.)

*The Pawn.*

The Pawn moves only one square at a time, and that *straight forward*, except in the act of capturing, when it takes one step diagonally to the right or left file on to the square occupied by the man taken, and continues on that file until it captures another man. A power has been conceded to it, however, of going *two steps when first played* in the game, *provided no hostile Pawn commands the first square over which he leaps*. A Pawn is the only one of the forces *which goes out of his direction to capture*, and which has not the advantage of moving backwards.

**Some Technical Terms in use among Chess Players.**

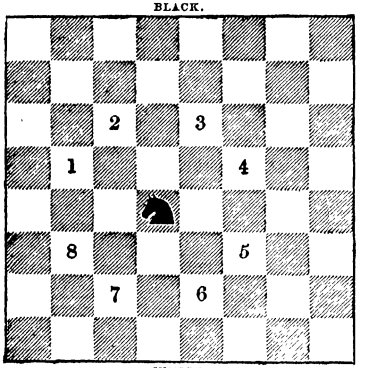
*Castling.*—Although, as a general rule, the move of the King is restricted to one square at a time, he has the privilege, under certain conditions, once in the game, of moving in conjunction with either of the Rooks two squares. This peculiar movement is called *Castling*, and, in this country, it is performed in the following manner:—If a player wishes to castle on his King's side of the board, he moves the King to K. Kt.'s sq., and then places the K.'s Rook on K. B's square. If he castle on the Queen's side, he plays his King to Q. B's sq.,

and Q's Rook to Q's sq. The object of this compound move is generally to place the royal Piece in safety, and at the same time bring the Rook from the corner square into better play.

The conditions under which a player is permitted to castle are :—1. The King must not be in check. 2. The King must not have moved. 3. The Rook must not have moved. 4. The King must not pass over or on to any square attacked by an enemy's man. And 5. There must be no Piece, either of his own or the adversary's, between the King and the Rook.

*Check and Checkmate.*—The King is said to be in *check* when he is attacked by any Piece or Pawn, for it being a fundamental law of chess that the King can never be taken, whenever any direct attack upon him is made, he must be warned of his danger by the cry of *check*, and the player is then compelled either to remove his King *out* of *check*, or parry the check by interposing a man between the King and the attacking Piece, or capture the checking man.

When he can do none of these three things, he is *checkmated*, and the game won by the other side.




The Knight's Move.

*Doubled Pawn.*—When two Pawns of the same colour are on the same file the front one is called a *doubled Pawn*.

*En prise.*—When a Piece or Pawn is in a situation to be taken by the enemy, it is said to be *en prise*. To put a Piece *en prise* is to play it so that it may be captured.

*The Exchange.*—When a Player gains a Rook for a Bishop or a Knight, it is termed *winning the exchange*.

*Gambit.*—This word is derived from an Italian phrase in wrestling, and signifies a movement by which the adversary is tripped up. In chess, this is attempted by the first player putting a Pawn *en prise* of the enemy early in the game, by which he is enabled more rapidly and effectually to develop his superior Pieces. There are several gambits, but the most important, and one which includes many others, is the King's gambit, commenced as follows :—

| WHITE. | BLACK. |
|---|---|
| 1. K. P. to K's 4th. | 1. K. P. to K's 4th. |
| 2. K. B. P. to B's 4th. | 2. P. takes K. B. P. |

There is also the Queen's gambit, of which the opening moves are—

| WHITE. | BLACK. |
|---|---|
| 1. Q. P. to Q's 4th. | 1. Q. P. to Q's 4th. |
| 2. Q. B. P. to B's 4th. | 2. P. takes P. |

*To Interpose.*—When the King is checked, or any valuable Piece in danger from the attack of an enemy, you are said to *interpose* a man when you play it between the attacked and attacking Piece.

*Isolated Pawn.*—A Pawn which stands alone, without the supports and protection of other Pawns, is termed an *isolated* Pawn.

*J'adoube.*—A French expression, signifying "I arrange," or "I replace," which is used by a player when he touches a man merely to adjust its position on the board, without intending to play it.

*Passed Pawn.*—A Pawn is said to be a *passed* one when the adversary has no Pawn to obstruct its march on the same file, or on either of the next files to the right or left.

*To Queen a Pawn, or to advance a Pawn to Queen.*—When a player has contrived to advance a Pawn to the eighth or last square of the file, it assumes the rank and power of a Queen, or any other Piece he chooses, and he is then said to have *queened* his Pawn.

*Stalemate.*—When one party has his King so circumstanced that, not being at the moment in check, he cannot play him without going into check, and at the same time has no other Piece or Pawn to move instead, he is said to be *stalemated*, and the game is considered drawn.

*Taking a Pawn en passant, or in passing.*—The Pawn has the privilege, on being first played in the game, to advance two squares, unless in so doing he pass a square which is attacked by a hostile Pawn; in which case the opponent may, at his option, permit him to make the two steps forward, and there remain, or may capture him in his passage in the same way as if he had moved but one step.

## CONSEQUENCES.

A parlour game, in which the players, seated at tables, write down, without collusion, parts of a brief imaginary social story on indicated lines; each folding down what they write and passing on the paper to the next contributor to continue the narrative, until the sheet on unfolding on completion, contains the work of as many different writers as are playing. The characters introduced may be present in the company or not, as pre-arranged. Ten players are requisite for the following specification of the "Consequences" game, which may be ingeniously varied. First player writes :—An adjectival description of a lady; second, a lady's name; third sets down that the adjectival lady unknown met an adjectival—hazarding the suitable description—gentleman; fourth the name of a gentleman; fifth, the meeting place of the two; sixth, when the meeting occurred; seventh, what the lady said to the gentleman; eighth, his reply; ninth, the Consequences; tenth, what the world said. The composite story might read at the conclusion thus:—(1) The gushing (2) widow Flighty (3) met silly (4) Lord Softhead (5) in the gloaming (6) down a shady lane (7) She said—"Kiss me quick, love" (8) He said—"Does your mother know you're out?" (9) The Consequence was—trouble for two (10) And the world said "Just what we expected." Good fun may be got out of this.

## CRIBBAGE.

Dealer serves out either five or six cards from an entire pack. Two cards are thrown out by each player, but not exposed; then a card is turned up, and this counts with the crib (which belongs to dealer), and also with the hands of the players. In discarding, and in play, the endeavour is to make as many combinations of fifteen, pairs, and runs, as possible; and "flushes" also count, *i.e.*, all the cards held being of one suit. The court cards are valued at ten each for counting, and the rest according to the number of their pips. Sixty-one points is game when two play at five-card "crib"; twice round the board at six cards. There are further points in the game, for which instructions should be obtained.

## DOMINOES.

A game played by two or more persons with "twenty-eight stones," or pieces of oblong bone, ivory, or wood, of uniform size, dyed black, faced in white and dotted with black spots to indicate every possible numerical combination, from double-six to double-blank, a black central dividing line being marked from side to side of each. The game consists in matching and joining one end of the pieces played with one end of another held by the following player, those engaged playing alternately. In the simplest form of domino play, he whose hand of five or seven pieces is first played out wins the round; other games consist of a combination of this and the counting of all the fives and threes formed by the two ends of play to the score of the player who makes them. Each player not only endeavours to facilitate his own scoring, but to frustrate that of his adversary. When one has

played his final piece, he is "domino." Some boxes of dominoes extend up to double-nine.

## DRAUGHTS.

A game played on a board made and marked as for chess (*q.v.*) with twelve black and twelve white discs or "men." One player takes the black "pieces," the other the "white," and places them on the three rows of white squares at his end of the board. In turn each moves a "piece" forward, diagonally, either to left or right, one square at a time, keeping to the white squares only, the object being to capture or hem in the "pieces" of his opponent. Any "piece" advanced to the further row on the antagonistic side of the board becomes a "king," and must be "crowned," when it may be moved by the player backward as well as forward. A "piece" left after a move capturable by an adversary must be taken by the latter, or he is "huffed," *i.e.* he loses the "piece." Capture is effected by leaping over an opposition "man," to a vacant white square beyond, upon the line of march, from the white space immediately in front; but no player can advance by skipping across one of his own "pieces." A continuous series of leaps may be made at one movement, should blank squares admit. Crowning consists of the placing of a surrendered "piece" upon the "man" which has become a king. He who remains in possession of one or more pieces crowned or uncrowned, upon any white square when his opponent's score is exhausted, wins the game.

## "NAP" OR "NAPOLEON."

Five cards dealt singly to each player from full pack. Player or dealer's left "declares" to win what number of tricks he thinks he can—two, three, four, or "Nap" or Napoleon (the whole five) or, with a poor hand, "passes." The next player has the privilege of calling higher and taking the lead in that case, unless he himself be over-called. The first card played by caller constitutes trumps. Should the leader "make" the number of tricks he declares he receives stakes as previously agreed from his opponents; failing he "pays out" accordingly. In a "Nap" declaration the "pay out" for failure is generally single, and for success double, but the arrangement may be varied. With an exceptionally poor hand "Misère" may be called by any player and take precedence of all else (unless another calls three). Here the caller's task is to avoid winning any trick, and forfeit or gain are usually as for three tricks. It is a favourite fast gambling game for small stakes with many card players.

## SOLITAIRE.

Played on a round board with thirty-three holes on its upper surface. In each hole is placed a glass marble. The player takes away any one marble, and moves thereinto any other separated by one from the vacant hole, removing the marble skipped over from the board, as with "men" at draughts; the object being so to take all but one, leaving that in the hole rendered vacant by the first move.

## WHIST.

Accounted the best of all social card games, and is played according to rigorous methods and strict rule by four persons—two in partnership against the other two—and the complete pack. The partners sit at opposite corners of the table; and, the cards having been shuffled and cut for trumps, are dealt out singly until exhausted. The cards are then taken in hand and played out in 13 tricks of four each, the player on the left of the dealer having first lead; and the winner of each trick leading off in the next. Ace is highest card—except in cutting, when it is reckoned lowest—king, queen, and knave rank next in order, and then from ten downwards. The higher card of any suit takes the lower, unless the trick be trumped by a player unable to follow suit; and the tricks are gathered up by one of the pair winning them, as made. Each trick over six taken in a hand by two partners counts one point to them towards the ten which makes game. The holding of "honours"—the ace and court cards of the trump suit—counts towards game, if a preponderance be held by either pair; that is, if the partners between them are dealt three "honours," they score two points, and should they have all four they count four in respect of such holding. "Honours" counting before tricks, a pair of partners holding three or four, having reached a score of eight, may "call" them and win thereby without further delay. It is usual for the holder of two honours at such a point to say to his partner, "Can you one?" Should the answer be "Yes!" the cards are produced and the game triumphantly ended. When the "nine-hole" is reached, "honours" do not count with the players in that position. There are penalties for "revoking," *i.e.* omitting to "follow suit" with a card of that suit in hand, and for other infringements of the elaborate rules of this scientific game, which requires playing with skill, deliberation and perfect understanding between the partners. It is very engrossing, and admits, consequently, of no general conversation. Dummy Whist is resorted to when four players are not available.

## SOLO WHIST.

A game in which the four players act independently, unless there be "proposal" and "acceptance," when the two partners play together against the other two. Play is as at Whist, honours, however, not being counted. The cards are all dealt, in four threes and the final round singly, dealer facing his last card to indicate trumps. The player on dealer's left may then "declare." If he, with a fairly strong hand, thinks he and a partner could make eight tricks, he calls "I propose," and may be accepted by any one of the other players in their turns, when the game proceeds, should there be no higher call. He may, however, call "Solo," which is a declaration that he intends to try to win five tricks against the combined efforts of the other three players. He may go higher and call "*Misère*," which means that he undertakes not to win any trick, and in this call there is no trump suit. He may declare still higher, called "*Abondance*," and, to make it, must win nine tricks, making any suit he chooses to denominate trumps, always providing that a call of *Abondance* on trumps would have precedence of that call in a non-trump suit, and take from him the lead. A very poor hand does not "declare" but "passes"; though the first player to call, having "passed," may accept a proposer, should the other players not do so or make a higher declaration, the declarations ranking from *Abondance* downwards, the lead going by rotation. The stakes are graduated, losers paying out to the other players on failing to achieve their declaration, and receiving upon accomplishing it, with additional winnings per trick exceeding the declaration, and forfeits for each trick declared and not taken, and for winning any trick after calling *Misère*. *Open Misère* is a higher call than *Abondance*, its declarer exposing his hand after the first trick; and *Abondance Déclarée* is the highest call of all—in which he who adventures upon it must take every trick. Double receivings and forfeits obtain in the last two calls, as compared with simple *Misère* and *Abondance* respectively, though there are no under tricks or over tricks to be paid for.

## TABLE TENNIS.

This game, previously known as "Ping-Pong," has increased in popularity and is seriously played by many Lawn Tennis and Badminton devotees. Firm rules have been laid down by the International Table Tennis Federation, amongst which the following are the most important:—

*The Table.*—Rectangular surface of dark colour, 9 ft. long by 5 ft. wide, and supported 2 ft. 6 in. above the floor, and made of 1-in. solid wood. The surface shall be edged with a white line ¾ in. broad.

*The Net.*—Dividing playing surface into two courts of equal size, 4 ft. 6 in. by 2 ft. 6 in., shall be 6 ft. long and 6¾ in. above table level. The outside limits of each post shall be 6 in. outside side lines.

*The Ball.*—Made of celluloid not less than 4½ in. nor more than 4¾ in. circumference, and not less than $\frac{1}{7}$ oz., nor more than $\frac{1}{5}$ oz. in weight.

*The Racket.*—May be of any material, size, shape or weight.

Games are 21 points up. If both sides are level at 20 they continue until one gets 2 points ahead.

Service is changed at every five points.

*Fair Service.*—The ball must first touch the server's court and then, passing over or round the net, touch striker-out's court.

# POULTRY, CAGE BIRDS, ETC.

PEARS—THE PURE SOAP

*For particulars of Pears Famous Toilet Preparations turn to end of Book*

# Pears' Dictionary of Poultry, Pigeons, and Cage Birds

EDITED BY C. A. HOUSE

*Editor of the "Poultry World," Author of "Leghorn Fowls," "Laying Hens," "Bantams, and How to Keep Them," "Amateur Poultry Keeping," "Pigeons, and All About Them," "House's Canary Manual," "Canaries," "Rabbits, and All About Them," "Our Cats, and All About Them," etc.*

## INTRODUCTION

The Great War changed many things, among them the British outlook on the keeping of Poultry. For a couple of centuries at least, English-bred Poultry have been looked upon as the finest and best in the world. That is so far as the breeding of high-class exhibition stock is concerned. Purity of breed, and perfection in quality so far as the properties of the different breeds are concerned, were the points to which British breeders devoted their attention, and in which they led the world.

The British breeders could and did produce birds of the different breeds which commanded prices ranging from £20 to £50, and even from £100 to £200. Arguing from the fact that it cost no more to rear one of these valuable specimens than it did an ordinary laying fowl which was worth no more than 5*s.* to 10*s.*, they said, "Why should we waste our time on such low-priced birds? We can obtain all the eggs that we need for eating from other nations. Let them supply such. We will turn our attention to the more profitable side of Poultry culture, the breeding of the purest and the best."

Poultry culture in England was a very highly specialised art, and English Poultry held a commanding position the world over. English exports of choice Poultry were great, even as our imports of eggs and table Poultry were enormous.

In 1914 came the Great European War. Imports were stopped. Food supplies ceased, and British breeders turned their attention from the breeding of exhibition, or Fancy, Poultry to the common utilitarian practice of egg and Poultry meat production. In doing so they were exploring an unknown avenue. Experience taught them that it was a profitable one. When the war ceased, England's stocks of utility Poultry increased. The demand for home-produced eggs and Poultry meat became greater and greater.

As a consequence, Poultry farms sprang up all over the country; many who had previous to the war been following sedentary occupations became Poultry farmers. In addition, many thousands of cottagers and small-holders turned their attention to the keeping and breeding of Poultry, whilst our general farmers, who had in the past paid little attention to the possibilities of good profits in Poultry, were urged by the National Farmers' Union to study more seriously the economics of Poultry on the farm, and so successfully have many of them done this that they have found that no live-stock on the farm will show a better return than a flock of high-class pedigree utility Poultry.

Not long ago we were privileged to go over a 600-acre farm in Hampshire. A few years since the holder of this farm was attracted by an article he read in one of the Poultry journals, the writer of which spoke of the neglect of a great profit-making proposition by our general farmers, and gave figures showing that a good stock of Poultry would yield more profit than horses, cattle, sheep or any other live-stock on the farm. That article impressed the reader so much that he at once took over from his wife the farm stock of Poultry, and set about testing the truth of the article he had been reading.

One of the first things he discovered was that no proper system of management had been followed by his wife, neither was the stock of the quality it should be. He purchased several hundreds of eggs from a well-known Poultry farmer, and by the aid of a small incubator hatched out a fine lot of chickens. At the end of the season he cleared out all the old stock. In two years he possessed a flock of 3,000 high-class Rhode Island Reds, 2,000 of which were pullets of the first season, and from each of which he had a clear profit of 10*s.* per head.

That this man's experience is not exceptional we have had many convincing proofs, and to-day there are hundreds of thousands more fowls on our general farms than there were in the first and second decades of the present century. Indeed we know of some small farmers who have given up general farming and turned their farms into Poultry farms only.

Much has been done by the Ministry of Agriculture to promote Poultry culture, and under its auspices our County Councils and other educational authorities have also helped in the good work. Yet notwithstanding all that has been done, the fact remains that England still sends out of the country something like twenty-two and a half million pounds a year for foreign eggs and poultry. Our home production has increased and is still increasing, yet over 40 per cent. of the eggs consumed in this country come from abroad. In Denmark and Holland, Poultry culture has reached a very high state and more than a third of the eggs which come from abroad come from these two countries.

From very carefully compiled estimates made by the officers of the Ministry of Agriculture, the value of the eggs produced in this country is greater than the whole of the cereal crop. This alone is an indication of how the production of Poultry in England has increased in the twentieth century. There are those who talk about over production, but we have a long way to go before home production overtakes home consumption, even as it is to-day, but it is gratifying to know that consumption of eggs is increasing beyond the growth of population, and to-day we consume far more eggs per head of the population than we did a few years since. This means that there is a very bright future before the Poultry Industry of Great Britain.

There has been great advance in all branches of Poultry culture. New methods of rearing are being introduced, the most notable of which is what is known as the Battery Brooding System, in which birds are reared in cages, in heated rooms, for the first eight weeks of their life without broody hens or hovers.

This system, together with that of the Commercial Hatchery, promises to completely revolutionise the Poultry Industry, as by it our hatching and rearing will be specialised, and home hatching and rearing will become a thing of the past. This is all in its infancy at present, but progress is being made, and it is possible that in a few years our commercial egg farmers, our general farmers and small-holders will do no hatching or rearing, but will buy all their chickens at an age when they can be put straight on the fields.

At a very moderate estimate every laying hen should produce a profit of 10*s.* per annum at the least, and when flocks are not too large the profit may be increased by 50 per cent. or even more. A young

man with a small amount of capital and unlimited energy may to-day make a good living by running a small commercial egg farm. In making a start, consideration has to be paid to the nature of the land, the quality of the stock, and the proximity of a good market. In selecting land, the chief consideration is dryness. Poor land is better than good. If a man is willing to work, Poultry farming will afford him a healthy and profitable occupation. But we would utter a word of caution. An apprenticeship must be served, or in this, as in any other business, failure will result.

The information given in these pages will help any amateur to make a success of Poultry-keeping by guiding him in the management of his small stud. By careful attention to detail he will soon be able to reach out to higher things and increase his profits.

The Poultry Industry is not only increasing, but it is now recognised as one of the most profitable and important branches of agriculture, and its future is one which promises greater and greater success to those who enter it armed with knowledge, enthusiasm, and determination.

# BREEDS OF POULTRY:

## THEIR POINTS, PECULIARITIES, AND VALUE.

**Anconas** are small, active fowls and non-sitters. The first specimens were brought from Ancona to Britain about 1884. They are of mottled black and white plumage and yellow legs with black spots; single combs; good layers of white eggs in summer, but not remarkable for table qualities.

**Andalusians** are a beautiful Spanish variety of slatey-blue colour, with very attractive dark edging or lacing to the feathers, and much resemble Minorcas in form. They are good layers of white eggs; but are faulty breeders, not more than half the chickens hatched being of the true markings, even when the eggs are from prize birds.

**Asels** are small, heavily-built birds of the best Indian Game type, and they are very pugnacious. They are only moderate layers, being chiefly kept for show purposes.

**Australorps**, a breed of sensational laying fowls which has been developed in Australia by crossing the Black Orpington with the Minorca and Chinese Langshan. First imported into England in 1920, they have since become exceedingly popular.

**Bantams** are kept more for pleasure than profit, and there are many beautiful varieties, both in the game and other sections. They are the result of carefully selected small "sports" of the larger varieties, freaks in reality, encouraged into perpetuation by fanciers. Thus we have Black Rose-comb Bantams, the Black Hamburgh in diminutive; and the Game varieties are also dwarfs of their fully-sized progenitors; the Old English Game Bantam is one of the most popular of these dwarfs; White Rose-combs, Booted (mainly white, though blacks, mottles and spangles have been shown), Plymouth Rock, Scotch Grey, Silver and Gold Spangled, and Pencilled Hamburghs, White, Black, Buff, Blue, Mottled, Silver-Pencilled, and Partridge, Wyandottes, Brahmas, Leghorns, Minorcas, Anconas, Andalusians, Japanese, Nankin, Frizzles, Cochin, generally known as Pekin, and Sebright Bantams, the latter with their pretty lacing on the beautiful gold and silver ground colours. All have their admirers and exhibitors.

**Barnevelders** are a modern fowl built up by crossing Partridge and Gold Wyandottes with the common fowl of the Barnevelder district in Holland. A most useful utility breed for general purposes. They are very handsome birds of black and gold plumage, and lay very large brown eggs. They do not lay so many eggs as the Wyandottes and Leghorns, but make up in weight what they lack in numbers. They are a very hardy breed, and the hens lay well in winter time.

**Brahmas** are a fine breed which attain a good size, but have fallen off considerably in recent years in point of quality. They are large, of erect bearing, and heavily feathered. There are two varieties, light and dark, the light variety being the best. The eggs are large and brown. They are frequent sitters.

**Campines** are a Belgian breed, small, active, non-sitters; they have barred plumage, single combs, and slate-blue legs; are good layers, and useful when young for table purposes. There are two varieties—Silver and Gold, the former being most in favour.

**Cochins.** These are well-known members of the fancy variety, come from China; large, bulky, of low carriage, pronounced cushion, and heavily feathered. There are five varieties—buff, partridge, cuckoo, white, and black. Buff Cochins are the most popular. They are neither good table birds nor good layers, but produce a fair number of eggs in winter, and of large size. They are mostly kept for show.

**Creve-Cœurs**, a black-plumaged French breed, very popular in its own country, but not over well suited to our climate. They have a two-horned comb and large crest. Good layers and table fowls.

**Dominiques**, one of the oldest American breeds, cuckoo marked, rose combs, yellow-legged, hardy, excellent layers, good table-birds.

**Dorkings** are the oldest English breed; square-bodied and deep-breasted; most valuable for table purposes, but not very good layers. Much used for crossing with game to produce table-birds. There are four generally recognised varieties—dark, silver-grey, white, and cuckoo—and several other little-known types, such as the red. The usual weight of a cock is from 7 to 11 pounds, and the flesh of these birds is of excellent quality. The eggs average over two ounces.

**Duckwing**, a class of game fowl, in two distinct varieties, golden and silver-hackled; both are beautiful, and possess all the good table-points of the game breed generally. There are also Duckwing Leghorns.

**Dumpies** are much in favour in Scotland; they have large square bodies and very short legs; the colouring varies. Both good layers and table birds.

**Faverolles** are a French variety. There are three varieties—white, salmon and ermine, the salmon being most generally met with in this country. It is a first-class table breed. Its great claim to recognition is the early maturity of the chicken. It is a good winter layer.

**Frizzles** come from Eastern Asia, and are remarkable for the peculiar backward curl of their feathers. Their plumage is commonly white, but there are also brown and black specimens. They are only moderate layers.

**Game Fowls** are usually poor layers, but capital sitters, and the hens make good mothers. Splendid table-birds, their chief objection is their incorrigible pugnacity, which hardly seems to have abated since the cruel old cock-fighting times. The old English game fowls are largely used for crossing with other breeds, and the Game-Dorking hybrid is about the best early-developing table-bird we have. The leading varieties of Old English Game Fowl are the black-red, brown-red, piles, duckwing, black, white, henny, birchen, and ginger-red. The modern Game Fowl is of little use, except from an exhibition standpoint.

**Hamburghs.** There are five principal varieties —black, silver and gold pencilled, and silver and gold spangled. They have a large rose-comb with long and pointed spike, and large, round white lobes; the legs are a dark slate blue, except in the black, which should be darker, approaching black; they are non-sitters, and fairly popular for show purposes. They are more appreciated for their beauty and activity than for their other qualities, although they are good layers of white eggs. Cuckoo and White Hamburghs are both occasionally met with.

**Henny Game** are a variety in which the cock-birds have straight tails and plumage like the females, and have been bred true for many years in Cumberland, Westmorland, Devonshire, and Cornwall.

**Houdans** are a popular and precocious French

variety, with heavy crest and bib and curious leaf-shaped comb; plumage similar to the Ancona; a good layer of white eggs, and a very useful table-bird; makes a very good cross with Game or with Orpingtons; not very popular for show. The economic merits of this fowl are very great.

**Indian Game,** a huge-boned member of the Asiatic Game family; very heavy, fair layers of buff eggs, most useful for crossing with Dorkings, Orpingtons, and Faverolles to produce table-chickens. Good sitters and excellent nurses. Popular for show.

**Japanese Bantams** are pompous loooking little white birds, with straight black tails, laced with white, and very short yellow legs. In recent years blacks, whites, mottles, greys, and blues have been shown.

**Japanese Long Tails.** A bird somewhat like the old English game fowl, save in the peculiar respect of the tail of the male, which sometimes reaches a yard or more in length. They are somewhat delicate, and quite unfitted for an English utility poultry yard. (*See* Yokohamas.)

**Jersey Giants** are an American bird of great size. They lay fairly well, and make good table-birds. There are blacks and whites.

**Jungle Fowl.** The wild poultry of the Orient, supposed by many to be the originator of all the modern domesticated breeds.

**La Bresse.** A French breed of the highest table quality. There are three varieties, white, grey and black; good layers, but rarely sit.

**La Fleche.** A black French breed, with two-horned comb, famous as a table-bird, remarkable for fineness of flesh, good layers, but seldom sit.

**Lakenfelders** are of Dutch origin, with white body and black hackle and tail; very small, good layers of white eggs; enjoy fair popularity; but are very wild and rather delicate.

**Langshans.** Originally came from a district in China on the Yangtse-Kiang, and have proved a very valuable breed. They have brilliant black plumage; are very good layers of dark-coloured eggs, and are of capital table quality.

**Leghorns.** A rather small, non-sitting, active, Italian breed; very good layers of large white eggs; heavy combs and large white lobes; several varieties—white, brown, buff, blue, black, pile, golden duckwing, silver duckwing, and cuckoo: most of these enjoy considerable popularity for show. As layers the white are quite the best of any fowl known to English breeders. The other colours are more generally kept by exhibitors.

**Malays.** A big-limbed variety of the Asiatic Game family, bred mainly for show purposes.

**Minorcas** are one of the best breed of domestic poultry. Medium sized and of Spanish origin; large single combs and white lobes—very good layers of large white eggs; highly recommended for sheltered runs; very popular for show; white and black, non-sitters. Not of much use as table-birds.

**Modern Game.** Very tall, evolved from the Old English Game, and bred solely for show; very popular, several varieties—black-red, brown-red, pile, duckwing, birchen, white, black, etc. (*See also* **Game Fowls.**)

**Naked Necks.** Curious variety of Transylvanian origin, with necks devoid of feathers; several colours.

**Nankin Bantams.** One of our oldest breeds, and seldom seen nowadays; they are of a cinnamon hue in colour, and are believed to have been the foundation of many other varieties, especially Sebrights and Game.

**Old English Game.** The original type of English fighting game; shapely and handsome; fine fleshed for table, and very valuable for crossing; still very popular for show; several varieties, black-red, brown-red, spangled blue, blue-red, birchen, brassy-back, black, Furness, tassled, crele, henny, etc., with variations in the females.

**Old English Pheasant.** A breed closely connected with the Derbyshire Redcap, and very similar in many ways.

**Orloffs.** A Russian breed; large, very big heads, with beards and muffs, useful for general purposes.

**Orpingtons.** An English breed, and one of the most popular of the day, originated by Mr. William Cook, of Orpington. Lay well in winter, and are very valuable birds, of great size and cobby shape; very hardy, and good layers of brown eggs; capital table-birds; highly recommended. Several varieties—black, buff, white and blue, the latter have become very popular. There are both single and rose-combed Orpingtons, and the former are favourite exhibition birds.

**Plymouth Rocks.** A splendid variety; large, tall, handsome, rich orange-yellow legs, and moderate single comb; splendid layers of brown eggs summer and winter; mature early; are capital sitters and mothers; good table-birds, but yellow skin; very popular for show. Six varieties barred, white, buff, black, golden barred and partridge. The barred and the buff are very popular both as exhibition and utility birds. The partridge is the last to be produced, and promises to become very popular.

**Polish.** A very handsome crested breed, of Continental origin; very popular in France and Holland; good layers and hardy if they can be kept from wet; non-sitters as a rule; chickens rather delicate; several varieties—white, black, silver, gold, white-crested black, buff-laced or chamois, blue-laced, etc.; has curious formation of skull.

**Redcaps.** An English breed of the Hamburgh type, but with very heavy rose-comb, found in Derbyshire and Yorkshire; capital layers of large eggs, winter and summer, pullets soon begin to lay; plumage gold spangled with black.

**Rhode Island Reds.** American, large, long, deep bodies, rich chestnut-red colour; valuable all-round breed; yellow legs; rose and single combs. The Rhode Island White is a more recent introduction, and is becoming popular.

**Scots Greys.** A Scottish variety; barred plumage like a Plymouth Rock, but white legs spotted with black; good layers and table-birds. A fine all-round fowl.

**Sebright Bantams.** Handsome little birds, the type of which was founded by the late Sir John Sebright by first crossing between Polish and Nankin Bantams, to get the lacing of the former and the smallness of the latter, and then with a dwarf of the "henny" game species, to obtain the "henny" hackles and tail of that fowl. Thus the Sebright type was secured, and there are gold and silver sorts, both rose-combed.

**Silkies** are supposed to come from Japan; very small, with white, silky plumage and curious mulberry combs and slightly feathered legs; popular for show, especially among ladies; most useful as sitters and mothers for Bantam chickens or pheasants. Skin very dark. Hardy, and lay cream-coloured eggs. Blacks and golds are now produced.

**Sicilian Buttercups.** An old Italian breed "Ucello di Joire" (flower bird), or "Longhi Sicilian," meaning Sicilian spot. Introduced into America about 1850, but disappeared towards the close of the last century. Interest in them was revived in 1911, and a club formed. English breeders became interested, and in 1913 birds were introduced into England. They are essentially utility birds, being exceptionally good layers. In shape they take after the other Italian breeds, such as Leghorns, Andalusians, Minorcas, and Anconas. In colour the cocks are somewhat similar to Rhode Island Reds, but not quite so dark. A rich bright red is what is required. The hens should be a rich deep golden buff, mottled with black. There is also a black-red variety. The legs should be willow-green. The name comes from the comb, which is altogether different from any other known breed of poultry. It is cup-shaped, with a row of spikes round the cup.

**Spanish,** similar to Minorcas, mostly black-plumaged, with large white hanging faces; once very popular for show, but now only occasionally seen; good layers of large eggs. Like Minorcas again, there are white varieties of Spanish, but they are very uncommon.

**Sultans.** Very beautiful small white breed from Turkey; large crests and bibs, flowing tails, and heavily feathered legs and feet; not very popular, because of the difficulty of keeping them in good plumage. Good layers of large white eggs; small eaters and non-sitters.

**Sumatra Game.** A sprightly black variety of the Eastern Game family; capital layer of white eggs, now becoming popular in England.

**Sussex.** For many years Surrey and Sussex produced fowls of great size with beautiful delicate flesh, they were generally known as Surrey fowls.

At the beginning of the twentieth century they were taken in hand by fanciers and given the name of Sussex, since when they have become the most popular exhibition breed in England, and have made a name for themselves in several other countries. Sussex are long deep-bodied birds with neat combs and wattles, and white legs and feet. They are most excellent table-birds, and the Lights have made a great name as layers. The breed has advanced by leaps and bounds since the conclusion of the Great War. The varieties are lights, reds, speckleds, browns, buffs, and whites.

**Wyandottes.** Next to the Sussex the most popular and widely kept exhibition breed. The Wyandottes, like the Plymouth Rock and the Rhode Island Red, came from America. The varieties known to English fanciers are—white, black, buff, blue, silver-laced, gold-laced, buff-laced, white-laced, blue-laced, violet-laced, barred, partridge, columbian and silver-pencilled. The white is the only one that has been bred to any extent by utility breeders, and in our Laying Competitions it runs the white Leghorn very hard for first place. The Wyandottes have yellow legs, they are all good winter layers, fairly good as table-birds, hardy, and the hens are most excellent mothers.

**Welsummer.** This is the latest addition to the breeds of Poultry, and is one of the most unique. It is the only non-sitting breed which lays a brown egg, and the egg is not only the brownest of the brown, beating the Barnevelder in this respect, but it is also a remarkably large egg. In form the Welsummer is like unto the Barnevelder, but in colouring it resembles the Brown Leghorn, except that the cockerels are marbled, or splashed, on the breast instead of black and the hens are rather deeper in colour, being more like the Continental Partridge Leghorn. The Welsummer is of Dutch origin, it is a good winter layer, and is also a bird which lays well all the year round.

# POULTRY MANAGEMENT IN HEALTH AND DISEASE.

**Accommodation.** The numbers and character of the fowls kept should be suited to the accommodation, as to runs and housing, which can be provided for them. Overcrowding will lead inevitably to fouling of the ground, disease in the birds, and disastrous failure.

**Appliances** for poultry-keeping need never be elaborate, provided they are practicable and utilitarian. Plain and home-made fittments for runs and fowl-houses nearly always answer as well, if contrived with ordinary ingenuity, from the materials convenient to hand, as costly appliances from the hardware manufacturers and poultry appliance devisers whose multitudinous utensils and superfluities are on view at shows and stores.

**Bantam Keeping,** save for the sale of choice exhibition stock, is not a hobby pursued for profit's sake. The midget fowls are much more ornamental than utilitarian, but they are engaging in their habits, and give delight to the children of the family and often to the grown folks too, especially those of the gentler sex. Bantams require little house-room, and cost little to keep; but most sorts can fly high and easily, so that it is prudent to keep their runs wired over or covered somehow. Their eggs should be hatched by themselves or little fowls like Silkies, and selected small corn should be fed to them with canary and other bird seed, milk-sops, boiled rice rolled in dry meal, and cut-up kitchen scraps. Shape and feathering being correct in the many varieties of Bantams, smallness is the thing to achieve, therefore breeding should be from the most diminutive stock. Save for the adaptation of all things to size, no variation need be made in the general treatment of bantams from that which is requisite for larger breeds of poultry.

**Black Breeds** of fowls are well suited for town fanciers, because their plumage is not susceptible to damage by the grime of an urban atmosphere. Here the Minorcas, Leghorns, Orpingtons and Wyandottes of ebony shade command attention; the Langshan is good, too, save for the circumstance that its feathered feet are apt to get clogged and shabby-looking in a limited run range. All the black breeds, except Hamburghs, lay large eggs, and endure close confinement well if properly attended to.

**Bonedust** is a valuable help to the securing of stamina in fowls inclined to leg-weakness. It should be ground from clean dry bones to the consistency of oatmeal, and mixed with the soft meal. If the growing chickens are given fresh-cut green bone there will be few cases of leg-weakness.

**Breeds, Selection of.** If number and size of eggs are the main objectives of the poultry-keeper, the Mediterranean fowls have no superiors, that is to say, those breeds which originated in South European countries and the varieties obtained by crossing them. The leading sorts are the Minorcas, Andalusians, the Leghorns, all long and clean of leg, prolific egg-producers, and comparatively poor table-birds. Other good layers are the Hamburghs, Houdans, Langshans, Wyandottes, Plymouth Rocks, Orpingtons, Game, Brahmas, Cochins, La Flèches, and Polish. Quality of meat is found at its best in the Dorking, Sussex, Game, La Fleche, Crève Coeur, Wyandotte, Orpington, Brahma, Houdan, Polish, and Langshan. Size and weight are afforded in the Dorking, Langshan, Plymouth Rock, Orpington, Crève Coeur, Malay, La Flèche, Cochin, and Brahma breeds; the two latter, however, expend a great deal of their food energy upon feather-production. If hardiness be a chief requisite, all things considered, Leghorns perhaps come first; and in order thereafter Houdans, Wyandottes, Orpingtons, Brahmas, Langshans, Cochins, Minorcas, and Andalusians. For sitting and mothering purposes combined, the approved order in pure breeds may be thus given :—Sussex, Wyandottes, Dorking, Game, Dumpies, Silkies, Brahmas, and Cochins. For all-round purposes, Langshans, Orpingtons, Brahmas, Houdans, and Plymouth Rocks are good; and so are well-selected crosses such as the Langshan-Minorca. If brown-shelled eggs are desired, Cochins, Brahmas, Orpingtons, Rhode Island Reds, Barnevelders, Welsummers, and Wyandottes are well in the running.

**Broody Hens** signify their desire to engage in the natural business of *nidification* by going "on the cluck." Should this be the time when the fowl-keeper desires to commence a sitting, all well and good. Give the birds their complement of eggs in proper nest boxes, placed in a retired position; the hens will do the rest. But if you don't want them to sit, don't drive them about, or put them barbarously into water, or try to starve them to your way of thinking. Get a small coop with a barred bottom and front; stand it on four bricks in a sunny corner. Place the bird in it in full sight of other fowls and feed it well for three or four days. Unable to sit down comfortably it will soon get over its broodiness, and become lively on being restored to liberty, and commence laying again shortly. But every hen of sitting propensity should be permitted to nest now and again, if only for the rest it gives the birds; forcing egg-production and interfering with the laws of Nature too much is harmful.

**Buying Fowls** is an important matter to the small fancier. He should only buy what he really wants and at the time best suited to his own convenience. These matters having been settled, let him, if possible, go, money in pocket, to the stock-yard of a breeder, make his own selection, pay a fair price for the birds he buys, and get them home to the accommodation he has previously provided. Or by watching the advertisements in the poultry papers of the reputable raisers, and communicating with them by letter, he can always get his wants satisfactorily supplied in these competitive days. But he should sedulously avoid unknown advertisers who purport to be underselling the regular breeders. That way swindling lies. The same caution applies to the purchase of egg settings; go always where there is acknowledged reputation

at stake if you want to save yourself loss and vexation, remembering that the best is the cheapest in the long run. It is wise to take advantage of the Deposit System. In this the Editor of the Poultry Journal takes charge of the money for a small fee. Never send money direct to strangers.

**Carriage of Eggs.**—Eggs for transit by post or rail should be sent in light strong boxes. Specially made boxes are readily procurable, with stiff card partitions, but any box of suitable size and rigidity will serve. A good plan is to put an inch of bran at the bottom, wrap each egg loosely in soft paper, place them about an inch apart and an inch from the box sides, filling in all round and covering with bran; then lay a soft sheet of paper down gently before screwing or cording on the lid as the jarring of driving nails is sure to do damage. Mark the box "EGGS," to guard against avoidable delay on journey.

**Chicken Rearing.**—For the first forty-eight hours of their life chickens do not need food. When the chick is hatched the yolk sac is drawn up into the body and absorbed. This is Nature's provision for the sustenance of the chick for the first two days. Experienced poultry keepers and those in a large way of business such as commercial egg farming or exhibition stocks have their own formulas for feeding and vary them according to the breeds and ages of the chicks, but the amateur is not equipped in the same manner and he should use one of the chicken meals or "Dry Chick Feeds" which are placed on the market by the many firms now supplying the needs of poultry keepers. Always buy foods which bear the name of reputable firms, remembering that the best is the cheapest, and pay no heed to the corn chandler who offers you something "just as good," but has not the guarantee of a well-known firm behind it. The old-fashioned methods of feeding hard-boiled egg and bread crumbs have been superseded by chicken meals and "Dry Chick Feed." On the morning after the chicks are hatched they should be given some clean fresh water and a little fine chicken grit, but no food. The first meal given on the second morning should be chicken meal mixed crumbly with a little skim milk if obtainable. All meals must be mixed crumbly. Never give chickens pasty or sloppy food. For the first two or three days feed meal only, then alternate with "Dry Chick Feed," which is a mixture (or should be) of cut wheat, groats, insects, and dried meat. Those feeds which are composed of kibbled wheat, maize, and peas, together with various seeds such as canary, hemp, and millet, are not good for young chicks, because they cannot digest the hard skin of the seeds. For the first fortnight feed every two hours, for the next month every three hours, after that four times a day until they are four months old, when three meals a day will suffice. Little and often is the secret of success in chicken feeding. Never forget that the drinking water should be renewed each time the chickens are fed, that fine flint grit should always be close by, green food finely chopped should also be given, even when the birds are on a grass run. The chicks should be placed in a coop with the hen the night before being first fed, and kept with her until they are six to eight weeks of age. When removed from the hen they should not be allowed to perch for a week or two, but should be bedded on dry straw, leaves, or peat moss. If they roost too early their breast bones are apt to become crooked. Keep them dry at all times. Damp is fatal to chickens. When the cockerels begin to crow they should be separated from the pullets. When the chicks are with the mother a teaspoonful of bone meal may be mixed with the daily supply of meal, afterwards it may be doubled, and a few ounces of fresh cut green bone may be given three times a week from three months onwards. Keep all coops and houses scrupulously clean, provide the birds with plenty of dry ashes, or dry earth, to dust themselves and keep insects away. When the chicks are a week old it is wise to rub their heads and necks and the under-parts of the wings with a mixture of paraffin one part and sweet oil four parts.

**Chilled Eggs,** so rendered by the vagrancy of the sitting hen, a misfortune to which they are liable if the absence of the sitter is more extended than half an hour, or even less in very cold weather, can often be put to rights by immersion in water warmed to one hundred and five degrees or a little over, being kept there until the errant hen has manifested readiness to resume her place on the nest, or some substitute has been secured. Many an unhatched chicken's life has thus been saved.

**Cleanliness** is absolutely necessary to success in poultry management. The fowl-house need not be ornate, but it must always be sweet and clean, the run dry and free from excreta and refuse, the food troughs and water-vessels rinsed spick and span daily, the perches clear of dirt and verminous insects, the nest boxes whitewashed and the nests frequently renewed, and the birds provided with a dust bath without the regular use of which they cannot be comfortable.

**Cockerels** must be either killed off, sold, or provided for separately when they begin to give trouble. They may run together in little flocks, divided from the pullets.

**Coops** may be of varied form, but they should never be too small, and always rain proof, free from draughts and dry as to the flooring, being slightly raised above the ground, ventilated towards the top, and fitted with a sliding front to give complete protection in bad weather. Also they must be constantly sweet and clean, whitewashed and disinfected within, and placed, if possible, on a sunny grass plot, sheltered from wind, with a sloping board running up to a broadish sill in front of the bars; the slope to afford easy access to the sill on which the food for the little ones is scattered in their early days, and where the fresh water for their drinking is placed in a simple fountain. These are the only essentials.

**Crop-bound** may be a distressing condition in a fowl arising from the swallowing of a bone or some other hard and indigestible substance, giving rise to obstruction. It is more an accident than a disease, and may need a simple operation for its relief. First try pouring warm water down the sufferer's throat, with patient and continuous kneading of the crop. If this does not afford the requisite relief, make a careful incision near the top of the crop about an inch long, and remove the contents gently with a small spoon, stitching up the wound nicely with a glover's needle and horse-hair thereafter, the stitching of the outer skin crossing that securing the inner membrane.

**Cross-Bred Fowls** may be well worth keeping if the crossing be accomplished intelligently, the sorts and the individuals being properly selected for a given purpose. One good cross producing hardy offspring is the Houdan-Minorca. The pullets lay good-sized white eggs prolifically all through the winter. The Houdan-Leghorn cross is also satisfactory. The Langshan-Minorca cross gives a capital combination of white, juicy meat for the table and big brown eggs for the basket. A Dorking cock run with half-bred Indian game pullets will produce immense and fleshy poultry, mainly white-legged. The Houdan-Dorking is a fine table cross, too, white of skin and flesh, the pullets laying white eggs. Orpington pullets, themselves good layers, mated with a Houdan cockerel, will give chicks which mature quickly and make fine winter egg producers. The great thing in crossing is always to get a good pure-bred male bird to mate with pullets of an ascertained utilitarian strain.

## DISEASES OF POULTRY.

Poultry are liable to many ailments, more or less serious. The principal diseases which trouble the poultry-keeper and his stock are grouped together alphabetically here for convenience, with brief directions for treatment.

**Abortion.**—If a hen gets dropping her eggs about, often shell-less, and moves continually, fasten her up awhile alone in a pen with a nest in the corner, give her soft food and a little bi-carbonate of soda in her drinking water. She may have been chased about by a spiteful "gamey" hen, or persecuted by one of the opposite sex. Remove the culprit.

**Apoplexy.**—Cause: over-feeding and excitement effect generally swift fatality. Sometimes a cure may be possible if bleeding from the vein

under the wing be promptly practised, with jalap and salts aperient, quietude, and spare diet to follow for awhile.

**Black Rot.**—Symptoms: blackening of the comb, feet and leg swelling, emaciation. Treatment: purge and give warm stimulant food, rubbing carbolised vaseline into comb and legs.

**Bronchitis** is differentiated from an ordinary cold by coughing. Isolate, put nitric acid sparingly into the water, sweetening slightly with glycerine. Cayenne and ginger in the soft food.

**Bumblefoot.**—Not uncommon in heavy fowls, and arises from a growth under the ball of the foot. Cut away carefully, and if suppurating, dress with antiseptic after cleansing, binding to exclude dirt.

**Canker.**—Symptoms: ulceration about head and ears, with discharge from the eyes, watering first, then thicker and fœtid. Fluid carbolate, with lead lotion ointment, may effect a cure.

**Catarrh**, or common cold, may be prevented from developing into the dreaded Roup by early isolation in a sheltered corner; two or three drops of tincture of aconite and soft warm food.

**Cholera.**—Chicken cholera is a deadly disease, commencing with a greenish discharge, becoming later white and watery, and accompanied by excessive thirst. Isolate in the shade, disinfect the water trough and replenish often with clean and quite cold water, giving fresh green food and small doses of cholera mixture from the chemist's.

**Comb Diseases.**—Black rot, chiefly attacking Spanish fowls, has been noticed; White comb troubles Cochins mainly, and is characterised by white spots which extend to the neck, causing feather-shedding. Treat as for Black Rot, save that a lotion of turmeric and cocoa-nut oil is sometimes serviceable.

**Consumption**, or "going light," is a wasting disease, which can rarely be arrested; but hypophosphates in the food and cod-liver oil in the meal or with quinine in capsules may overcome the tendency if treatment be commenced early enough.

**Cramp** is caused by exposure to damp or running over saturated ground. Remove the fowl to a dry warm house, with boarded floor, strawed or moss-littered, plunging the legs first into warm mustard and water for a few minutes, drying well. This may be repeated occasionally until improvement is shown. The legs may also be rubbed with a stimulating embrocation.

**Crop.**—Soft or Swollen. Usual cause, overdrinking from morbid thirst. Isolate; feed sparingly with soft food containing stimulant spice, and give a very little water after meals with nitric acid in weak solution.

**Debility.**—Raw eggs down the throat two or three times a day, cooked lean meat, chemical food, cod-liver oil, a teaspoonful twice a day; such generous treatment may save the life of a costly bird; others so affected should be destroyed.

**Diphtheria** is a form of canker with internal ulceration. Isolate at once, give an aperient, feed on unpeppered soft food, dress the interior sores with a camel-hair brush dipped in carbolic and sulphurous acid or in iron tincture and glycerine, and dust the exterior ulcers, after cleansing, with iodoform. A little brandy in the food may help; but it is only worth while taking this trouble with very valuable fowls.

**Dysentery** is something worse than diarrhœa, and not so bad as cholera, and should be treated similarly, but a little less vigorously, than the latter.

**Elephantiasis** attacks the fowls with large and coarse scales on the shanks chiefly, and may be contributed to by sudden exposure to very cold wet. It takes the form of unsightly scurf and encrustation of legs and feet, and is very contagious. Curable only in the onset stage, the treatment is carbolised oil or glycerine ointment, after scrubbing with soap and tepid water, with weak sugar of lead as a last resort.

**Eruptions** usually arise from confinement and uncleanliness; correct the uncleanliness, give plenty of green food, especially chopped dandelions, put powdered sulphur in the soft food, and dress the affected parts with carbolised vaseline. Constant scratching of the head is a symptom.

**Fits.**—Try dripping cold water over the fowl's head from the tap, or bleed under the wing.

**Gapes.**—Cause: worms in the windpipe, a frequently fatal ailment of small chickens. Pl camphor in the water; strip a small quill feather, moisten it with turpentine, introduce it into the trachea, and withdraw it with the worms adherent, which destroy. Patience may succeed. There are generally ticks on the heads of chickens with the gapes; destroy these with mercurial ointment.

**Giddiness**, like fits, may be incipient apoplexy. It is manifested by the chick or fowl running dazed as in a circle; treat as advised for fits.

**Gout.**—Swollen and inflamed feet and legs indicate gout. Keep the bird dry, feed up with green-meat, give an aperient, and a half-grain colchicum extract pill twice daily.

**Indigestion.**—See the grit-box is well supplied; this complaint usually arises because the gizzard is not working right. Feed moderately on soft food, with a very little lean meat, and give half a pill of rhubarb occasionally.

**Inflammation of Rump.**—This usually occurs in the gland above the tail where the secretion which fowls use for keeping their feathers sheeny is stored. Open with needle, squeeze out suppurating matter, and foment with warm water, afterwards cleansing with antiseptic solution. Repeat if necessary.

**Leg Weakness.**—When young birds, especially of heavy breed, outgrow their strength, and squat about on their hocks, bandy legs or knock-knee may result, quite spoiling the bird's appearance. Generally there has been improper feeding. Put some bone-meal in the food of the cockerels and pullets, and give them plenty of barley-meal and sound corn, with cod-liver oil and chemical food, and a little lean meat. Also let there be plenty of old lime rubbish and crushed oyster shell within the reach of the birds.

**Liver Disease** arises from over-stimulation, confinement, and damp, and is most frequent in the larger Asiatic breeds of poultry. It is hereditary, and birds known to be tuberculous or torpid of liver should never be bred from. Green food and careful dietary may ward it off in early stages, but if the liver complaint has got well hold, as indicated by consistently yellow droppings, kill off the sufferer.

**Peritonitis** may be suspected when a hen, in full lay, with a bright red comb, manifests pain and distress. It is inflammation of the abdominal lining membrane, produced perhaps by over-stimulation of the ovaries. Sometimes holding the hen in a covered basket over steam may do good.

**Pneumonia.**—The bronchial cough, with very difficult breathing and gasping, often attacks chicks artificially hatched on their emergency from an over-heated "foster-mother" to the air. Rub turpentine into the feathers under the shoulders, bring the little invalid into the warm, feed on milk and bread; give a little antimoniac or ipecacuanha wine from a teaspoon.

**Rheumatism.**—Almost, save for joint swelling, like cramp, and needs similar treatment.

**Roup** occasions more mortality in the poultry yard than all other ailments combined. It culminates from a common cold, and is highly contagious. A bird attacked with the eye and nostril running, characteristic of this disease, must be shut away from the rest at once, and everything it has been in contact with disinfected. If the roup rattle in the throat has begun before detection, there will be small chance of saving the patient. Pellets of meal with pepper in them may be forced down its throat two or three times a day to keep it from sinking, and a little tincture of aconite given in small pilules. Give a jalap aperient, and put camphor in the drinking water. Persevere for a little while, if it be a good bird, but your chance is small.

**Ulceration** about the vent, in hens, may be treated alternately with white precipitate ointment, and carbolised vaseline. They should be kept apart.

**Worms** in the intestines irritate and put fowls out of health. They should be eradicated by turpentine pills or santonin, followed by an aperient. Neglect of treatment may lead to serious results.

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**Disinfectants** are frequently requisite in poultry, and carbolic acid in solution and carbolic powder are very valuable for sweetening the houses and runs, and for cleansing and rinsing the utensils,

especially when there has been roup or any other contagious ailment in evidence. A little should always be used in the whitewash.

**Dust Bath.**—The fowl's way of cleansing is to roll in the dust. Let them, therefore, have plenty, clean and dry, a good depth of it where the sun comes but the rain does not, with a lot of fine ashes in it, and some black sulphur. Clear the lot away occasionally and renew.

**Egg-bound.**—Generally an aperient will rectify this, but chopped groundsel rolled in butter is recommended by some; and an olive oil injection, or the passing of an oiled feather (sweet or linseed oil will serve) up the vent and round the egg will often be found helpful. The holding of the bird over a bowl of hot water for five or ten minutes will give relief, and cause the egg to drop. The bowl should be covered with muslin.

**Egg-Eating.**—This is a vice on the hen's part, contributed to by her keeper. It generally arises from the absence of shell-forming material in the run. The hens peck to the shells of the eggs they lay to get the material for forming more shell which instinct tells them they ought to have, and this gives them a depraved taste for the egg which is difficult to eradicate. One hen also sets the others a bad example, and soon many eggs are devoured. Plenty of old mortar rubbish and cracked-up oyster shell should be provided for the hens to pick at in confinement. Then a blown egg or two filled with mixed mustard or a few very rotten ones, should be laid about, to disgust the delinquents, who break them to satisfy their unnatural craving.

**Eggs,** either for eating or incubation, should be kept with the large end downward stood in holes in a board. This preserves freshness and vitality longer than lying them in bran or keeping the small end down. For long keeping some grease or wax the eggs, some store in lime-water or in a paste made from quicklime, some pack in dry salt, some in bran, some bury in an air-tight box, but nothing is better than steeping them in a solution of silica or "water-glass" as soon after laying as possible, and keeping in a cool, dry cellar, where the frost cannot come. Don't try to retain hens for laying purposes after two and a-half years old; an odd bird or two may keep in profit longer, but it will be the exception rather than the rule. Fat-forming meals should be largely eschewed when egg-production is the principal object; a warm breakfast is good on very cold mornings and it should mainly consist of cooked and easily assimilable food, and fresh bones and meal help the egg yield.

**Enemies of Poultry.**—Keep the cats away by wiring, and exclude rats by a good deep concrete, else you will lose birds and eggs in a very disheartening way; mice will nibble your nest boxes and get at any food left about—and there never should be any left about—otherwise the smaller rodents do little harm. Insects are pestilent little enemies of fowls; but they can be circumvented by cleanliness and constant care.

**Fancy Poultry.**—Bantams, already dealt with, come under this head; so do all such as are reared and kept more for show than utility; some of the newer breeds of this order may have passing mention. Buff Orpingtons were raised from much crossing at Orpington by the Cooks with an utilitarian end in view; but the rearers of Buff Plymouth Rocks, and Buff and Buff-laced Wyandottes, also Partridge Wyandottes, White Plymouth Rocks, and White Indian Game, appear mainly to have been aiming at novelty and pure "fancy." Anconas were "fancy" to begin with, but their egg-producing prolificacy rescued them from the merely ornamental state. Silkies are fine sitters, but count more in the beauty category than for practical usefulness, and the Japanese Long Tails are quite bizarre, and belong to the aviaries of the moneyed fancier, as also do the various Frizzled Fowls, Naked Necks, Sultans, Ptarmigans, Rumpless Fowls (or "Cock of the Woods") from Persia and Ceylon, and certain other poultry curiosities which have their admirers amongst the wealthy.

**Fattening** for market is a process carried to a great length by the "crammers" and "caponisers" of the Continent, and at certain British establishments of a specialistic sort; but less extensive poultry raisers find it answers to go some distance in the same direction for profit's sake. The principle striven for is after growth has been attained to give seclusion and rest from everything else but the business of plumping out. The birds are confined in semi-darkness and tempted by stimulant food to eat as much as can be got down their throats. Ground buckwheat, crushed oats, maize meal, etc., form the staple dietary with the addition of suet and other fats, moistening with milk. The fattening of Poultry is largely followed in the Heathfield district.

**Feather-Eating** is a pernicious habit in some fowls that have been fed on heating and stimulant food and kept closely confined. Laziness from repletion and lack of health-promoting activity often starts it, and when a bird in a batch begins the practice, others retaliate, until the whole pen presents a sorry spectacle. Change the dietary, give abundance of green food; put short straw or moss litter on the floor and bury their corn to make the birds scratch for a living; this will give them something better to do than stripping off their own feathers and those of their miserable companions. Also hang up the green food in bunches on a string and make them jump up to get it. If this fails to cure them, wring their necks. Feather plucking is easily cured if the bird which does it is looked for and when discovered is surgically treated by having the curved tip of her upper mandible clipped. This will not interfere with her feeding, but it will prevent her from getting a grip on the feather.

**Feathers** are of some economic value in fowl-keeping if carefully kept and properly cured by baking and drying. They are not nearly so good for bed-stuffing as the downy breast feathers of the goose, of course; but well selected, and the larger ones stripped, they come in well for pillows, bolsters, and cushion making.

**Feeding of Poultry** requires proper consideration and systematic regulation. Over-feeding—save for fattening previous to slaughter—is distinctly bad and disease-inviting; whilst mal-nutrition, or the giving of improper food, is only less harmful in degree. The dietary should be wholesome, varied, sufficient; and no more. In dealing with chicken-raising we have indicated the best practice as regards immaturity. For grown fowls with a free range two meals a day will be enough; one in the early morning when they are let out of the house, and the other in the evening before going to roost. These will pick up green food and much supplementary aliment during the hours of roving. The first meal should be a warm mash composed of middlings, bran, and ground oats in equal quantities with ten per cent. of meat or fish meal, these may be alternated; the evening meal should be wheat or oats, which may be given on alternate nights. Where only a small household flock is kept in a confined run the early morning meal should be a mash composed of household scraps, middlings and bran. A handful or two of corn should be given at midday. Green food such as cut grass, cabbage, lettuce, garden refuse and weeds should be given every day. Loose leaves may be placed in an open string net and suspended from the roof, whole cabbages and lettuce may be suspended in like manner just out of reach of the birds so that they may jump for it and thus get exercise. Last thing, a feed of good sound grain should be supplied. As to quantity, as much as the fowls will eat greedily is a good standard to go by, always rather leaving them a little hungry than allowing anything unconsumed to lie about. They want less when not laying than when in the swing of egg-production. Half-a-pint of grain a day should suffice for half-a-dozen healthy adult birds. Of grain, good hard wheat stands first in value; oats next. Indian corn should be given but sparingly; it is too heating, except where birds have free range.

**Fractures** of the shanks in fowls are easily set by replacing the broken bone in position and securing with splints formed of folds of porous brown paper saturated in white of egg. Other bone fractures sustained by fowls are very difficult to mend because of the restless disposition of the birds, but bandaging may be attempted with valuable fowls which have met with an accident of this painful character.

**Frost Bite** may be prevented in severe weather by well oiling the combs and wattles of the birds, or rubbing in vaseline, so as to prevent the

adhesion and freezing of water after the act of drinking.

**Grass Runs** are grand things for fowls if sufficiently large enough to retain their greenery on constant usage, but otherwise they are better not attempted, for a befouled patch from which the grass has been nearly scratched and trampled away is unsightly and injurious. A small plot of grass, kept closely cut, is very good for young chickens; but for the older birds the grass range should be very extensive to be of practical service.

**Green Food.**—"Plenty of it" is the order for the would-be successful poultry-keeper to observe. Growing greenery, picked and pecked by the birds ranging at will, is best; next best, the fresh cuttings of the lawn, short and sweet, and not thrown into the runs in such profusion as to be left lying to rot. Cut up lettuce leaves, cabbage leaves, dandelions, cress, and anything else fresh and assimilable should be supplied to the extent the birds will eat it up clean. Don't permit cabbage stalks and mid-ribs to stay in the run to decay and render the place unwholesome.

**Grit** is indispensable to fowls in captivity. It forms their teeth, without which their food cannot be properly digested in the gizzard. The grit must be hard, angular, and sharp to be of full service, and nothing equals flint broken up small. Smooth gravel is of little service.

**Hens**, as a rule, should be killed off at the end of their second laying season, when the first sign of the moult appears. Their best laying days are then over, and they will henceforth, if allowed to live, deteriorate for table purposes.

**Houses** for fowls should be so designed and built as to give the requisite accommodation for the poultry intended to be kept. They need not be costly or ornate. The simpler and better constructed they are the more satisfactory they will prove. Suit the size of the house to your requirements, let it face the south-east if possible, and let it be wet-proof and wind-proof, the floor elevated from the ground, with a hen ladder giving access from the run to a little closable entrance door at the front, and let there be a big door at the back to facilitate cleaning. Put your perches on one level well below the essential ventilation holes towards the top of the house, and light it by a small window either at the north side over the door, or in any other convenient position. Both light and fresh air are wanted if you would keep your birds in health. If you "go in" for Brahmas, Cochins or Orpingtons, you will need only very low broad perches, and you must have plenty of clean straw or moss litter on the floor; if with dry sand, ashes or lime dust amongst it all the better. If the floor be raised and boarded, a layer of concrete or asphalt upon it will be good for securing dryness and excluding vermin; and this will be even more necessary should the house bottom be the ground.

**Incubating—Artificial.**—This is a process rendered fairly easy to all poultry-farmers, female as well as male, who have at command a dry and airy room and any one of the many makes of incubator manufactured by reliable firms. The best—size and extent of course being a governing condition—are those which are at once the costliest and cheapest, an imperfect incubator "is dear at a gift." The capacity of the incubator should be such as its possessor may have accommodation for the produce of; and its working will require the unremitting attention of the person in charge. It should stand on a firm table in a well-ventilated position where there is no draught, and the heating apparatus be regulated to maintain a steady temperature of from 102 to 104 degrees, whilst the provision for airing, turning and moistening the eggs must leave nothing to be desired. Study of the directions given with the incubator and practical experience of its working can alone make its management a success. An Artificial Foster Mother, or Rearer, will be requisite to receive the chicks after hatching, this being a portable construction containing a glass-covered run and a wired-in run in front of a chamber into which the chickens can come and go, as they will, such chamber being kept at a uniform heat of 60 to 90 degrees, according to the outside weather, and the whole concern being readily cleanable. The "Foster Mother," of which there are numerous satisfactory makes in the market, must be placed in an apartment the air of which can gradually by full and free ventilation be brought to coincide with that out of doors, so as to obviate chill when the chicks have to be transferred to the open. The feeding of the youngsters should be similar to that recommended for hen-hatched chicks.

**Infertile Eggs** can be detected readily by the fifth or sixth day of incubation, and even earlier, by experienced persons by holding up to a strong light; if they then look perfectly clear they should be withdrawn from the nest or incubator and used for culinary purposes. Should too many hens be running with one male, or the cock bird be lacking in virility, this will occur, and it is obviously useless to waste time over trying to hatch eggs which are infertile.

**Iron** is useful in the drinking water of fowls in cold or wet weather, giving "tone" to the birds. A teaspoonful of the tincture of steel is very serviceable.

**Killing Poultry** should be swiftly and humanely accomplished. Tie the legs quickly and firmly, and dislocate the neck with a quick wrench of the wrist of the right hand, the neck being grasped tightly by the left; or chop the head clean off at one blow with a sharp chopper, the neck being laid on a solid block. Either of these plans is better and quicker than severing the jugular or penetrating the brain through the mouth with a knife. Some strike the fowl smartly and heavily on the back of the head with a stout stick or block of wood, and if this be done deftly instant insensibility and death will be the result. Hang the bird up by the feet for the blood to drain downwards.

**Lime** is essential to the welfare of fowls, and for the formation of the shells of their eggs. It should therefore always be provided in some form in the runs, and crushed oyster shell is a ready means of its supply. Lime that has not lost its "quickness" by use and exposure is apt to yellow the plumage of white-feathered birds, if laid about profusely or employed too freely as a component of the dust bath.

**Mating** should be arranged as to number of hens allowed to run with one male, according to the breed. The Houdan is particularly active, and the lighter classes, such as the Hamburghs, Minorcas, Leghorns, and Wyandottes, can have more hens in the pens than the heavier birds like Brahmas, Cochins, Dorkings, Langshans, Orpingtons, etc., without prejudice to the fertility of the eggs. In this particular, season makes a difference too, the eggs laid very early not being so certain to bring forth chicks on setting as those produced in the spring and summer. Speaking generally the light, or laying breeds may run one cockerel to eight or ten hens, the heavier breeds six or seven.

**Moulting** is a "ticklish" time with most fowls, though a perfectly natural condition. Everything proper should be done to help the birds over the moult. Those with the most vitality get through the feather-shedding and renewal the quickest. Old birds are long shabby; they should be got rid of altogether. Hens slow of moulting through being "run down" by heavy laying should be placed apart, given specially generous feeding treatment, and supplied also with a suitable tonic, such as iron in the drinking water.

**Nests and Nest Protection.**—Nests, generally speaking, are best in their natural position, on the ground, whence the eggs derive the necessary moisture. A little soft straw, confined between two bricks, in a secluded corner where the rain cannot come to the sitting bird, is all that is really requisite. Fern leaves are good nest material, insects do not seem to relish the smell of them. Whether for incubation or for mere egg-laying, the nest-boxes, if such there be, should be placed in privacy, but yet readily getatable by the owner or attendant, well-ventilated, and scrupulously clean. If of wood, scour and whitewash them frequently, and renew the bedding often. By no means have them exposed to cold, though airy; but let the position be such as to protect against wind and frost, so that the eggs of a sitting hen may not be chilled unduly in winter, or very early spring time, when she gets off for food and exercise. Never let broody hens sit in the laying house, place them in some other building.

**Oyster Shells**, smashed up well, are capital for laying fowls, for the lime in them is good for the birds and the eggs they lay, while the harder and

less soluble portions help the gizzard to grind the food.

**Parasites of Poultry.**—Lice will swarm on the birds, their perches, nest-boxes, and the houses they inhabit if cleanliness be not observed by the poultry-keeper and the proper dust-bath be not provided. But if there be regular and thorough cleaning out, and whitewashing of the whole interior arrangement at least twice yearly with good hot lime in which sulphate of iron or even paraffin is mixed, with occasional spraying about of dilute carbolic acid, or dusting with some good disinfectant powder, there will be little trouble from lice or any other vermin. The dust-bath should be sifted and renewed frequently, and sulphur may be scattered over it occasionally.

**Peat Moss Litter** is an invaluable material for strewing thickly over the floors of fowl-houses, so long as it can be kept dry. If permitted to become saturated with damp it is dangerous. It should be crumbled down fine, and frequently stirred or raked about; and then acts as an absorbent and deodoriser.

**Perches** ought to be wide enough to afford support to the breastbone of the bird, a good height in the house and out of a draught, with none above any other—else there will be warfare for the highest vantage point—and free from cracks or interstices in which lice may lurk.

**Plucking.** Poultry should always be plucked directly after killing, when the bird's body is still warm, as the feathers come away much more easily than later.

**Poultry Points.**—A few technical terms used in the poultry "fancy" may be explained. Deaf ears are the ear-lobes or skinny folds hanging below the true ear. Gills or wattles, the red pendent structures at each side of the beak. The narrow neck feathers, found also on the saddles of the cock-bird, are called "hackles." "Pea-comb," a triple comb, like three in one, the central part the taller of the three. Pencilling, small striped markings across or down the feathers. Saddle, the part of the back nearest the tail in cock-birds; usually called the cushion in the hen. Shank, the scaly portion of the leg. Sickles, the upper feathers of the tail covert in the male birds, often long and gracefully curved. Top-knot, or crest, the crown feathering of birds like the Polish, Crêve Cœur, and Houdan. Vulture-hock, projecting feathers on the hock-joint, as in the Brahma. Wing-bar, a line of contrasting colour across the middle of the wing, caused by the variant marking of the lower coverts. Wing-bow, the shoulder of the wing.

**Profitable Poultry.**—Poultry, properly selected, managed and cared for systematically, according to the counsel given throughout this section, will be profitable. Where all the food has to be purchased, if it be bought in the best market and none of it wasted, the keep of a hen will come to about nine shillings a year. If she be well chosen and dealt with as we have endeavoured to direct, she should average 180 eggs a twelvemonth for the two years of her full laying life. There is a fair good profit on the eggs alone here; and she and her fellow hens should pay for the keep of themselves and the cock easily. For sale or home consumption when she goes out of profit, she should be worth as much as she cost up to the time of laying her first eggs. Haphazard poultry keeping, inattention, and, above all, the stocking of unsuitable birds and their retention in the yard beyond the proper period will most certainly result in loss.

**Pullets, care of.**—The term "pullet" is not properly applicable to a young hen fowl after the end of the year in which she was hatched, but it is generally so called during the early months of the year following. The young birds should be quartered apart from the cockerels when the pullets' combs commence to redden and the cockerels begin to crow, and given plenty of grit and oyster shell as well as green food. If they are over-precocious and lay their first eggs as early as five months old, as some pullets will, they may advantageously be kept back a bit by transference to another run. Let the development of all the organs be complete before mating up and encouragement to full laying. Only the best and most promising pullets should be selected for stock, the rest being fatted and killed for the table or otherwise disposed of.

**Roosting** should not be encouraged in chickens till they are about four months old or three months for light breeds, that is, on the regulation perches. It is far better for them to squat in the straw or moss litter on the fowl-house floor, away from the perches overhead, or a smooth, broad shelf may be fixed for their benefit about a foot high, and parallel with the perches, on the warmest side of the house. Sprinkle this with sand and ashes, and strew broken straw upon it, with more dust on the top of it to prevent the adhesion of droppings to the plumage, and frequently sweep the board clean.

**Runs** should be as large as there is space at command for, covered in by a water-tight roof at the top if possible, and constructed with an open-wired front and a wind-proof back and end, either of boards or brick. The wiring should be stout, wide-meshed from about 2 or 3 feet high, finer below, and 6 feet high, to permit of walking about in and cleaning with facility. Have it in a dry place, facing west or south, to afford shelter from the more trying cold winds, and let the floor be of gravel or sifted ashes, laid thickly on the natural ground. Give access by a wired door, preferably close to the front of the fowl-house, where the birds enter through their own sliding door. This applies particularly to town and suburban poultry keeping.

**Setting.** Secure and select the best eggs obtainable. The trouble entailed in hatching and rearing a poor bird is as great as the best requires, so that the first cost of the egg is by no means the only consideration. Get the most reliable eggs you can for the purpose you have in view in breeding. Let the shape, if you personally select, be perfect, and the size normal, according to the standard of the breed. The number of eggs should vary according to the size of the hen, a large bird like a Cochin can cover thirteen easily, a smaller fowl will find difficulty with less; and fewer ought to make a clutch in cold weather than warm; nine to eleven is a good average. Let the bird be set as soon on in the year as convenient, for the earliest profit, in a dry, quiet corner out of reach of molestation on the ground, a hollow lined with soft oat straw making a good nest. Dust the hen on the under parts with pyrethrum powder before she begins her three weeks' sitting. This will prevent her being bothered by insects.

**Show, Preparing for.**—A few hints on preparing choice birds for exhibition may here be given. If there be any tendency to scurf or scale on the shanks, get them clear by scrubbing gently with soapsuds and an old tooth brush three times a week; and anointing with sulphur and neatsfoot oil or vaseline, after wiping dry. Give the bird powdered charcoal in its food to clear the system and impart tone, and a fair amount of fresh linseed twice a week with its mash; this will afford gloss to the plumage. Let the dietary be varied and the exercise ample, making the specimen scratch for its food A little cooked meat daily, fed out of the hand, will help to give condition, also render the bird tame. Cleanse the wattles, comb and face with a soft, damp cloth, and when dry rub vinegar over them with a small sponge to give extra brightness. Wash the birds thoroughly all over, and very carefully, the day before sending off to the show

**Sitting Hens.**—Supplementary to the paragraph on "Setting," a few further hints on the management of the sitting hen may here be given. When she goes broody put her on "pot" eggs first; if she settles to sit steadily let her stay for two days and then replace the "pot" eggs with the eggs you want to hatch. Let her off regularly, and at the same time daily for food, drink, exercise, and dusting; she should be away from the nest ten to twenty minutes. Sprinkle the eggs with lukewarm water occasionally during her absence, and if any egg has got broken accidentally, remove it and cleanse the rest; this is most essential. On the fifth, or sixth day, if you can manage it, examine each egg carefully to see whether any remain translucent; them remove, for they are clearly infertile. If they are cracked slightly during incubation, neatly mend with strips of thin gummed paper or gold-beaters' skin. Should any chicks hatch out on the twentieth day, remove them directly they are dry to a basket lined with soft flannel indoors near the fire until the rest "come off." Don't attempt to feed the chicks

thus removed. They have enough egg yolk inside them to sustain them for forty-eight hours. Put hen and chickens under a properly prepared coop when the "clutch" is complete.

**Sulphur**, powdered, in the moulting period, and to hasten egg-laying, is good for pullets and hens alike, a small half-teaspoonful to each fowl twice a week, mix in the mash.

**Table Poultry.**—Reference to the paragraph on "Breeds" will show what kind of birds to select for the best meat-producing results. The desiderata are quick maturity, meatiness, white, fine-flavoured and firm flesh—especially of the breast, which should be broad, long, and deep—and size.

**Trussing** for market should be simple; setting the hocks back and the wings into shape and securing the legs is all that is requisite after plucking. Further preparation for the spit should be left to the purchaser and the cook, as should the "drawing" of the birds, for anything that entails cutting the skin or flesh of the fowl assists decomposition, which the raiser certainly does not desire to have expedited until his financial interest in his produce is ended.

**Water Troughs** should be simple and easy to cleanse. A good deep earthenware saucer with a garden flower-pot inverted in it is good, inexpensive and effective, in that it leaves the drink accessible to the beaks of chicks and fowls of larger growth without affording room for the feet of either. There are many good glazed earthenware "fountains" to be purchased cheaply; also convenient galvanised "tip-over," metal troughs for insertion in the frame work of the run, readily removable for scouring, and accessible from outside for replenishment. The chief essential is cleanliness of the utensils and their constant refilling with perfectly fresh and cold water. The position of the vessels should be sheltered, for sun-warmed drink is both disagreeable to and bad for poultry. Never give medicine in the water in metal fountains.

**Winter Layers.**—Perhaps the best fowls for egg-production in winter are the Orpingtons, Brahmas, Wyandottes, Langshans, and Barnevelders and crosses between the Minorcas and Langshans, Minorcas or Leghorns and Wyandottes. Hatch these as early as you can in the season; they will get over their moult and commence re-laying very early. Thus it will be seen that to be sure of winter eggs you must choose not only the proper hens but the proper time for their launch into life.

**Winter Management.**—Warmth is essential for the maintenance of fowls in full virility. Carefully exclude all draught from the hen-house, whilst retaining full and free ventilation. Let the runs be sheltered from cold blasts, and the food varied and wholesome, nourishing, appetising, and comfortably hot without being over-stimulating.

**Worms** are not the best food for fowls as a rule, though they will scratch for and greedily devour them. The most dangerous worms for poultry dietary are the larger earthworms from the runs which have become at all fouled, for the bodies of the wrigglers may have given lodgment to the pestilent germs of the tapeworm and other enemies of warm-blooded animals.

# BREEDS OF DUCKS.

## USEFUL AND ORNAMENTAL.

**Aylesbury.**—Unsurpassed for table purposes, pure white in colour; bill should be pale flesh-hued, not yellow; eyes blue, body long and deep, ready for market at eight weeks old.

**Bahama.**—An ornamental variety, light brown, pencilled dark; a similar duck is found at the Cape of Good Hope.

**Black Cayuga.**—Early maturing, lustrous black, as large as the Aylesbury, blue-black bill, shanks orange or dark slate, hardy, good layers, fine flavour.

**Black East India.**—Small size (smaller the better for show), glossy plumage, black feet and legs, drake's bill orange, duck's black, small boned, good layers.

**Call Ducks.**—"Fancy" birds, grey or white, used occasionally as decoys, small, the white varieties have bright yellow bills, very lively.

**Khaki Campbells.**—These are wonderful layers, and fairly good table-birds.

**Carolina.**—The summer or Wood Duck of America, a beautiful variety of ornamental water fowl, closely related to the Mandarin, red bill, black margined, hooked at the point; glossy green crest; throat, collar, over the eye and belly white; breast chestnut, cheeks and side of the upper neck violet; back dusky bronze tinged with green; side, under wing, fine lined with black over drab; tail deep black tinged with yellow; wing spot blue and green, not so bright in the duck as the drake; yellowish-red legs and feet.

**Crested.**—An ornamental duck, with a pretty top-knot.

**Indian Runner.**—The most popular egg-laying duck, laying immense quantities of white eggs. The colours are fawn, black, white, chocolate, fawn-and-white.

**Japanese Teal.**—A very beautiful bird, allied to the Mandarin, the drake especially being handsome of plumage. The female resembles the Mallard.

**Mallard.**—The white duck, or Mallard, is sometimes found amongst the inhabitants of ornamental duck ponds.

**Mandarin.**—Sometimes called the Chinese Teal; the most gorgeous of all the ornamental ducks, and quaint of appearance; very small, and affectionate in their pairing, though the drake is apt to be quarrelsome with other males of his genus, and with ducks to which he has not been properly mated. A broad cream-coloured stripe extends from the front of the sides of the head, across the eye, to the back of the neck. A variety of bright colours appears over the body, and the bill is crimson.

**Muscovy**, or wild Musk duck.—Very large, the drake often reaching over ten pounds in weight; mainly black and white in patches; flesh good when eaten young; lays few eggs, the male fighting anything he comes near most pertinaciously.

**Orpingtons.**—They are found in five colours, black, white, chocolate, buff and blue. They are shapely, good-sized birds, following the Rouen somewhat in shape, and the Indian Runner in style and carriage. Like the Orpington fowls they have great utility properties, being good layers and carrying a fair amount of flesh. They are hardy, and mature quickly, thus may be said to be good all-round utility birds.

**Pekin.**—Fine utilitarian duck, good-flavoured flesh, hardy, fast-growing, very large, pale straw or cream-coloured, deep yellow bill, long deep bodies, reddish-orange shanks.

**Rouen.**—Well described as a larger and tamed wild duck; handsome and utilitarian, a capital layer, but rather late in reaching maturity; the drake has a greenish-yellow bill, black at the tip; head and neck lustrous green, with white ring low down towards the breast, which latter is rich claret; back grey and green, under-parts grey; tail black, bright blue wing bar; the duck is a beautiful chestnut colour and her plumage is loud.

**Spotted Bill Ducks.**—Rare fancy birds from India, with a peculiarly bright green wing spot, pale brown breast all spotted with dark dots like a trout, jet-black bill with yellow tip.

**Teal.**—The ordinary British Teal and the Garganey Teal are not found on ornamental lakes, nor is the Japanese Teal.

**Whistling Ducks**, sometimes called "Tree Ducks," because of their habit—in common with the Mandarins and Carolinas—of perching on boughs. The White-faced Whistling Duck is handsomely pencilled and many-coloured; the Red Tree Duck is even prettier.

**Duck-rearing Notes.**—Ducks are naturally hardy birds, and readily adapt themselves to circumstances. Of course they are waterfowl, but they can be kept profitably with the merest apology for a pond to disport in or with none at all if intended for early killing. However the duck-pond is constructed, it should have its side sloping easily down to the water, to enable ducks and

ducklings to get in and out without difficulty. Also provision should be made for cleaning out the artificial pond frequently, especially if it be of small dimensions, for ducks are dabsters at fouling water. The duck-house never need be an ambitious affair; any dry, well ventilated shed will do, the floor covered with clean straw for the birds to lay their eggs in. Fasten up the birds every evening and they will usually do their laying during the night or early morning. Mate four ducks with one drake soon after the moult, and feed them extra well to get eggs almost daily until their batch of from ten to forty has been laid, then they will rest for a few weeks. Hens will hatch and mother ducklings very well; the incubatory period is twenty-eight days, but the duck is a good sitter and may be allowed to hatch her last batch. During the first week ducklings need feeding every two hours, after that every three hours. The food should consist of 4 lb. each of biscuit meal, ground oats, middlings and bran, mixed with skim milk or water into a crumbly condition. After the first week add 4 lb. of barley meal, 1 lb. of fish meal, ½ lb. of bone meal, and ½ lb. of very fine grit to the above. Young ducks must be given an abundance of chopped green food, of which lettuce is the best. They should be fed upon a clean board which has been well sprinkled with sand before the food is placed upon it. A bowl of sand should also be given them so that they may cleanse their bills after feeding. After the second week ducklings with any range will pick up a lot of slugs and insect food for themselves; but besides this they should be fed regularly three times a day with barley-meal, sharps, household scraps, and anything else handy, giving them on each occasion as much as they can gobble up clean. At ten weeks old they will be fit to kill, and that is the most profitable way to dispose of the bulk of them.

# GEESE.

## FOR FOOD AND FANCY.

**Canada Goose.**—A handsome and ornamental long-necked bird, and aboriginal of North America, half-way between swan and goose in general form. Head, bill, and greater part of neck black, with a peculiar white cravat at the throat, body grey, grading to nearly white underneath, wing quills and tail nearly black, grey-brown eye, long, lead-coloured legs and feet, imposing carriage, swan-like and graceful on the water.

**Chinese Goose.**—Is in two principal varieties, both great egg-layers, though the size of the eggs is but two-thirds that of the common goose, which only lays about fifteen times on an average during any year, while the Chinese will lay as many as thirty for a "clutch" three times or more each season. Midway between swan and goose in size, and pretty in form. A night swimmer with a harsh note. One sort is white, with deep blue eyes and orange pale brown-striped down the back of the neck, shanks, and bill, and a large black knot at the base of the latter, from which it is sometimes styled the "Knobbed Goose." The brown variety, so-called, is predominantly yellow-grey, with a darker brown stripe down the back and neck, and very dark brown bill and eyes, dark orange shanks, and a feathered "dewlap" under throat.

**Careopsis Goose** of New Holland.—A very handsome fancy water fowl, but the gander is even more of a fighter than his Egyptian relative, if possible, and a "positive terror" on a pond.

**Danubian or Sebastopol Goose** is pure white curiously frizzled, the plumage being soft, silky, and turned back. Weight about 10 lb.

**Egyptian or Nile Goose** is tall and slender, grey to black on the upper parts, pale buff beneath the breast, beautifully pencilled with black, chest-nut patch round the eye, purple bill. A strong flier and incorrigibly pugilistic.

**Embden Goose.**—Very big and white, square bodied, waddles along close to the ground when fat. Flesh-coloured bill, orange shanks, bright blue eyes, long winged. Comes from Embden in Westphalia. Ganders will weigh 20 lb. or more. Matures rapidly. The most popular and profitable goose for farmers.

**Gambian Goose,** or "Spur-Winged" Goose, from the powerful spurred formation on the wrist-joint of the wing. Has a large excrescence at the top of the base of the bill; green-black save as to cheeks, throat, and under parts, which are white. Bill and legs dull red. Shy and tall, and smallish as to size. More ornamental than useful.

**Indian Bar-headed Goose,** has three black bands across the back of its white head. A distinguished-looking bird for ornamental water.

**Italian or Roman Goose** is smaller than the Embden. It weighs about 15 lb., is a good forager, and almost as prolific an egg-producer as the best layers of the Chinese varieties. It is a non-sitter, a quick maturer, and finely flavoured.

**Magellan Goose,** sometimes styled also the "Chilian Goose," is prettily shaped on breast and back and gentle in association with other waterfowl.

**Sandwich Island Goose.**—Hardy and prolific, much bred and sold for "fancy" in Belgium.

**Toulouse Goose.** The giant of the Anserine group, and a good layer for a goose to boot. One extra fine pair will weigh 60 lb. together. Grows to a big frame quickly, but puts on flesh rather slowly. Comes in for Christmas well. Grey of colour, darkest on the back. This is the bird whose liver is swollen by confinement in heat to an enormous size to make the *pâté de foie gras* that epicures profess such fondness for.

# GEESE REARING NOTES.

Geese require a wide range of liberty to do well, and common or pasture land, with a pond by the way, to rove over in flocks unmolested. So kept, and with stubbles to forage in during the autumn, they will pick up the most of their living, and thrive and fatten exceedingly. Fed in the mornings before being let out for the day, and in the evenings before retirement, they will generally return to the homeyard with regularity, after a little early teaching or driving; but if not, a little child or even an intelligent dog will lead them to and fro quite easily. The ganders, however, will speedily show fight to any mischievous meddler; and sometimes put strange children and timid women-folk to fearsome flight with their hissing and rushing onslaughts of bill and wing. They want a dry and airy shed, bedded with clean straw, to sleep in. Three geese may go to each gander, and they should be mated up as soon after moulting time as possible, and given extra liberal dietary to bring on the egg-laying. The eggs, which take thirty days to incubate, should be "set" under broody hens of the Brahma or some similar large breed, four or five to each hen. Damp the eggs with lukewarm water twice a week or so when the foster mother is off feeding. When the goslings hatch out they will not require very much attention, being very hardy; but, being likewise very voracious, they will want a lot of feeding. What is good for chickens is good for goslings, only more of it is needed with plenty of flesh meat and green stuff; spring onions are good, in supplementation. In bringing on the young-sters for market let them have their run for development daily, and liberally feed them with meal, corn, turnips, and potatoes at both ends of the day; then for the last three weeks of their short life keep them in confinement and induce them to cram as much as they will with Indian corn, oats, and boiled potatoes. Brewers' grains and kitchen scraps of all kinds are also helpful to prepare the goslings for consumption as "green geese" at Michaelmas, about which time they are best for the table. The big older birds are grosser eating. They rarely lay till over a year old and will live to a great age if allowed to do so, breeding for many seasons. The big Embden and Toulouse geese, and cross-breeds fattened up for the Christmas markets, are usually three-year-old, or at least two-year-old, birds. Some geese sit very well themselves, and then bring up their brood with exemplary attentiveness.

# SWANS.

**Swans** in the wild state are met with everywhere but in actually equatorial regions. Two species are common to both Europe and America, and a third, of well-marked differentiation, in Australia.

**The Mute Swan** is the largest and best known of all the Cygnus group. Spotless white on every feather, its slender curving neck, red bill with a large black protuberance at the base, soft brown eye, and dark feet are familiar. It is not mute, as the name would imply, but its voice is softly musical, if somewhat melancholy. There is a variety, equally large, but slightly different as to shape of cranium, to be found on the Baltic, and called generally the Polish swan. Its cygnets are pure white from the egg onwards, thus variant from the true Mute Swan, whose young are hatched grey, and long remain so.

**The Whistling Swan** is also white, slightly smaller than the Mute Swan, with shorter and thicker neck, and yellow bill without the black bump at the base. It has a tuneful voice, and many sweet notes frequently come forth, especially when on the wing. When wounded or distressed, these are prolonged and accentuated in volume, and no doubt give rise to the old legend of the Swan song, which Shakespeare had in mind when he made Emilia say in "Othello"—"I will play the swan and die in music." Berwick's swan is a still smaller white bird, slight and short of neck.

**The Black Swan** from Australia is well known now the world over. Not quite so large as the Mute swan, it is sooty-black to grey of plumage, scarlet-eyed and red of bill, the latter being white-tipped. These Antipodeans are not quite so quiet with other water birds in collections as their white relatives are.

**The Black-Necked Swan** comes from South America, and is sometimes known as the Chilian swan. Its neck and head are jet black, the rest of the body white. The bill protuberance is most marked and red of colour, the bill itself being of a leaden hue. This bird swims with the neck straight like a goose, and its cygnets grow with great rapidity.

**Swan-keeping.**—Given a stretch of water and some privacy swans of the common breed may be trusted to look after their own affairs. They make an enormous nest close by the water in which the hen lays six to nine thick-shelled, dirty-white, green-tinged eggs. These take thirty-five days to hatch, and the downy-grey cygnets are taken into the water by the mother at two days old, both the parent birds giving their young the most assiduous attention. A few groats or a little coarse oatmeal thrown upon the water will be eaten with avidity by the youngsters, and corn may be fed regularly to the old birds; or a trough by the edge of the stream or pond may have suitable food placed in water for the benefit of the whole family, who are models of affectionate attachment. The cygnets may often be seen on the back of one of the old birds whilst swimming. Swans fly well, for such great birds, when once fairly on the wing, but get up into the air with some difficulty, and always from the water. Their flesh is considered good eating when the birds are young, and used to be much esteemed at the tables of the great. They live to a great age, and resent interference, especially during the sitting period and when the cygnets are small; at these times the male swam will exhibit pugnacity on the approach of any intruder, especially if a stranger. The young are very hardy. Swans pair for life, and in the wild state migrate from place to place in flocks. They will swim long distances in streams or rivers.

# TURKEYS.

**Utilitarian Turkeys.**—The great "gobbler" of our farm yards came to us first from across the Atlantic four centuries ago. He was a wild aboriginal roamer of the prairies and brush of North and Western America, and occurred in a varied form in Mexico, Yucatan, Honduras, and the whole central portion of the New World. To Britain he took kindly, and the Eastern Counties suited his development particularly well. In Norfolk the turkey-raisers fixed a type which secured high favour for the Christmas table, black, spotted white on the wings, and fine of flavour, but not usually so large as what came to be called the Cambridge turkey, tawny grey of feather. Both breeds have latterly been improved considerably by the introduction of new blood from the mammoth cultivated bronze birds of America. Size, quality of flesh, and length of breast are much more sought after in the marketing turkey of to-day than beauty of appearance or purity of pedigree. The "bronze" predominates in the stubbles of East Anglia because it comes to greater size than the darker Norfolk variety, though the latter gives the whiter and finer meat. Cocks, April hatched, should make eighteen pounds for the Christmas market, the hen about two-thirds of that weight, both in their feathers. The bigger birds, thirty pounds weight and over, are usually two-year-olds. Some have been shown of forty-five pounds weight and over.

**The White Turkey** runs rather small, but is pretty to look at, and choice flavoured in eating. The cock generally retains the hairy black tuft on his breast, and the red and blue on the head add to the attractiveness of the bird when alive.

**The Buff, or Red Turkey.** This bird, which comes from Austria, is smaller than the bronze or white, but gives very fine meat.

**Fancy Turkeys.**—The Mexican turkey has white in his tail and covert feathers. The Honduras turkey is beautifully ocellated, bronzy-green in ground colour, bounded with gold, lustrous black and lower down with intense blue and brilliant red. He has no hairy tuft on the breast, and the lower part of his naked neck is smooth. This handsome bird seems only to flourish in tropical or sub-tropical regions. Crested turkeys have been known, but they were probably "sports" or freaks of nature.

**Turkey Rearing.**—Turkeys lay on an average from twenty to thirty eggs before wanting to sit, sometimes considerably more. The period of incubation is twenty-seven to twenty-eight days. For the first few weeks of their lives young turkeys require unremitting care at the hands of the rearer, being most delicate and liable to cramp, and so stupid as not to be able to forage for themselves sufficiently. As they are mostly hatched under hens—six or seven is as many as can be covered properly—it is a good plan to put a few common fowls' eggs into the nest about the seventh day of incubation, so that the more active chickens, coming out at the same time as the turkey poults, may teach their foster brothers and sisters how to feed. The turkey is herself a good sitter and a capital mother, and she is generally given her last seven or eight eggs to incubate herself. The poults should be kept to a dry and sunny covered run, free from draughts and damp, which is death to them. Cleanliness must be observed in every particular, both as to feeding utensils—to prevent sourness in the food—and as to the state of the run and the coop or sleeping shed, the floor of which should be raised from the ground and covered with often-replenished dry soil or fine moss peat litter. Remember that on no account should the young turkeys get into the rain, and see that their feeding is regular and proper. Once an hour during daylight is not at first too often to feed the poults, just as much as they will clear up eagerly, and no more; and the diet needs to be judiciously varied. For four or five days custard of egg and milk, hard-boiled eggs, and minced dandelion leaves, or chopped boiled nettles should only be given; afterwards groats, barley meal, with a mixing of boiled potato, and occasionally a little rice or other small grain, are good. To this must be added young lettuce or green onions, cut up small, or dandelions again. A little pepper with the food is often given for stimulating purposes. It will do the poults no harm to run about on a sunny short-shaven grass

plot when they are a month old. About the third day, and again at six and eight weeks old when "shooting the red," are their most critical times, and at both these periods they require extra vigilance. Later they pick up strength wonderfully, and become exceedingly hardy, roosting out in the open in all weathers. They feed on barley tailing, meal, potatoes, turnips, and all kinds of food, especially if made into a mash with milk; they eat greedily when past the perils of poulthood, and glean most assiduously in the oat and barley stubbles after harvest. They want plenty of green meat, and some brick dust to scour their stomachs with, but they should never be given peas or any sort of pulse, for it is hurtful. Turkeys are killed for market by breaking their necks, the breast bone also being broken to plump them out.

## PEA FOWLS.

Everybody knows the peacock and his almost indescribable beauty, his proud carriage, and his harsh scream. He is a dainty ornament of the lawn of many a mansion, walking, with mincing gait and wondrous tail extended, over the greensward, or sunning himself on some picturesque terrace-wall or spreading tree branch. He comes from the gorgeous Orient, and has been acclimatised in Britain for hundreds of years. He has graced the banqueting board at many a royal feast, for his flesh makes fine eating. The domesticated pea fowl of this country is identical with the wild bird as found in India, China, and Ceylon to-day. The Javanese pea fowl inhabiting Burma, Siam, and Sumatra also, is of even glossier iridescence than the more generally known variety, and has a crest nearly twice as large; his hen, like that of his Indo-Chinese relatives, is very much soberer of plumage than himself, and also minus the noble ocellated tail. The black-winged or black-shouldered pea fowl would appear to be more of a "sport" than a distinct variety.

**Management.**—Pea fowls, once at maturity, seem pretty well able to manage themselves, given suitable surroundings; that is to say, a park to wander in at will, and shade and shelter against climatic inclemency; and even these they prefer to discover and select. The shrill screech of the cock when weather changes impend, or when he believes it will bring him a food donation, is scarcely charming to the ear. The birds should be fed with regularity, which will keep them from flying far afield, and four to five females may be permitted to each male. The hens lay in a cunningly hidden nest, in some dense copse by preference, and sit well, if quite undisturbed, for the incubatory spell of four weeks; they are the very best of mothers, and lead about their little ones for fully six months. The feeding of the chicks should approximate to that proper for the young of the guinea fowl; but if there is a good range of short grass, and immunity from feline interference, there will be no need to bother much about them after the first fortnight, for the fond mother will see to their every want. In the beginning the young cocks and hens are alike in appearance, the males not attaining any of their dominatingly distinctive beauty until eighteen months old, and not coming to full magnificence till the moult of the third year has passed. The pea fowl is a sorry sight during the moulting time, when he will mope and hide away, but it is soon over, and in his new bright plumage he is proud enough to show himself again for admiration.

## GUINEA FOWLS.

**Varieties.**—Three distinct sorts of the Guinea fowl are found in British collections, the speckled type from West Africa, called there the Vulturine Royal Guinea Fowl, and met with wild also in an identical form in the Cape Verde Islands and the West Indies. It is sometimes called the Pearl Guinea Fowl, from the fancied resemblance of its spots to pearls. The body colour is grey the neck hackled brownish-grey horned on the top of the head, red-wattled, white under eye and on the ear lobes, slate-coloured legs. It carries the stern low, and has an arching back and tail in one long circular sweep. The white variety is wild in Madagascar, and the pied sort is said to be the result of a cross with the darker birds. There are blue and dun Guinea fowls, almost spotless, occasionally to be met with, and in some cases the colouring of the commoner kind is reversed, the ground hue being almost white and the speckling dark purple. The birds weigh about four pounds each, the male and the female being very much alike in appearance. Generally two hens run with one male bird, and the female has a very harsh call-note, like the creaking of a greaseless axle. They are delicate eating, and lay many cream-coloured eggs pointed at one end, hiding their nests when they have liberty.

**Rearing.**—Guinea fowls are of wild and wandering habit, and will find food for themselves if not penned and kept in the country, roosting in the trees at night. They are quarrelsome, and "drive" other birds, such as pheasants and game, remorselessly. Guinea fowls do not often themselves want to sit, so that their eggs are placed under ordinary hens, and take twenty-six to twenty-seven days to hatch out. The chicks are pretty little brown-bodied things, beautifully striped, with the legs and beak orange-red. They have very small crops, and require feeding at first almost half-hourly, on ants' eggs and insects, ground oats, chopped egg, cooked meat, and chicken meal. It is quite as necessary to keep them free from damp as is the case with young turkeys, and the care in their rearing must be in no wise relaxed until the horn on the head is grown. Guinea fowls never do well closely confined; they must have range to be healthy.

## PIGEONS AND PIGEON KEEPING.

**Pigeon-keeping** is a very interesting hobby, indulged in by many in town and country. As such it seems to demand some little attention here, though of course pigeons are not poultry, neither do they properly come within the category of Cage Birds, because usually they are permitted where and whenever possible by their owners to fly freely at liberty during at least some portion of the day, reliance being placed upon the "homing" proclivities of each pigeon to bring it back to its own cote, where it knows food and protection await it. This of course does not apply to the more highly bred and valuable exhibition varieties which are kept in aviaries.

### PIGEONS AND THEIR POINTS.

**Antwerp.**—A strong big-bodied bird, in fact, the largest of our English fancy pigeons, excepting the Runt. It has a very stout beak and massive skull; the preponderating colours are silver dun, red, mealy and blue chequer.

**Archangel.**—Rather uncommon; head and breast copper coloured, wings, back, and tail rich, lustrous black or green, small crest, rich red eye.

**Barb.**—Small, slightly wattled, rich pink ceres round the eyes, came first from Barbary; the colours are black, white, yellow, red, and dun.

**Blue Rock.**—Common, good flier, containing many of the points of the wild originator of the domestic pigeon breed.

**Carrier.**—The "king of pigeons," abnormally developed as to beak, wattles, and eye ceres; rather larger than the ordinary pigeon. Colours principally black and dun, others white, blue, and pied.

Head should be flat, narrow, long, and straight. Not the famous flier, but an exhibition bird entirely, and very costly, many having been sold at £100 each.

**Cropper.**—A variety of Pouter, smaller than the ordinary English Pouter, and differs in shape and feathering of legs. The Norwich Cropper has been much fancied by breeders in the city of Norwich, hence the name. The Cropper is smarter and more active than the Pouter. Colours: black blue, white, yellow, red, dun, silver. During recent years the Holle Cropper, a Dutch breed, has been taken up by English fanciers and is becoming very popular. It is a gay merry bird and is bred in many colours—white, black, blue, red, yellow, silver, grizzle, mottle, and in the same colours with white markings.

**Dragoon.**—One of the wattled family, stouter and stronger in build than the Carrier, has a peg-shaped wattle, and its ceres are much smaller and finer than those of the Carrier. Colours: blue, blue-chequer, grizzle, silver, yellow, red, red-chequer, white, and mealy.

**Fantail.**—Sometimes called the Broad-tailed Shaker. Tail spread and erect, neck long and tapering, breast round and protuberant. Colours: white, blue, black, silver, red, yellow, and chequer.

**Helmet.**—Rare, white-bodied, coloured, helmet-shaped cap and coloured tail.

**Homing Pigeon.**—The "Carrier" of to-day—the bird most used for long-distance flying races; has been bred up to perfection by fanciers in Belgium and elsewhere on the Continent, also in this country. Did wonderful work in the Great War.

**Homers, Show.**—A large, strong variety which has been evolved by crossing the Antwerp with the Homing or Racing Pigeon. A very handsome and powerful-looking bird, with stout beak, long, gracefully-curved face and skull, dark ceres, and white eyes. Colours: black, blue, silver, yellow, red, dun, also chequers in these colours. The chequers produce the best show specimens.

**Homers, Exhibition Flying.**—Among the most popular varieties known to English breeders. It has been produced by the crossing of the Working Homer with the Show Homer. The chief points are stoutness of beak, length and levelness of face, which should take somewhat after that of the Magpie in shape, dark ceres, white eyes, smart, alert carriage, shortness of body and feather. The Exhibition Flying Homer is a very handsome pigeon.

**Horseman.**—A small bird of the Cropper family.

**Jacobin** receives its name from the frill of turned-back feathers running up the neck to the top of the head. Pretty and distinguished looking. A very popular and largely bred variety.

**Laugher.**—Now rare; in size resembles the common Flying Tumblers, generally grey mottled or red. Has a curious prolonged set of call-notes broken with a sound like a little laugh.

**Magpie.**—Marked like the mischievous bird of that name; descended from a strain of German Tumblers. A smart, engaging bird, and one of the most largely bred in England. Colours: black, red, yellow, blue, silver, dun, cream.

**Martham.**—The latest English breed of Pigeon, similar in structure and style to the Magpie, but has no white marking.

**Modena.**—An Italian breed, has secured great popularity amongst English breeders. It is a member of the family known as Hen Pigeons. The chief points are a short, round body, short wings and tail, the latter being cocked up and not carried down like that of most breeds. It is found in a great variety of colours, with most delicate and beautiful lacings, chequerings, and markings.

**Nun.**—Small in size; the body colour is white, the head, ten outer flight feathers, and the tail are coloured; at the back of the head there is a shell crest. Colours: black, red, yellow, dun.

**Oriental Frills.**—A large family of short-faced frilled Pigeons from the Orient, and most varied in colour.

**Owl.**—Small, round-headed, shy, rose-frilled after the fashion of the Turbit. Blue and silver the most esteemed colours.

**Pouter.**—A high-class bird with a globularly developed crop, should measure twenty inches from beak tip to tail end, stand very erect, and keep his tail off the ground. Colours: blue, black yellow, red, strawberry. There is a miniature race of Pouters known as Pigmies, which are really Bantam Pouters and are very largely bred.

**Runt.**—A bird of extreme antiquity, one of the oldest, as it is the largest breeds; a pair of Runts will weigh from 4 lb. to 5 lb. They are ungainly, clumsy-looking birds. Colours principally blue, silver, black, red, yellow, and dun.

**Trumpeter.**—Takes its name from its deep-voiced note; is noisy in spring, or when highly fed. Feathered on feet and legs, has a shell crest at back of head, and a twin-crown arrangement on head, known as the rose. Colours: black, white, and mottled.

**Tumbler.**—Short and long-faced, fine fliers, with a peculiar falling attitude at times on the wing. Short-legged, wings drooping to the ground, neck squat, chest broad, head circular, eye central; Almond tumblers are much prized, the normal colour being that of the shell of the nut named, with black and white on the end of the quill feathers, and the body spangled with black. There are many colours and varieties. Beards which have a white mark under the beak, and Bald-heads which have a white head are found in all colours mentioned. There are also chequers and blue-barred. In the Mottles and Rosewings there are blacks, reds, and yellows. The Tumblers are again divided into Muffed and clean-legged.

**Turbits** have the breast feathers reversed and standing out frill fashion. The best fetch fancy prices. Turbits have short beaks and small round fronted heads, with the top somewhat depressed, and a large eye. Colours: black, blue, yellow, red, dun, strawberry, cream, and chequer.

**Pigeon-keeping Notes.**—Pigeons are best kept in a dry and draught-proof loft—into which neither rats nor cats can get—with shelves ten inches broad or so running round the walls, and partitioned into compartments of, say, sixteen inches wide, with an entrance hole towards the end, over an alighting board. The water fountains should be replenished daily. The old birds must be properly fed with maple peas, tares, dari, wheat, and a little small maize. Some of the larger breeds need the addition of tick beans, especially the Homing Pigeons, while some of the smaller, such as Short-faced Tumblers, Orientals, and Foreign Owls, do not require maize, and few peas. They must be supplied with old mortar, gravel, and salt, and great cleanliness ought to be observed in the cote or loft. The pigeons will begin to breed at nine months old, and each pair will, if allowed, have six to eight nests (always two eggs at a time) during a year, and continue to breed for several years. Valuable pigeons should not be allowed to nest more than three times in the season. The period of incubation is 18 days, and the "squeakers" are fed at first by a secretion of the old birds called "soft food," and later with disgorged corn. The young cock birds are rather larger than the hens, and have a more prolonged squeak. A variation in dietary is good; the birds will eat any kind of corn and small beans, as well as peas, tares, and vetches. Lettuce, mustard and cress, small cabbages, etc., are suitable green food. Pigeons are apt to breed feather lice, which insect powder will clear away; white-washing and the free use of disinfectants will keep mites out of the nest-boxes and off the birds. The birds are liable to a few ailments; wet roup should be combated by mixing permanganate of potash in the drinking water, just enough to make it a rosy pink colour; dry roup, which comes mostly at the moulting time, may be cured by two or three cloves of garlic sometimes; canker is often caused by the birds pecking each other, and the sore parts may be rubbed with honey and burnt alum; megrims are incurable.

# CAGE BIRDS.

## BRITISH AND FOREIGN.

It will be convenient in this section of the dictionary to give in alphabetical order a few particulars of the principal kinds of birds, foreign as well as British, kept as cage pets or in aviaries, indoor and outdoor, noting the leading points of the chief feathered favourites. These notes are supplemented by concise useful information concerning cages and their selection, the stocking of aviaries, the treatment of bird diseases, etc.

**Bengalee.**—Pretty fawn and white birds, much petted in Japan, and introduced as aviary subjects into this country by the dealers.

**Blackbirds.**—Lively and bright, this familiar songster of our shrubberies and hedgerows takes kindly to a cage if hand-reared from the nest. He needs a good-sized cage, and besides crushed hemp-seed and bread, rape and other seeds, should have a few worms, slugs, and insects given him as titbits, and a little ripe fruit occasionally. He will sing his thanks for these attentions, and his ebony feathers and crocus beak and eye ceres will be all the brighter for them.

**Budgerigars.**—These belong to the Parrakeet family, and only a few years since were known as the birds which at the street corners and at country fairs told "the pretty lady's fortune" from the box of cards in front of the cage. Now Budgerigars are of great importance, and are bred in this country by thousands. Just after the Great War a regular boom set in, and Blue Budgerigars fetched as much as £250 for a pair. This gave great incentive to breeders, and whereas but a few years since we only had green and yellow Budgerigars we now have blues, cobalts, olives, mauves, whites, silver wings as well. The demand for Budgerigars is tremendous, especially since their importation was stopped. They are hardy, easy to breed and easy to rear.

**Bulbul.**—Oriental varieties of the Nightingale, useful aviary birds, very fond of ants' eggs and meal worms. Head, crest, and throat jet-black, rest of plumage chiefly olive-green, tail long and graceful, must be protected from frost. The red-vented Bulbul is brown on back, tail, and wings, black on crest and top of head, red on vent, and red spot under eye; chin, throat, and ears white.

**Bullfinch.**—Black on head, rosy red-breasted, this familiar hard-beaked British finch is very much of a small-cage or aviary favourite. Feed on German summer rape and canary seed, and occasionally, by way of a treat or change, give crushed hemp-seed; also give a tree branch to peck at for buds and insects. Bullfinches will pipe any tune if patiently taught.

**Buntings** are all pretty aviary birds and the Yellow-hammer is the most familiar of the family. It requires insects as well as seed food to keep it in good health. The Cirl Bunting is distinguished by a dark triangular patch on the throat; the Corn Bunting, a shy bird, is rather larger than the Yellow-hammer, greyer in colour, and speckled on the breast; the Black-headed Bunting is black on the throat as well as the head, it is a winter visitor to Britain; so is the Lapland Bunting a somewhat smaller bird, with the black marking reaching on to the breast. The Snow Bunting is mainly white, with some chestnut feathering; it dislikes heat, and prefers a stone to sit on to a perch.

**Canaries** are of many sorts, much hybridised and specialised by the fanciers. The bird came originally from the Canary Isles, where in the wild state it was not yellow as we generally know it, but a dark olive-green. The deep yellow colouring, originally a sport, has been fixed by selection. The leading varieties are the Yorkshire, the Belgian, the London fancy, the Scotch fancy, the Norwich crest, the Norwich plain-head, the Lancashire, the Lizard, the Cinnamon, and the Border fancy, all of which have numerous well-defined sub-divisions. The canary has also been a great deal "crossed" with other birds of various breeds, the result being what is known as "mules," as the goldfinch mule, the linnet mule, the greenfinch mule, the siskin mule, and the bullfinch mule, all these, of course, being infertile. Of what are known as canaries proper, there are several distinct classes of nearly every one of the leading varieties, the plain or self-coloured, and the variegated, each of which is again divided into yellows and buffs, or, as the old fanciers used to style them, jonques and mealies. There is considerable diversity of size as well as of colour, shape and marking; thus the Coppy has been bred to eight inches long, while the little Border has been dwarfed down to nearly half that length. In different localities the fanciers fix their types of excellence according to their own ideals, and set up standards which "rule out" all the rest. The Yorkshires, whatever their colour shade, must be models of extended uprightness; in the Scotch, shoulders must be as heavy as possible, whilst the front of the bird must be cleaned out like a half circle or bent like a bow in tension; the Belgian must droop the head and shrug out the shoulders, the more the better; the Norwich is nearer the normal as to outline and build, high colour being aimed at by the breeder as much as nicely-rounded plumpness. Cinnamons are slightly less "stocky," fawn of hue and always red-eyed; the Lizard must be dark and dusky of body colour, capped and spangled, smallness with him is generally reckoned detrimental. The Lizards are styled golds and silvers, not yellows and buffs as are all the other breeds. Variegation, too, is the forte of the London fancy; and, as for the crested classes, everything with them is subordinated to "topping" development, even to the point of compelling the poor bird to look only downward upon its little world. Green canaries there are too; and every shade imaginable of yellow-self, from intense orange, eloquent of cayenne and marigold diet, down to the pale primrose of the buffs. White canaries are now being bred in all the different types. Harking away again from simplicity, all the graded colourings, from the full rich jonque to the washed-out white, may be either mottled or splashed in contrasting darkness, clearly and without "running." So that the canary fancier can give "points," almost to infinity, to the feathered object of his hobby, even though he may incline to contemptuousness of the divergent choice of others. In addition to all these, which may be termed the show varieties, there are the German Rollers, so much esteemed for their song. Choice Rollers are valuable and cost anything from 20s. to £10.

**Cardinals** are American birds, some of them as large as thrushes, rather sparrow-like in shape, big and strong of beak, pugnacious of habit, and often prettily feathered. The Cardinal Grossbeak, or Virginian Nightingale, is the gayest of the group, carmine-red with a black ring round the bill and a patch on the chin of the same hue. The Grey Cardinal, rather smaller, comes from Brazil, is slatey grey to white on the under parts, crest, head, and throat scarlet; the Green Cardinal is yellow and black, with a greeny sheen; the Pope is a little smaller, crestless, with the red feathering short and slight; and the Yellow-billed Cardinal is the least of the family, with a browny-red head and a bright yellow beak. All make active and pretty aviary birds, and require some shelter in winter; food, chiefly canary seed and millet, with ants' eggs, insects, and fruit.

**Chaffinches** are handsome little birds much favoured in Germany as house pets. In England they are chiefly kept for exhibition. They sing and learn tricks well under patient teaching. Their food should be similar to that of the Canary, only giving more rape seed.

**Cockatiels** are, properly speaking, parakeets, and though crested not at all allied to the cockatoo family, with which on that account some associate them. Cockatiels are grass or ground birds, with great swiftness and activity as foragers for food on foot. Seeds, insects, succulent roots, and small fruit are the staple food. The cockatiel is a capital aviary subject where space is ample. It is grey and white, with a little yellow in the breast and on the face, dull red on the ear coverts, and black under the tail.

**Cockatoos** are amongst the most striking and

attractive of the parrot race, most of them capable of a considerable amount of culture in the matter of tricks and talk, and generally gentle and graceful under domestication. The snowy-white lemon-crested Cockatoo from Australia is a prime favourite; the rosy-breasted, triple-crested Leadbeater's Cockatoo is particularly handsome; the Great Salmon Cockatoo from the Moluccas is also mainly white, with a pearl-bloom tinge on the front, a broad backward inclining crest, and puffy, loose feathering; the bare-eyed Cockatoo of Western Australia, spare of crest, red-throated, is about the best of talkers of a numerous loquacious family. The Antipodean Rose Cockatoo is occasionally mistaken for the Grey African Parrot, but his white head and small crest should save him from being so confounded, though the latter lies flat when the bird is not excited, and he has his bit of red colour on the breast and not on the tail; the slender-billed Cockatoos have the upper mandible curved forbiddingly and lengthily over the lower, but are very tractable birds for all that. There is a Goliath Cockatoo, big of beak, and sooty feathered, which comes from New Guinea; some "all blacks"—forming a kind of link between macaw and cockatoo—rather scarce Australian birds; and a number of pretty sulphurous to ochre-crested white cockatoos from the Carolinas and Philippines, all small and black-beaked.

**Doves** are gentle, engaging little pets, and will, most of them, breed in suitable wicker cages or aviaries if themselves hand-reared. The Turtle Doves are prime favourites, but the Ring Dove or common Wood-pigeon, the Stock Dove, and the Rock-pigeon are all kept in cages, or aviary compounds, with success. Our Turtle Doves will interbreed with the Barbary Doves or the larger Egyptian Turtle Dove. Those with plenty of aviary room may keep some of the other very pretty foreign doves which the dealers have specimens of at times, such as the Long-tailed Masked Dove from the Cape, sometimes called the Harlequin; the crested Goura of the Philippines, the Nicobar Pigeon, the Bronze Wing, the delicate Diamond Dove, the plump little Zebra Dove, the glistening Green-winged Dove, both from the gorgeous Orient; the charming Tambourine Dove, chocolate above and white below; and the pink-eyed pure white Java Dove. All the latter must be kept warm and given room to exercise their wings to be a success. Canary and millet seed, with dari and soft oats, suit the smaller doves, the larger may have any good corn peas, vetches, and buckwheat as well.

**Finches** of all kinds, foreign as well as British, make admirable aviary birds, and most of them will nest under confinement. Chiefly seed-eaters, they are all more or less, fond of millet and canary seed, and like ants' eggs and meal-worms, gentles, etc., especially when rearing young. The Green and Grey Singing Finches are great favourites with many bird lovers, the former being sometimes styled the Cape Canary. The tropical and sub-tropical finches are, of course, suited only for indoor aviaries, at least in the winter time. Some of them cost a lot of money.

**Flycatchers** are shy but restless little birds, not unlike tits in action, but longer tailed. They need either a large cage or an aviary to do well, and must have as much insect food as possible, meal-worms, ants' eggs, etc. The Pied Flycatcher is the commoner, the Spotted Flycatcher and the Red-Breasted Fly-catcher—the latter not unlike a little Robin—are also sometimes seen in confinement.

**Greenfinches** are pretty birds, but poor singers They have powerful pointed beaks, and a patch of bright yellow on the wing. Ordinary bird-seed will do for this hardy finch.

**Goldfinches,** or **Redcaps,** as some people prefer to call them, are the most beautiful of British birds, besides being fine songsters. At first—and until the moult—the young birds are grey feathered on the head. Their rape-seed should be scalded, and any hemp seed given them ought to be crushed; thistle and teazle-seed should also be given them. Goldfinches are very fond of green-stuff, but it is important that it should be fresh.

**Jackdaws** are the smallest of our crows and not the least mischievous. The bird is generally allowed to ramble at large during the day time, having half a dozen wing feathers clipped to keep him from flying right away. The male has more crest and more grey on the head than the hen. They can be taught a lot of tricks and seem to know many intuitively. Jackdaws are omnivorous and will take anything from the table; but they ought to have a dead mouse occasionally as a treat to keep them in condition.

**Jays** must be kept to themselves, or there will be murder in the aviary; a big basket cage is best for them. They are beautiful birds, with a lot of blue about them, and very bold. The cocks can be taught to talk. They are fond of peas and beans, worms and insects generally; and must have a certain proportion of animal food of some sort.

**Kingfishers** are bright and beautiful birds, and require a large aviary with running water and living fish in it for their food, and convenience for seclusion. They take very badly to confinement, and are so dirty in their habits as to be quite unsuited to any sort of imprisonment. The Halcyon of the ancients, the King-fisher is altogether out of place in a cage.

**Larks** will strive to soar whenever they wish to sing, so that a soft cloth or baize top must be provided for their cage, also a fresh turf for them to peck at. They do much better in a large cage than in a small one, with plenty of room to run about, and road-dust to roll in. Larks require insect food as well as seed.

**Linnets** are sweet singers, and should in captivity be accommodated with larger cages than the tiny cramping wired boxes usually provided for them. Grey, brown, or speckled feathers are worn at different periods by these birds, and the cocks have a rosy breast tint autumnally when at liberty. Small seeds are their only food.

**Love Birds** are most interesting pets, pretty of way as well as pretty of feather. Millet is the best seed staple, white or spray, and they will most of them eat cooked maize, ants' eggs, and sweet sponge cake. The co-called Abyssinian Love Birds are green and yellow with black markings and red bills, surrounded by a broad band of orange. They really come from the West Coast of Africa, and must be kept warm and out of all draughts. The Rosy-faced Love Birds are rather larger, and have the mask on the face of a pretty peach shade, and the bill white. They will breed if given a coco-nut husk to nest in.

**Magpies** are chattering and destructive Pies, and should either have restricted liberty or a large cage. They will eat anything and are restless lumps of mischief. The common British Magpie is in the spring-time velvety-black, relieved by pure white on wings and breast.

**Mannikins.**—The Magpie Mannikin comes from Africa, the Bronze-wing, the Black-headed White breasted, the Black-headed Brown are to be found in the East Indian Islands and some parts of India. They are very tame, quiet little fellows and make most interesting pets, but they grow their toe-nails very fast and these must be trimmed frequently or they may break their feet or legs.

**Mocking Birds** are American thrushes, long of tail, grey and white in colour, and not such fine singers as they are generally reputed to be. They may be treated in captivity like our own thrushes, and should have a little insect food in variety.

**Nightingales** do not sing in cages so well as in the woods or shrubberies, which they make melodious with their summer warbling by day as well as night. They are readily hand-reared when taken from the rather slovenly nest and fed on ants' eggs, meal-worms, gentles, and almost any insects. Very small red garden worms, not over an inch long, and cut in two, may be given to them; but, being migrants, they are difficult to retain in captivity for any length of time in this country. Matchless in song they are soberly clad, brownish-red above and grey below.

**Nuns** are Asiatic and African finches with white or black heads, and should be treated as other foreign birds of the same character, whether kept in small cages or as aviary specimens.

**Nutmeg Birds,** sometimes called Spice Birds, may be reckoned relatives of the Nuns and need similar treatment in captivity. They are chocolate coloured above and brown speckled on white beneath.

**Parrakeets** are magnificent birds, many of them.

Much smaller than the macaws, they have long tapering tails like them, but feathers on the cheeks instead of bare skin. There is an intermediate group, with partially-feathered cheeks, called macaw parrakeets. Parrakeets are gentle, vivacious, and apt at talking. They are found in the forests of every part of the world save Europe, and their plumage is chiefly green, with markings of red or blue. Perhaps the Rosella Parrakeet of New South Wales is the most beautiful and brilliant of any, though the King Parrakeet, the biggest of the Antipodean Broad-tails, is another particularly gorgeous bird. Of the smaller parrakeets, none is more striking than the Auriceps, or Golden-headed parrakeet of New Zealand. It is only 8½ inches long when full grown, and half of that is tail. The forehead is scarlet, with a band of golden-yellow behind. Most of the rest of the feathering is green, with some blue and yellowish-grey. Maize, either cooked or raw, hemp-seed, nuts, fruit, biscuit can be fed to all the parrot tribe, and clean water two or three times a day.

**Parrots** are a large family, and, properly speaking, do not include the long-tailed macaws or the gorgeous lories and lorikeets, nor the parrakeets, cockatoos, and cockatiels already treated. All of them require protection from cold, and cages or perches, which may be placed out of doors in the summer. The dietary has been indicated sufficiently, save that the lories need boiled rice, sweetened with honey. They want water to bathe in, and must be kept out of draughts. Milk-sop is not a bad thing for parrots for a change, but they ought not to be given meat. Chickweed and ripe corn in the ear are enjoyed by most of these birds. Some will live to a great age in captivity. Perhaps the Grey Parrot from the African West Coast is the greatest favourite, but the Green Amazon is favoured by some. Their beaks are very powerful. The aras or macaws come from South America.

**Redpolls** are very like linnets, except as to size, being a little smaller. They come to Britain from Scandinavia to winter, and tame readily. Some stay in this country and breed here.

**Shamas** are Indian birds of robin-like habit, ten inches long. They are good aviary birds, of very handsome black-blue and rich brown plumage, and may be fed as recommended for the nightingales.

**Shrikes** are the smallest of British birds of prey, and must, of course, have insects and flesh food, such as small mice, or pieces of rabbit with the fur adherent. In an aviary they must be kept away from the young of other birds, or they will certainly destroy the nestlings. The Red-backed Shrike, or Butcher Bird, is rather a fine-looking fellow; the Great Grey Shrike is more of a rarity.

**Siskins** are yellowy-green to greenish-grey, with black on the head and throat of the male. They mate with the canary, and are very docile.

**Starlings** are capital talkers at times, and good aviary birds, with a quaint way of walking when foraging for food. They eat many insects, and are fond of berries and soft, ripe fruit.

**Tanagers** are American fruit-eating birds who like a few insects occasionally, but prefer grapes, ripe pears, bananas, oranges, and summer fruit generally. Sometimes they live solitarily, sometimes in flocks, the Grosbeak Tanager building quite a little bird town in the top of a palm tree for the accommodation of a large family group. The Scarlet Tanager is the brightest of the Tanager

**Thrushes** require similar feeding and accommodation to their Blackbird relatives. They will sing very sweetly in a cage, are very fond of sunflower seeds and fat white slugs or shell snails.

**Tits** are most interesting aviary birds, their quaint nest building and peculiar way of turning topsy-turvy in searching crannies of bark for insect food being most diverting. The Great Tit is black on the head; the Blue Titmouse is half his size; the Coal Tit has white cheeks and a grey back; the Crested Tit is a rare Scottish bird with a tuft on its head; the March Tit is darker than the Coal Tit except for the absence of the black patch on the throat; the Long Tailed or Bottle Tit hangs up its wonderful mossy nest to a tree branch; the Bearded Tit is now very rare. All must have ants' eggs or insect food of some sort.

**Wagtails** are restless waders, some call them "Peggy Dishwater" because of their quaint habits. They are insect eaters in the main, all the varieties, and they should never be caged, but kept in aviaries with a running stream and a grass plot.

**Warblers** are a numerous family, headed by the Nightingale, already noticed, and including the Blackcap, Dartford Warbler, the White Throats, the Wrens, and the Chiffchaff. In captivity they must have ants' eggs or similar food.

**Weaver Birds** are little African species varying from sparrow to starling size, and very good aviary birds, especially when they can be induced to do their wonderful nest-making either for pastime or nidification. They will eat millet and canary seed.

**Whydah Birds** are long-tailed, hard-billed, seed-eating birds about as big as Canaries, and coming from Senegal and South Africa. The peculiarity is the disproportionately long tail which the male develops at the breeding season. They change their plumage twice a year, and the Paradise Whydah has tail feathers thirteen to fourteen inches long, without being the most liberally endowed of the family. They want millet and other soft seeds as a staple, with some insect food or ants' eggs.

**Aviaries and Aviary-stocking.**—Aviaries may be indoor and outdoor affairs, simple and inexpensive, or ornate and costly, according to the taste and the means of the bird-fancier. They may be part of a conservatory partitioned off, with hanging and other plants in it, and capable of being heated to suit the needs of tropical and sub-tropical birds. In that case there should be ample accommodation for the numbers and species included, and a proper sorting of the birds without overcrowding. Ventilation should be perfectly arranged for, and great attention given to cleanliness, for strong bright birds otherwise would soon become bedraggled and miserable looking. Most of the British birds are suitable for keeping in an outdoor aviary of sufficient dimensions. It should be about fifteen feet high, zinc roofed, and properly guttered, opened to the south with a wired front and glazed sizes, and a stout back of brick or woodwork, all well-constructed. The perches and trees, nesting accommodation, etc., should be as close a following of Nature as possible at all points, and there must be proper cover and seclusion and the necessary water supply.

**Cages.**—Blackbirds, thrushes, and such birds should be placed in roomy cages, with a draw-out floor for cleaning, boarded back, and covered food and water vessels; larks require the cage floor to be large enough to take fresh turves, and a soft top to the cage; canaries and the finches generally may have all-wire cages, or wire with japanned metal top or back Glass part of the way up conduces to cleanliness and to the comfort of the bird.

**Bird Diseases and Bird Medicine.**—Epilepsy arises usually from over-feeding; olive oil may afford relief, or plunging in very cold water. Moulting time requires very careful feeding, extra cleanliness, and perfect freedom from draught, with a little iron infusion in the drinking water. Saffron is good for costiveness, especially if given with linseed oil, and for catarrh speed-well infusion and some pectoral elixir may be recommended. Giddiness may be prevented by covering the cage-top with a cloth in many cases. Feather eating is most frequent where the confinement is close and the cage small; room for flight will generally cure it. Over-stimulating food will make any bird ill, and very likely kill it in the end; let not this error of dietary be perpetrated by any bird-lover. Asthma comes of letting a bird, accustomed to artificial heat, get into a draught; many cage-birds are ruined thus. Generally speaking, a bird hanging in a window is in a draught. We are no advocates for bird coddling, but keeping your pet out of draughts is most essential. If your cages and perches are quite clean always, and you keep the claws of your birds mostly cut, there will be little fear of sore feet. Camphor water, weak, is good for washing the feathers of birds suspected of harbouring red mite, and a good insecticide may be used at the nesting period with advantage. The perches and the corners of the breeding cages should be brushed over with turpentine or paraffin once a fortnight. The higher the cage is hung in a room the worse the air for the bird.

# DOMESTIC PETS

PEARS—THE PURE SOAP

*For particulars of Pears Famous Toilet Preparations turn to end of Book*

# Pears' Dictionary of Domestic Pets

## INTRODUCTION.

### BY THE EDITOR AND EXPERTS OF "THE BAZAAR, EXCHANGE AND MART."

Comprehended under the popular designation of "pets" is a fairly large number of animals differing markedly in structure, habits, and as regards their general environment, and not a little in respect of their popularity. It is attempted here to consider in as concise and practical a manner as possible the various units composing this divergent group, and to give sufficient information concerning each one discussed as will enable anyone not merely to identify any individual, but also to keep it in health or to treat it when afflicted with at any rate the minor ailments to which it is subject.

Some of the principal families are made up of so many individuals, and the details connected with their successful management are so numerous, that only the very briefest survey is possible in the space at our disposal. Especially is this the case with the dog and the cats, while even more restricted is the information on rabbits, cavies (guinea-pigs), mice, and rats, all of which are popular with pet-keepers. Then, too, there are others, which, if less popular—monkeys, dormice, and squirrels, for example—need great care and a special environment if their lives are to be pleasant and if they are to afford real enjoyment to those responsible for their well-being.

Though the enumeration foreshadowed may be said to embrace the most popular of all the animals kept purely as "pets," so elastic is the term that it is practically impossible to define its extent. Thus it is necessary so to widen the field of our survey as to take in the strictly utilitarian goat, the smaller reptiles like the lizards, and the tortoises; these last being still more briefly touched upon.

We commence with the dogs, and continue with the other subjects in the order of their enumeration. Still, even with the dogs we do not treat of all the varieties met with in domesticity, but rather with a selection of those which in our opinion are best entitled to be regarded as "pets," for it is possible, we know, to make a pet of any dog whether giant or pigmy. Breeds like Fox-hounds, Pointers, Setters, Retrievers, the majority of the Spaniels, and a few other varieties are not included. The whole of the Terrier group (notwithstanding the fact that they are mainly classed as sporting dogs) are dealt with, except the Bull Terrier, Bedlington Terrier, and the Sealyham, whose mission—at any rate for the present—is strictly confined to the realms of sport.

#### VARIETIES OF DOGS.

**Aberdeen Terrier.**—An erroneous name often applied to untypical representatives of the Scottish Terrier. The origin of the prefix cannot be traced, but there is not, nor has there ever been, a terrier peculiar to Aberdeen city. (*See* **Scottish Terrier.**)

**Airedale Terrier.**—With the exception of the Bull Terrier this is the largest of the group. Though this dog is too big for the work of a terrier proper, it makes a splendid guard, companion, and defender of person or property. Game it certainly is, but its disposition is of the best, and the Terrier is readily controlled; while it is hardy to a degree and one of the best water-dogs. In colour it is an admixture of black or dark grizzle and tan, with a hard, wiry, straight and close-lying coat. A peculiarity of the breed is that puppies when born are more like Black and Tan Terriers. An Airedale Terrier weighs 40 lb. to 45 lb., bitches being slightly lighter than dogs. The tail is docked about one-half.

**Alsatian Wolfdog.**—The English name is a misnomer, for this dog has been bred for very many years without recourse to a wolf crossing. In its native country it is known as the Berger d'Alsace, and in Germany as the Shepherd Dog. The Alsatian is docile, thoroughly reliable, faithful, and vigilant, making an excellent guard and watchdog. The average height of dogs is 21½ to 23½ inches at shoulders, and of bitches, 19½ to 23½; the colour may be black, iron grey, silver grey, white, black and tan, or wolf colour.

**Black and Tan Terrier.**—A Terrier at one time fairly numerous, but now correspondingly scarce. It is a sleek-coated animal, having excellent claims to be considered a first-rate house-dog and ratter. Not so hardy as some terrier breeds, it is best kept indoors. For town life it is well suited as its coat does not readily show dirt, and it will thrive with a minimum of exercise if judiciously fed. A nicely proportioned dog, weighing from 16 lb. to 20 lb., and sometimes described as the Manchester Terrier.

**Bobtail Sheepdog.**—By nature a worker this picturesque and essentially English dog has gradually become a fashionable beauty, kept largely as a pet and companion dog. In intelligence the variety is second to none, as it is in docility and strong attachment to its owner. On account of its long, shaggy jacket, however, it is not a general favourite with housewives, though if a long-handled brush be kept wherewith to wash it down on wet days, and care is afterwards taken to dry it thoroughly before allowing it indoors, little trouble should be given. Despite its bear-like gait (when viewed behind) and general appearance it is a most active dog, galloping very fast. Any shade of grey, grizzle, blue, or blue-marled with or without markings are liked; while in the grevish or blue dogs a pearl, wall, or china eye is a characteristic. The Bobtail is a strongly made muscular dog, standing 22 inches and upwards, with a profuse shaggy outer coat and a waterproof undercoat. Though popularly believed to be born tailless, in nine cases out of ten the tail is removed during the first week of puppyhood—an operation that militates somewhat against the more extended keeping of the dog.

**Borzoi or Russian Wolfhound.**—This hound is the most beautiful and symmetrical of the Great Greyhound group and a very popular dog with both men and women. Though big it is not bulky, and like the Scottish Deerhound and the Irish Wolfhound it will curl up into a comparatively small space indoors, an obvious advantage. As its name unmistakably proclaims, this hound in its native country is used against the wolf, and a brace will render an excellent account of themselves against that formidable animal. Alike as a companion and personal guard the Borzoi may be recommended, while it is no mean watchdog, though it cannot be classed as a noisy variety. Boasting an excellent temperament and a dignified demeanour generally, the dog may be taken out without fear of ill consequences once it has been trained. With this breed as with the Deerhound and the Irish Wolfhound it is best to start with puppies six months old or even rather more, as when young nearly all the Greyhounds seem to be somewhat susceptible to distemper and other ills, but they soon outgrow this if properly fed and housed. Damp is the great enemy; cold they can endure with impunity. Being light-coloured this hound needs to be washed occasionally and to be brushed and combed daily, the tail and feathering requiring extra attention. In height a male Borzoi should measure from 29 in. upwards, and a female 2 inches less. The skull should be flat

and narrow and the head generally so fine that the shape and direction of the bones and principal veins are clearly visible; while viewed in profile it should appear as if Roman-nosed. Generally the dog is built on Greyhound lines. White is the prevailing colour, with or without fawn, lemon, grey, brindle, blue or black markings. Occasionally self-colours are met with. Light-eyed, short-headed, heavy-eared and heavy-shouldered specimens are to be avoided; as are also those having eyes wide apart, or that are barrel-ribbed or cow-hocked. On no account should this variety be chained to a kennel, or a misshapen, broken-spirited animal will undoubtedly result. Care too must be taken in regard to any punishment inflicted on a puppy, as no breed of dog is more sensitive or more readily spoiled by harsh treatment.

**Bouledogue Français.**—(*See* **Foreign Dogs.**)

**Bulldog.**—At one time employed in the sport of bull-baiting, the bulldog is now kept as a fashionable canine beauty. It is undoubtedly an ugly dog, but its disposition altogether belies its appearance. The head is very massive and the face extremely short, with a broad blunt muzzle inclined upwards. Altogether it combines strength and determination with activity. In general the Bulldog may be regarded as well-mannered, and though it makes a good personal guard, in the house its value is not great. Contrary to the opinion usually entertained in regard to the dog it must be classed as delicate. About 50 lb. is the weight of the best specimens, and the hindquarters are always lighter than the forequarters, with a distinct arch of the back. The coat is smooth and fine in texture, and variable as to colour. Whole colours and smuts are most esteemed—brindles, red, white with their varieties, as whole fawns, fallows, etc., while the pied and mixed colours stand next in order of merit.

**Bulldog (Miniature).**—Even more in favour as a pet is the miniature edition of the larger animal described above. Formerly this dog was not bred very true to type, it having been tainted with a cross of the French Bulldog; but this has now been altered, and a typical miniature Bulldog is a small edition of its larger relative. This dog should go to scale at 20 lb. or less.

**Cairn Terrier.**—(*See* **Skye Terrier.**)

**Chow Chow.**—This, the edible dog of the East, enjoys, and deservedly, a great reputation as a pet. Though decidedly "stand-offish" to strangers, to its master or mistress it is a most devoted companion. It is one of the prick-eared varieties, and has a flat and broad skull, black tongue and mouth-roof, short and straight back, and a tail carried well over the back. There are two kinds of coat—rough and smooth. The former is preferable, and is dense, straight, and rather coarse in texture, with a soft and woolly undercoat. In the neck vicinity it is prolonged into a frill. For this reason a collar is undesirable, but if one is necessary it should be of the round or rein type. Black and red are the most favoured colours, though yellow, blue, and white specimens are found. The weight of a Chow Chow is from 40 lb. to 50 lb.

**Clydesdale Terrier.**—A breed of many names, it having been known as Silkie, Paisley, and Glasgow Terrier, as well as the one above given. To judge by its coat and general appearance the breed is evidently a near relative of the Skye Terrier. It is, however, smaller, silkier as to jacket, higher on the leg, more compact as to body, and more heavily feathered on ear. The coat in colour is bright steel blue and golden tan, the latter being restricted to the head, legs, and feet; while the tail is deep blue or black. The Clydesdale Terrier is an active and alert dog.

**Collie.**—So far as the general public is concerned there are two distinct varieties—the rough and the smooth; but fanciers acknowledge a third—the Bearded Collie, a modified Old English Sheepdog that is allowed to possess the whole of its tail. All are most intelligent dogs, and make the finest of companions, house-dogs, and protectors. It is frequently asserted that Collies are treacherous, but this is a libel on the breed generally. The rough is more popular than the smooth, but its coat requires far more labour to keep it in nice trim. No collars should be worn by Collies as this tends to spoil the coat, especially the frill of the rough variety. Sable and white and black, tan and white are the colours most liked, but the blue marle (marbled) is rapidly making headway. A Collie should scale from 45 lb. to 65 lb., and should measure at shoulder 22 in. to 24 in.

**Dachshund.**—In its native country this dog, as its name suggests, is used against the badger. Here it is but a fashionable pet with a very large circle of admirers despite *Punch's* description. It is a long, low dog with a long and narrow skull showing a decided "peak," short and strong forelegs and higher and lighter-boned hind-legs, a deep chest with prominent breast-bone, and a muscular, arched loin. Colour is of minor import, but black and tan, liver, liver and tan, red, and dappled are preferred. A typical Dachshund stands from 7 in. to 9 in. at shoulder, and weighs from 15 lb. to 21 lb., and there are both rough and smooth haired specimens. As house dogs and pets the variety may be recommended, being alike alert and intelligent to a degree.

**Dandi Dinmont Terrier.**—Prior to the issue of Sir Walter Scott's *Guy Mannering*, this long-bodied, low-legged terrier was a dog valued purely for its "vermint" qualities. Since shows have popularised it a change has come over the scene, and Dandie has, according to sportsmen, degenerated into a pet. For all that it is a distinctive Terrier with its domed forehead and top-knotted skull, full, round, wide apart eyes, muscular neck, arched loin, short crisp-feeling coat, and short gaily carried tail. Pepper and mustard are the two colours by which the breed is differentiated, and these vary considerably. About 18 lb. is the average weight of the best Dandie Dinmont Terriers; while at shoulder they should measure from 8 in. to 11 in. They are hardy, plucky, but not self-willed dogs, most capable guards, and splendid companions. Puppies when whelped differ materially in colour from adults. Peppers are black at birth, or perhaps black with tan legs, while mustards are tan colour with much black down the back.

**Foreign Dogs.**—Of the breeds falling under the designation of pet dogs, and classed by the Kennel Club as foreign, the chief are the Bouledogue Français and the Samoyede. The former is an active, intelligent dog, cobby of build, muscular, and heavy as to bone. The skull is massive with a square and massive foreface, large eyes, deep stop (indentation between the eyes), small neat bat (upright) ears, and short, broad, upturned muzzle. Though on distinct Bulldog lines the variety has not the exaggerated front of its English relative, and is altogether more active and terrier like. Its weight is in the vicinity of 22 lb. Black and black and tan are not admissible as colours for this variety.

The Samoyede is a breed that has come rapidly to the front. It is one of the Northern varieties, and a relative, therefore, of the Pomeranian, the Elkhound, and the Eskimo, and, like them, used in its native country as a utilitarian animal. In general appearance it is Pomeranian-like, and possesses the foxy type of head common to that group, has a short back, well-curled tail, thick coat that stands well out, and a nice frill. As is the case with this group generally, the Samoyede is hardy, very alert, and intelligent, while its temperament is of the best White is the colour most in favour, and the dog measures about 20 in. to 21 in. at shoulder.

**Fox Terrier.**—These (for there are two varieties —smooth and wire-haired) are the most popular of all domestic dogs, and are too well known in regard to general conformation to need more than a brief description. Formerly they were the "Kennel Terriers" of the sportsman, but within the last half century they have become fashionable companion, pet, and show animals. There is nothing to choose between the two varieties, whose only points of differentiation are in the coat. The rough dog, however, requires a little more grooming to keep him in nice condition than the smooth. Contrary to the general belief, colour is of little importance so long as white predominates, and neither brindle, red, nor liver markings should obtain. Fox Terriers are handy, smart little dogs, as much at home in the water as on land, and among the best of all house guards. Both varieties require to be docked, rather more than half the tail being allowed to remain.

**Great Dane.**—Some may cavil at this breed

being included as a pet dog, but as a matter of fact quite a number of ladies keep the noble Great Dane in this capacity and also as a companion and guard. It may be said to combine immense strength with great activity (we have seen one easily clear a five-barred gate) and a conformation that could scarcely be excelled. As a rule a pure-bred specimen that has been properly brought up is a dog most amenable to discipline and with a sweet temper. Conscious of his immense strength, unless unduly provoked, he seldom uses it, and for these reasons may be trusted in any company. Again, his sleek coat commends him as an indoor dog, big though he be. Damp and draught are the great enemies to be avoided when keeping this lovely hound, which may be taught indoor manners as easily as can a toy animal. In appearance the Great Dane should be intermediate as it were between the Mastiff and the Greyhound, possessing neither the massive proportions of the one nor the slenderness of the other. The head and neck should always be carried high. Thirty inches is the minimum height of a dog and 28 inches that of a bitch; while the minimum weight of the former should be 120 lb. and that of the latter 100 lb. Brindle, fawn, blue, black and harlequin are the colours most admired. As in the case of the Borzoi, Deerhound, and Irish Wolfhound, the Great Dane must never be chained.

**Griffon Bruxellois.**—A Belgian toy dog that has gained many friends in this country. The Belgian dogs are cropped and docked, but the former is not allowed here. For a small dog this variety has a large head, rounded and covered with coarse hair, the lips being edged with black and carrying a moustache, the eyes large, black, or nearly so, and having long eye-lashes; the chin is prominent and has a beard. These dogs, which carry a red, harsh, wiry coat, weigh from a pound or two up to 10 lb. They need to be kept indoors.

**Irish Terrier.**—Another deservedly popular member of the terrier group, and one that on account of its hardiness, gameness, and fine house-dog qualities has a very large circle of admirers. It makes a first-class town dog, its wheaten-red coat not showing signs of soiling. From 22 lb. to 24 lb. is the average weight of the best specimens. No special attention is needed to keep this dog in good condition. Occasionally an otherwise good dog shows a faint trace of white on chest. For a pet this of course does not detract from its value, though in the show dog it would. In outline the Irish Terrier is a graceful-looking not to say racy animal, and it should not be modelled on Fox Terrier lines.

**Irish Wolfhound.**—Though in reality a breed of modern manufacture that we owe largely to the work of the late Captain Graham, it is one which breeds very true to type. The hound as we know it to-day is a monument to the skill of the breeder after over half a century of hard work. Endowed with great strength and activity, the Irish Wolfhound makes a splendid defender, while its amicable and quiet manners are proverbial. A typical dog should measure at least 31 inches at shoulder and go to scale at 120 lb.; and a typical bitch 28 inches and 90 lb. In general appearance this hound is heavier in build than the Deerhound, but not so heavy as the Great Dane—in fact it is strongly though symmetrically built. The colours are those met with in the Deerhound. The coat should be harsh on body, legs and head, and over the eyes and under the jaw very wiry and long.

**Italian Greyhound.**—One of the daintiest and most refined of all pet dogs. It may be described as a pocket edition of the Whippet, with a high-stepping free action, fine and supple skin, and a coat that shines like satin. The most desirable-sized specimens are those from 5 lb. to 7 lb. in weight, self-coloured fawn being the favourite colour. Brindled and pied hounds are not considered desirable. This little hound is too delicate to be allowed outside except in favourable weather, and it is usual to "sheet" it when giving it a run outside in winter and spring. My lady's boudoir seems more suited to this aristocratic little hound than any other part of the house.

**Japanese Spaniel.**—An Eastern toy dog of great beauty. Though still retaining a measure of popularity the breed has been to a certain extent deposed from its high place by the introduction of its Pekinese relative. Fanciers set most store on the very small Japanese, and it is this craze which has largely proved the breed's undoing. Again, it is a variety which seems more than ordinarily susceptible to distemper. As pets the large sized animals are best suited, as they may be readily bred from; with the very small ones the risk is far too great to allow bitches to exercise their maternal instinct. Except that it is usually black and white and has a tail carried over the back, the Japanese in many features resembles the historic Blenheim Spaniel, though it differs from that dog in having the eyes set farther apart, in the face being broader, and in the skull being less rounded. Like the Italian Greyhound it has a distinctive high foot action. The weight may be anything from 2½ lb. to 11 lb., and although black and white is the favourite colour, red and white is admissible. Whatever the colour it should be evenly distributed over the body, cheeks, and ears.

**Maltese.**—By some this is regarded as the oldest of all dogs. Handsome in appearance, with a long coat that in whiteness rivals driven snow, and an engaging manner, it is little wonder that its admirers are many. Beautiful, however, as it undoubtedly is when kept in nice coat, it is far too sional combing are necessary to the dog's well-being, and soap is considered injurious to the coat; beaten-up egg is far better for the purpose. These dogs weigh from 4 lb. to 9 lb., and the coat is parted down the centre from the eyes to the root of the tail.

**Newfoundland.**—No breed except perhaps the St. Bernard is so well known as the Newfoundland which Landseer has immortalised. It is, however, the white and black dog that the great animal painter selected for his famous picture, and this in respect of type is scarcely the equal of the more popular black. Originally introduced from Newfoundland the breed has been improved considerably by English fanciers and to-day it has a large number of followers. In its native home it was and is a worker; here it is merely used as a companion and guard. A characteristic of the breed is that it makes one of if not the finest of all water-dogs, and it is a pity that this characteristic is not oftener developed. The Newfoundland is one of the breeds that in the past was given a bad name, being regarded as bad-tempered. This, however, was an unjust aspersion and usually those specimens responsible for the circulation of an unfounded charge were mongrels. The general lines on which the dog is built are very well known; broad, massive head and flat skull, broad back, well-ribbed body and muscular hindquarters, and deep broad chest. In height 27 inches would be an average for a dog and 25 inches for a bitch; while in weight from 140 lb. to 150 lb. for dogs, and 110 lb. to 120 lb. for bitches, would represent about the mean. Being a heavy dog, walking exercise only should be given. More than two years are taken by this dog to build up its huge framework, and a good deal of care has to be exercised if the forelegs are to be muscular, well-boned and quite straight.

**Paisley Terrier.** (*See* Clydesdale Terrier.)

**Pekinese.**—Another Eastern variety, which as its name proclaims has its origin at Pekin, though not restricted thereto. With the Pomeranian it shares the honour of being the most popular toy dog known in this country. From 5 lb. to 10 lb. is the most desirable weight for one of these dogs, which are heavy in front and fall away lion-like behind. Unlike the English Toy Spaniels, the Pekinese Spaniel has a flat skull, and the tail is carried curled over the loins. The dog has a distinctly high action when walking; short, heavy, bowed fore-legs and lighter hind ones, heart-shaped drooping ears, and a very short broad muzzle. The coat is long, with a thick under coat, and the thighs, legs, tail, and toes are profusely covered with feathering, while there is a frill round the neck extending beyond the shoulder blades. Colour is unimportant. This is quite one of the most expensive of all dogs.

**Pomeranian.**—A foxy-haired, prick-eared, thick-coated dog, which of recent years has been dwarfed, the Toy specimens being those most in demand. Formerly the Pomeranian went to

scale at 20 lb. or more; to-day 2 lb. to 5 lb. specimens are those which fashion demands. Colours are very numerous—black, brown, fawn, blue, sable, red, orange, and parti-coloured, and prices for typical dogs rule high. The late Queen Victoria greatly helped to popularise these smart, active, toy dogs, whose chief drawbacks are that they are somewhat "yappy" and not as hardy as they might be. Their temperament, however, is of the best, and a marked improvement upon that of their progenitors, whose snappiness was proverbial. The Pomeranian of to-day is a compactly made little dog with a well-knit frame and a profuse, stand-off straight coat that is prolonged into a frill at the neck and extends over the shoulders. This dog requires to be specially groomed: after brushing the coat in the ordinary way it should be finished the wrong way of the wool. Now and again a hair stimulant is desirable.

**Poodle.**—Second to none in intelligence Poodles both corded and curly have a very fair following. Generally speaking, however, the immense amount of labour and special knowledge required to keep them in nice order militates against their greater popularity. As pet dogs the Toy Poodles, weighing some 4 lb. or 5 lb., are those best suited. Though at one time it was considered that the corded and curly Poodles were two distinct varieties, it has been conclusively proved that they are one and the same, and that, according to the treatment it receives, the coat may be either corded or curly. The latter is the more popular dog. A typical Poodle presents a very symmetrical whole. The body is short, the head long, straight and fine, with a slight peak to the skull. Black, white, red, and blue are the colours.

**Pug.**—Two distinct colour varieties of this pet-dog exist—the Black and the Fawn; the latter is a modern introduction (1886) that we owe largely to the late Lady Brassey. For a long time the Blacks ill-compared with the Fawns in quality, but nowadays they are their equal in that respect. In build the Fawn pug is square and cobby, with a black face mask, large and deep wrinkles, a line (trace) extending from occiput to tail, a massive head without "stop" and weighs from 13 lb. to 17 lb. As house-dogs pugs do not excel.

**St. Bernard.**—As in the case of the Newfoundland there are two varieties, but these are differentiated not by colour but by the nature of the coat—Rough and Smooth. Contrary to the generally entertained opinion the latter is the true mountain dog though the former is the more admired. About the breed generally, however, a halo of romance centres, and this adds to the interest. To Albert Smith, the traveller-lecturer, we are indebted for the introduction here of the breed which, though like most others has had its ups and downs, has always enjoyed a large measure of popularity. On several occasions £1,000 has been paid for a typical specimen, and even now the variety is not a cheap one to purchase. Nobility, strength, benevolence, intelligence and dignity are all to be seen in the St. Bernard, whose massive, broad, slightly rounded skull, short face, deep lips, small deep-set dark eyes with the lower eyelid drooping disclosing the "haw," broad and straight back, well-rounded ribs, and very muscular hindquarters are very well known. Stand-at least 30 inches at shoulder and heavy in proportion, a St. Bernard is a most formidable dog when aroused, but generally speaking as quiet as the proverbial lamb. In the Rough variety the coat should be dense and flat and prolonged at the neck into a ruff with well-feathered thighs; in the Smooth the feathering on tail and thighs should be slighter and the coat generally hound-like. The markings of a typical dog add considerably to its beauty. They are—white muzzle, white blaze up face, white collar round neck, white chest, white fore-legs, feet and tail-tip, with black shadings on face and ears.

**Schipperke.**—A foxy-headed, prick-eared dog, from Belgium: tailless (but not naturally so); coat black. It is quite the smartest of all house-dogs, though a trifle noisy by reason of its harsh "yap, yap." A distinctive feature is (or should be) the rounded guinea-pig rump. Its weight is about 12 lb.

**Scottish Deerhound.**—As is the case with the Borzoi this hound makes a very desirable companion and guard, while its temperament is of the best and its personal attachment remarkable. In reality the Scottish Deerhound is a Greyhound with a wiry coat, some three or four inches in length, but the body is larger than that of its smooth relative. Dogs measure at shoulder 29 inches to 33 inches and bitches 27 inches to 30 inches, while the former go to scale at from 85 lb. to 105 lb. and the latter from 65 lb. to 80 lb. Dark blue-grey, dark and light grey and brindle are the colours most liked. Contrary, too, to what usually obtains, bitches of this variety are frequently of finer quality than dogs.

**Scottish Terrier.**—A powerfully built, sharp and active Terrier of from 15 lb. to 20 lb. weight, with a rather short, hard, wiry jacket of steel-grey, iron-grey, black-brindle, grey-brindle, black, sandy, or wheaten colour, a fairly long, slightly domed head, carrying small prick ears, a flat-sided, moderately long body, and a tail disposed somewhat gaily. Though slightly headstrong and stand-offish in manner, this Terrier is nevertheless most affectionate and extremely intelligent, while as a house-dog he is one of the best. Soundly conditioned he will thrive whether kept indoors or outside, and on the plainest of fare, but he is especially fond of plenty of exercise.

**Shetland Sheepdog.**—A comparatively new breed of pet-dog modelled on the lines of a Collie, but as yet showing no particular fixity of type. From 7 lb. to 10 lb. is about the weight, and the colours are those found in the Collie proper. It is, in fact, a Collie in miniature with a reputation for being one of the best of toy dogs in regard to amicability and alertness. In its native home it is employed as a worker.

**Silkie Terrier.** (*See* **Clydesdale Terrier.**)

**Skye Terrier.**—A long and low Terrier carrying a double coat, the outer one long and covering body and face, and the under one short, soft and woolly. It is a charming dog for a pet, intelligent, and a first-class guard; while if kept purely for that purpose the abnormally long coat seen in the show animal is not required. The breed may be either prick- or drop-eared. The coat is either dark or light blue, or grey, or sometimes (though rarely) fawn with black points, but when born the puppies are black, or perhaps grizzly, about the face. This dog stands about 9 inches at shoulder, and weighs from 14 lb. to 18 lb. There is a short-coated offshoot of the dog known as the Cairn Terrier, which is likely to become fashionable: at present it is in few hands. It is far more readily kept in condition than the Skye Terrier proper.

**Toy Spaniels.** (English.)—These are four in number, Blenheim, Ruby, King Charles, and Tricolour. All have the same family characteristics—domed head, wide-apart eyes, well-marked "stop," *retroussé* nose with wide-open nostrils, and ears that nearly touch the ground. The only point of difference is the colour. In the King Charles it is glossy black and deep tan over the eyes and cheeks; in the Ruby, chestnut-red; in the Blenheim, white with chestnut-red markings evenly distributed and a white blaze extending from nose to forehead, in the centre of which is a red "spot"; in the Tricolour or Prince Charles Spaniel it is black, white and tan, the black and white well broken over the body and the tan distributed over the face, the lining of the ears, and tail. On account of the short face all the Toy Spaniels make a snuffling noise that is objectionable to many. They are not very good house-dogs, and are somewhat delicately constitutioned. Against this must be set the fact that they are beautiful as to colouring and most affectionate in disposition.

**Welsh Terrier.**—A comparatively little-known member of the Terrier group, but one that makes a first-class pet and companion dog, while it is alert in the house, active outside, and very plucky. Though built somewhat on Wire-haired Fox Terrier lines the great width of skull between the ears, the deeper jaw, and the altogether stronger head, differentiates the Welsh Terrier from the more popular Fox Terrier named. In weight it is about 20 lb., and its shoulder height 15 inches in the case of dogs, bitches being correspondingly smaller and lighter. The coat—black-and-tan or black grizzle and tan—is hard, close and wiry, and does not show signs of soiling even in smoky towns, while the dog is hardy to a degree.

**West Highland White Terrier.**—In reality this

is a working Terrier, but of late years it has been much popularised. It is the genuine working Skye Terrier, but white and short-coated and with a different muzzle from the Scottish Terrier proper. Still, since it has been popularised it is gradually becoming merged as regards type with the last-named dogs.

**Yorkshire Terrier.**—To keep this dog for show it really needs a glass case; but as a pet it may be allowed to run about the house. In that case the long coat, which is the glory of the show animal, must not be looked for, nor do we think it is desirable. The variety is one of the smallest of all dogs (we have seen 2 lb. dogs exhibited, and have owned them a trifle under this weight), but the minute 2 lb. to 5 lb. specimens are delicate: one 7 lb. in weight is far better. The body-coat is steely-blue, glossy and silk-like in texture, but that on the head and chest is a rich, bright tan. A peculiarity of the breed is that the puppies are born black and tan.

## DOG MANAGEMENT.

**Accommodation.**—Dogs that are kept as pets may be allowed the run of the house, and even if they are placed in a kennel for a portion of the day, should always come indoors at night, where they are of three times the service they would be in a kennel. They should be provided with a definite sleeping place which they will quickly recognise, but this should never be on the ground level, where draughts are most prevalent. Baskets, boxes, and indoor kennels are to be had in variety, and these may readily be raised out of the way of draughts. Even a chair on which a special cushion is placed will make a snug and comfortable sleeping-place. By way of "bedding" a rug, of material varying with the weather and the breed, will be quite sufficient for even the more delicate breeds. Still, if bedding as ordinarily understood be prepared, Elastene is hygienic, warm, and does not flatten like hay. In all long-coated breeds, however, a cushion, which must be kept clean and well beaten, is better than bedding. The covering should be of some cheap and washable material. So far as the hardier terriers are concerned, these require little by way of bedding. The toy breeds when not kept in a special kennel should have a lined basket or box with a cushion for them to lie upon. Still, whatever sleeping-place and material are used they should be exposed to sun and air in the daytime, and it is especially desirable periodically to treat them to an insecticide and to keep them free from dust, in which latter flea-larvæ thrive.

**Appliances.**—For the most part these will consist of brushes and combs, scissors, nail cutters, collars, chains, leads, and food and milk vessels. These latter must be kept scrupulously clean and wholesome, while brushes should be cleansed and disinfected periodically.

**Breeding.**—Where bitches are kept—and in many respects they are superior to dogs—they should always be allowed to breed. Once in two years is often enough. If they are prohibited from breeding they usually become very fat and are liable to lacteal tumours. It is not desirable to breed at the first "heat," which may occur at any time after about the seventh month, and spring is preferable to any other season. Twice a year bitches are available, there being an interval of six months between the periods of œstrum or heat. The signs of this functional disturbance are a swelling of the parts accompanied by a reddish discharge. The time to mate the bitch is just as this ceases. The "heat" lasts from a fortnight to three weeks, and during that time the bitch must be watched, or she will leave the house and seek a mate for herself. The period of gestation is sixty-three days, more or less. For the greater part of the time no change in a bitch's daily life need be made—say for the first four or five weeks. After that care must be exercised that she is not over excited or allowed to exert herself too much, and especially to jump. A fortnight before her time she should have her whelping place appointed, and be allowed to there each day until near her time. This will be heralded by a change in her behaviour, by a constant desire to go outside, and a general restlessness. Except with big-headed breeds like Bulldogs, healthy bitches require no help as a rule, though often small dogs when whelping like to have their mistresses by them. The event over, no attempt must be made to count or even to look at the puppies. A little lukewarm arrow-root should be given her, and she should not be disturbed for going out until the next day, when she should be allowed out to relieve herself, and any soiled bedding should be removed. For three days soft food only should be given the nursing mother, after which a dietary on more generous lines than ordinarily given should be provided.

**Docking, and Removal of Dew-Claws.**—These are two of the minor operations that even a pet dog breeder is called upon to perform unless he is prepared to seek the services of a veterinary surgeon. Quite a large number of the breeds enumerated are docked—Irish, Fox, Welsh, Airedale, and Yorkshire Terriers, English Toy Spaniels, Schipperkes, and Poodles. The operation is best performed during the first week of a puppy's life, it then inflicts a minimum of pain on the individuals on which it is practised. Having pushed back the skin and hair, the required length of tail may be removed with a pair of nippers or else with a sharp knife. In the case of the Schipperke only the veriest stump is allowed to remain, but in the other breeds, not quite half is taken off the terriers, and a little more than half off the Toy Spaniels, etc.

The removal of the dew-claws from the hind legs is a very necessary operation, as such, if left, often cause the dog considerable pain should they get lacerated; their removal also gives him a more finished appearance about the leg. They may be removed about the same time as the tail is docked, using a pair of special scissors (obtainable from dealers in fanciers' appliances) and severing them in an upward direction.

**Feeding.**—An adult dog in health requires but two meals a day—a very light one of hard, dry biscuits in the morning, and a more substantial one late in the afternoon. If fed very late the dog will be asleep when most its services are needed. The dietary should be varied—cooked lean meat, houndmeal, well boiled oatmeal or rice, any vegetables from the table but not too many potatoes, cooked fish freed from bones, and biscuit either broken up and given dry or covered with gravy, etc., and allowed to cool. The meals must be at regular intervals, and the dog given as much as he can comfortably eat. There must be no long fasts and no great feasts. After that the food vessel should be taken away, cleansed, and put aside until the next meal-time is due. The changes on the food should be rung as often as possible. Very occasionally, if a dog appears out of sorts, a little raw lean meat finely cut up will work wonders. Shy feeders and greedy ones need alike to be watched at feeding times. Large bones should always be provided after a meal, but not in place of one. Fish, game, poultry, and rabbit bones should never be fed to dogs.

Puppies require to be fed on the "little and often" principle. At the age of three weeks they may be taught to lap soft food from the mother's dish. Weaning time (seven weeks), however, is the most critical period in their lives, as the change from the mother's milk to that of the cows (far less nutritious), which is the general substitute, causes them to fall away considerably. The best foods are Malt Milk or Lactol; while Benger's and Ridge's Foods with a little Plasmon are also excellent. Five or six meals a day are none too many for the weaned pup for the next two or three months. After the fifth month they may be reduced by two, as more sustaining food will gradually be given, until at the tenth only two meals will be necessary. Vegetables are not good for very young puppies, as they have a tendency to promote flatulency.

**Exercise.**—All dogs require exercise to keep them in health, the amount varying with breeds and even individuals thereof. With delicate toys this is often difficult to provide on account of weather conditions. In such cases then the little animals must be induced to run after a ball inside. Pugs and Bulldogs like slow walking exercise; the hardier terriers something more arduous, and two or three hours daily are not too many for a healthy adult. Exercise must never be given directly after a meal or in the heat of the day; nor must a dog be allowed to enter the water for a swim just after feeding. To allow any of the

breeds enumerated to run after a cycle, trap, or motor would be cruelty refined.

**Grooming.**—Regular grooming is as important as regular food; it keeps the skin and coat in nice condition and tends to prevent fleas and lice from effecting a lodgment. Brushing is better than combing for most breeds, and special brushes are sold for special breeds. Grooming should be performed before feeding. Sleek-coated breeds like Bulldogs, Black and Tan Terriers, etc., are best finished off with a chamois leather and a good hand rubbing.

**Training.**—Pet dogs stand as much in need of training as the sporting dog used with the gun, though it is necessarily of a different kind. The first lesson must be obedience to name or whistle. The lessons must never be too prolonged or the puppy will weary. The fourth month will be early enough to commence. To collar and chain the animal must also be accustomed. Naturally he will resist both. If, however, they are put on when there is a prospect of a run out or a romp, and the chain be allowed to drag, the pupil will soon forget that they are restrictive agents. Indoor manners must be early inculcated. Every time the puppy offends he should have the soiled place pointed out and be put outside in disgrace. On no account thrash him or the fault will be intensified—not cured. Having expiated his offence let him again return indoors and do not scold him unless he again offends, when the process of ejection may be repeated. Outdoor manners will consist of thorough obedience to call or whistle, to come to heel when told, and to respect domestic and other stock. This last may be brought about by taking the puppy where cattle, horses, sheep, and poultry are. At first he will be on a lead or chain, but later this may be dispensed with. Any attempt to break away must be checked by warning voice, but severer measures must not be resorted to until every other means have failed. With some dogs it is quite sufficient to put them on the lead at the first sign of breaking away and allowing them to cover the remainder of the journey restricted and in disgrace. Puppies should never be fed from the table or allowed to take anything from strangers, otherwise they grow up intolerable nuisances. Again they must never be allowed to jump up, say, when an owner meets a friend, or to bark at horses, cattle, or other stock. Any attempt to do so must be nipped in the bud, or a well-mannered adult will never result.

## COMMON DISEASES AND PARASITES.

The diseases and parasites affecting dogs are exceedingly numerous—so numerous that to deal with all would require a volume. All that can be dealt with, and these very briefly, are such as are commonly met with, and that will yield usually to home treatment.

**Anæmia.**—Dogs that are badly fed and housed, or which suffer from worms, are often anæmic, and in that condition Blotch or Surfeit—characterised by the appearance of reddish patches and finally by sores—results. With anæmia the gums and mucous membranes are pale and bloodless, and the animal sometimes falls away considerably. Good nourishing food and a healthy environment are very beneficial. Occasionally a little fresh, raw meat, finely chopped, will do a lot of good. An excellent drug is reduced iron (tasteless), 1 gr. to 3 gr. in the food twice a day.

**Blotch or Surfeit.**—Really a phase of Eczema in which there are inflamed patches and large sores. It may be due to poorness of blood (Anæmia) or to an overcharged system. A remedy in the former case has been suggested under **Anæmia**: while in the latter a brisk purge is called for until the bowels are moving freely. To the sores themselves boracic acid ointment should be applied.

**Canker of the Ear.**—An exceedingly common disease of the dog that manifests itself in two forms—internal and external. The internal form may be due to a Symbiotic parasite that sets up great irritation, or to some injury or foreign substance in the inside ear with suppuration and an objectionable smell. The external form affects the ear-flap. The symptoms are a shaking of the head and a pawing at the ear, with, of course, a redness inside the ear or inflammation, and perhaps ulcers outside. For the external canker it is just necessary to cleanse the ear by means of Condy's Fluid (a light red solution), and afterwards to apply, when thoroughly dry, ointment of Balsam of Peru. In internal canker the ear should be gently syringed with spirits of wine and lukewarm water (one in twenty). After that well dry with successive pieces of cotton-wool rolled round the pointed end of a penholder, and finally blow through a quill or glass tube equal parts of finely-powdered iodoform and subnitrate of bismuth. Feed lightly and keep the bowels well moved.

**Cough.**—A symptom and not a disease proper; often due to derangement of the organs of respiration, but occasionally to worms and indigestion. Where in addition to the cough there is a rapid rise of temperature, quick, laboured breathing and expectoration, bronchitis may be suspected, and skilled aid should be sought. In the other two cases the cause must be removed, when the cough will cease.

**Deafness.**—With white dogs especially this is a fairly common disease. Usually with them it is congenital and incurable. The condition may, however, arise from a secretion of wax, and in that case gentle syringing with lukewarm water, careful drying of the ear, and the insertion therein of a little almond oil, warmed in a spoon held over a spirit flame, will give relief.

**Diarrhœa.**—An extremely common ailment with dogs and puppies, and one that must never go unchecked; on the other hand, it must not be stopped directly a looseness of the bowels is noted, as that is Nature's way of getting rid of some undesirable matter. A good plan is to give a dessertspoonful or a teaspoonful of castor oil. Worms and unsuitable food are commonly responsible for the trouble, while an injudicious use of flowers of sulphur is now and again a direct cause. Still, whatever the cause, the oil suggested will do good, and this may be followed by 5 gr. to 10 gr. of subnitrate of bismuth dry on the back of the tongue. The food, too, must consist chiefly of arrowroot and milk or of peptonised milk. Well-boiled rice, with which some shredded raw lean beef or mutton has been mixed, may also be given: but the rice must be *thoroughly cooked*, or further trouble may result. Young puppies with the dam should not have drugs: they should be treated through the mother, but older ones may have half a teaspoonful of ordinary chalk mixture.

**Distemper.**—The commonest and most fatal of all dog diseases. Though usually a disease of puppyhood it also attacks adult dogs. One attack of the disease does not render an animal immune, but second and third attacks are as a rule lighter. All dogs do not have distemper, though the number which escape is relatively small. It is a many-phased disease that runs a specific course, and though certain drugs are helpful, the patient depends for recovery still more upon good nursing. The great thing is to treat the disease directly it is recognised. The usual form is characterised by running of the eyes and nostrils, a hot nose, and a decided rise in temperature. The first thing to be done is to remove the dog to warm, airy quarters, where he will receive constant attention. It is very essential that the discharge from the eyes and nose be kept removed. Once the nose gets clogged with the mucus, complications are sure to arise (the lungs and the bronchi may become involved), and the case is not then amenable to home treatment. If ordinary invalid food is refused—as it frequently will be—the following must be given three or four times, daily:—Bovril one teaspoonful, milk 2 oz., and half an egg. In addition a fresh egg should be beaten up in a little milk; this is sustaining and will also help to moisten the patient's mouth. These preparations must be given quite fresh. Still better fare if the dog will take it consists of a sheep's head boiled and the meat therefrom cut up finely and mixed with stale bread—the whole covered with the liquor in which the head was boiled. St. Vitus's Dance (Chorea) often follows a distemper attack, and is incurable. Those whose business it is to wait on distemper patients should not be allowed access to healthy dogs, cats, or even ferrets. After the patient becomes convalescent he will be so debilitated that a generous, readily-digested dietary must be provided for a time.

**Eczema.**—Another disease with many phases and difficult in bad cases for a layman to differen-

tiate from Sarcoptic Mange. There are both wet and dry forms of eczema, and both may be characterised by considerable skin irritation. The cause of disease in any individual may be very obscure. It may be due to a lack of food or from a surfeit thereof, or even from an unsuitable dietary, or from worm infestation. Contrary to the opinion often entertained, Eczema is not due to a parasite (as Mange in both forms is), but is really a blood disorder and therefore non-contagious. The skin often presents a very red appearance, especially in the thigh region, when the disease is known as Red Mange; or in addition to the inflamed condition there may be bladder-like eruptions which, having discharged their contents, form scabs and coalesce. To attempt to allay the irritation (the effect) without attacking the cause is not of any permanent use. The cause must be diagnosed and efforts made to remove it and to bring about a healthier condition of the blood. For this, from a dessertspoonful to a tablespoonful of the following should be tried:—Liquor arsenicalis, 1 dr., tincture of ginger 2 dr., Epsom salts 1 oz., water to 6 oz. To allay the skin irritation use one part of flowers of sulphur to six parts of olive oil. Scottish and several other Terriers seem particularly susceptible to a form of wet eczema between the toes. For this boric acid is excellent.

**Fits.**—Those most commonly met with are due either to teething or to epilepsy. The former are not of great moment, and usually an aperient at the time the permanent teeth are irrupted will prevent them. Epileptic fits are more serious. The dog when seized seems to tremble violently, staggers, and falls down should he attempt to move. They are usually accompanied by a frothing at the mouth, champing of the jaws, violent convulsions, and a moaning. Beyond removing the animal to a quiet spot little can be done. When the fit is over the animal will collect himself and will get up apparently all right. Bromide of Potassium in 2 gr. doses, twice a day, will have a quieting effect on the nervous system; but care must be taken not unduly to excite a dog showing a predisposition to these fits, or to give exercise on a full meal. Worms, too, are a cause of fits in both puppies and adults. The remedy is to expel the parasites.

**Fleas.**—Dogs that are neglected (ungroomed) or whose sleeping-places are not looked after, are very liable to flea attacks. These are found on the dog as perfect insects only, the larval (grub) and chrysalis stage being passed in dust and other débris. There are plenty of soaps an the market that will kill fleas; while Jeyes' Fluid in solution will also be equally useful. In the smaller dogs (toys) a spraying with camphor spirit, followed by a combing, should get rid of the pests; but care must be taken that the spirit does not get into the eyes. Baskets, cushions, and rugs should be periodically cleansed and treated to an insectide.

**Indigestion.**—Another common ailment generally the result of improper feeding and lack of exercise and fresh air. The chief symptoms are an unhealthy appetite (craving for cinders and coal), diarrhœa, bad breath, vomiting and constipation. A compound rhubarb pill—or two in the case of the larger dogs—given on alternate nights for a week, will soon work an improvement if at the same time attention be given to dietary and exercise.

**Lice.**—Two kinds of lice are found on the dog—a biting and a sucking kind. They are usually more difficult to get rid of than fleas by reason of the fact that not only have the insects themselves to be taken into account, but also the unhatched generations in the egg-cases (" nits ") attached to the hair-shafts. All hair-combings should be burned directly after grooming, and the dog dressed with one part paraffin and two parts olive oil. The egg-cases may also be dissolved by means of vinegar. Jeyes' Fluid (one in fifty) is also a good insecticide. Lice are debilitating to their host, and are, moreover, the intermediaries of Tapeworm and thus doubly objectionable.

**Mange.**—Though often spoken of in connection with dogs, Mange cannot be regarded as a common disease in either the Sarcoptic or the Follicular form. As it is communicable to man—at least in the Sarcoptic form—home treatment is not advisable. Again, at the outset it is difficult to differentiate it from Eczema. Later, however, the shedding of the coat and the unwholesome appearance due to the bursting of the pustules, the exudation of a fluid, and the coalescing of the scabs, should be sufficient to warn the owner. Mange is due entirely to parasites, the one burrowing under the cuticle, and the other beneath the hair follicles. It is highly contagious, and a kennel or other sleeping-place used by a mangy patient should not be occupied by a healthy dog until it has been thoroughly disinfected, and then only on the advice of a veterinary surgeon.

**Rickets.**—Puppies bred from ricketty parents, or reared under unhealthy conditions, or fed on an unsuitable diet, are liable to contract this deforming disease. It is caused by a deficiency of earthy matter in the limbs chiefly, and the result is that they are unable to support the body-weight and become misshapen. Moreover, once the limbs are crooked the deformity is permanent. The great thing to aim at is prevention. This is best brought about by finding a good substitute for the dam's milk at weaning time (*see* **Feeding**). Ten grains of phosphate of calcium given in the food twice a day should also prove of great benefit.

**Ringworm.**—Two varieties of Ringworm are found on the dog—honeycomb and circular. The fungus responsible therefor is easily introduced into an otherwise healthy area by means of cats, cattle, etc. Affected animals should be isolated directly the disease is noticed, and dressed with yellow mercuric oxide ointment. Ringworm is very contagious and transmissible to man.

**Ticks.**—Pet-dogs that have the run of the country are almost certain to pick up Ticks—animals which approach the spiders in form. They are very irritating as well as debilitating to their host. When first they attach themselves they are quite small, but gradually assume goodly proportions, and when full fed are not unlike a plump horse bean. They should never be picked off, as in doing so the mouth-parts of the creature are invariably left, and these cause nasty sores. If not very numerous they should just be touched with a camel-hair pencil dipped in turpentine. This will cause them to relax their hold, and they may then be readily detached and crushed. Washing with soap is of no avail against Ticks. Several firms of repute sell efficacious lotions to be used against the pests.

**Worms.**—Round, Tape-, and Thread-worms affect the dog and are the cause of much trouble. Puppies nearly always harbour the kind first mentioned, and they are detrimental to their health. Pot-bellied individuals should always be suspected, and a vermifuge be given. Sherley's Worm Capsules are safe and effectual. For Tape-worms (usually passed in flat segments with the *fæces*) oil of male fern in capsule form and in doses suited to the different breeds is almost a specific. All vermifuges should be given after fasting the dog twelve hours, and should be followed in half an hour with a dose of castor-oil—a dessertspoonful to a tablespoonful. So long as the head of the creature remains, however, the worm will continue to increase by budding off segments from the head. By way of prevention all dogs should be kept free from fleas and lice, and on no account should they have access to uncooked rabbits' livers or sheeps' heads, either of which may be the means of infesting the dog with Tape-worms of a most injurious kind.

Thread-worms may be ousted by similar means.

# CATS.

The cat may be truthfully classed as amongst the most beautiful, elegant, and graceful of all carnivorous mammals, while its agility is nothing short of remarkable. It is, moreover, an animal of great utility, and assists materially in holding in check two of the most destructive of all vermin—the rat and the mouse. In the days of Julius Cæsar, although our forests were plentifully supplied with cats, not a single " mouser " existed in any British town or village. And further, it is recorded that the domestic cat was a rarity even a thousand years after. Cats have been kept as pets though for hundreds of years now, and once having proved their value to man as destroyers of vermin became greatly valued.

## VARIETIES.

In a general way Domestic Cats are divided into two classes—Long-haired, and Short-haired. As exhibition specimens the Long-haired are much the more popular, but the latter are much the more numerous, and largely kept as household pets.

**Long-Haired Cats.**—Not many years ago these were judged for coat and size only, and the colours were few; now there are many—Black, Blue, White, Orange, and Cream in Selfs; Brown, Silver, Orange, and Blue in Tabbies; Tortoiseshell, Tortoiseshell-and-White, and Blue-and-Cream in Broken Colours. The most valuable and highly-prized colour of all is that known as Chinchilla. The Chinchilla is a cat that is practically a silver, but its fur is just flecked or tipped very faintly with grey. The Smoke possesses an under coat of pure silver, whilst its top coat is a rich black. A sound-coloured Smoke, must now show any barring or tabby marking. Its under colour must be as clear and pure as its top coat is bright and sparkling. Although springing from one common ancestry, the Smoke and the Chinchilla have nothing in common except the colour of under coat. The top coat of the one must be as light as possible, and that of the other as black as possible. The Chinchilla has a green eye, peculiarly beautiful and lovely, but the eye of the Smoke has been improved into a rich amber of a coppery hue.

The most popular of colours is that known as blue, but strictly speaking the colour is more of a French grey than a blue, although there is one family of Blues which possesses a warm and deeper tone, and is more of a plum blue. This particular strain has been in great request of recent years, and one of its members, known as Champion Sir Archie II. of Arrandale, has produced more winning cats and kittens than any cat ever bred. The eye of the Blue must be deep amber or copper coloured if it is to be accounted of value on the show bench. Blacks, Brown Tabbies, Orange Selfs and Tabbies, Smokes, Creams, Tortoiseshells, Tortoiseshell-and-Whites, Blue-and-Creams, and Blue Tabbies should all have orange or amber coloured eyes. Silver Tabbies should possess a dark hazel eye. All the best authorities are agreed on this point, although of late years one or two prominent judges have stated their preference for the green eye, but their opinion has not been shared by the leading breeders. Whites have blue eyes.

All the Tabbies are named after the ground colour of their coats—Brown, Silver, Blue, and Orange. The stripes of the first three must be black, whilst those of the Orange are of a richer and deeper hue than the ground colour, and a good description to apply to them would be red. It is somewhat remarkable that the best coloured black cats are usually very rusty and brownish in their top coat as kittens. Therefore a kitten should not be rejected on account of its colour until it has shed its kitten fur, and rejoices in the possession of its full adult coat. Tortoiseshells are tri-coloured, having distinct patches of black, red, and yellow, and the richer, deeper, and clearer these three colours are so much more valuable the animal. Thus far the Tortoiseshell Tom is the *rara avis* of the Cat Fancy, only two or three specimens having made their appearance. Tortoiseshells are bred from the crossing of Blacks and Oranges, and from either of these colours with Tortoiseshell. At one time Orange females were as rare as Tortoiseshell males, but now they are fairly common. Whites are very handsome and are highly esteemed on the show bench.

The chief points of the Long-Haired Cat apart from colour, which is a very weighty consideration and a point of great value, are—Head, round and compact as possible, bold in the forehead, short in face, full and round in the cheeks and lower jaw; the nose should be short and wide, and have a slight upward tilt; the eyes should be round, full, bold, and bright; a lustreless eye is a great drawback, and ears should be short, neat, well tufted, and widely set in the forehead. Body, compact, cobby, and firm. Legs, stout, strong in bone, well covered with fur. Feet, broad, well padded and nicely tufted. Frill or colour, long, full, and flowing. Tail, short, wide and bushy, and carrying a profusion of fur, hence the cognomen "brush" so often applied.

**Short-Haired Cats.**—In coat and structure the Short-Haired Cats differ very materially, not only from the Long-Haired but also from each other. All the Long-Hairs are alike in shape, coat, and carriage. Not so the Short-Hairs. There is only one variety of Long-Haired, but there are five varieties of Short-Haired—British, Manx, Abyssinian, Russian, and Siamese. Another variety is sometimes spoken of—the Maltese, but it is not recognised by English breeders.

We will speak of the British first. The ordinary household cat or family mouser. It is more elongated in body, legs and tail than the Long-Haired Cat. The head, although full and round, is not so short in face and nose as that of the Long-Haired. It is freer in its movements, and possesses a more vigorous and swinging gait than does the Long-Haired. The colours are—Black, Blue, White, Orange, and Cream in Selfs. Brown, Silver, Grey, and Orange in Tabbies. In eye colour they are the same as the various Long-Hairs, as are the two other colours, Tortoiseshell and Tortoiseshell-White. The coat of all British cats is soft, fine, sleek, and velvety.

**Manx Cats** are tailless. They are not so elongated in body as the British, the hindquarters having a sort of chopped-off appearance; they are not square, but rounded; the hind legs are unusually long, thus the body slopes towards the shoulders, instead of from them as in the British cats. The Manx cats are devoid of the graceful carriage of the British, and have a kind of lounging gait, something like that of a rabbit.

**Abyssinian Cats.**—These bear a close resemblance to the Egyptian cats, and many believe them to be direct descendants of the original Egyptians. The name Abyssinian suggests a connection with Egypt, and the fact that they are quite distinct in colour from any other cats known to English breeders also lends colour to the Egyptian theory. The body is long and slim, as are the legs and tail. The face is more wedge-shaped than that of the British. The ears are rather long and fine and tipped with black. In colour it is brown, and is evenly ticked with black. Silvers have been produced, but the best authorities say they are not pure, and are the result of being crossed with the British Tabbies. This contention may be correct, but we are inclined to dispute it. In our opinion the Silvers are sports from the Browns, and are the result of a failure or weakness of the colouring pigment.

**Russian Cats.**—These are beautiful rich lavender blue in colour, a brighter and more metallic hue than the blue of the British Cat, which they resemble in body shape but not in head, the head being longer and not so massive as that of the British. The coat of the Russian is altogether different from that of the British, it is not so soft and velvety, but is closer and firmer, and possesses a plush-like appearance and feeling. The eyes are not so deep in colour as those of the British Blue, and often show a shade of green. English breeders like the deep coloured eye, but the paler shade is more in keeping with the colour and texture of the coat of the Russian.

**Siamese Cats.**—As the name indicates these are the Royal Cats of Siam, and they are most distinctive in character. In shape of body they resemble the British Cats, but are more delicately formed, are finer in bone, and somewhat shorter in limb. The head is fine, but not so long nor so wedge-shaped as that of the Abyssinian. When young the Royal Cat of Siam is of a clear cream colour, but as it ages so the colour darkens to fawn, and from fawn to chocolate. It has clear china blue eyes, and its face, ears, paws and tail have rich seal-brown markings. They are hardy if kept under proper conditions. There is a blue variety, but only a few have been imported into England.

## MANAGEMENT.

**Breeding.**—No better place for the early home of kittens can be desired than a cheese tub. One of these will only cost a few pence from the local grocer, and when scrubbed and cleaned needs nothing more than a piece of old blanket or flannel laid in the bottom to make a very comfortable bed for a breeding queen. Pussy should be introduced to her quarters about a week before the kittens are expected, and she will soon understand and appreciate them. The blanket or

flannel should be changed every few days, then no trouble will be experienced from fleas, especially if the bottom of the tub is wiped out with a cloth and dusted with pyrethum insect powder each time the blanket is changed. The welfare of a litter of kittens depends in great measure upon the cleanliness of their bed, as it is impossible for them to thrive if a colony of fleas are sucking their life blood from them. It is not advisable to mate a queen before she is ten or twelve months of age, nor to allow her to have more than two litters in a season if it is desired to have strong, robust, healthy kittens. When a queen shows signs of becoming restless, she should be shut up until arrangements can be made to send her away to be mated, so that she may not contract a mis-alliance. Nine weeks from the time of mating kittens may be expected.

**Feeding.**—For the first seven or eight weeks the kittens will do well enough with their mother's milk. Then they may be given a little cow's milk, thin gruel made with oatmeal and milk, and Benger's or Ridge's Food. At nine weeks they should be given porridge made from milk and rolled oats such as Quaker, Provost, or Waverley. At twelve weeks they may have a little minced beef cooked with their porridge; as change of food they should be given puppy, or dog, biscuits broken up and cooked as porridge. This diet may be continued until the kittens are seven or eight months old. Many give kittens raw minced or scraped beef from the age of three months, but it is not needful; in fact, our experience leads us to the conclusion that young kittens do better without, than with, raw meat. Young kittens when weaned need to be fed five or six times a day, say, every two hours; when three months, every three hours; from six to eight months, four times a day; after that age, twice a day. For adult cats the diet should be varied, and may consist of fish, meat (cooked or raw), gravy, vegetables, boiled tripe, table scraps, breadcrumbs, and any of the ordinary hound meals, and dog biscuits which may be scalded and mixed with meat and vegetables or fish, or fed alone. Milk we do not care for as a food for cats after early kittenhood; we long ago came to the conclusion that they do far better without it. There is one thing, however, which should never be forgotten, and that is a dish of clean cold water renewed twice a day. With this, and care and cleanliness, there will not be much illness. Kittens will learn the use of the sanitary pan from their mother, and will use it regularly from the earliest days of kittenhood if permitted. Finely sifted ashes are the best material for the pan, but powdered peat moss or dry earth are efficient substitutes.

**Grooming.**—The health and general well-being of cats depends greatly upon the way in which their bodies as well as their beds and resting-places are cleansed. Every day the coats of long-haired cats should be well brushed with a long-bristled brush such as ladies use. Combs should never be used unless absolutely necessary, as they tear the coat and destroy its beauty. If the coat should become mattered and cotted, the cots should be teased out with a long darning needle, then gently combed, and afterwards brushed out. If neglected, the coats will soon become matted; therefore, the daily use of the brush should not be neglected. Before showing, the coats of Blues, Blacks, Browns, Creams and Oranges should be dry-cleaned with warm bran, which should be well rubbed into the coat with the hands and then carefully brushed out. Whites, Silvers and Chinchillas should be cleansed with baked flour or with Pears' Prepared White Fuller's Earth, rubbed in in the same manner, and then well brushed out. It must be remembered that the daily grooming does more than add to the cat's outward appearance; it keeps it in good health by preventing the loose fur from entering the cat's stomach and causing fur balling. In connection with this, we may say that cats who are able to eat long coarse grass are seldom affected in this manner, the grass preventing the balling by reason of its power as a natural emetic.

### DISEASES AND PARASITES.

**Canker of the Ears.**—A disease that might be treated on the general lines as suggested for dogs.

**Cold in the Head.**—Sneezing, coughing, and eye and nose discharge are the symptoms. The treatment consists in keeping the cat warm and giving light, easily-digested food. Should the discharge clog the nostrils, the cat's head should be held over a vessel of hot water containing a little Eucalyptus Oil or else a decoction of Poppy Heads. This complaint is very contagious.

**Diarrhœa.**—Symptoms too well known to need description. Observe the same general rules as are detailed for dogs.

**Distemper.**—A highly contagious disease characterised by loss of appetite and weight, and a hot nose; this is usually followed by diarrhœa, or it may be by vomiting, discharge from the eyes and nose, coughing, and sneezing. Another phase of the disease shows the cat as a most emaciated animal with a dry, staring coat and cold skin; death usually soon puts an end to its sufferings. Pneumonia, again, often follows on distemper, and is often fatal. The best thing to be done is to send for a Veterinary Surgeon.

**Eczema.**—A non-contagious skin trouble in which there is great irritation, causing the cat to scratch itself and scabs to form, especially on the back. In certain cases where there is no inflammation present, arsenic is the best drug to employ, but in infinitesimal doses, and only under the advice of a Veterinary Surgeon. A little lean, raw meat cut up is good, and the bowels should be kept gently moved. To relieve the inflamed skin apply three times a day: Goulard's Extract, 1 part; Glycerine, 2 parts; Rectified Spirit, 2 parts; Water, 75 parts.

**Fits.**—Epileptic fits are common. Adopt general treatment as advised for dogs. Three-grain Bromide of Potassium tabloids should be dissolved in a little water and given as a sedative.

**Fleas.**—These are especially troublesome in the case of long-haired cats. They are best got rid of by spraying with spirit of camphor from tail to neck taking care that none gets in the eyes), and then combing the cat over a vessel of hot water.

**Fur-balling.**—This is not a disease although it often gives rise to one, and is not infrequently the cause of a cat's death. Usually the cat owner resorts to castor-oil, and thus makes matters worse. The best thing to be done is to get a pigeon and to give a wing—feathers and all—to the cat. This will usually dislodge the fur "ball" without much trouble.

**Gastro-Enteritis.**—Perhaps the most fatal of all cat diseases, and usually due to erroneous feeding, or the cat eating garbage. The "stools" are greenish and most offensive; there is much fever accompanied by a swelling and tenderness of the stomach. It is infectious and the aid of a Veterinary Surgeon should at once be enlisted.

**Lice.**—A biting louse in found on the cat. It does not seem to cause much irritation. It may be destroyed by using creolin 1 part, water 200 parts twice a week. Fatty food is called for, and cod-liver oil will be found of benefit in such cases.

**Mange.**—A somewhat untractable disease not amenable generally to home treatment.

**Milk Tumours.**—These unsightly swellings are due to unthinking people destroying the whole of a litter of kittens and not attempting to disperse the milk. When all the kittens are taken away from the mother while she has plenty of milk, the latter should first be drawn off and the milk-glands rubbed with camphorated oil.

**Ringworm.**—An irritating skin condition due to a fungus, and as the complaint is communicable to man, it is best treated by a Veterinary Surgeon.

**Worms.**—Both Round- and Tape-worms are found in the cat. For the first give to an adult: areca nut, 6 grams; santonin, 1 gram, followed in an hour by a dessertspoonful of castor-oil. For the Tape-worms Oil of Male Fern (obtainable in capsules) is excellent. After the expulsion of the parasites the cat will need to be generously fed.

### GOATS.

**Disposition and Tractability.**—Goats are capable of being made as companionable as dogs. They should be taken in hand when quite young, a well-bred kid being far easier to procure than a full-grown goat, which may cost anything between £5 and £10, whereas a kid may be had for a pound or thirty shillings.

**Rearing Kids.**—Our advice to beginners is to write to some of the principal breeders of the

...t Society, and endeavour to purchase a
...id from parents possessing a milking
..., which means one whose dam or grand
has won a milking prize, showing that the progeny are likely to inherit this quality.

Many goats produce three kids at a birth, but it is better to rear two well than three indifferently, and therefore breeders may often be willing to part with the third at a reasonable price, and this is the chance for the novice. The sooner the kid is taken from its mother after birth the easier it is to rear by hand, and artificial feeding is easily managed if the following conditions are observed:—The first and most important is to pay the greatest attention to cleanliness in the utensils used. The feeding-bottle should be one of those having a teat fixed to one end and not one connected by a long tube which accumulates sour milk and is difficult to clean. It must be rinsed out with scalding water once a day at least, and occasionally left soaking in soda water. The best milk of course is goat's milk, but as this is not often obtainable where a goat is not kept on the premises, cow's milk may be substituted, a quarter of a pint at a time, repeated several times a day for the first week. Afterwards the meal may approximate to half a pint and be repeated less often. At a week old a quart a day may be given and this may be gradually increased afterwards. At the end of a month, if economy has to be considered, some calf-meal gruel may be given mixed with the cow's milk, and continued in larger proportion as the animal grows, till at two months old this artificial food may be supplied alone or at least with only a small proportion of milk. At ten weeks the kid may, if desired, be gradually weaned from the bottle and encouraged to eat hay—which it will have already nibbled freely if offered—and crushed oats mixed with bran. It will be found beneficial, however, to continue the liquid nourishment night and morning for another month or longer.

**Goatlings.**—Technically speaking a kid is a young goat up to twelve months old; from that age to two years it is known as a goatling, which corresponds to a heifer amongst cows. Now a goat is probably the most precocious of all domestic animals, and if allowed the opportunity it will mate even before it is fully weaned, and bring forth a kid before it is itself out of its kidhood. This must be carefully guarded against by anyone wishing to rear a fine goat, for this early breeding arrests growth, and the animal never afterwards attains its proper development. She kids and goatlings must therefore be kept quite away from male kids or goats.

Assuming the kid to have been born in March, it should not be mated until the September of the year following. As the period of gestation is five months it will then come into profit the following February or March, when it has practically done growing.

**Training a Goat for Draught.**—It will be during the goatling stage, and, in fact, as soon as it is no longer a kid, that the animal should be trained for drawing a carriage if such be desired. The first thing to be done is to accustom the animal to a bridle and bit, and then to drive it about with a pair of reins but without being attached to any vehicle. This is to teach it the use of the bit and to get it to answer to the rein, turning to right or left and stopping as required. The goat is then attached to a light cart, being at first led by hand, and afterwards driven until it understands what is expected of it.

**Feeding.**—Grass is by no means a necessity. The animal enjoys pasturage naturally, but the grass must be clean and sweet; trimmings of hedges and prunings of trees form admirable food. There is, indeed, nothing in a vegetable garden, from such weeds as thistles and docks to peahaulm and potato tops, stalks of greens, etc., that comes amiss to these animals.

When the time of the year arrives in which garden produce is no longer available, recourse must be had to hay and oats, with swedes or mangolds as green food, and such scraps as the kitchen affords in the way of pieces of bread, apple and potato parings, the scrapings of the porridge-pot, and such like. It is out of waste material of this kind that the pet goat provides the household with the most nourishing and digestible of milks—a milk which gives a creamy taste to your tea and coffee and the puddings that are made with it.

## RABBITS.

England has long held the lead so far as the breeding of high-class exhibition rabbits is concerned, but on the utility side is a long way behind the Continent so far as the production of rabbit-meat and valuable skins are concerned. When we consider that all domesticated rabbits are descended from the brown, or grey, wild rabbit (*Lepus cuniculus*), so familiar to us all, we are led to realise how great has been the ingenuity and perseverance of fanciers in the production and perfecting of the many varieties which now grace the benches of our shows. This work has been greatly assisted by the many specialist clubs devoted to the culture of Fancy Rabbits.

**Varieties.**—(1) Angora: points—long fleecy coats, heavily tufted ears and feet; colours—white, black, blue, fawn and grey, the first the most common. (2) Belgian Hare (bred to the type of the wild hare): points—length of body, fine head, fineness of bone, and rich rufous red colour. (3) Dutch: points—smart cobby body, close fine coat; markings—white blaze collar and fret stops; colours—black, blue, light and dark grey, tortoiseshell, yellow; weight 5 lb. to 5½ lb. (4) English: shape, size, full close coat; markings—butterfly nose, eyes, ears, cheeks, saddle, body, legs and belly; colours—black, blue, grey, tortoiseshell. (5) Flemish Giant: points—size, massive bone, squareness of body, firmness of flesh; colour—steel-grey; weight 15 lb. to 20 lb. (6) Himalayan: points—small cobby body, pink eyes, close fine coat; colours—white, with black nose, ears, feet and tail. (7) Imperial: points—medium size, short fine silky coat, blue eyes; colour—medium blue; weight 5 lb. to 6 lb. (8) Lops: points—length, width, substance, and carriage of ears, size of body, straightness of limbs; colours—black, black and white, blue, blue and white, fawn, fawn and white, grey, grey and white, sooty fawn, and tortoiseshell; the ears of first-class specimens measure 27 to 28 inches from tip to tip, and 7 to 8 inches across. (9) Polish: points—neat cobby body, short ears, pink eyes, short fine coat; colour—white. (10) Silvers: points—short cobby bodies, but larger than Polish or Himalayan, evenness and soundness of colour, brightness and sharpness of silvery ticking, short fine coats, fine bone, neat ears; colours—grey, fawn, brown, blue, divided into shades known as light, medium, and dark in each of the four colours; weight 5½ lb. to 6 lb.

**Housing.**—There are two forms of housing, outdoor and indoor. In the former the hutches are ranged in stacks out of doors, under a roof of tarred felt or corrugated iron; in the latter, a shed, or properly built rabbitry is used for housing the hutches. The latter form is much the best if full attention is paid to the ventilation. The outside of all hutches should be painted. The floors should be very firmly and closely built, all joints should be well puttied, and the floors then tarred to prevent the moisture soaking through. Where a large number of rabbits are kept it is necessary to stack the hutches, and when this is done the lowest tier should be at least 18 inches off the floor or ground. Bricks or posts may be used for this purpose, but they should be covered with tin to prevent rats and mice getting into the hutches. When fixing hutches it is wise to let them slant a little to the back. This will keep the moisture from spreading all over the hutches and facilitate cleaning operations. Outdoor hutches should also be protected with shutters, which may be fixed with hinges, or held in position with bolts or button fasteners.

Hutches for single rabbits should be about 2 ft. square. Breeding hutches should be from 3 ft. 6 in. to 4 ft. 6 in. in length according to the size of the variety kept. Lops, Belgian Hares, and Flemish need the largest size. These hutches should be fitted with a door at either end, the two meeting in the middle, or the whole of the front may be made to open. In the larger sized hutches the double doors are much to be preferred. The fronts of all hutches should be of wood for the bottom half, and fine-meshed wire netting for the upper half. Separate breeding compartments are not advisable. The does usually make their nests in one of the corners, and if an open hutch

is used one can easily and quickly examine the young, if such is needed. If cash is short, most excellent hutches can be made out of strong cases which may be bought from drapers, ironmongers, or provision dealers. Rabbits are inclined to gnaw the projecting points of woodwork in their hutches, but if it is occasionally brushed over with paraffin oil there will not be much trouble in this direction.

**Feeding.**—Rabbits need feeding at least twice a day—morning and night, and if convenient a third meal at mid-day will do much good to suckling does and growing young stock. To keep them in good health and condition, variety and change of food are needed. The dietary should consist of good clean sound oats, wheat, bran, pollard, barley-meal, hay, green food and roots. In the summer time ordinary pet rabbits will do well upon a handful of bran, a few oats, and a handful of green food in the morning, with hay and green food at night, and the night feed should be a generous one. In the winter, oats, bran, wheat, with hay and roots, such as carrots or swedes, may be given. When fattening, barley meal and pollard mixed into a crumbly mass should be given morning and night in addition to other foods.

High-class exhibition stock will require more careful feeding. The morning meal should consist of oats and bran, wheat and bran, or bran and pollard, with a little hay and green food; at midday a handful of green food should be given; at night a plentiful supply of hay should be given, some green food or roots according to the season of the year, whilst the more substantial part of the meal may be wheat or oats, or a mash made of pollard, bran, and barley meal mixed in the proportion of two-fifths of each of the former to one-fifth of the barley meal. When does are suckling young a dish of bread and milk given in the morning will prove most beneficial. Meadow grass, clover, lucerne, chicory, green oats, green wheat, sow thistle, dandelion, groundsel, chickweed, lettuce, cabbage, cauliflower leaves, celery tops, carrot tops, pea and bran haulm, in fact any ordinary domestic green vegetable or garden refuse will be welcomed by bunny.

No hard and fast rule can be laid down as to how much food a rabbit should eat. Rabbits, like human beings, vary in their needs. The small breeds must be fed with a careful hand, the larger ones more generously. Experience will soon teach how much food is needed either for single specimens, breeding does, or a hutch full of young growing stock. A pan of clean fresh water should be given every morning.

**General Management.**—The hutches should be bedded with sawdust or finely ground peat moss to the depth of one or one-and-a-half inches, and this should be covered with soft straw or hay. When a number of rabbits are kept together the hutches should be cleaned out every day, single hutches twice or thrice a week. It is not necessary to remove the whole of the bedding, but only those portions which are soiled. Once a week the whole should be removed, and the floors of the hutches thoroughly scraped and brushed.

Exhibition stock will require grooming every day. The coats should be brushed with a fairly soft brush, and then be rubbed over with a wisp of hay or a dry duster. When lifting rabbits, grasp them boldly in the middle of the back, and place one hand underneath to share the weight. If lifted by the ears, the left hand should hold the ears whilst the right hand should be placed under the hindquarters to support the weight.

The small varieties may be bred with when six or seven months, but the larger breeds should not be allowed to do so until they are eight or ten months old, that is, if strong healthy progeny are desired. Early breeding, if persisted in, shortens the lives of the breeding stock and weakens the progeny. The stud buck should be kept in a hutch by himself, and does that are to be mated should be placed in his hutch. Never put the buck into the hutch of the doe. The period of gestation is thirty days. Sometimes does may kindle a day before, or a day or two later. About a week before the young make their appearance the doe will be seen carrying bits of hay and straw about the hutch, and tearing the fur from her chest. It is not wise to interfere with the young unless the doe is of a very kind and friendly disposition. A hasty glance may be taken whilst the doe is feeding, or you may remove her from the hutch for a moment, but great care is needed not to disturb the nest. Just pull the edge of it back, look quickly to see if the young are all right, and then place the nest edge back as you found it. Should there be a dead youngster in the nest remove it. If all goes on well the youngsters will begin peeping out of the nest at the end of a fortnight, and at three weeks will be found nibbling at their mother's provender. At five weeks they may be removed, but if they are valuable, the longer you have them with the doe the stronger and finer they will be. At nine weeks they should be taken away so as to give the doe time to recuperate before she is again mated. The young may be kept together until three months old, when the sexes should be divided. As the bucks approach breeding age they will need separate hutches, or they will fight and damage each other.

### COMMON AILMENTS.

**Snuffles.**—Cause: A parasite which invades the nasal passages. Highly contagious. Commonest in debilitated stock kept under damp, insanitary surroundings. Symptoms: Loss of appetite, dullness. A peculiar sneezing and coughing accompanied by profuse nasal discharge and salivation, which wets the chest and feet; often mistaken for a common cold. Treatment: Isolate the rabbit and disinfect the hutch. As the disease is almost incurable, destroy all affected animals of no great value. Feed very liberally on bread and milk, corn, etc. Blow powdered borax up the nostrils, or drop in a few drops of equal parts of eucalyptus oil and glycerine twice daily.

**Diarrhœa.**—Causes: Poisoning due to giving too great a quantity continuously of one kind of green food; indigestion from unsuitable food; a too sudden change of dietary, heated (fermented) food, etc. Treatment: Change the dietary. Give meadow grass if possible. A feed of shepherds' purse, or some water to drink, sometimes checks active symptoms. In young rabbits try feeding on bread and milk only for a few days.

**Fleas.**—These pests may be kept in check by constant dustings of insect powder into the fur, and attention to securing thorough cleanliness.

### CAVIES.

A quarter of a century since the word Cavy was not at all common. In those days people talked of Guinea-pigs, but since the little squeaker of our boyhoods' days was elevated into the position of a show animal it has rejoiced in the more high-sounding and dignified appellation of Cavy. It is descended from the wild *Cavia porcellus* ("Restless Cavy"), and is a native of South America. Cavies make most pleasing and attractive pets for children, as they are most docile and tractable. Seldom, indeed, does one hear of a Cavy proving savage or vicious. During the summer months they may be given a hutch with a long wired run which may be placed in a convenient spot on the lawn, being moved to a fresh spot each day. They will clip the grass as close as any mowing machine, whilst their manure acts beneficially as a fertiliser. When out on the lawn they should be given clean fresh water to drink at least twice a day, and a few oats once a day. Their bed should consist of hay or soft straw.

**Varieties.**—There are three varieties cultivated by British fanciers:—(1) Peruvian or Long-haired: points—size, shape, length, density and fineness of coat, colour; the coat should completely envelop the body and hide the head; these tresses have in extra good specimens reached the wonderful length of 18 inches from the root to the end of the hair; colours—black, blue, fawn, cream, white, and agouti, with combinations of these in bi-coloured and tri-coloured pigs. (2) Abyssinians: points—size, shape, colour, harshness of coat, rosetting; the coat should be like pin-wire, about 1¼ inches in length, and full of well-defined rosettes; colours—black, red, white, agouti, tortoiseshell, tortoiseshell and white, and other bi-coloured and tri-coloured combinations. (3) English, or Smooth-haired: points—size, shape, colour, fineness of coat, and markings; colours—black, white and brown selfs, also tortoiseshell in great variety.

**Housing.**—If a stable or an outbuilding with an impervious floor is available, guinea-pigs may be

kept in pens separated by boards about a foot high, over which they will not climb. They should be given warm boxes to lie in. If kept in hutches no division or sleeping box is necessary. The fronts may be covered with ½-inch mesh wire-netting, which need not be carried more than about a foot up. It is, however, necessary to afford perfect protection from the possible onslaught of rats, cats, dogs, etc. Minimum size of pen or hutch for a trio and their unweaned progeny: 3 ft. long, 18 in. wide; allow an extra foot in length and 3 in. in width for every extra cavy. Outdoor pens on the coop and run principle, but so constructed that vermin cannot burrow their way in, form suitable abodes if placed in a sheltered and sunny position. They should be stood on a concrete floor if intended to remain as permanencies. The general principles of housing given in the section on rabbits are equally suitable in the management of cavies.

**Breeding.**—Cavies are gregarious, and live in communities of a boar and several sows. Two strange adult boars must be kept apart; but an adult will generally accept the company of, and settle down with, small boars of three weeks or a month old. Sows resent the introduction of strange members of their own sex to their pen.

When breeding high-class exhibition stock, the usual practice is to run one boar with three or four sows, and when the sows are seen to be in young to remove the boar to a hutch by himself. The period of gestation is seventy days. The young are born fully haired, and begin to run about and feed almost at once. It is not safe to leave the young with their mother after they are six weeks old, as there are instances on record of their breeding at this early age. When the young are removed from the breeding pen the sexes must be divided. They will not interfere with each other's progeny, but on the contrary the sows will all suckle the young indiscriminately. As soon as the young are taken away from the sow the boar may be introduced again.

**Feeding.**—The general principles given in the section on rabbits are applicable to the feeding of Cavies.

### COMMON AILMENTS.

Cavies are singularly free from all kinds of diseases if housed and fed in a suitable manner. There are two diseases that attack them—consumption and dropsy. We have never heard of anyone curing the former, and very seldom the latter.

**Skin Troubles.**—When fed on a dietary that is too dry, or too heating, Cavies are apt to suffer from irritation of the skin, and they commence to bite themselves and thus spoil their career as show specimens. As soon as a Cavy is seen to be biting itself a sprinkling of flowers of sulphur should be mixed in its meal mash, all dry corn should be removed from its dietary and bread and milk substituted, and in this a pinch of carbonate of magnesia may be mixed. If a sore should appear anywhere on the skin it should be washed each morning with warm water in which a few drops of Jeyes' Fluid has been sprinkled; it should then be dried carefully, and touched with a little zinc ointment.

**Vermin.**—If their hutches are kept scrupulously clean, and their bodies groomed regularly each day, no vermin will ever be found upon Cavies, unless they come in contact with other Cavies, or boxes, which have been infected with either lice or fleas. Cavies sent away to prospective buyers are sometimes put into hutches that are not quite clean, and sometimes at shows fleas or lice are picked up. The safest and quickest remedy is to mix a little of Jeyes' Fluid in some water, dip a sponge in it, and give the Cavy a good rub over with the sponge; dry the coat with the sponge and a dry duster. One dressing is sometimes enough, but there are occasions when the sponging will have to be repeated for several days.

## MICE.

**Origin.**—Fancy mice are descended from the common grey house mouse (*Mus musculus*). They may cost from sixpence to a sovereign or more per pair according to colour, strain, and individual quality. Only the males make an offensive smell.

**Varieties.**—Fancy mice may be divided into the following more or less well-defined varieties: (1) Black and tan; (2) Self black; (3) Self chocolate; (4) Albino (the "white mouse"); (5) Broken or spotted; (6) Black-eyed white; (7) Variegated.

Japanese waltzing mice are thought to owe their peculiar habit of spinning round after the tail until exhausted to a diseased or malformed condition of the auditory labyrinth.

Egyptian Spiny Mice (*Acomys cahirensis*) are sometimes bred in captivity in this country.

**Housing.**—Mice thrive if kept in pairs in the ordinary flat dealers' cage if a sufficiently large size (1*s.*) is selected. These cages will not stack. A nice commercial cage in which the animals can be watched has a glass front, and the nest-boxes in an upper story. Home-made cages may be made from small boxes, air being obtained through a hole cut in the lid and covered with perforated zinc, a view of the animals being ensured through another hole cut in the front and covered with a sheet of glass—a cleaned photographic negative makes a good window. Mouse cages require careful construction, as the animals gnaw wooden projections. A little paraffin oil brushed on the wood helps to prevent this. Where several mice are kept together (such as a buck and two or three does) a large cage with a separate nest for each animal should be provided. Damp is fatal to these animals.

**Feeding.**—Feed once or twice daily. As stock food mix equal quantities of canary seed, millet seed, and oats, and give about a small teaspoonful per head daily on the floor of the cage. In addition, a piece of bread soaked in milk the size of a walnut; or as a change a little soaked dog food. The pan must be kept scrupulously clean. Dry bread or biscuit crumbs give variety to the dietary now and then.

A little vegetable food, such as flowering and seeding grass heads, groundsel, dandelion, or lettuce leaves, or a tiny piece of apple, carrot, swede, or mangold may be given daily. No sour or decomposing fragments of moist food must be left about the cages.

**General Management.**—The cages must be kept thickly covered with dry sawdust. Some fanciers sprinkle Sanitas over the sawdust before use; or mix equal parts of Sanitas sawdust and ordinary sawdust to mitigate the unpleasant smell made by the bucks. If the cages are kept scrupulously clean, and as few bucks as possible retained, then the presence of mice in a building need not be unduly obvious. The contents of the cages should be changed at least three times a week, care being taken to scrape well into the corners. The nest should be changed once or twice a week.

Mice should always be kept in couples or several together, as one animal does not thrive alone. Males brought up together from birth will live contentedly; but two adult bucks will fight and injure one another if an attempt is made to keep them together.

Mice breed very early and will produce from four to six litters in a year. The period of gestation is 20 days, and the young will probably average about five in a litter. The buck and doe may be left together always; or if it is desired to keep only one buck and several does the animals can all run together, each doe being removed to a separate cage when she is seen to be in young. The doe will make her own nest out of clean hay provided a few days before the litter is expected. The young are born blind and naked. About five or six days after birth the young can be looked at, the prettiest selected to rear, and the remainder destroyed.

The young should be taken away from the mother and the sexes separated when they are four weeks old. It is not advisable to allow them to breed until they are three or four months old, though they will do so much sooner when well fed.

Mice may be lifted by grasping the tail firmly about halfway up. No attempt must be made to pick them up by the extreme tip.

### COMMON AILMENTS.

**Skin Trouble.** — Symptoms: Small irritating pustules form on the skin and are quickly scratched into sores. Cause: Too heating a class of food. Treatment: Rub in sulphur ointment (flowers of sulphur mixed with vaseline). Sprinkle a pinch of sulphur on the bread and milk three times a week, or dissolve a little Epsom salts in water and give to

drink, withholding all moist food. Increase the daily allowance of grass and vegetable food.

Mice occasionally die of fits, or are carried off in a few hours by pneumonia. Nothing can be done for a sick patient beyond keeping it warm and dry.

## RATS.

**Varieties.**—Fanciers divide rats into the following varieties; (1) The Pink-eyed Albino (which is most admired when pure white and free from a yellow tinge); (2) Agouti (the grey or brown wild colour, with or without a white ventral surface; (3) Self Black; (4) the Hooded Rat (which is white with black or agouti head, shoulders, forelegs and dorsal stripe; (5) the "Irish" (which is black with a more or less white ventral surface; (6) Self Fawn or Yellow (specimens of which have recently come into the possession of several breeders).

**Housing.**—A cube sugar-box or an empty tea-chest makes a most suitable abode. The front should be closed in with a frame covered with ½-in. mesh wire-netting, and should be hinged to form a door. Inside this it is convenient to have a thin board of hard wood, 3 in. or 4 in. high, run across the front of the hutch, and let into grooves at each side to prevent the sawdust, husks, etc., from being scattered about. A small lidded box, with a hole bored in one end, should be placed inside the hutch as a sleeping box. Bird travelling box-cages, of parrot size, procurable at most dealers', also make nice small, if not very convenient cages for one pet rat.

**Feeding.**—Rats thrive best on a great variety of food, which must not be of too heating a character. Bread and milk, soaked dog food occasionally, boiled rice, or, in fact, any plain farinaceous pudding, are suitable and appreciated, and if a little moist food of this class is given daily together with some vegetable food the animals will require no water.

A heavy non-upsettable feeding-pot must be provided, and no more food given than is eaten up at once, as the remainder will be carried away to decompose in the nest. Grass heads in flower and seed, dandelion, chicory, lettuce leaves, etc., in summer, and a small piece of apple, carrot, mangold, swede or parsnip in winter, will provide the necessary vegetable food. One or two tablespoonfuls of grain should be thrown into the hutch daily. A mixture made of equal parts of wheat, maize and oats is useful as a stock mixture; and a second made of equal parts of canary seed, hemp seed, sunflower seed, linseed, buckwheat, millet and dari can be made and given occasionally as a change. Feed once or twice daily.

**General Management.**—Dry sawdust should be sprinkled on the floor of the hutch, and the nest-box filled with hay when the hutch is cleaned out. This should be at least twice weekly during the winter, and three times weekly during the summer months.

Rats are very prolific. The period of gestation is about twenty-eight days, and the animals will commence to breed at five or six months old, or even earlier. The number of young at a birth varies from four to twelve (nineteen is not unknown); in favourable circumstances a female may have from four to six litters in the year. The young are born blind and naked. The animals may be paired, or one buck kept successively with several does for a period not exceeding three weeks.

No particular attention is required when the young are due beyond seeing that the nest-box is free from stale food and provided with clean soft hay. The parents may be left together; but the nest should not be disturbed nor the young examined until they are at least a week old. The young can be weaned when six weeks old by removal to a new hutch. It is advisable at this stage to separate the sexes, as the bucks will then live peacefully together if undisturbed until fully grown.

As regards ailments, etc., treat skin trouble as recommended under this heading for Mice. Fleas will not give trouble if the animals are kept in clean surroundings and prevented from mixing with flea-infested specimens.

## SQUIRRELS.

Squirrels are very generally distributed over the whole of the habitable world with the exception of the Australian region and Madagascar. Of the sixty or seventy species known, there are about a dozen which can be kept in a state of captivity, provided that proper accommodation is available for them.

**Varieties.**—Even foreign squirrels are not expensive pets: Chipmunks cost from 20*s.* per pair; Flying Squirrels from 25*s.*; Grey Squirrels from 30*s.*; Dorsal Squirrels from 60*s.*; Prevost's Squirrel from 60*s.*; the Common Squirrel only about 9*s.* or 10*s.* The most expensive are the Malabar Squirrels, which cost from £4 to £6 per pair.

**Common Squirrel** (*Sciurus vulgaris*).—In colour this species is brownish-red, the chest and ventral parts being a drab white. During the late autumn and winter months the ears are densely tufted with hair, but during the spring and summer this growth gradually disappears, until about the end of June the ear-tips are almost naked. When born they are both naked and blind, and when the fur makes its appearance is the best time to take them if hand-reared specimens are required. Adult caught squirrels seldom get tame or even reconciled to captivity, and after a longer or shorter period usually pine away unless kept in large enclosures.

**Grey Squirrel** (*Sciurus carolinensis*)—A very pretty and attractive animal of a silver grey colour; they are the cheekiest and most confiding of all, and as pets are pre-eminent.

**Dorsal Squirrel** (*Sciurus dorsalis*).—A handsome animal, brownish-chestnut above and whitish-fawn beneath; but like the others is very variable in coloration.

**Malabar Squirrel.**—A very large and beautiful creature of rich dark chestnut colour above with cream underparts; it is about 2 feet in length.

**Chipmunk** (*Tamias striatus*).—This species belongs to the Ground Squirrels. It is smaller than its relations and prettily striped with black and white on a ground colour of black and fawn.

**Indian Palm Squirrel** is not so frequently imported as the other foreign squirrels owing to its capture being attended with some amount of difficulty, but it is a very handsome creature, with beautiful markings and a delightfully soft fur. It gets tame very quickly, but is somewhat delicate in confinement.

Any of the above-named squirrels are well worth the attention of any pet keeper. They are all amusing and intelligent pets, and when tame are really delightful little companions when let out in a room.

**Cages.**—The cage for squirrels ought to be at least 4 feet square and solidly put together of 1-in. material, all projecting edges being protected with tin, as these animals, being true rodents, have a knack of gnawing their way out of a cage. The wire front is best of half-inch mesh galvanised wire netting. A retiring-box about a foot square should be attached to the back of the cage near the top just below the roof. This box should be accessible from the outside, by means of a small door cut in the frame of the main cage, so that it can be quickly got at to clean out when necessary and fresh bedding put in. It is a mistake to have the doors of a squirrel's cage too large, as these animals are very lively and quick in their movements, and would slip through the moment the door was opened unless it were only just big enough to admit the arm. The floor of the cage should be strewn with fresh sawdust and on top of this a layer of hay or straw; straw is the better of the two, as hay encourages insects, and once these have made a foothold it is difficult to get rid of them. The cage for the ground squirrels need not be so large, and the hay for the sleeping box should be as fine and soft as possible, for the Chipmunk spends most of its time curled up therein. Those species other than the Chipmunk ought to have part of a tree branch fixed diagonally in their cage from a lower corner to an opposite upper one so that they can play about upon it. Earthenware food and water vessels are better than iron or metal ones, as they are more quickly cleaned, merely requiring to be dipped in hot water and wiped dry with a towel, besides being free from the likelihood of rust; the only advantage of a metal food dish is that it is less liable to be overturned. The cage must be cleaned out once a day and not less than every week should be scrubbed over with boiling water and some brand of disinfectant soap. If this be regularly done the interior of the cage will always be clean and free from any objectionable odour.

The Grey Squirrel is quite hardy and can be kept out of doors all the year round if it has a large enclosure or aviary to get plenty of exercise in, and will breed if a pair have the place entirely to themselves. As they are extremely jealous and pugnacious in disposition, different species cannot be kept together; if they were, it would be nothing less than one continual round of quarrelling, often resulting in the infliction of severe injuries on one another.

**Feeding and Management.**—Nuts form the principal portion of the dietary and are an absolute necessity. Almost any kinds are relished, but Brazils and filberts seem the greatest favourites. Plenty of fresh water is necessary, as squirrels drink "a little and often." The fruits may be oranges, dates, apples, pears and grapes. Grain food in the shape of Indian corn and oats forms an agreeable supplementary diet. Carrots and greens are also useful as a change. Bread is also useful but should not be given in the form of bread and milk, but is better if dry or merely dipped in milk sufficiently to just moisten the outside. The Dorsal Squirrel is very fond of grapes, and as these can be got very cheaply at the grocer's, the extra cost of feeding entailed by giving these does not make an undue burden on the pocket, as it only amounts to a few pence per week. Although nuts are the principal form of food, squirrels ought not to be fed solely or for any length of time upon them without the addition of other forms of diet, as internal troubles arise if this be done; change of food and variety are always beneficial.

Inflammation of the lungs appears to be the prevailing illness which is fatal to the foreign species of squirrels, and unfortunately there is no cure and nothing can be done to relieve the sufferer, which as a rule only lives a very few days after being seized with this complaint. They also suffer from worms, which can be got rid of by the use of the time-honoured areca nut. As the incisors grow rather rapidly some coco-nut shell or other similarly hard substance should be provided for them to gnaw at to keep their teeth in proper trim.

## MONKEYS.

As pets monkeys have always had a peculiar fascination for most people, although it must be admitted that usually the anticipation has proved more delightful than the realisation, the aftermath —as it were—of the desire being a trying period and the time that these pets were kept a continual round of worry and vexation, often culminating in disagreeable interviews with the neighbours and estrangements in the household. This has often been due entirely to ignorance and carelessness; ignorance—in not knowing how properly to care for and look after the animal, and carelessness—in omitting to do some proper thing at some proper time or in some proper manner. As an example—

—a cage for a monkey—using the word in a wide sense—should always be fastened with either a lock and key or a padlock; the use of an ordinary turn-button of a screw-hook and eye to a cage being nothing short of criminal. A monkey may, if it gains its freedom unobserved, do an enormous amount of damage before its absence is detected and it can be recaptured.

Speaking generally monkeys are all tameable, but are very often extremely capricious in their likes and dislikes for their human friends. Occasionally one that is good-tempered will take a dislike to some person, and will consider it good fun to scratch and bite the fingers of that individual if he (or she) is imprudent or forgetful enough to place them within reach. Some species are endowed with a preternatural cunning, and it takes all the time of their owner to guard against some unpleasant *contretemps*. One of these monkeys will get an idea into its mind, and weeks may go by before a favourable opportunity occurs to mature it; however, when the chance comes, the long period of waiting is fully made up for, and the glee of the monkey at circumventing the astuteness of its guardian is most marked, and its pleasure is shown in a vivid manner, chuckling with delight until retribution comes, when poor "Jacko" is transformed into a very forlorn and woe-begone animal.

Usually it is the ladies of the household who object to monkeys, and when one is suggested as a pet, draw very vividly upon their imaginations as to their mischievousness and the amount of damage they are likely to cause. They are often right, too, for naturally, if a monkey is to be allowed the run of the house, such things as the breaking of choice ornaments and pieces of china, and the picking to bits of curtains or portions of delicate needlework, are almost sure to happen.

When choosing a monkey as a pet, a male should be selected, as the females are often very objectionable besides being less hardy, and for obvious reasons, except for scientific purposes, the latter ought to be separately caged, if kept at all. Care likewise should be taken to obtain a young animal, as they get morose and treacherous as age creeps on them. A monkey which has been kept as a tame pet for years will prove no exception to this rule. When people find that their pet is getting sullen, they generally part with him for a mere song, and the individual who unfortunately speculates in one of these is generally disgusted beyond hope of cure. Cheap monkeys are nearly always either old or else ailing, and it is far better to go to a respectable dealer and pay a reasonable sum for a healthy young animal than to waste money in buying such specimens that are either moping or treacherous.

We have often been asked—"Can monkeys be taught to perform tricks!" Well, the answer is that *that* depends in a very great measure on the patience and capabilities of the instructor; whatever tricks are taught, perfect kindness must be maintained the whole time the lessons are going on. A monkey should never be struck, even if it bites, as a blow is never forgotten by one of these creatures; kindness is the great secret with these animals.

**Varieties.**—The most frequently imported monkeys are the Guenons and the Macaques. The Guenons from their usually rich coloration and their affectionate and interesting ways are favourites among those people who are making their first essays in monkey-keeping. They are all treated in a similar manner and it is usually either a question of price or else of a personal predilection regarding the colour and appearance of one of the species which decides the choice in the prospective owner's mind. The two species most commonly met with are the Lesser White-nosed Guenon and the Green Guenon.

**Lesser White-nosed Guenon** (*Cercopithecus petaurista*).—This is a very gentle and active monkey, displaying great affection to those who take notice of it and treat it kindly. Some individuals dislike being handled or in any way being interfered with. The head and upper parts of the body and tail are olive-green, speckled with yellow; the underparts are white, as are the whiskers and beard; the face is black; the lower portion of the nose and the upper part of the top lip are white—hence the popular name; there is a black line across the forehead which encircles the crown.

**Green Guenon** (*Cercopithecus callitrichus*).—A species very rich in coloration; the head, body, and the outer surface of the limbs are a very beautiful yellowish-green, the hairs being annulated with yellow and black; the under parts of the body, inner surface of the limbs and the throat, white tinged with yellow along the median line. There is an orange tuft at the tip of the tail. From 30*s.* to 45*s.* is the price charged for this species.

**Macaques.**—Of these the commonest are the Bengal Macaque (*Macacus rhesus*) and the Bonnet Macaque (*M. sinicus*). The former is a greyish-brown colour with yellowish-white underparts; young examples may be distinguished from their elders by the flesh-colour of the callosities, which redden with age. The Bonnet Macaque is olivaceous-brown on the body; the exterior surfaces of the limbs are greyish.

**Marmosets.**—Some dealers advertise a small "monkey that will go in a pint pot"; a description they give to the Marmoset, the body of which is a trifle smaller than that of a rat. Being extremely quiet and quaint, it is preferred by some people, particularly those of the weaker sex, to the larger monkeys, as the soft woolly fur makes it much resemble a young kitten. The fur is delicately soft and bushy, and is ornamented with blackish-brown stripes upon a ground of deep tawn. The tail is annulated with black and white; the head is black and adorned with two tufts of white hair, one over each ear. Insects and fruit form the diet, both of which are plentiful enough during the summer but in the winter are difficult to maintain

a constant supply of. It hardly matters what insects are given, caterpillars (not the hairy kinds), flies, moths, butterflies, mealworms, cockroaches; spiders are also relished. The fruit should be quite ripe. Bread and milk, if not sloppy, may also be given occasionally.

**Capuchins.**—The Capuchins of South America are analogous to the Guenons of Africa, and the one most commonly imported is the Brown Capuchin, which is a very docile and affectionate monkey of a reddish-brown colour. It is also the hardiest as well as the cheapest of the Capuchins, costing, as a rule about 40*s*. Too liberal a supply of food is harmful. To a great extent these monkeys are flesh-feeders, and a newly-killed mouse or a sparrow, besides grasshoppers, can be given. Eggs, if absolutely fresh, are also greatly relished. The Capuchins are more delicate than the Guenons and ought to be kept in a warm room.

**Feeding and Management.**—The details of feeding Mangabeys are in every respect the same as for the Guenons, but the Macaques are more voracious than their relations and a more liberal supply of food must be given; boiled rice, odd bits of bread and vegetables (carrots, potatoes and onions), pea-flour and meat may be mixed into a kind of pudding and a tinful given each day, morning and night; nuts, peas, maize, raw carrots, apples (sliced) are all relished. Dates, figs and grapes may be given as luxuries.

All the Guenons are noted for the extreme development of the cheek-pouches, which, when full, give a very peculiar appearance to the face of the animal. A Guenon on being offered a nut or a portion of fruit from a large bag of food will pouch whatever is given to him until the pouches are full. They are mostly good-tempered one towards another when several are kept in one cage. Of the two species named the Green is the hardier and it bears our climate very well, rarely, if ever, ailing anything. Both are very playful and engaging during their youth, but, like nearly all other monkeys, become vicious and morose as they get old. If the cage is small it is a good thing to let the monkey out once or twice a day for exercise, but the doors and windows of the room should be kept shut and small ornaments removed, as the long tail of a Guenon is a very awkward weapon when flourished about, and would easily knock a valuable vase off a bracket or the mantelpiece in spite of the monkey trying to be most careful when jumping about. Half-an-hour is quite long enough at a time for a monkey to be away from its cage, and at such a time it should never be left alone or out of sight for a single instant, as, however quiet and inoffensive it may appear when closely watched, a monkey can never be trusted not to take advantage of any opportunity that may present itself.

The Macaques are not so suitable for the average minded pet-keeper as the Guenons, as although they are interesting in many ways and serve to widen one's experience of monkeys, they cannot be relied upon. Their temper and equanimity may be perfect one moment, and the next they are transformed into veritable little fiends. No monkey likes being teased, but these are nearly as resentful as the Baboons, and a bite from them, if they get near enough to their aggressor, is a serious matter. Another reason—more important in many ways—is that they are not suitable pets where young children are, as some of their actions might not be approved. When quite young they are very amusing and can be taught many little tricks.

**Cages.**—The cage for an ordinary monkey should be at least 4 feet or 5 feet long and correspondingly high and broad. A door should be placed at each end to enable all parts of the interior readily accessible when the cage requires cleaning. Stout galvanised wire netting of 1½ in. mesh is as good as anything for the front, with a wooden moulding strip nailed over the edges to finish off and improve the general appearance. The internal fittings need not be either complicated or costly; merely two or three food dishes, a swinging perch, and a looking glass framed in stout wood. If the cage is intended for Marmosets, a sleeping box is an advantage. It can be placed at the top of the cage, a stout bough of a tree connecting it with the floor and thus giving the inmates of the cage a means of getting to the retiring chamber, which should be filled with sweet hay. Many people who keep monkeys cover the floor of the cages with sawdust, and others use only hay; whichever be used must be changed every day and the cage floor thoroughly brushed down, and once a week scrubbed out with a strong mixture of soda and water.

## DORMICE.

Amongst the smaller mammals the different kinds of European Dormice are great favourites not only with children but also with "grown-ups."

**Varieties.**—There are three species which may, as a rule, be readily obtained from dealers of livestock. These are the Common Dormouse (*Muscardinus avellanarius*), the Squirrel-tailed Dormouse (*Glis esculentus*) and the Garden Dormouse (*Eliomys quercinus*). All are within reach of the humblest pet-keeper, the first-named costing about 3*s*. 6*d*. and the others from 7*s*. 6*d*. to 15*s*. per pair, according to the number in the market. The Common Dormouse is too-well known to need any description. The Squirrel-tailed Dormouse is a very pretty little creature; the coloration is ashy-grey above and white beneath. It is considerably larger than its common relation, being about 6 inches in length without the tail, which is another 5 inches. The Garden Dormouse is not quite so big, being only 8 or 9 inches in total length, of which the tail is between 3 and 4. The colour is brownish rather than ashy above, with white underparts; the eyes are ringed with black, which is extended as a stripe below and behind the ears; the tail is tipped with black above and white beneath.

**Cages.**—Most people make the mistake of keeping dormice in cages which are far too small. A cage for the common species ought not to be less than 18 inches to 24 inches long, and proportionately high and broad, whilst for the Squirrel-tailed Dormouse it should not be less than 5 feet long by 4 feet high and 3 inches wide from back to front. The latter species, when awake, is a remarkably active creature and is constantly on the move, jumping and running about all over its cage and is quite as lively as the animal from which it takes its popular name. All the Dormice are arboreal in their habits, and provision ought to be made for this; in the small-size cage one small tree branch is sufficient, but in the one for the larger species two or even three may be necessary. The sleeping-box—a most important adjunct for these little mammals—which often spend nearly six out of the twelve months of the year asleep—should be placed at the top of the cage in such a position that it can be readily got at to inspect the interior now and again without disturbing the inmate; this is best done by means of a door in the side or roof of the main cage which opens directly into the sleeping-box. The floor of the cage should be covered with pine sawdust, this need not be thickly spread as dormice are very clean and make hardly any mess at all. The sleeping-box may have a layer of sawdust and then be loosely filled with hay, moss, and wadding. Access to the box is given by having one of the branches so arranged that it leads from the floor to the entrance. With small rodents like these which can squeeze themselves through remarkably tiny crevices, there is no necessity to use wires at all and the front of the cage may be glazed with fairly stout glass; if this be done ventilation must be provided by having a 6 inch square cut at the bottom of each side of the cage and another at the top near the centre and these covered with perforated zinc; these, of course, may be made as doors.

**Feeding and Management.**—Dormice should be fed regularly twice a day on bread-and-milk, nuts, biscuits and fruit. It is best to shell the nuts so as not to give the animals too much practice in nibbling in case they turned their attention to the woodwork of the cage. Hazels, walnuts, acorns and chestnuts may be freely given and the Squirrel-tails are especially fond of chestnuts. Water should be liberally supplied. If kept in a warm room and food abundantly provided the chances are very much in favour of the Dormice not hibernating, but they will get corpulent just as if they were preparing for a long winter sleep. If more than one pair be kept in one cage quarrels are sure to arise, and an additional advantage in keeping only a pair of the Squirrel-tailed species is that there is every probability that they will freely produce young in a cage of the dimensions

given, often twice a year. Gentleness is a *sine qua non* with all Dormice as, although pugnacious, they are extremely nervous creatures, and no one can successfully keep them who is not both gentle and patient. They get very tame and may safely be let out during the evening for a scamper round the room; they will fearlessly climb all over their owner, and jump comparatively big leaps for their size from one article of furniture to another. For young people there are very few of the smaller European animals that are more suitable as pets than these graceful creatures, not only because they are comparatively inexpensive to purchase, but also in that they are so little trouble to look after—a very important matter in such cases where there may be a tendency for the novelty of having them to wear off after a short time. Just a final word of warning; should any of my readers possess an example which commences hibernation in earnest, it should, in no circumstances, be interfered with, or roused from its winter sleep, as such would in all probability prove fatal.

## LIZARDS.

Under the popular name of Lizards are classed by naturalists an extremely large number of species and varieties showing great variability and a very wide geographical range. By the modern classification the Lizards (*Autosauri* or *Lacertilia*) include the ancient Geckos, which are practically cosmopolitan, and the African Chameleons and several other families. The true Lizards, however, are the *Lacertidæ*, and these alone number upwards of a hundred species. All that is proposed here is to refer to several species which have proved adaptable to a life of confinement and which, therefore, may be kept as pets.

Even our native Lizards are of considerable interest and some of them make pretty little pets. The Common Lizard of this country is a species with a very wide range—extending, in fact, through Northern and Central Europe and Siberia to the Saghalien Isles. To Ireland it is a specially interesting species inasmuch as it is the only reptile found in that country—another injustice to "Ould Ireland." One of the most curious and interesting things in connection with the *Lacertilia* is the capability of reproducing a tail should this organ, as it very frequently does, get broken. The marvellous regenerative power is centred in certain cells found in a transverse septum of cartilage and is retained throughout the animal's life. An excellent example of this tail-brittleness is found in the common, useful, and much persecuted Slow-worm (*Anguis fragilis*), which is in reality a legless Lizard and not a Snake as commonly thought, and which through ignorance is killed as being harmful to man, while in reality it is not merely incapable of inflicting harm but is a most useful reptile, destroying vast quantities of snails and slugs, and therefore should be preserved rather than killed.

**Varieties.**—Some of the common species will do very well in captivity—the Eyed-Lizard for example—and moreover live for ten years and more: others, like the exquisitely coloured Green or Emerald Lizard found in Jersey do not live very long. Most of these reptiles when kept in captivity become remarkably tame and exhibit in some cases an intelligence that one does not as a rule associate with the *Reptilia* generally. We will now enumerate a few of the species that may be kept in various ways, though some little care is needed in the selection of species to live together, or it will be a case of survival of the fittest.

**Common Chameleon** (*Chameleon vulgaris*).—Quite one of the most remarkable of all the Lizards by reason of its ability to change its colour according to varying moods, to inflate its body, and to subsist for so long a time without food that it was commonly asserted it lived on air. Another remarkable feature of the Chameleon is the long extensile tongue by means of which it secures its food; while yet another is the eye structure enabling it to see in every direction without moving either its head or its body. Again the long tail is prehensile. Although extremely interesting the Chameleon is somewhat troublesome to keep in winter as its quarters must be warmed. In summer this is unnecessary. The case in which it is kept should have a warm and sunny aspect and at one corner a slight shelter should be afforded the timid reptiles. The food best suited consists of cockroaches and other small insects, including flies. In size this Lizard measures when full-grown about 1 foot. It should not be kept with other species; and although this reptile will not take water from a vessel it will do so if the fern-case in which it is kept be gently sprayed.

**Emerald or Green Lizard** (*L. viridis*).—Beautiful though this species undoubtedly is, it cannot generally speaking be recommended as one to be kept in captivity. Emerald green is the prevailing colour of the upper surface of this Lizard, which measures in the case of males 16 inches or 17 inches in length, the majority of it being tail. Beneath it is yellowish, while the throat is blue, or bluish in the case of males in the breeding season. In its native habitat it prefers rocky places. Like many other Lizards it will eat insects of various kinds (including butterflies), snails, and earth-worms. It can be called a British species, as it occurs in Jersey.

**Eyed-Lizard** (*Lacerta ocellata*).—One of the most satisfactory species to keep in confinement, but on account of its voracity it is best placed alone in a greenhouse. After a time this species will get very tame, so tame as to take proffered food from the hand. Mice, earthworms, cockroaches, etc., may be given to this Lizard, which is some 20 inches to 24 inches long. The popular and specific name has been bestowed on account of the ocelli, or eye-spots. In colour this Lizard is green above and often exquisitely reticulated with black. Beneath it is greenish-yellow; while at the sides are numerous blue, black-edged spots, which account for its specific and popular names. The males attain a large size—2 feet and more in length, and assume their most beautiful coloration at the breeding-time. This species retires for the winter, burrowing into the soil in late autumn to emerge with the fine days of the returning spring.

**Prickly Lizards.**—By this name are popularly known several species which, though of good repute as pets, are nevertheless uncanny to look upon by reason of the spine-like processes covering their body. They are, however, less formidable than they seem; indeed they are classed as gentle reptiles that will bear handling with impunity. To the majority, however, they are not likely to appeal, more especially too as they are somewhat expensive. The Derbian Zonure (*Zonurus derbianus*) is one of the best of the group. Like some other Lizards this species is capable of taking long fasts. The food most acceptable to it consists of mealworms, small beetles, and grubs; while a vessel of water should be supplied in its case. As in the case of the Blue-Tongued, its case should be provided with a snug retreat; the floor of its apartment should also be covered with sand. It may be allowed to hibernate in a box or other receptacle containing leaves, but this must be kept in a room in which there is a fire the night through.

**The Slow-Worms** (*Anguis fragilis*).—A native species known also as the Blind-Worm. This latter name is a most inappropriate one as the species has excellent eyes. It measures from 10 inches to 1 foot or more in length, and though there is a slight tapering towards the tail it is of almost uniform thickness. On the upper surface it is brownish-grey, with a metallic sheen; beneath it is black, but the colour is variable. Except the gravid females, these reptiles like the shade. They feed on snails, earthworms, and slugs, and hibernate in burrows in the soil. The food should be given alive.

**Viviparous Lizard** (*L. vivipara*).—A very variable species in which the female is larger than the male. The colour is brown or reddish above, with darker or lighter spots, and occasionally there is a dark yellow-edged band at the sides; beneath the male is orange or even red, and the female very much paler. From 6 inches to 7 inches would represent the length. Green-fly and similar succulent morsels will provide them with food until they are capable of taking food similar to that given to the Eyed-Lizard. This species hibernates in autumn.

**Wall Lizard** (*L. muralis*.).—Another very variable species which derives its popular name from the fact that it has in some of its native habitats a partiality for walls. Though resembling the Common Lizard it is 2 in. or 3 in. longer and has a fine tapering tail, while that of its relative

is for a greater part of its length of equal thickness. It requires similar treatment to the Common Lizard, and is very partial to garden worms. This species also occurs in the Channel Islands.

**Housing, etc.**—To those who can afford to purchase ready-made one of the delightful little vivaria that are on the market, the problem of how best to accommodate these Lizards which cannot be allowed the run of a warm green house, might be readily solved. Necessarily, however, these are somewhat expensive, and it is not at all unusual for those who go in for Lizard-keeping to rig up a suitable substitute therefor out of a box, affixing thereto a thick glass front and a door made of perforated zinc. Such a home-made structure would necessarily vary as regards its dimensions with the particular species that it is desired to accommodate. So far as the species dealt with are concerned, a vivarium that would be suited to a reptile of the size of the Eyed Lizards might very well be 4 feet long, 2 feet high, and 2½ feet wide. The bottom should be thickly strewn with small shingle or sand and a retreat at one corner should be fashioned out of cork, bark or something similar. A small tree-branch would also be a useful addition. Generally speaking the Lizards are sun-lovers and therefore the vivarium should be so situate that it gets as much as possible.

**Feeding, etc.**—As the favourite food of the different Lizards enumerated has been given when dealing with them specifically there is little need to refer to it specially. Still it may be as well to state that clean fresh water should be provided in a pan, for though it is not unusual for these reptiles to abstain from taking it for a long time on end, yet it is a necessity for them.

In the enumeration of species we have not included the locally distributed (in this country) Sand Lizard (*Lacerta Agilis*), for despite every care and many trials with it, we have not found it a very suitable one for a life of captivity. It is larger and bulkier than *L. vivipara* with which it is sometimes confused and shows considerable colour-variation, the colours of both male and female being more subdued after the breeding season is passed. Vivid green is the ground-colour of the male at that time, especially on the sides, where it is also dotted with black, and has whitish eye-spots. Beneath it is yellow. The female is a combination of grey or dark brown with rows of white centred spots. This Lizard is very common in parts of Surrey and Dorset. It may be stated that those wishing to catch Lizards in their haunts should never attempt to do so by the hand. The proper way is by means of a thread-noose attached to a thin, pliant stick.

## TORTOISES.

Nearly everyone in large towns is familiar with certain species of Land Tortoises which are sold by wily itinerant merchants as useful aids to the gardener who, unless he be something of a naturalist, alas! soon finds that he has been imposed upon, and that instead of eating the luscious slugs with which his soil abounds, the tortoise prefers his succulent lettuces and tender cabbage plants, not to mention his strawberries. The Water Tortoises, however, are with few exceptions carnivorous, and this must be borne in mind when making provision for the respective needs of the members of the two families *Testudinidæ* (Land Tortoises), and *Emydidæ* (Terrapins, or Marsh Tortoises). Generally speaking, it is the former which are favoured by the pet-keeper, and interesting creatures they are in captivity. It is astonishing the time these Land Tortoises will live in a state of captivity if they are but intelligently treated in the way of food. Nor are they the dull, stupid creatures that at first blush they would seem to be: on the contrary they soon become fairly tame and readily recognise the hands that feed them. The name Tortoise is a peculiarly appropriate one, having been bestowed on the group on account of their twisted legs.

### LAND TORTOISES.

**Varieties.**—Those best suited to a life in captivity are natives of Europe, the most familiar species being *Testudo græca*, *T. mauritanica*, and *T. marginata*, the first-named two having reference to their country of origin and the last and largest to the extended hind margin of its carapace. The Greek Tortoise may be differentiated from its two allies by its long tail having a claw-like end: while the Moorish Tortoise has, like *T. marginata*, but a single plate in the tail vicinity and a plastron which is movable behind, as against the immovable plastron and double tail-plate of the Greek Tortoise.

**Management.**—If the Tortoises are to be kept in the garden they must be restricted by some means, or they will do a lot of damage. The position assigned them should be a sunny one and preferably bounded by a wall. It is then quite easy to rig up with boards, or a box from which an end has been removed, a comfortable retreat from bad weather, and especially if a framework on which some Willesden Canvas has been stretched well covers the retreat, thus protecting it from rain and scorching sun. Occasionally one sees the Tortoise restricted by means of a cord fastened through a hole made in the hind margin of the shell. This will not appeal to the majority. Of course if the Tortoises can be allowed the liberty of a warm green-house and are fed properly they will not hibernate. Moreover, too, assuming that a pair have been kept (and this is better than keeping a single one), the probability is that eggs will be laid. In that case they should be placed in some moist sand on a frame generating a nice moist heat of 75 deg. to 85 deg. Fahr. In that case they should hatch out in two months or a little more.

In the event of one not having a suitable green-house in which the Tortoises can be housed in winter, they should be allowed in autumn to bury themselves in the ground, marking the spot that they have selected. Or again they may be taken and placed in a box containing soil or leaves and stowed in a cool room until spring, when they will awake from their torpor and soon commence to feed, though not very readily at first.

**Foods.**—The best food for Land Tortoises consists of lettuce, cabbage, grass, dandelion flowers and the flowers of buttercup; while it also exhibits a partiality for strawberries, currants, and many other garden plants.

### MARSH TORTOISES.

These are very much flatter than their land congeners, and are, moreover, provided with webbed feet to suit the partial aquatic life that they lead. To keep them wholly in water, however, is cruel for they are also most capable walkers.

Emys Orbicularis (Syn. *E. lutaria*), the European Pond Tortoise is the commonest species kept and is variable as to colour; there are two types, radiate and spotted, in the former of which the colours radiate from the centre. Adult specimens measure from 5 inches upwards to 9 inches. To watch this Tortoise stalk its prey, whether fish or frog, is most interesting. In a state of nature they feed in the water, but when tame they will take food on land. These Pond Tortoises make a curious shrill noise at breeding time. The eggs are deposited on land, but the young are very difficult to rear.

**Food and Management.**—As previously suggested these are in the main carnivorous, feeding upon worms, newts, fish, frogs, and various insects; while in captivity they may also be provided with raw meat, small birds and mammals. Where one can furnish these creatures with a small, sunny, duck-weed-covered pond, with a bank on which they can land to "sun" themselves, this should be an ideal spot. Such a pond, however, would need to be surrounded with wire-netting or the Tortoises would "stray." Provision should also be made of a suitable place in which they can deposit their eggs should they wish to do so; a nice light, sandy soil would be excellent. They should be allowed to hibernate in a box of moss and then be stored in a cool frost-proof place until the following season. If one can give them plenty of suitable food, and a warm green-house having a pond in which the water can be kept chilled, or one of the vivariums making provision for this latter, these Marsh Tortoises will not hibernate.

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*In the following tables any number of articles, separate weights or measures, days, weeks, months or years —from* 1 *to* 5,000*—are reckoned, at amounts from a sixteenth of one penny to one guinea, in individual sets, each table being complete in itself. Up to* 20 *each number is worked through progressively in the shorter tables on this page; then follows* 25*—as a quarter of a hundred—and every multiple of ten next in order, with* 52*—as the number standing for the weeks in a year—interpolated in its proper place.*

*In the longer tables—from the next page to the end—every number from* 1 *to* 100 *is reckoned out. Beyond the number* 100*, the figures standing for multiples of dozens up to the gross* (144) *have a line each, as has also* 112*, the number of pounds in a cwt.; with an entry for* 365*, the number of days in the year, breaking the even hundred progression; and one at* 2,240*—for the purpose of showing at a glance what the cost per ton comes to of anything priced at the amount per pound shown by the table—inserted between the* 2,000 *and* 3,000.

*The reckoning for every possible combination of whole numbers can thus be readily arrived at, where not expressly given, by adding together the items indicating the values attached to composing numbers. Thus* 3,366 *articles at one-twelfth of a penny each would come to the total of* 3,000 + 300 + 60 + 6*, or, as will be seen,* £1 0*s.* 10*d.* + 2*s.* 1*d.* + 5*d.* + 0½*d., an aggregate equalling* £1 3*s.* 4½*d.*

### 1/16d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 25 | 0 | 0 | 1½ | 500 | 0 | 2 | 7½ |
| 2 | 0 | 0 | 0½ | 30 | 0 | 0 | 1¾ | 600 | 0 | 3 | 1½ |
| 3 | 0 | 0 | 0½ | 40 | 0 | 0 | 2½ | 700 | 0 | 3 | 7½ |
| 4 | 0 | 0 | 0½ | 50 | 0 | 0 | 3½ | 800 | 0 | 4 | 2 |
| 5 | 0 | 0 | 0½ | 52 | 0 | 0 | 3½ | 900 | 0 | 4 | 8½ |
| 6 | 0 | 0 | 0¾ | 60 | 0 | 0 | 3¾ | 1000 | 0 | 5 | 2½ |
| 7 | 0 | 0 | 0¾ | 70 | 0 | 0 | 4⅜ | 1100 | 0 | 5 | 8¾ |
| 8 | 0 | 0 | 0¾ | 80 | 0 | 0 | 5 | 1200 | 0 | 6 | 3 |
| 9 | 0 | 0 | 0¾ | 90 | 0 | 0 | 5⅝ | 1300 | 0 | 6 | 9½ |
| 10 | 0 | 0 | 0⅞ | 100 | 0 | 0 | 6¼ | 1400 | 0 | 7 | 3½ |
| 11 | 0 | 0 | 0⅞ | 108 | 0 | 0 | 6¾ | 1500 | 0 | 7 | 9¾ |
| 12 | 0 | 0 | 0⅞ | 112 | 0 | 0 | 7 | 1600 | 0 | 8 | 4 |
| 13 | 0 | 0 | 0⅞ | 120 | 0 | 0 | 7½ | 1700 | 0 | 8 | 10½ |
| 14 | 0 | 0 | 0⅞ | 132 | 0 | 0 | 8¼ | 1800 | 0 | 9 | 4½ |
| 15 | 0 | 0 | 1 | 144 | 0 | 0 | 9 | 1900 | 0 | 9 | 10½ |
| 16 | 0 | 0 | 1 | 150 | 0 | 0 | 9⅜ | 2000 | 0 | 10 | 5 |
| 17 | 0 | 0 | 1 | 200 | 0 | 1 | 0½ | 2240 | 0 | 11 | 8 |
| 18 | 0 | 0 | 1¼ | 300 | 0 | 1 | 6¾ | 3000 | 0 | 15 | 7½ |
| 19 | 0 | 0 | 1¼ | 365 | 0 | 1 | 10⅝ | 4000 | 1 | 0 | 10 |
| 20 | 0 | 0 | 1¼ | 400 | 0 | 2 | 1 | 5000 | 1 | 6 | 0½ |

### 1/8d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0½ | 25 | 0 | 0 | 5 | 500 | 0 | 8 | 4 |
| 2 | 0 | 0 | 0½ | 30 | 0 | 0 | 6 | 600 | 0 | 10 | 0 |
| 3 | 0 | 0 | 0½ | 40 | 0 | 0 | 8 | 700 | 0 | 11 | 8 |
| 4 | 0 | 0 | 0½ | 50 | 0 | 0 | 10 | 800 | 0 | 13 | 4 |
| 5 | 0 | 0 | 1 | 52 | 0 | 0 | 10½ | 900 | 0 | 15 | 0 |
| 6 | 0 | 0 | 1¼ | 60 | 0 | 1 | 0 | 1000 | 0 | 16 | 8 |
| 7 | 0 | 0 | 1¼ | 70 | 0 | 1 | 2 | 1100 | 0 | 18 | 4 |
| 8 | 0 | 0 | 1¼ | 80 | 0 | 1 | 4 | 1200 | 1 | 0 | 0 |
| 9 | 0 | 0 | 1⅜ | 90 | 0 | 1 | 6 | 1300 | 1 | 1 | 8 |
| 10 | 0 | 0 | 2 | 100 | 0 | 1 | 8 | 1400 | 1 | 3 | 4 |
| 11 | 0 | 0 | 2⅛ | 108 | 0 | 1 | 9½ | 1500 | 1 | 5 | 0 |
| 12 | 0 | 0 | 2⅛ | 112 | 0 | 1 | 10½ | 1600 | 1 | 6 | 8 |
| 13 | 0 | 0 | 2⅛ | 120 | 0 | 2 | 0 | 1700 | 1 | 8 | 4 |
| 14 | 0 | 0 | 2⅛ | 132 | 0 | 2 | 2½ | 1800 | 1 | 10 | 0 |
| 15 | 0 | 0 | 3 | 144 | 0 | 2 | 4½ | 1900 | 1 | 11 | 8 |
| 16 | 0 | 0 | 3¼ | 150 | 0 | 2 | 6 | 2000 | 1 | 13 | 4 |
| 17 | 0 | 0 | 3¼ | 200 | 0 | 3 | 4 | 2240 | 1 | 17 | 4 |
| 18 | 0 | 0 | 3¼ | 300 | 0 | 5 | 0 | 3000 | 2 | 10 | 0 |
| 19 | 0 | 0 | 3¼ | 365 | 0 | 6 | 1 | 4000 | 3 | 6 | 8 |
| 20 | 0 | 0 | 4 | 400 | 0 | 6 | 8 | 5000 | 4 | 3 | 4 |

### 1/12d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 25 | 0 | 0 | 2 | 500 | 0 | 3 | 5⅔ |
| 2 | 0 | 0 | 0½ | 30 | 0 | 0 | 2½ | 600 | 0 | 4 | 2 |
| 3 | 0 | 0 | 0½ | 40 | 0 | 0 | 3⅓ | 700 | 0 | 4 | 10½ |
| 4 | 0 | 0 | 0½ | 50 | 0 | 0 | 4⅙ | 800 | 0 | 5 | 6⅔ |
| 5 | 0 | 0 | 0½ | 52 | 0 | 0 | 4⅓ | 900 | 0 | 6 | 3 |
| 6 | 0 | 0 | 0½ | 60 | 0 | 0 | 5 | 1000 | 0 | 6 | 11⅓ |
| 7 | 0 | 0 | 0½ | 70 | 0 | 0 | 5⅚ | 1100 | 0 | 7 | 7⅔ |
| 8 | 0 | 0 | 0⅔ | 80 | 0 | 0 | 6⅔ | 1200 | 0 | 8 | 4 |
| 9 | 0 | 0 | 0¾ | 90 | 0 | 0 | 7½ | 1300 | 0 | 9 | 0½ |
| 10 | 0 | 0 | 0⅔ | 100 | 0 | 0 | 8⅓ | 1400 | 0 | 9 | 8⅓ |
| 11 | 0 | 0 | 1 | 108 | 0 | 0 | 9 | 1500 | 0 | 10 | 5 |
| 12 | 0 | 0 | 1 | 112 | 0 | 0 | 9⅓ | 1600 | 0 | 11 | 1⅓ |
| 13 | 0 | 0 | 1 | 120 | 0 | 0 | 10 | 1700 | 0 | 11 | 9⅔ |
| 14 | 0 | 0 | 1⅛ | 132 | 0 | 0 | 11 | 1800 | 0 | 12 | 6 |
| 15 | 0 | 0 | 1⅛ | 144 | 0 | 1 | 0 | 1900 | 0 | 13 | 2½ |
| 16 | 0 | 0 | 1⅓ | 150 | 0 | 1 | 0½ | 2000 | 0 | 13 | 10⅔ |
| 17 | 0 | 0 | 1⅓ | 200 | 0 | 1 | 4⅔ | 2240 | 0 | 15 | 6⅔ |
| 18 | 0 | 0 | 1⅓ | 300 | 0 | 2 | 1 | 3000 | 1 | 0 | 10 |
| 19 | 0 | 0 | 1⅓ | 365 | 0 | 2 | 6½ | 4000 | 1 | 7 | 9⅓ |
| 20 | 0 | 0 | 1⅔ | 400 | 0 | 2 | 9⅓ | 5000 | 1 | 14 | 8⅓ |

### 1/3d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0⅓ | 25 | 0 | 0 | 8⅓ | 500 | 0 | 13 | 10⅔ |
| 2 | 0 | 0 | 0⅔ | 30 | 0 | 0 | 10 | 600 | 0 | 16 | 8 |
| 3 | 0 | 0 | 1 | 40 | 0 | 1 | 1⅓ | 700 | 0 | 19 | 5⅓ |
| 4 | 0 | 0 | 1⅓ | 50 | 0 | 1 | 4⅔ | 800 | 1 | 2 | 2⅔ |
| 5 | 0 | 0 | 1⅔ | 52 | 0 | 1 | 5⅓ | 900 | 1 | 5 | 0 |
| 6 | 0 | 0 | 2 | 60 | 0 | 1 | 8 | 1000 | 1 | 7 | 9⅓ |
| 7 | 0 | 0 | 2⅓ | 70 | 0 | 1 | 11⅓ | 1100 | 1 | 10 | 6⅔ |
| 8 | 0 | 0 | 2⅔ | 80 | 0 | 2 | 2⅔ | 1200 | 1 | 13 | 4 |
| 9 | 0 | 0 | 3 | 90 | 0 | 2 | 6 | 1300 | 1 | 16 | 1⅓ |
| 10 | 0 | 0 | 3⅓ | 100 | 0 | 2 | 9⅓ | 1400 | 1 | 18 | 10⅔ |
| 11 | 0 | 0 | 3⅔ | 108 | 0 | 3 | 0 | 1500 | 2 | 1 | 8 |
| 12 | 0 | 0 | 4 | 112 | 0 | 3 | 1⅓ | 1600 | 2 | 4 | 5⅓ |
| 13 | 0 | 0 | 4⅓ | 120 | 0 | 3 | 4 | 1700 | 2 | 7 | 2⅔ |
| 14 | 0 | 0 | 4⅔ | 132 | 0 | 3 | 8 | 1800 | 2 | 10 | 0 |
| 15 | 0 | 0 | 5 | 144 | 0 | 4 | 0 | 1900 | 2 | 12 | 9⅓ |
| 16 | 0 | 0 | 5⅓ | 150 | 0 | 4 | 2 | 2000 | 2 | 15 | 6⅔ |
| 17 | 0 | 0 | 5⅔ | 200 | 0 | 5 | 6⅔ | 2240 | 3 | 2 | 2⅔ |
| 18 | 0 | 0 | 6 | 300 | 0 | 8 | 4 | 3000 | 4 | 3 | 4 |
| 19 | 0 | 0 | 6⅓ | 365 | 0 | 10 | 1⅓ | 4000 | 5 | 11 | 1⅓ |
| 20 | 0 | 0 | 6⅔ | 400 | 0 | 11 | 1⅓ | 5000 | 6 | 18 | 10⅔ |

## ¼d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0½ | 44 | 0 | 0 | 11 | 87 | 0 | 1 | 9½ |
| 2 | 0 | 0 | 0½ | 45 | 0 | 0 | 11½ | 88 | 0 | 1 | 10 |
| 3 | 0 | 0 | 0½ | 46 | 0 | 0 | 11½ | 89 | 0 | 1 | 10½ |
| 4 | 0 | 0 | 1 | 47 | 0 | 0 | 11½ | 90 | 0 | 1 | 10½ |
| 5 | 0 | 0 | 1¼ | 48 | 0 | 1 | 0 | 91 | 0 | 1 | 10½ |
| 6 | 0 | 0 | 1½ | 49 | 0 | 1 | 0½ | 92 | 0 | 1 | 11 |
| 7 | 0 | 0 | 1¾ | 50 | 0 | 1 | 0½ | 93 | 0 | 1 | 11¼ |
| 8 | 0 | 0 | 2 | 51 | 0 | 1 | 0½ | 94 | 0 | 1 | 11½ |
| 9 | 0 | 0 | 2¼ | 52 | 0 | 1 | 1 | 95 | 0 | 1 | 11½ |
| 10 | 0 | 0 | 2½ | 53 | 0 | 1 | 1¼ | 96 | 0 | 2 | 0 |
| 11 | 0 | 0 | 2¾ | 54 | 0 | 1 | 1½ | 97 | 0 | 2 | 0½ |
| 12 | 0 | 0 | 3 | 55 | 0 | 1 | 1¾ | 98 | 0 | 2 | 0½ |
| 13 | 0 | 0 | 3¼ | 56 | 0 | 1 | 2 | 99 | 0 | 2 | 0½ |
| 14 | 0 | 0 | 3½ | 57 | 0 | 1 | 2¼ | 100 | 0 | 2 | 1 |
| 15 | 0 | 0 | 3¾ | 58 | 0 | 1 | 2½ | 108 | 0 | 2 | 3 |
| 16 | 0 | 0 | 4 | 59 | 0 | 1 | 2¾ | 110 | 0 | 2 | 3½ |
| 17 | 0 | 0 | 4¼ | 60 | 0 | 1 | 3 | 112 | 0 | 2 | 4 |
| 18 | 0 | 0 | 4½ | 61 | 0 | 1 | 3¼ | 120 | 0 | 2 | 6 |
| 19 | 0 | 0 | 4¾ | 62 | 0 | 1 | 3½ | 130 | 0 | 2 | 8½ |
| 20 | 0 | 0 | 5 | 63 | 0 | 1 | 3¾ | 132 | 0 | 2 | 9 |
| 21 | 0 | 0 | 5¼ | 64 | 0 | 1 | 4 | 140 | 0 | 2 | 11 |
| 22 | 0 | 0 | 5½ | 65 | 0 | 1 | 4¼ | 144 | 0 | 3 | 0 |
| 23 | 0 | 0 | 5¾ | 66 | 0 | 1 | 4½ | 150 | 0 | 3 | 1½ |
| 24 | 0 | 0 | 6 | 67 | 0 | 1 | 4¾ | 175 | 0 | 3 | 7½ |
| 25 | 0 | 0 | 6¼ | 68 | 0 | 1 | 5 | 200 | 0 | 4 | 2 |
| 26 | 0 | 0 | 6½ | 69 | 0 | 1 | 5¼ | 250 | 0 | 5 | 2½ |
| 27 | 0 | 0 | 6¾ | 70 | 0 | 1 | 5½ | 300 | 0 | 6 | 3 |
| 28 | 0 | 0 | 7 | 71 | 0 | 1 | 5¾ | 365 | 0 | 7 | 7½ |
| 29 | 0 | 0 | 7¼ | 72 | 0 | 1 | 6 | 400 | 0 | 8 | 4 |
| 30 | 0 | 0 | 7½ | 73 | 0 | 1 | 6¼ | 500 | 0 | 10 | 5 |
| 31 | 0 | 0 | 7¾ | 74 | 0 | 1 | 6½ | 600 | 0 | 12 | 6 |
| 32 | 0 | 0 | 8 | 75 | 0 | 1 | 6¾ | 700 | 0 | 14 | 7 |
| 33 | 0 | 0 | 8¼ | 76 | 0 | 1 | 7 | 750 | 0 | 15 | 7½ |
| 34 | 0 | 0 | 8½ | 77 | 0 | 1 | 7¼ | 800 | 0 | 16 | 8 |
| 35 | 0 | 0 | 8¾ | 78 | 0 | 1 | 7½ | 900 | 0 | 18 | 9 |
| 36 | 0 | 0 | 9 | 79 | 0 | 1 | 7¾ | 1000 | 1 | 0 | 10 |
| 37 | 0 | 0 | 9¼ | 80 | 0 | 1 | 8 | 1250 | 1 | 6 | 0½ |
| 38 | 0 | 0 | 9½ | 81 | 0 | 1 | 8¼ | 1500 | 1 | 11 | 3 |
| 39 | 0 | 0 | 9¾ | 82 | 0 | 1 | 8½ | 1750 | 1 | 16 | 5½ |
| 40 | 0 | 0 | 10 | 83 | 0 | 1 | 8¾ | 2000 | 2 | 1 | 8 |
| 41 | 0 | 0 | 10¼ | 84 | 0 | 1 | 9 | 2240 | 2 | 6 | 8 |
| 42 | 0 | 0 | 10½ | 85 | 0 | 1 | 9¼ | 3000 | 3 | 2 | 6 |
| 43 | 0 | 0 | 10¾ | 86 | 0 | 1 | 9½ | 5000 | 5 | 4 | 2 |

## ½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0½ | 44 | 0 | 1 | 10 | 87 | 0 | 3 | 7½ |
| 2 | 0 | 0 | 1 | 45 | 0 | 1 | 10½ | 88 | 0 | 3 | 8 |
| 3 | 0 | 0 | 1½ | 46 | 0 | 1 | 11 | 89 | 0 | 3 | 8½ |
| 4 | 0 | 0 | 2 | 47 | 0 | 1 | 11½ | 90 | 0 | 3 | 9 |
| 5 | 0 | 0 | 2½ | 48 | 0 | 2 | 0 | 91 | 0 | 3 | 9½ |
| 6 | 0 | 0 | 3 | 49 | 0 | 2 | 0½ | 92 | 0 | 3 | 10 |
| 7 | 0 | 0 | 3½ | 50 | 0 | 2 | 1 | 93 | 0 | 3 | 10½ |
| 8 | 0 | 0 | 4 | 51 | 0 | 2 | 1½ | 94 | 0 | 3 | 11 |
| 9 | 0 | 0 | 4½ | 52 | 0 | 2 | 2 | 95 | 0 | 3 | 11½ |
| 10 | 0 | 0 | 5 | 53 | 0 | 2 | 2½ | 96 | 0 | 4 | 0 |
| 11 | 0 | 0 | 5½ | 54 | 0 | 2 | 3 | 97 | 0 | 4 | 0½ |
| 12 | 0 | 0 | 6 | 55 | 0 | 2 | 3½ | 98 | 0 | 4 | 1 |
| 13 | 0 | 0 | 6½ | 56 | 0 | 2 | 4 | 99 | 0 | 4 | 1½ |
| 14 | 0 | 0 | 7 | 57 | 0 | 2 | 4½ | 100 | 0 | 4 | 2 |
| 15 | 0 | 0 | 7½ | 58 | 0 | 2 | 5 | 108 | 0 | 4 | 6 |
| 16 | 0 | 0 | 8 | 59 | 0 | 2 | 5½ | 110 | 0 | 4 | 7 |
| 17 | 0 | 0 | 8½ | 60 | 0 | 2 | 6 | 112 | 0 | 4 | 8 |
| 18 | 0 | 0 | 9 | 61 | 0 | 2 | 6½ | 120 | 0 | 5 | 0 |
| 19 | 0 | 0 | 9½ | 62 | 0 | 2 | 7 | 130 | 0 | 5 | 5 |
| 20 | 0 | 0 | 10 | 63 | 0 | 2 | 7½ | 132 | 0 | 5 | 6 |
| 21 | 0 | 0 | 10½ | 64 | 0 | 2 | 8 | 140 | 0 | 5 | 10 |
| 22 | 0 | 0 | 11 | 65 | 0 | 2 | 8½ | 144 | 0 | 6 | 0 |
| 23 | 0 | 0 | 11½ | 66 | 0 | 2 | 9 | 150 | 0 | 6 | 3 |
| 24 | 0 | 1 | 0 | 67 | 0 | 2 | 9½ | 175 | 0 | 7 | 3½ |
| 25 | 0 | 1 | 0½ | 68 | 0 | 2 | 10 | 200 | 0 | 8 | 4 |
| 26 | 0 | 1 | 1 | 69 | 0 | 2 | 10½ | 250 | 0 | 10 | 5 |
| 27 | 0 | 1 | 1½ | 70 | 0 | 2 | 11 | 300 | 0 | 12 | 6 |
| 28 | 0 | 1 | 2 | 71 | 0 | 2 | 11½ | 365 | 0 | 15 | 2½ |
| 29 | 0 | 1 | 2½ | 72 | 0 | 3 | 0 | 400 | 0 | 16 | 8 |
| 30 | 0 | 1 | 3 | 73 | 0 | 3 | 0½ | 500 | 1 | 0 | 10 |
| 31 | 0 | 1 | 3½ | 74 | 0 | 3 | 1 | 600 | 1 | 5 | 0 |
| 32 | 0 | 1 | 4 | 75 | 0 | 3 | 1½ | 700 | 1 | 9 | 2 |
| 33 | 0 | 1 | 4½ | 76 | 0 | 3 | 2 | 750 | 1 | 11 | 3 |
| 34 | 0 | 1 | 5 | 77 | 0 | 3 | 2½ | 800 | 1 | 13 | 4 |
| 35 | 0 | 1 | 5½ | 78 | 0 | 3 | 3 | 900 | 1 | 17 | 6 |
| 36 | 0 | 1 | 6 | 79 | 0 | 3 | 3½ | 1000 | 2 | 1 | 8 |
| 37 | 0 | 1 | 6½ | 80 | 0 | 3 | 4 | 1250 | 2 | 12 | 1 |
| 38 | 0 | 1 | 7 | 81 | 0 | 3 | 4½ | 1500 | 3 | 2 | 6 |
| 39 | 0 | 1 | 7½ | 82 | 0 | 3 | 5 | 1750 | 3 | 12 | 11 |
| 40 | 0 | 1 | 8 | 83 | 0 | 3 | 5½ | 2000 | 4 | 3 | 4 |
| 41 | 0 | 1 | 8½ | 84 | 0 | 3 | 6 | 2240 | 4 | 13 | 4 |
| 42 | 0 | 1 | 9 | 85 | 0 | 3 | 6½ | 3000 | 6 | 5 | 0 |
| 43 | 0 | 1 | 9½ | 86 | 0 | 3 | 7 | 5000 | 10 | 8 | 4 |

## ¾d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0¾ | 44 | 0 | 2 | 9 | 87 | 0 | 5 | 5½ |
| 2 | 0 | 0 | 1½ | 45 | 0 | 2 | 9¾ | 88 | 0 | 5 | 6 |
| 3 | 0 | 0 | 2¼ | 46 | 0 | 2 | 10½ | 89 | 0 | 5 | 6¾ |
| 4 | 0 | 0 | 3 | 47 | 0 | 2 | 11¼ | 90 | 0 | 5 | 7½ |
| 5 | 0 | 0 | 3¾ | 48 | 0 | 3 | 0 | 91 | 0 | 5 | 8¼ |
| 6 | 0 | 0 | 4½ | 49 | 0 | 3 | 0¾ | 92 | 0 | 5 | 9 |
| 7 | 0 | 0 | 5¼ | 50 | 0 | 3 | 1½ | 93 | 0 | 5 | 9¾ |
| 8 | 0 | 0 | 6 | 51 | 0 | 3 | 2¼ | 94 | 0 | 5 | 10½ |
| 9 | 0 | 0 | 6¾ | 52 | 0 | 3 | 3 | 95 | 0 | 5 | 11¼ |
| 10 | 0 | 0 | 7½ | 53 | 0 | 3 | 3¾ | 96 | 0 | 6 | 0 |
| 11 | 0 | 0 | 8¼ | 54 | 0 | 3 | 4½ | 97 | 0 | 6 | 0¾ |
| 12 | 0 | 0 | 9 | 55 | 0 | 3 | 5¼ | 98 | 0 | 6 | 1½ |
| 13 | 0 | 0 | 9¾ | 56 | 0 | 3 | 6 | 99 | 0 | 6 | 2¼ |
| 14 | 0 | 0 | 10½ | 57 | 0 | 3 | 6¾ | 100 | 0 | 6 | 3 |
| 15 | 0 | 0 | 11¼ | 58 | 0 | 3 | 7½ | 108 | 0 | 6 | 9 |
| 16 | 0 | 1 | 0 | 59 | 0 | 3 | 8¼ | 110 | 0 | 6 | 10½ |
| 17 | 0 | 1 | 0¾ | 60 | 0 | 3 | 9 | 112 | 0 | 7 | 0 |
| 18 | 0 | 1 | 1½ | 61 | 0 | 3 | 9¾ | 120 | 0 | 7 | 6 |
| 19 | 0 | 1 | 2¼ | 62 | 0 | 3 | 10½ | 130 | 0 | 8 | 1½ |
| 20 | 0 | 1 | 3 | 63 | 0 | 3 | 11¼ | 132 | 0 | 8 | 3 |
| 21 | 0 | 1 | 3¾ | 64 | 0 | 4 | 0 | 140 | 0 | 8 | 9 |
| 22 | 0 | 1 | 4½ | 65 | 0 | 4 | 0¾ | 144 | 0 | 9 | 0 |
| 23 | 0 | 1 | 5¼ | 66 | 0 | 4 | 1½ | 150 | 0 | 9 | 4½ |
| 24 | 0 | 1 | 6 | 67 | 0 | 4 | 2¼ | 175 | 0 | 10 | 11¼ |
| 25 | 0 | 1 | 6¾ | 68 | 0 | 4 | 3 | 200 | 0 | 12 | 6 |
| 26 | 0 | 1 | 7½ | 69 | 0 | 4 | 3¾ | 250 | 0 | 15 | 7½ |
| 27 | 0 | 1 | 8¼ | 70 | 0 | 4 | 4½ | 300 | 0 | 18 | 9 |
| 28 | 0 | 1 | 9 | 71 | 0 | 4 | 5¼ | 365 | 1 | 2 | 9¾ |
| 29 | 0 | 1 | 9¾ | 72 | 0 | 4 | 6 | 400 | 1 | 5 | 0 |
| 30 | 0 | 1 | 10½ | 73 | 0 | 4 | 6¾ | 500 | 1 | 11 | 3 |
| 31 | 0 | 1 | 11¼ | 74 | 0 | 4 | 7½ | 600 | 1 | 17 | 6 |
| 32 | 0 | 2 | 0 | 75 | 0 | 4 | 8¼ | 700 | 2 | 3 | 9 |
| 33 | 0 | 2 | 0¾ | 76 | 0 | 4 | 9 | 750 | 2 | 6 | 10½ |
| 34 | 0 | 2 | 1½ | 77 | 0 | 4 | 9¾ | 800 | 2 | 10 | 0 |
| 35 | 0 | 2 | 2¼ | 78 | 0 | 4 | 10½ | 900 | 2 | 16 | 3 |
| 36 | 0 | 2 | 3 | 79 | 0 | 4 | 11¼ | 1000 | 3 | 2 | 6 |
| 37 | 0 | 2 | 3¾ | 80 | 0 | 5 | 0 | 1250 | 3 | 18 | 1½ |
| 38 | 0 | 2 | 4½ | 81 | 0 | 5 | 0¾ | 1500 | 4 | 13 | 9 |
| 39 | 0 | 2 | 5¼ | 82 | 0 | 5 | 1½ | 1750 | 5 | 9 | 4½ |
| 40 | 0 | 2 | 6 | 83 | 0 | 5 | 2¼ | 2000 | 6 | 5 | 0 |
| 41 | 0 | 2 | 6¾ | 84 | 0 | 5 | 3 | 2240 | 7 | 0 | 0 |
| 42 | 0 | 2 | 7½ | 85 | 0 | 5 | 3¾ | 3000 | 9 | 7 | 6 |
| 43 | 0 | 2 | 8¼ | 86 | 0 | 5 | 4½ | 5000 | 15 | 12 | 6 |

## 1d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 1 | 44 | 0 | 3 | 8 | 87 | 0 | 7 | 3 |
| 2 | 0 | 0 | 2 | 45 | 0 | 3 | 9 | 88 | 0 | 7 | 4 |
| 3 | 0 | 0 | 3 | 46 | 0 | 3 | 10 | 89 | 0 | 7 | 5 |
| 4 | 0 | 0 | 4 | 47 | 0 | 3 | 11 | 90 | 0 | 7 | 6 |
| 5 | 0 | 0 | 5 | 48 | 0 | 4 | 0 | 91 | 0 | 7 | 7 |
| 6 | 0 | 0 | 6 | 49 | 0 | 4 | 1 | 92 | 0 | 7 | 8 |
| 7 | 0 | 0 | 7 | 50 | 0 | 4 | 2 | 93 | 0 | 7 | 9 |
| 8 | 0 | 0 | 8 | 51 | 0 | 4 | 3 | 94 | 0 | 7 | 10 |
| 9 | 0 | 0 | 9 | 52 | 0 | 4 | 4 | 95 | 0 | 7 | 11 |
| 10 | 0 | 0 | 10 | 53 | 0 | 4 | 5 | 96 | 0 | 8 | 0 |
| 11 | 0 | 0 | 11 | 54 | 0 | 4 | 6 | 97 | 0 | 8 | 1 |
| 12 | 0 | 1 | 0 | 55 | 0 | 4 | 7 | 98 | 0 | 8 | 2 |
| 13 | 0 | 1 | 1 | 56 | 0 | 4 | 8 | 99 | 0 | 8 | 3 |
| 14 | 0 | 1 | 2 | 57 | 0 | 4 | 9 | 100 | 0 | 8 | 4 |
| 15 | 0 | 1 | 3 | 58 | 0 | 4 | 10 | 108 | 0 | 9 | 0 |
| 16 | 0 | 1 | 4 | 59 | 0 | 4 | 11 | 110 | 0 | 9 | 2 |
| 17 | 0 | 1 | 5 | 60 | 0 | 5 | 0 | 112 | 0 | 9 | 4 |
| 18 | 0 | 1 | 6 | 61 | 0 | 5 | 1 | 120 | 0 | 10 | 0 |
| 19 | 0 | 1 | 7 | 62 | 0 | 5 | 2 | 130 | 0 | 10 | 10 |
| 20 | 0 | 1 | 8 | 63 | 0 | 5 | 3 | 132 | 0 | 11 | 0 |
| 21 | 0 | 1 | 9 | 64 | 0 | 5 | 4 | 140 | 0 | 11 | 8 |
| 22 | 0 | 1 | 10 | 65 | 0 | 5 | 5 | 144 | 0 | 12 | 0 |
| 23 | 0 | 1 | 11 | 66 | 0 | 5 | 6 | 150 | 0 | 12 | 6 |
| 24 | 0 | 2 | 0 | 67 | 0 | 5 | 7 | 175 | 0 | 14 | 7 |
| 25 | 0 | 2 | 1 | 68 | 0 | 5 | 8 | 200 | 0 | 16 | 8 |
| 26 | 0 | 2 | 2 | 69 | 0 | 5 | 9 | 250 | 1 | 0 | 10 |
| 27 | 0 | 2 | 3 | 70 | 0 | 5 | 10 | 300 | 1 | 5 | 0 |
| 28 | 0 | 2 | 4 | 71 | 0 | 5 | 11 | 365 | 1 | 10 | 5 |
| 29 | 0 | 2 | 5 | 72 | 0 | 6 | 0 | 400 | 1 | 13 | 4 |
| 30 | 0 | 2 | 6 | 73 | 0 | 6 | 1 | 500 | 2 | 1 | 8 |
| 31 | 0 | 2 | 7 | 74 | 0 | 6 | 2 | 600 | 2 | 10 | 0 |
| 32 | 0 | 2 | 8 | 75 | 0 | 6 | 3 | 700 | 2 | 18 | 4 |
| 33 | 0 | 2 | 9 | 76 | 0 | 6 | 4 | 750 | 3 | 2 | 6 |
| 34 | 0 | 2 | 10 | 77 | 0 | 6 | 5 | 800 | 3 | 6 | 8 |
| 35 | 0 | 2 | 11 | 78 | 0 | 6 | 6 | 900 | 3 | 15 | 0 |
| 36 | 0 | 3 | 0 | 79 | 0 | 6 | 7 | 1000 | 4 | 3 | 4 |
| 37 | 0 | 3 | 1 | 80 | 0 | 6 | 8 | 1250 | 5 | 4 | 2 |
| 38 | 0 | 3 | 2 | 81 | 0 | 6 | 9 | 1500 | 6 | 5 | 0 |
| 39 | 0 | 3 | 3 | 82 | 0 | 6 | 10 | 1750 | 7 | 5 | 10 |
| 40 | 0 | 3 | 4 | 83 | 0 | 6 | 11 | 2000 | 8 | 6 | 8 |
| 41 | 0 | 3 | 5 | 84 | 0 | 7 | 0 | 2240 | 9 | 6 | 8 |
| 42 | 0 | 3 | 6 | 85 | 0 | 7 | 1 | 3000 | 12 | 10 | 0 |
| 43 | 0 | 3 | 7 | 86 | 0 | 7 | 2 | 5000 | 20 | 16 | 8 |

## 1½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 1½ | 44 | 0 | 4 | 7 | 87 | 0 | 9 | 0½ |
| 2 | 0 | 0 | 2½ | 45 | 0 | 4 | 8½ | 88 | 0 | 9 | 2 |
| 3 | 0 | 0 | 3½ | 46 | 0 | 4 | 9½ | 89 | 0 | 9 | 3½ |
| 4 | 0 | 0 | 5 | 47 | 0 | 4 | 10½ | 90 | 0 | 9 | 4½ |
| 5 | 0 | 0 | 6½ | 48 | 0 | 5 | 0 | 91 | 0 | 9 | 5½ |
| 6 | 0 | 0 | 7½ | 49 | 0 | 5 | 1½ | 92 | 0 | 9 | 7 |
| 7 | 0 | 0 | 8½ | 50 | 0 | 5 | 2½ | 93 | 0 | 9 | 8½ |
| 8 | 0 | 0 | 10 | 51 | 0 | 5 | 3½ | 94 | 0 | 9 | 9½ |
| 9 | 0 | 0 | 11½ | 52 | 0 | 5 | 5 | 95 | 0 | 9 | 10½ |
| 10 | 0 | 1 | 0½ | 53 | 0 | 5 | 6½ | 96 | 0 | 10 | 0 |
| 11 | 0 | 1 | 1½ | 54 | 0 | 5 | 7½ | 97 | 0 | 10 | 1½ |
| 12 | 0 | 1 | 3 | 55 | 0 | 5 | 8½ | 98 | 0 | 10 | 2½ |
| 13 | 0 | 1 | 4½ | 56 | 0 | 5 | 10 | 99 | 0 | 10 | 3½ |
| 14 | 0 | 1 | 5½ | 57 | 0 | 5 | 11½ | 100 | 0 | 10 | 5 |
| 15 | 0 | 1 | 6½ | 58 | 0 | 6 | 0½ | 108 | 0 | 11 | 3 |
| 16 | 0 | 1 | 8 | 59 | 0 | 6 | 1½ | 110 | 0 | 11 | 5½ |
| 17 | 0 | 1 | 9½ | 60 | 0 | 6 | 3 | 112 | 0 | 11 | 8 |
| 18 | 0 | 1 | 10½ | 61 | 0 | 6 | 4½ | 120 | 0 | 12 | 6 |
| 19 | 0 | 1 | 11½ | 62 | 0 | 6 | 5½ | 130 | 0 | 13 | 6½ |
| 20 | 0 | 2 | 1 | 63 | 0 | 6 | 6½ | 132 | 0 | 13 | 9 |
| 21 | 0 | 2 | 2½ | 64 | 0 | 6 | 8 | 140 | 0 | 14 | 7 |
| 22 | 0 | 2 | 3½ | 65 | 0 | 6 | 9½ | 144 | 0 | 15 | 0 |
| 23 | 0 | 2 | 4½ | 66 | 0 | 6 | 10½ | 150 | 0 | 15 | 7½ |
| 24 | 0 | 2 | 6 | 67 | 0 | 6 | 11½ | 175 | 0 | 18 | 2½ |
| 25 | 0 | 2 | 7½ | 68 | 0 | 7 | 1 | 200 | 1 | 0 | 10 |
| 26 | 0 | 2 | 8½ | 69 | 0 | 7 | 2½ | 250 | 1 | 6 | 0½ |
| 27 | 0 | 2 | 9½ | 70 | 0 | 7 | 3½ | 300 | 1 | 11 | 3 |
| 28 | 0 | 2 | 11 | 71 | 0 | 7 | 4½ | 365 | 1 | 18 | 0½ |
| 29 | 0 | 3 | 0½ | 72 | 0 | 7 | 6 | 400 | 2 | 1 | 8 |
| 30 | 0 | 3 | 1½ | 73 | 0 | 7 | 7½ | 500 | 2 | 12 | 1 |
| 31 | 0 | 3 | 2½ | 74 | 0 | 7 | 8½ | 600 | 3 | 2 | 6 |
| 32 | 0 | 3 | 4 | 75 | 0 | 7 | 9½ | 700 | 3 | 12 | 11 |
| 33 | 0 | 3 | 5½ | 76 | 0 | 7 | 11 | 750 | 3 | 18 | 1½ |
| 34 | 0 | 3 | 6½ | 77 | 0 | 8 | 0½ | 800 | 4 | 3 | 4 |
| 35 | 0 | 3 | 7½ | 78 | 0 | 8 | 1½ | 900 | 4 | 13 | 9 |
| 36 | 0 | 3 | 9 | 79 | 0 | 8 | 2½ | 1000 | 5 | 4 | 2 |
| 37 | 0 | 3 | 10½ | 80 | 0 | 8 | 4 | 1250 | 6 | 10 | 2½ |
| 38 | 0 | 3 | 11½ | 81 | 0 | 8 | 5½ | 1500 | 7 | 16 | 3 |
| 39 | 0 | 4 | 0½ | 82 | 0 | 8 | 6½ | 1750 | 9 | 2 | 3½ |
| 40 | 0 | 4 | 2 | 83 | 0 | 8 | 7½ | 2000 | 10 | 8 | 4 |
| 41 | 0 | 4 | 3½ | 84 | 0 | 8 | 9 | 2240 | 11 | 13 | 4 |
| 42 | 0 | 4 | 4½ | 85 | 0 | 8 | 10½ | 3000 | 15 | 12 | 6 |
| 43 | 0 | 4 | 5½ | 86 | 0 | 8 | 11½ | 5000 | 26 | 0 | 10 |

## 1½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 1½ | 44 | 0 | 6 | 5 | 87 | 0 | 12 | 8½ |
| 2 | 0 | 0 | 3½ | 45 | 0 | 6 | 6½ | 88 | 0 | 12 | 10 |
| 3 | 0 | 0 | 5½ | 46 | 0 | 6 | 8½ | 89 | 0 | 12 | 11½ |
| 4 | 0 | 0 | 7 | 47 | 0 | 6 | 10½ | 90 | 0 | 13 | 1½ |
| 5 | 0 | 0 | 8½ | 48 | 0 | 7 | 0 | 91 | 0 | 13 | 3½ |
| 6 | 0 | 0 | 10½ | 49 | 0 | 7 | 1½ | 92 | 0 | 13 | 5 |
| 7 | 0 | 1 | 0½ | 50 | 0 | 7 | 3½ | 93 | 0 | 13 | 6½ |
| 8 | 0 | 1 | 2 | 51 | 0 | 7 | 5½ | 94 | 0 | 13 | 8½ |
| 9 | 0 | 1 | 3½ | 52 | 0 | 7 | 7 | 95 | 0 | 13 | 10½ |
| 10 | 0 | 1 | 5½ | 53 | 0 | 7 | 8½ | 96 | 0 | 14 | 0 |
| 11 | 0 | 1 | 7½ | 54 | 0 | 7 | 10½ | 97 | 0 | 14 | 1½ |
| 12 | 0 | 1 | 9 | 55 | 0 | 8 | 0½ | 98 | 0 | 14 | 3½ |
| 13 | 0 | 1 | 10½ | 56 | 0 | 8 | 2 | 99 | 0 | 14 | 5½ |
| 14 | 0 | 2 | 0½ | 57 | 0 | 8 | 3½ | 100 | 0 | 14 | 7 |
| 15 | 0 | 2 | 2½ | 58 | 0 | 8 | 5½ | 108 | 0 | 15 | 9 |
| 16 | 0 | 2 | 4 | 59 | 0 | 8 | 7½ | 110 | 0 | 16 | 0½ |
| 17 | 0 | 2 | 5½ | 60 | 0 | 8 | 9 | 112 | 0 | 16 | 4 |
| 18 | 0 | 2 | 7½ | 61 | 0 | 8 | 10½ | 120 | 0 | 17 | 6 |
| 19 | 0 | 2 | 9½ | 62 | 0 | 9 | 0½ | 130 | 0 | 18 | 11½ |
| 20 | 0 | 2 | 11 | 63 | 0 | 9 | 2½ | 132 | 0 | 19 | 3 |
| 21 | 0 | 3 | 0½ | 64 | 0 | 9 | 4 | 140 | 1 | 0 | 6 |
| 22 | 0 | 3 | 2½ | 65 | 0 | 9 | 5½ | 144 | 1 | 1 | 0 |
| 23 | 0 | 3 | 4½ | 66 | 0 | 9 | 7½ | 150 | 1 | 1 | 10½ |
| 24 | 0 | 3 | 6 | 67 | 0 | 9 | 9½ | 175 | 1 | 5 | 6½ |
| 25 | 0 | 3 | 7½ | 68 | 0 | 9 | 11 | 200 | 1 | 9 | 2 |
| 26 | 0 | 3 | 9½ | 69 | 0 | 10 | 0½ | 250 | 1 | 16 | 5½ |
| 27 | 0 | 3 | 11½ | 70 | 0 | 10 | 2½ | 300 | 2 | 3 | 9 |
| 28 | 0 | 4 | 1 | 71 | 0 | 10 | 4½ | 365 | 2 | 13 | 2½ |
| 29 | 0 | 4 | 2½ | 72 | 0 | 10 | 6 | 400 | 2 | 18 | 4 |
| 30 | 0 | 4 | 4½ | 73 | 0 | 10 | 7½ | 500 | 3 | 12 | 11 |
| 31 | 0 | 4 | 6½ | 74 | 0 | 10 | 9½ | 600 | 4 | 7 | 6 |
| 32 | 0 | 4 | 8 | 75 | 0 | 10 | 11½ | 700 | 5 | 2 | 1 |
| 33 | 0 | 4 | 9½ | 76 | 0 | 11 | 1 | 750 | 5 | 9 | 4½ |
| 34 | 0 | 4 | 11½ | 77 | 0 | 11 | 2½ | 800 | 5 | 16 | 8 |
| 35 | 0 | 5 | 1½ | 78 | 0 | 11 | 4½ | 900 | 6 | 11 | 3 |
| 36 | 0 | 5 | 3 | 79 | 0 | 11 | 6½ | 1000 | 7 | 5 | 10 |
| 37 | 0 | 5 | 4½ | 80 | 0 | 11 | 8 | 1250 | 9 | 2 | 8½ |
| 38 | 0 | 5 | 6½ | 81 | 0 | 11 | 9½ | 1500 | 10 | 18 | 9 |
| 39 | 0 | 5 | 8½ | 82 | 0 | 11 | 11½ | 1750 | 12 | 15 | 2½ |
| 40 | 0 | 5 | 10 | 83 | 0 | 12 | 1½ | 2000 | 14 | 11 | 8 |
| 41 | 0 | 5 | 11½ | 84 | 0 | 12 | 3 | 2240 | 16 | 6 | 8 |
| 42 | 0 | 6 | 1½ | 85 | 0 | 12 | 4½ | 3000 | 21 | 17 | 6 |
| 43 | 0 | 6 | 3½ | 86 | 0 | 12 | 6½ | 5000 | 36 | 9 | 2 |

## 1½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 1½ | 44 | 0 | 5 | 6 | 87 | 0 | 10 | 10½ |
| 2 | 0 | 0 | 3 | 45 | 0 | 5 | 7½ | 88 | 0 | 11 | 0 |
| 3 | 0 | 0 | 4½ | 46 | 0 | 5 | 9 | 89 | 0 | 11 | 1½ |
| 4 | 0 | 0 | 6 | 47 | 0 | 5 | 10½ | 90 | 0 | 11 | 3 |
| 5 | 0 | 0 | 7½ | 48 | 0 | 6 | 0 | 91 | 0 | 11 | 4½ |
| 6 | 0 | 0 | 9 | 49 | 0 | 6 | 1½ | 92 | 0 | 11 | 6 |
| 7 | 0 | 0 | 10½ | 50 | 0 | 6 | 3 | 93 | 0 | 11 | 7½ |
| 8 | 0 | 1 | 0 | 51 | 0 | 6 | 4½ | 94 | 0 | 11 | 9 |
| 9 | 0 | 1 | 1½ | 52 | 0 | 6 | 6 | 95 | 0 | 11 | 10½ |
| 10 | 0 | 1 | 3 | 53 | 0 | 6 | 7½ | 96 | 0 | 12 | 0 |
| 11 | 0 | 1 | 4½ | 54 | 0 | 6 | 9 | 97 | 0 | 12 | 1½ |
| 12 | 0 | 1 | 6 | 55 | 0 | 6 | 10½ | 98 | 0 | 12 | 3 |
| 13 | 0 | 1 | 7½ | 56 | 0 | 7 | 0 | 99 | 0 | 12 | 4½ |
| 14 | 0 | 1 | 9 | 57 | 0 | 7 | 1½ | 100 | 0 | 12 | 6 |
| 15 | 0 | 1 | 10½ | 58 | 0 | 7 | 3 | 108 | 0 | 13 | 6 |
| 16 | 0 | 2 | 0 | 59 | 0 | 7 | 4½ | 110 | 0 | 13 | 9 |
| 17 | 0 | 2 | 1½ | 60 | 0 | 7 | 6 | 112 | 0 | 14 | 0 |
| 18 | 0 | 2 | 3 | 61 | 0 | 7 | 7½ | 120 | 0 | 15 | 0 |
| 19 | 0 | 2 | 4½ | 62 | 0 | 7 | 9 | 130 | 0 | 16 | 3 |
| 20 | 0 | 2 | 6 | 63 | 0 | 7 | 10½ | 132 | 0 | 16 | 6 |
| 21 | 0 | 2 | 7½ | 64 | 0 | 8 | 0 | 140 | 0 | 17 | 6 |
| 22 | 0 | 2 | 9 | 65 | 0 | 8 | 1½ | 144 | 0 | 18 | 0 |
| 23 | 0 | 2 | 10½ | 66 | 0 | 8 | 3 | 150 | 0 | 18 | 9 |
| 24 | 0 | 3 | 0 | 67 | 0 | 8 | 4½ | 175 | 1 | 1 | 10½ |
| 25 | 0 | 3 | 1½ | 68 | 0 | 8 | 6 | 200 | 1 | 5 | 0 |
| 26 | 0 | 3 | 3 | 69 | 0 | 8 | 7½ | 250 | 1 | 11 | 3 |
| 27 | 0 | 3 | 4½ | 70 | 0 | 8 | 9 | 300 | 1 | 17 | 6 |
| 28 | 0 | 3 | 6 | 71 | 0 | 8 | 10½ | 365 | 2 | 5 | 7½ |
| 29 | 0 | 3 | 7½ | 72 | 0 | 9 | 0 | 400 | 2 | 10 | 0 |
| 30 | 0 | 3 | 9 | 73 | 0 | 9 | 1½ | 500 | 3 | 2 | 6 |
| 31 | 0 | 3 | 10½ | 74 | 0 | 9 | 3 | 600 | 3 | 15 | 0 |
| 32 | 0 | 4 | 0 | 75 | 0 | 9 | 4½ | 700 | 4 | 7 | 6 |
| 33 | 0 | 4 | 1½ | 76 | 0 | 9 | 6 | 750 | 4 | 13 | 9 |
| 34 | 0 | 4 | 3 | 77 | 0 | 9 | 7½ | 800 | 5 | 0 | 0 |
| 35 | 0 | 4 | 4½ | 78 | 0 | 9 | 9 | 900 | 5 | 12 | 6 |
| 36 | 0 | 4 | 6 | 79 | 0 | 9 | 10½ | 1000 | 6 | 5 | 0 |
| 37 | 0 | 4 | 7½ | 80 | 0 | 10 | 0 | 1250 | 7 | 16 | 3 |
| 38 | 0 | 4 | 9 | 81 | 0 | 10 | 1½ | 1500 | 9 | 7 | 6 |
| 39 | 0 | 4 | 10½ | 82 | 0 | 10 | 3 | 1750 | 10 | 18 | 9 |
| 40 | 0 | 5 | 0 | 83 | 0 | 10 | 4½ | 2000 | 12 | 10 | 0 |
| 41 | 0 | 5 | 1½ | 84 | 0 | 10 | 6 | 2240 | 14 | 0 | 0 |
| 42 | 0 | 5 | 3 | 85 | 0 | 10 | 7½ | 3000 | 18 | 15 | 0 |
| 43 | 0 | 5 | 4½ | 86 | 0 | 10 | 9 | 5000 | 31 | 5 | 0 |

## 2d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 2 | 44 | 0 | 7 | 4 | 87 | 0 | 14 | 6 |
| 2 | 0 | 0 | 4 | 45 | 0 | 7 | 6 | 88 | 0 | 14 | 8 |
| 3 | 0 | 0 | 6 | 46 | 0 | 7 | 8 | 89 | 0 | 14 | 10 |
| 4 | 0 | 0 | 8 | 47 | 0 | 7 | 10 | 90 | 0 | 15 | 0 |
| 5 | 0 | 0 | 10 | 48 | 0 | 8 | 0 | 91 | 0 | 15 | 2 |
| 6 | 0 | 1 | 0 | 49 | 0 | 8 | 2 | 92 | 0 | 15 | 4 |
| 7 | 0 | 1 | 2 | 50 | 0 | 8 | 4 | 93 | 0 | 15 | 6 |
| 8 | 0 | 1 | 4 | 51 | 0 | 8 | 6 | 94 | 0 | 15 | 8 |
| 9 | 0 | 1 | 6 | 52 | 0 | 8 | 8 | 95 | 0 | 15 | 10 |
| 10 | 0 | 1 | 8 | 53 | 0 | 8 | 10 | 96 | 0 | 16 | 0 |
| 11 | 0 | 1 | 10 | 54 | 0 | 9 | 0 | 97 | 0 | 16 | 2 |
| 12 | 0 | 2 | 0 | 55 | 0 | 9 | 2 | 98 | 0 | 16 | 4 |
| 13 | 0 | 2 | 2 | 56 | 0 | 9 | 4 | 99 | 0 | 16 | 6 |
| 14 | 0 | 2 | 4 | 57 | 0 | 9 | 6 | 100 | 0 | 16 | 8 |
| 15 | 0 | 2 | 6 | 58 | 0 | 9 | 8 | 108 | 0 | 18 | 0 |
| 16 | 0 | 2 | 8 | 59 | 0 | 9 | 10 | 110 | 0 | 18 | 4 |
| 17 | 0 | 2 | 10 | 60 | 0 | 10 | 0 | 112 | 0 | 18 | 8 |
| 18 | 0 | 3 | 0 | 61 | 0 | 10 | 2 | 120 | 1 | 0 | 0 |
| 19 | 0 | 3 | 2 | 62 | 0 | 10 | 4 | 130 | 1 | 1 | 8 |
| 20 | 0 | 3 | 4 | 63 | 0 | 10 | 6 | 132 | 1 | 2 | 0 |
| 21 | 0 | 3 | 6 | 64 | 0 | 10 | 8 | 140 | 1 | 3 | 4 |
| 22 | 0 | 3 | 8 | 65 | 0 | 10 | 10 | 144 | 1 | 4 | 0 |
| 23 | 0 | 3 | 10 | 66 | 0 | 11 | 0 | 150 | 1 | 5 | 0 |
| 24 | 0 | 4 | 0 | 67 | 0 | 11 | 2 | 175 | 1 | 9 | 2 |
| 25 | 0 | 4 | 2 | 68 | 0 | 11 | 4 | 200 | 1 | 13 | 4 |
| 26 | 0 | 4 | 4 | 69 | 0 | 11 | 6 | 250 | 2 | 1 | 8 |
| 27 | 0 | 4 | 6 | 70 | 0 | 11 | 8 | 300 | 2 | 10 | 0 |
| 28 | 0 | 4 | 8 | 71 | 0 | 11 | 10 | 365 | 3 | 0 | 10 |
| 29 | 0 | 4 | 10 | 72 | 0 | 12 | 0 | 400 | 3 | 6 | 8 |
| 30 | 0 | 5 | 0 | 73 | 0 | 12 | 2 | 500 | 4 | 3 | 4 |
| 31 | 0 | 5 | 2 | 74 | 0 | 12 | 4 | 600 | 5 | 0 | 0 |
| 32 | 0 | 5 | 4 | 75 | 0 | 12 | 6 | 700 | 5 | 16 | 8 |
| 33 | 0 | 5 | 6 | 76 | 0 | 12 | 8 | 750 | 6 | 5 | 0 |
| 34 | 0 | 5 | 8 | 77 | 0 | 12 | 10 | 800 | 6 | 13 | 4 |
| 35 | 0 | 5 | 10 | 78 | 0 | 13 | 0 | 900 | 7 | 10 | 0 |
| 36 | 0 | 6 | 0 | 79 | 0 | 13 | 2 | 1000 | 8 | 6 | 8 |
| 37 | 0 | 6 | 2 | 80 | 0 | 13 | 4 | 1250 | 10 | 8 | 4 |
| 38 | 0 | 6 | 4 | 81 | 0 | 13 | 6 | 1500 | 12 | 10 | 0 |
| 39 | 0 | 6 | 6 | 82 | 0 | 13 | 8 | 1750 | 14 | 11 | 8 |
| 40 | 0 | 6 | 8 | 83 | 0 | 13 | 10 | 2000 | 16 | 13 | 4 |
| 41 | 0 | 6 | 10 | 84 | 0 | 14 | 0 | 2240 | 18 | 13 | 4 |
| 42 | 0 | 7 | 0 | 85 | 0 | 14 | 2 | 3000 | 25 | 0 | 0 |
| 43 | 0 | 7 | 2 | 86 | 0 | 14 | 4 | 5000 | 41 | 13 | 4 |

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 2½ | 44 | 0 | 8 | 8 | 87 | 0 | 16 | 3½ |
| 2 | 0 | 0 | 4½ | 45 | 0 | 8 | 5½ | 88 | 0 | 16 | 6 |
| 3 | 0 | 0 | 6½ | 46 | 0 | 8 | 7½ | 89 | 0 | 16 | 8½ |
| 4 | 0 | 0 | 9 | 47 | 0 | 8 | 9½ | 90 | 0 | 16 | 10½ |
| 5 | 0 | 0 | 11½ | 48 | 0 | 9 | 0 | 91 | 0 | 17 | 0½ |
| 6 | 0 | 1 | 1½ | 49 | 0 | 9 | 2½ | 92 | 0 | 17 | 3 |
| 7 | 0 | 1 | 3½ | 50 | 0 | 9 | 4½ | 93 | 0 | 17 | 5½ |
| 8 | 0 | 1 | 6 | 51 | 0 | 9 | 6½ | 94 | 0 | 17 | 7½ |
| 9 | 0 | 1 | 8½ | 52 | 0 | 9 | 9 | 95 | 0 | 17 | 9½ |
| 10 | 0 | 1 | 10½ | 53 | 0 | 9 | 11½ | 96 | 0 | 18 | 0 |
| 11 | 0 | 2 | 0½ | 54 | 0 | 10 | 1½ | 97 | 0 | 18 | 2½ |
| 12 | 0 | 2 | 3 | 55 | 0 | 10 | 3½ | 98 | 0 | 18 | 4½ |
| 13 | 0 | 2 | 5½ | 56 | 0 | 10 | 6 | 99 | 0 | 18 | 6½ |
| 14 | 0 | 2 | 7½ | 57 | 0 | 10 | 8½ | 100 | 0 | 18 | 9 |
| 15 | 0 | 2 | 9½ | 58 | 0 | 10 | 10½ | 108 | 1 | 0 | 3 |
| 16 | 0 | 3 | 0 | 59 | 0 | 11 | 0½ | 110 | 1 | 0 | 7½ |
| 17 | 0 | 3 | 2½ | 60 | 0 | 11 | 3 | 112 | 1 | 1 | 0 |
| 18 | 0 | 3 | 4½ | 61 | 0 | 11 | 5½ | 120 | 1 | 2 | 6 |
| 19 | 0 | 3 | 6½ | 62 | 0 | 11 | 7½ | 130 | 1 | 4 | 4½ |
| 20 | 0 | 3 | 9 | 63 | 0 | 11 | 9½ | 132 | 1 | 4 | 9 |
| 21 | 0 | 3 | 11½ | 64 | 0 | 12 | 0 | 140 | 1 | 6 | 3 |
| 22 | 0 | 4 | 1½ | 65 | 0 | 12 | 2½ | 144 | 1 | 7 | 0 |
| 23 | 0 | 4 | 3½ | 66 | 0 | 12 | 4½ | 150 | 1 | 8 | 1½ |
| 24 | 0 | 4 | 6 | 67 | 0 | 12 | 6½ | 175 | 1 | 12 | 9½ |
| 25 | 0 | 4 | 8½ | 68 | 0 | 12 | 9 | 200 | 1 | 17 | 6 |
| 26 | 0 | 4 | 10½ | 69 | 0 | 12 | 11½ | 250 | 2 | 6 | 10½ |
| 27 | 0 | 5 | 0½ | 70 | 0 | 13 | 1½ | 300 | 2 | 16 | 3 |
| 28 | 0 | 5 | 3 | 71 | 0 | 13 | 3½ | 365 | 3 | 8 | 5½ |
| 29 | 0 | 5 | 5½ | 72 | 0 | 13 | 6 | 400 | 3 | 15 | 0 |
| 30 | 0 | 5 | 7½ | 73 | 0 | 13 | 8½ | 500 | 4 | 13 | 9 |
| 31 | 0 | 5 | 9½ | 74 | 0 | 13 | 10½ | 600 | 5 | 12 | 6 |
| 32 | 0 | 6 | 0 | 75 | 0 | 14 | 0½ | 700 | 6 | 11 | 3 |
| 33 | 0 | 6 | 2½ | 76 | 0 | 14 | 3 | 750 | 7 | 0 | 7½ |
| 34 | 0 | 6 | 4½ | 77 | 0 | 14 | 5½ | 800 | 7 | 10 | 0 |
| 35 | 0 | 6 | 6½ | 78 | 0 | 14 | 7½ | 900 | 8 | 8 | 9 |
| 36 | 0 | 6 | 9 | 79 | 0 | 14 | 9½ | 1000 | 9 | 7 | 6 |
| 37 | 0 | 6 | 11½ | 80 | 0 | 15 | 0 | 1250 | 11 | 14 | 4½ |
| 38 | 0 | 7 | 1½ | 81 | 0 | 15 | 2½ | 1500 | 14 | 1 | 3 |
| 39 | 0 | 7 | 3½ | 82 | 0 | 15 | 4½ | 1750 | 16 | 8 | 1½ |
| 40 | 0 | 7 | 6 | 83 | 0 | 15 | 6½ | 2000 | 18 | 15 | 0 |
| 41 | 0 | 7 | 8½ | 84 | 0 | 15 | 9 | 2240 | 21 | 0 | 0 |
| 42 | 0 | 7 | 10½ | 85 | 0 | 15 | 11½ | 3000 | 28 | 2 | 6 |
| 43 | 0 | 8 | 0½ | 86 | 0 | 16 | 1½ | 5000 | 46 | 17 | 6 |

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 2¾ | 44 | 0 | 10 | 1 | 87 | 0 | 19 | 11¼ |
| 2 | 0 | 0 | 5¼ | 45 | 0 | 10 | 3¾ | 88 | 1 | 0 | 2 |
| 3 | 0 | 0 | 8¼ | 46 | 0 | 10 | 6¼ | 89 | 1 | 0 | 4¼ |
| 4 | 0 | 0 | 11 | 47 | 0 | 10 | 9¼ | 90 | 1 | 0 | 7¼ |
| 5 | 0 | 1 | 1¼ | 48 | 0 | 11 | 0 | 91 | 1 | 0 | 10¼ |
| 6 | 0 | 1 | 4¼ | 49 | 0 | 11 | 2¾ | 92 | 1 | 1 | 1 |
| 7 | 0 | 1 | 7¼ | 50 | 0 | 11 | 5¼ | 93 | 1 | 1 | 3¼ |
| 8 | 0 | 1 | 10 | 51 | 0 | 11 | 8¼ | 94 | 1 | 1 | 6¼ |
| 9 | 0 | 2 | 0¾ | 52 | 0 | 11 | 11 | 95 | 1 | 1 | 9¼ |
| 10 | 0 | 2 | 3¾ | 53 | 0 | 12 | 1¾ | 96 | 1 | 2 | 0 |
| 11 | 0 | 2 | 6¾ | 54 | 0 | 12 | 4¾ | 97 | 1 | 2 | 2¾ |
| 12 | 0 | 2 | 9 | 55 | 0 | 12 | 7¾ | 98 | 1 | 2 | 5¾ |
| 13 | 0 | 2 | 11¾ | 56 | 0 | 12 | 10 | 99 | 1 | 2 | 8¾ |
| 14 | 0 | 3 | 2¾ | 57 | 0 | 13 | 0¾ | 100 | 1 | 2 | 11 |
| 15 | 0 | 3 | 5¾ | 58 | 0 | 13 | 3¾ | 108 | 1 | 4 | 9 |
| 16 | 0 | 3 | 8 | 59 | 0 | 13 | 6¾ | 110 | 1 | 5 | 2¾ |
| 17 | 0 | 3 | 10¾ | 60 | 0 | 13 | 9 | 112 | 1 | 5 | 8 |
| 18 | 0 | 4 | 1¾ | 61 | 0 | 13 | 11¾ | 120 | 1 | 7 | 6 |
| 19 | 0 | 4 | 4¾ | 62 | 0 | 14 | 2¾ | 130 | 1 | 9 | 9¼ |
| 20 | 0 | 4 | 7 | 63 | 0 | 14 | 5¾ | 132 | 1 | 10 | 3 |
| 21 | 0 | 4 | 9¾ | 64 | 0 | 14 | 8 | 140 | 1 | 12 | 1 |
| 22 | 0 | 5 | 0¾ | 65 | 0 | 14 | 10¾ | 144 | 1 | 13 | 0 |
| 23 | 0 | 5 | 3¾ | 66 | 0 | 15 | 1¾ | 150 | 1 | 14 | 4¼ |
| 24 | 0 | 5 | 6 | 67 | 0 | 15 | 4¾ | 175 | 2 | 0 | 1¾ |
| 25 | 0 | 5 | 8¾ | 68 | 0 | 15 | 7 | 200 | 2 | 5 | 10 |
| 26 | 0 | 5 | 11¾ | 69 | 0 | 15 | 9¾ | 250 | 2 | 17 | 3¾ |
| 27 | 0 | 6 | 2¾ | 70 | 0 | 16 | 0¾ | 300 | 3 | 8 | 9 |
| 28 | 0 | 6 | 5 | 71 | 0 | 16 | 3¾ | 365 | 4 | 3 | 7¾ |
| 29 | 0 | 6 | 7¾ | 72 | 0 | 16 | 6 | 400 | 4 | 11 | 8 |
| 30 | 0 | 6 | 10¾ | 73 | 0 | 16 | 8¾ | 500 | 5 | 14 | 7 |
| 31 | 0 | 7 | 1¾ | 74 | 0 | 16 | 11¾ | 600 | 6 | 17 | 6 |
| 32 | 0 | 7 | 4 | 75 | 0 | 17 | 2¾ | 700 | 8 | 0 | 5 |
| 33 | 0 | 7 | 6¾ | 76 | 0 | 17 | 5 | 750 | 8 | 11 | 10½ |
| 34 | 0 | 7 | 9¾ | 77 | 0 | 17 | 7¾ | 800 | 9 | 3 | 4 |
| 35 | 0 | 8 | 0¾ | 78 | 0 | 17 | 10¾ | 900 | 10 | 6 | 3 |
| 36 | 0 | 8 | 3 | 79 | 0 | 18 | 1¾ | 1000 | 11 | 9 | 2 |
| 37 | 0 | 8 | 5¾ | 80 | 0 | 18 | 4 | 1250 | 14 | 6 | 5¼ |
| 38 | 0 | 8 | 8¾ | 81 | 0 | 18 | 6¾ | 1500 | 17 | 3 | 9 |
| 39 | 0 | 8 | 11¾ | 82 | 0 | 18 | 9¾ | 1750 | 20 | 1 | 0¾ |
| 40 | 0 | 9 | 2 | 83 | 0 | 19 | 0¾ | 2000 | 22 | 18 | 4 |
| 41 | 0 | 9 | 4¾ | 84 | 0 | 19 | 3 | 2240 | 25 | 13 | 4 |
| 42 | 0 | 9 | 7¾ | 85 | 0 | 19 | 5¾ | 3000 | 34 | 7 | 6 |
| 43 | 0 | 9 | 10¾ | 86 | 0 | 19 | 8¾ | 5000 | 57 | 5 | 10 |

## 2½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 2½ | 44 | 0 | 9 | 2 | 87 | 0 | 18 | 1½ |
| 2 | 0 | 0 | 5 | 45 | 0 | 9 | 4½ | 88 | 0 | 18 | 4 |
| 3 | 0 | 0 | 7½ | 46 | 0 | 9 | 7 | 89 | 0 | 18 | 6½ |
| 4 | 0 | 0 | 10 | 47 | 0 | 9 | 9½ | 90 | 0 | 18 | 9 |
| 5 | 0 | 1 | 0½ | 48 | 0 | 10 | 0 | 91 | 0 | 18 | 11½ |
| 6 | 0 | 1 | 3 | 49 | 0 | 10 | 2½ | 92 | 0 | 19 | 2 |
| 7 | 0 | 1 | 5½ | 50 | 0 | 10 | 5 | 93 | 0 | 19 | 4½ |
| 8 | 0 | 1 | 8 | 51 | 0 | 10 | 7½ | 94 | 0 | 19 | 7 |
| 9 | 0 | 1 | 10½ | 52 | 0 | 10 | 10 | 95 | 0 | 19 | 9½ |
| 10 | 0 | 2 | 1 | 53 | 0 | 11 | 0½ | 96 | 1 | 0 | 0 |
| 11 | 0 | 2 | 3½ | 54 | 0 | 11 | 3 | 97 | 1 | 0 | 2½ |
| 12 | 0 | 2 | 6 | 55 | 0 | 11 | 5½ | 98 | 1 | 0 | 5 |
| 13 | 0 | 2 | 8½ | 56 | 0 | 11 | 8 | 99 | 1 | 0 | 7½ |
| 14 | 0 | 2 | 11 | 57 | 0 | 11 | 10½ | 100 | 1 | 0 | 10 |
| 15 | 0 | 3 | 1½ | 58 | 0 | 12 | 1 | 108 | 1 | 2 | 6 |
| 16 | 0 | 3 | 4 | 59 | 0 | 12 | 3½ | 110 | 1 | 2 | 11 |
| 17 | 0 | 3 | 6½ | 60 | 0 | 12 | 6 | 112 | 1 | 3 | 4 |
| 18 | 0 | 3 | 9 | 61 | 0 | 12 | 8½ | 120 | 1 | 5 | 0 |
| 19 | 0 | 3 | 11½ | 62 | 0 | 12 | 11 | 130 | 1 | 7 | 1 |
| 20 | 0 | 4 | 2 | 63 | 0 | 13 | 1½ | 132 | 1 | 7 | 6 |
| 21 | 0 | 4 | 4½ | 64 | 0 | 13 | 4 | 140 | 1 | 9 | 2 |
| 22 | 0 | 4 | 7 | 65 | 0 | 13 | 6½ | 144 | 1 | 10 | 0 |
| 23 | 0 | 4 | 9½ | 66 | 0 | 13 | 9 | 150 | 1 | 11 | 3 |
| 24 | 0 | 5 | 0 | 67 | 0 | 13 | 11½ | 175 | 1 | 16 | 5½ |
| 25 | 0 | 5 | 2½ | 68 | 0 | 14 | 2 | 200 | 2 | 1 | 8 |
| 26 | 0 | 5 | 5 | 69 | 0 | 14 | 4½ | 250 | 2 | 12 | 1 |
| 27 | 0 | 5 | 7½ | 70 | 0 | 14 | 7 | 300 | 3 | 2 | 6 |
| 28 | 0 | 5 | 10 | 71 | 0 | 14 | 9½ | 365 | 3 | 16 | 0½ |
| 29 | 0 | 6 | 0½ | 72 | 0 | 15 | 0 | 400 | 4 | 3 | 4 |
| 30 | 0 | 6 | 3 | 73 | 0 | 15 | 2½ | 500 | 5 | 4 | 2 |
| 31 | 0 | 6 | 5½ | 74 | 0 | 15 | 5 | 600 | 6 | 5 | 0 |
| 32 | 0 | 6 | 8 | 75 | 0 | 15 | 7½ | 700 | 7 | 5 | 10 |
| 33 | 0 | 6 | 10½ | 76 | 0 | 15 | 10 | 750 | 7 | 16 | 3 |
| 34 | 0 | 7 | 1 | 77 | 0 | 16 | 0½ | 800 | 8 | 6 | 8 |
| 35 | 0 | 7 | 3½ | 78 | 0 | 16 | 3 | 900 | 9 | 7 | 6 |
| 36 | 0 | 7 | 6 | 79 | 0 | 16 | 5½ | 1000 | 10 | 8 | 4 |
| 37 | 0 | 7 | 8½ | 80 | 0 | 16 | 8 | 1250 | 13 | 0 | 5 |
| 38 | 0 | 7 | 11 | 81 | 0 | 16 | 10½ | 1500 | 15 | 12 | 6 |
| 39 | 0 | 8 | 1½ | 82 | 0 | 17 | 1 | 1750 | 18 | 4 | 7 |
| 40 | 0 | 8 | 4 | 83 | 0 | 17 | 3½ | 2000 | 20 | 16 | 8 |
| 41 | 0 | 8 | 6½ | 84 | 0 | 17 | 6 | 2240 | 23 | 6 | 8 |
| 42 | 0 | 8 | 9 | 85 | 0 | 17 | 8½ | 3000 | 31 | 5 | 0 |
| 43 | 0 | 8 | 11½ | 86 | 0 | 17 | 11 | 5000 | 52 | 1 | 8 |

## 3d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 3 | 44 | 0 | 11 | 0 | 87 | 1 | 1 | 9 |
| 2 | 0 | 0 | 6 | 45 | 0 | 11 | 3 | 88 | 1 | 2 | 0 |
| 3 | 0 | 0 | 9 | 46 | 0 | 11 | 6 | 89 | 1 | 2 | 3 |
| 4 | 0 | 1 | 0 | 47 | 0 | 11 | 9 | 90 | 1 | 2 | 6 |
| 5 | 0 | 1 | 3 | 48 | 0 | 12 | 0 | 91 | 1 | 2 | 9 |
| 6 | 0 | 1 | 6 | 49 | 0 | 12 | 3 | 92 | 1 | 3 | 0 |
| 7 | 0 | 1 | 9 | 50 | 0 | 12 | 6 | 93 | 1 | 3 | 3 |
| 8 | 0 | 2 | 0 | 51 | 0 | 12 | 9 | 94 | 1 | 3 | 6 |
| 9 | 0 | 2 | 3 | 52 | 0 | 13 | 0 | 95 | 1 | 3 | 9 |
| 10 | 0 | 2 | 6 | 53 | 0 | 13 | 3 | 96 | 1 | 4 | 0 |
| 11 | 0 | 2 | 9 | 54 | 0 | 13 | 6 | 97 | 1 | 4 | 3 |
| 12 | 0 | 3 | 0 | 55 | 0 | 13 | 9 | 98 | 1 | 4 | 6 |
| 13 | 0 | 3 | 3 | 56 | 0 | 14 | 0 | 99 | 1 | 4 | 9 |
| 14 | 0 | 3 | 6 | 57 | 0 | 14 | 3 | 100 | 1 | 5 | 0 |
| 15 | 0 | 3 | 9 | 58 | 0 | 14 | 6 | 108 | 1 | 7 | 0 |
| 16 | 0 | 4 | 0 | 59 | 0 | 14 | 9 | 110 | 1 | 7 | 6 |
| 17 | 0 | 4 | 3 | 60 | 0 | 15 | 0 | 112 | 1 | 8 | 0 |
| 18 | 0 | 4 | 6 | 61 | 0 | 15 | 3 | 120 | 1 | 10 | 0 |
| 19 | 0 | 4 | 9 | 62 | 0 | 15 | 6 | 130 | 1 | 12 | 6 |
| 20 | 0 | 5 | 0 | 63 | 0 | 15 | 9 | 132 | 1 | 13 | 0 |
| 21 | 0 | 5 | 3 | 64 | 0 | 16 | 0 | 140 | 1 | 15 | 0 |
| 22 | 0 | 5 | 6 | 65 | 0 | 16 | 3 | 144 | 1 | 16 | 0 |
| 23 | 0 | 5 | 9 | 66 | 0 | 16 | 6 | 150 | 1 | 17 | 6 |
| 24 | 0 | 6 | 0 | 67 | 0 | 16 | 9 | 175 | 2 | 3 | 9 |
| 25 | 0 | 6 | 3 | 68 | 0 | 17 | 0 | 200 | 2 | 10 | 0 |
| 26 | 0 | 6 | 6 | 69 | 0 | 17 | 3 | 250 | 3 | 2 | 6 |
| 27 | 0 | 6 | 9 | 70 | 0 | 17 | 6 | 300 | 3 | 15 | 0 |
| 28 | 0 | 7 | 0 | 71 | 0 | 17 | 9 | 365 | 4 | 11 | 3 |
| 29 | 0 | 7 | 3 | 72 | 0 | 18 | 0 | 400 | 5 | 0 | 0 |
| 30 | 0 | 7 | 6 | 73 | 0 | 18 | 3 | 500 | 6 | 5 | 0 |
| 31 | 0 | 7 | 9 | 74 | 0 | 18 | 6 | 600 | 7 | 10 | 0 |
| 32 | 0 | 8 | 0 | 75 | 0 | 18 | 9 | 700 | 8 | 15 | 0 |
| 33 | 0 | 8 | 3 | 76 | 0 | 19 | 0 | 750 | 9 | 7 | 6 |
| 34 | 0 | 8 | 6 | 77 | 0 | 19 | 3 | 800 | 10 | 0 | 0 |
| 35 | 0 | 8 | 9 | 78 | 0 | 19 | 6 | 900 | 11 | 5 | 0 |
| 36 | 0 | 9 | 0 | 79 | 0 | 19 | 9 | 1000 | 12 | 10 | 0 |
| 37 | 0 | 9 | 3 | 80 | 1 | 0 | 0 | 1250 | 15 | 12 | 6 |
| 38 | 0 | 9 | 6 | 81 | 1 | 0 | 3 | 1500 | 18 | 15 | 0 |
| 39 | 0 | 9 | 9 | 82 | 1 | 0 | 6 | 1750 | 21 | 17 | 6 |
| 40 | 0 | 10 | 0 | 83 | 1 | 0 | 9 | 2000 | 25 | 0 | 0 |
| 41 | 0 | 10 | 3 | 84 | 1 | 1 | 0 | 2240 | 28 | 0 | 0 |
| 42 | 0 | 10 | 6 | 85 | 1 | 1 | 3 | 3000 | 37 | 10 | 0 |
| 43 | 0 | 10 | 9 | 86 | 1 | 1 | 6 | 5000 | 62 | 10 | 0 |

## 3½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 3½ | 44 | 0 | 11 | 11 | 87 | 1 | 3 | 6½ |
| 2 | 0 | 0 | 6½ | 45 | 0 | 12 | 2½ | 88 | 1 | 3 | 10 |
| 3 | 0 | 0 | 9½ | 46 | 0 | 12 | 5½ | 89 | 1 | 4 | 1½ |
| 4 | 0 | 1 | 1 | 47 | 0 | 12 | 8½ | 90 | 1 | 4 | 4½ |
| 5 | 0 | 1 | 4½ | 48 | 0 | 13 | 0 | 91 | 1 | 4 | 7½ |
| 6 | 0 | 1 | 7½ | 49 | 0 | 13 | 3½ | 92 | 1 | 4 | 11 |
| 7 | 0 | 1 | 10½ | 50 | 0 | 13 | 6½ | 93 | 1 | 5 | 2½ |
| 8 | 0 | 2 | 2 | 51 | 0 | 13 | 9½ | 94 | 1 | 5 | 5½ |
| 9 | 0 | 2 | 5½ | 52 | 0 | 14 | 1 | 95 | 1 | 5 | 8½ |
| 10 | 0 | 2 | 8½ | 53 | 0 | 14 | 4½ | 96 | 1 | 6 | 0 |
| 11 | 0 | 2 | 11½ | 54 | 0 | 14 | 7½ | 97 | 1 | 6 | 3½ |
| 12 | 0 | 3 | 3 | 55 | 0 | 14 | 10½ | 98 | 1 | 6 | 6½ |
| 13 | 0 | 3 | 6½ | 56 | 0 | 15 | 2 | 99 | 1 | 6 | 9½ |
| 14 | 0 | 3 | 9½ | 57 | 0 | 15 | 5½ | 100 | 1 | 7 | 1 |
| 15 | 0 | 4 | 0½ | 58 | 0 | 15 | 8½ | 108 | 1 | 9 | 3 |
| 16 | 0 | 4 | 4 | 59 | 0 | 15 | 11½ | 110 | 1 | 9 | 9½ |
| 17 | 0 | 4 | 7½ | 60 | 0 | 16 | 3 | 112 | 1 | 10 | 4 |
| 18 | 0 | 4 | 10½ | 61 | 0 | 16 | 6½ | 120 | 1 | 12 | 6 |
| 19 | 0 | 5 | 1½ | 62 | 0 | 16 | 9½ | 130 | 1 | 15 | 2½ |
| 20 | 0 | 5 | 5 | 63 | 0 | 17 | 0½ | 132 | 1 | 15 | 9 |
| 21 | 0 | 5 | 8½ | 64 | 0 | 17 | 4 | 140 | 1 | 17 | 11 |
| 22 | 0 | 5 | 11½ | 65 | 0 | 17 | 7½ | 144 | 1 | 19 | 0 |
| 23 | 0 | 6 | 2½ | 66 | 0 | 17 | 10½ | 150 | 2 | 0 | 7½ |
| 24 | 0 | 6 | 6 | 67 | 0 | 18 | 1½ | 175 | 2 | 7 | 4½ |
| 25 | 0 | 6 | 9½ | 68 | 0 | 18 | 5 | 200 | 2 | 14 | 2 |
| 26 | 0 | 7 | 0½ | 69 | 0 | 18 | 8½ | 250 | 3 | 7 | 8½ |
| 27 | 0 | 7 | 3½ | 70 | 0 | 18 | 11½ | 300 | 4 | 1 | 3 |
| 28 | 0 | 7 | 7 | 71 | 0 | 19 | 2½ | 365 | 4 | 18 | 10½ |
| 29 | 0 | 7 | 10½ | 72 | 0 | 19 | 6 | 400 | 5 | 8 | 4 |
| 30 | 0 | 8 | 1½ | 73 | 0 | 19 | 9½ | 500 | 6 | 15 | 5 |
| 31 | 0 | 8 | 4½ | 74 | 1 | 0 | 0½ | 600 | 8 | 2 | 6 |
| 32 | 0 | 8 | 8 | 75 | 1 | 0 | 3½ | 700 | 9 | 9 | 7 |
| 33 | 0 | 8 | 11½ | 76 | 1 | 0 | 7 | 750 | 10 | 3 | 1½ |
| 34 | 0 | 9 | 2½ | 77 | 1 | 0 | 10½ | 800 | 10 | 16 | 8 |
| 35 | 0 | 9 | 5½ | 78 | 1 | 1 | 1½ | 900 | 12 | 3 | 9 |
| 36 | 0 | 9 | 9 | 79 | 1 | 1 | 4½ | 1000 | 13 | 10 | 10 |
| 37 | 0 | 10 | 0½ | 80 | 1 | 1 | 8 | 1250 | 16 | 18 | 6½ |
| 38 | 0 | 10 | 3½ | 81 | 1 | 1 | 11½ | 1500 | 20 | 6 | 3 |
| 39 | 0 | 10 | 6½ | 82 | 1 | 2 | 2½ | 1750 | 23 | 13 | 11½ |
| 40 | 0 | 10 | 10 | 83 | 1 | 2 | 5½ | 2000 | 27 | 1 | 8 |
| 41 | 0 | 11 | 1½ | 84 | 1 | 2 | 9 | 2240 | 30 | 6 | 8 |
| 42 | 0 | 11 | 4½ | 85 | 1 | 3 | 0½ | 3000 | 40 | 12 | 6 |
| 43 | 0 | 11 | 7½ | 86 | 1 | 3 | 3½ | 5000 | 67 | 14 | 2 |

## 3½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 3½ | 44 | 0 | 13 | 9 | 87 | 1 | 7 | 2½ |
| 2 | 0 | 0 | 7½ | 45 | 0 | 14 | 0½ | 88 | 1 | 7 | 6 |
| 3 | 0 | 0 | 11½ | 46 | 0 | 14 | 4½ | 89 | 1 | 7 | 9½ |
| 4 | 0 | 1 | 3 | 47 | 0 | 14 | 8½ | 90 | 1 | 8 | 1½ |
| 5 | 0 | 1 | 6½ | 48 | 0 | 15 | 0 | 91 | 1 | 8 | 5½ |
| 6 | 0 | 1 | 10½ | 49 | 0 | 15 | 3½ | 92 | 1 | 8 | 9 |
| 7 | 0 | 2 | 2½ | 50 | 0 | 15 | 7½ | 93 | 1 | 9 | 0½ |
| 8 | 0 | 2 | 6 | 51 | 0 | 15 | 11½ | 94 | 1 | 9 | 4½ |
| 9 | 0 | 2 | 9½ | 52 | 0 | 16 | 3 | 95 | 1 | 9 | 8½ |
| 10 | 0 | 3 | 1½ | 53 | 0 | 16 | 6½ | 96 | 1 | 10 | 0 |
| 11 | 0 | 3 | 5½ | 54 | 0 | 16 | 10½ | 97 | 1 | 10 | 3½ |
| 12 | 0 | 3 | 9 | 55 | 0 | 17 | 2½ | 98 | 1 | 10 | 7½ |
| 13 | 0 | 4 | 0½ | 56 | 0 | 17 | 6 | 99 | 1 | 10 | 11½ |
| 14 | 0 | 4 | 4½ | 57 | 0 | 17 | 9½ | 100 | 1 | 11 | 3 |
| 15 | 0 | 4 | 8½ | 58 | 0 | 18 | 1½ | 108 | 1 | 13 | 9 |
| 16 | 0 | 5 | 0 | 59 | 0 | 18 | 5½ | 110 | 1 | 14 | 4½ |
| 17 | 0 | 5 | 3½ | 60 | 0 | 18 | 9 | 112 | 1 | 15 | 0 |
| 18 | 0 | 5 | 7½ | 61 | 0 | 19 | 0½ | 120 | 1 | 17 | 6 |
| 19 | 0 | 5 | 11½ | 62 | 0 | 19 | 4½ | 130 | 2 | 0 | 7½ |
| 20 | 0 | 6 | 3 | 63 | 0 | 19 | 8½ | 132 | 2 | 1 | 3 |
| 21 | 0 | 6 | 6½ | 64 | 1 | 0 | 0 | 140 | 2 | 3 | 9 |
| 22 | 0 | 6 | 10½ | 65 | 1 | 0 | 3½ | 144 | 2 | 5 | 0 |
| 23 | 0 | 7 | 2½ | 66 | 1 | 0 | 7½ | 150 | 2 | 6 | 10½ |
| 24 | 0 | 7 | 6 | 67 | 1 | 0 | 11½ | 175 | 2 | 14 | 8½ |
| 25 | 0 | 7 | 9½ | 68 | 1 | 1 | 3 | 200 | 3 | 2 | 6 |
| 26 | 0 | 8 | 1½ | 69 | 1 | 1 | 6½ | 250 | 3 | 18 | 1½ |
| 27 | 0 | 8 | 5½ | 70 | 1 | 1 | 10½ | 300 | 4 | 13 | 9 |
| 28 | 0 | 8 | 9 | 71 | 1 | 2 | 2½ | 365 | 5 | 14 | 0½ |
| 29 | 0 | 9 | 0½ | 72 | 1 | 2 | 6 | 400 | 6 | 5 | 0 |
| 30 | 0 | 9 | 4½ | 73 | 1 | 2 | 9½ | 500 | 7 | 16 | 3 |
| 31 | 0 | 9 | 8½ | 74 | 1 | 3 | 1½ | 600 | 9 | 7 | 6 |
| 32 | 0 | 10 | 0 | 75 | 1 | 3 | 5½ | 700 | 10 | 18 | 9 |
| 33 | 0 | 10 | 3½ | 76 | 1 | 3 | 9 | 750 | 11 | 14 | 4½ |
| 34 | 0 | 10 | 7½ | 77 | 1 | 4 | 0½ | 800 | 12 | 10 | 0 |
| 35 | 0 | 10 | 11½ | 78 | 1 | 4 | 4½ | 900 | 14 | 1 | 3 |
| 36 | 0 | 11 | 3 | 79 | 1 | 4 | 8½ | 1000 | 15 | 12 | 6 |
| 37 | 0 | 11 | 6½ | 80 | 1 | 5 | 0 | 1250 | 19 | 10 | 7½ |
| 38 | 0 | 11 | 10½ | 81 | 1 | 5 | 3½ | 1500 | 23 | 8 | 9 |
| 39 | 0 | 12 | 2½ | 82 | 1 | 5 | 7½ | 1750 | 27 | 6 | 10½ |
| 40 | 0 | 12 | 6 | 83 | 1 | 5 | 11½ | 2000 | 31 | 5 | 0 |
| 41 | 0 | 12 | 9½ | 84 | 1 | 6 | 3 | 2240 | 35 | 0 | 0 |
| 42 | 0 | 13 | 1½ | 85 | 1 | 6 | 6½ | 3000 | 46 | 17 | 6 |
| 43 | 0 | 13 | 5½ | 86 | 1 | 6 | 10½ | 5000 | 78 | 2 | 6 |

## 3½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 3½ | 44 | 0 | 12 | 10 | 87 | 1 | 5 | 4½ |
| 2 | 0 | 0 | 7 | 45 | 0 | 13 | 1½ | 88 | 1 | 5 | 8 |
| 3 | 0 | 0 | 10½ | 46 | 0 | 13 | 5 | 89 | 1 | 5 | 11½ |
| 4 | 0 | 1 | 2 | 47 | 0 | 13 | 8½ | 90 | 1 | 6 | 3 |
| 5 | 0 | 1 | 5½ | 48 | 0 | 14 | 0 | 91 | 1 | 6 | 6½ |
| 6 | 0 | 1 | 9 | 49 | 0 | 14 | 3½ | 92 | 1 | 6 | 10 |
| 7 | 0 | 2 | 0½ | 50 | 0 | 14 | 7 | 93 | 1 | 7 | 1½ |
| 8 | 0 | 2 | 4 | 51 | 0 | 14 | 10½ | 94 | 1 | 7 | 5 |
| 9 | 0 | 2 | 7½ | 52 | 0 | 15 | 2 | 95 | 1 | 7 | 8½ |
| 10 | 0 | 2 | 11 | 53 | 0 | 15 | 5½ | 96 | 1 | 8 | 0 |
| 11 | 0 | 3 | 2½ | 54 | 0 | 15 | 9 | 97 | 1 | 8 | 3½ |
| 12 | 0 | 3 | 6 | 55 | 0 | 16 | 0½ | 98 | 1 | 8 | 7 |
| 13 | 0 | 3 | 9½ | 56 | 0 | 16 | 4 | 99 | 1 | 8 | 10½ |
| 14 | 0 | 4 | 1 | 57 | 0 | 16 | 7½ | 100 | 1 | 9 | 2 |
| 15 | 0 | 4 | 4½ | 58 | 0 | 16 | 11 | 108 | 1 | 11 | 6 |
| 16 | 0 | 4 | 8 | 59 | 0 | 17 | 2½ | 110 | 1 | 12 | 1 |
| 17 | 0 | 4 | 11½ | 60 | 0 | 17 | 6 | 112 | 1 | 12 | 8 |
| 18 | 0 | 5 | 3 | 61 | 0 | 17 | 9½ | 120 | 1 | 15 | 0 |
| 19 | 0 | 5 | 6½ | 62 | 0 | 18 | 1 | 130 | 1 | 17 | 11 |
| 20 | 0 | 5 | 10 | 63 | 0 | 18 | 4½ | 132 | 1 | 18 | 6 |
| 21 | 0 | 6 | 1½ | 64 | 0 | 18 | 8 | 140 | 2 | 0 | 10 |
| 22 | 0 | 6 | 5 | 65 | 0 | 18 | 11½ | 144 | 2 | 2 | 0 |
| 23 | 0 | 6 | 8½ | 66 | 0 | 19 | 3 | 150 | 2 | 3 | 9 |
| 24 | 0 | 7 | 0 | 67 | 0 | 19 | 6½ | 175 | 2 | 11 | 0½ |
| 25 | 0 | 7 | 3½ | 68 | 0 | 19 | 10 | 200 | 2 | 18 | 4 |
| 26 | 0 | 7 | 7 | 69 | 1 | 0 | 1½ | 250 | 3 | 12 | 11 |
| 27 | 0 | 7 | 10½ | 70 | 1 | 0 | 5 | 300 | 4 | 7 | 6 |
| 28 | 0 | 8 | 2 | 71 | 1 | 0 | 8½ | 365 | 5 | 6 | 5½ |
| 29 | 0 | 8 | 5½ | 72 | 1 | 1 | 0 | 400 | 5 | 16 | 8 |
| 30 | 0 | 8 | 9 | 73 | 1 | 1 | 3½ | 500 | 7 | 5 | 10 |
| 31 | 0 | 9 | 0½ | 74 | 1 | 1 | 7 | 600 | 8 | 15 | 0 |
| 32 | 0 | 9 | 4 | 75 | 1 | 1 | 10½ | 700 | 10 | 4 | 2 |
| 33 | 0 | 9 | 7½ | 76 | 1 | 2 | 2 | 750 | 10 | 18 | 9 |
| 34 | 0 | 9 | 11 | 77 | 1 | 2 | 5½ | 800 | 11 | 13 | 4 |
| 35 | 0 | 10 | 2½ | 78 | 1 | 2 | 9 | 900 | 13 | 2 | 6 |
| 36 | 0 | 10 | 6 | 79 | 1 | 3 | 0½ | 1000 | 14 | 11 | 8 |
| 37 | 0 | 10 | 9½ | 80 | 1 | 3 | 4 | 1250 | 18 | 4 | 7 |
| 38 | 0 | 11 | 1 | 81 | 1 | 3 | 7½ | 1500 | 21 | 17 | 6 |
| 39 | 0 | 11 | 4½ | 82 | 1 | 3 | 11 | 1750 | 25 | 10 | 5 |
| 40 | 0 | 11 | 8 | 83 | 1 | 4 | 2½ | 2000 | 29 | 3 | 4 |
| 41 | 0 | 11 | 11½ | 84 | 1 | 4 | 6 | 2240 | 32 | 13 | 4 |
| 42 | 0 | 12 | 3 | 85 | 1 | 4 | 9½ | 3000 | 43 | 15 | 0 |
| 43 | 0 | 12 | 6½ | 86 | 1 | 5 | 1 | 5000 | 72 | 18 | 4 |

## 4d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 4 | 44 | 0 | 14 | 8 | 87 | 1 | 9 | 0 |
| 2 | 0 | 0 | 8 | 45 | 0 | 15 | 0 | 88 | 1 | 9 | 4 |
| 3 | 0 | 1 | 0 | 46 | 0 | 15 | 4 | 89 | 1 | 9 | 8 |
| 4 | 0 | 1 | 4 | 47 | 0 | 15 | 8 | 90 | 1 | 10 | 0 |
| 5 | 0 | 1 | 8 | 48 | 0 | 16 | 0 | 91 | 1 | 10 | 4 |
| 6 | 0 | 2 | 0 | 49 | 0 | 16 | 4 | 92 | 1 | 10 | 8 |
| 7 | 0 | 2 | 4 | 50 | 0 | 16 | 8 | 93 | 1 | 11 | 0 |
| 8 | 0 | 2 | 8 | 51 | 0 | 17 | 0 | 94 | 1 | 11 | 4 |
| 9 | 0 | 3 | 0 | 52 | 0 | 17 | 4 | 95 | 1 | 11 | 8 |
| 10 | 0 | 3 | 4 | 53 | 0 | 17 | 8 | 96 | 1 | 12 | 0 |
| 11 | 0 | 3 | 8 | 54 | 0 | 18 | 0 | 97 | 1 | 12 | 4 |
| 12 | 0 | 4 | 0 | 55 | 0 | 18 | 4 | 98 | 1 | 12 | 8 |
| 13 | 0 | 4 | 4 | 56 | 0 | 18 | 8 | 99 | 1 | 13 | 0 |
| 14 | 0 | 4 | 8 | 57 | 0 | 19 | 0 | 100 | 1 | 13 | 4 |
| 15 | 0 | 5 | 0 | 58 | 0 | 19 | 4 | 108 | 1 | 16 | 0 |
| 16 | 0 | 5 | 4 | 59 | 0 | 19 | 8 | 110 | 1 | 16 | 8 |
| 17 | 0 | 5 | 8 | 60 | 1 | 0 | 0 | 112 | 1 | 17 | 4 |
| 18 | 0 | 6 | 0 | 61 | 1 | 0 | 4 | 120 | 2 | 0 | 0 |
| 19 | 0 | 6 | 4 | 62 | 1 | 0 | 8 | 130 | 2 | 3 | 4 |
| 20 | 0 | 6 | 8 | 63 | 1 | 1 | 0 | 132 | 2 | 4 | 0 |
| 21 | 0 | 7 | 0 | 64 | 1 | 1 | 4 | 140 | 2 | 6 | 8 |
| 22 | 0 | 7 | 4 | 65 | 1 | 1 | 8 | 144 | 2 | 8 | 0 |
| 23 | 0 | 7 | 8 | 66 | 1 | 2 | 0 | 150 | 2 | 10 | 0 |
| 24 | 0 | 8 | 0 | 67 | 1 | 2 | 4 | 175 | 2 | 18 | 4 |
| 25 | 0 | 8 | 4 | 68 | 1 | 2 | 8 | 200 | 3 | 6 | 8 |
| 26 | 0 | 8 | 8 | 69 | 1 | 3 | 0 | 250 | 4 | 3 | 4 |
| 27 | 0 | 9 | 0 | 70 | 1 | 3 | 4 | 300 | 5 | 0 | 0 |
| 28 | 0 | 9 | 4 | 71 | 1 | 3 | 8 | 365 | 6 | 1 | 8 |
| 29 | 0 | 9 | 8 | 72 | 1 | 4 | 0 | 400 | 6 | 13 | 4 |
| 30 | 0 | 10 | 0 | 73 | 1 | 4 | 4 | 500 | 8 | 6 | 8 |
| 31 | 0 | 10 | 4 | 74 | 1 | 4 | 8 | 600 | 10 | 0 | 0 |
| 32 | 0 | 10 | 8 | 75 | 1 | 5 | 0 | 700 | 11 | 13 | 4 |
| 33 | 0 | 11 | 0 | 76 | 1 | 5 | 4 | 750 | 12 | 10 | 0 |
| 34 | 0 | 11 | 4 | 77 | 1 | 5 | 8 | 800 | 13 | 6 | 8 |
| 35 | 0 | 11 | 8 | 78 | 1 | 6 | 0 | 900 | 15 | 0 | 0 |
| 36 | 0 | 12 | 0 | 79 | 1 | 6 | 4 | 1000 | 16 | 13 | 4 |
| 37 | 0 | 12 | 4 | 80 | 1 | 6 | 8 | 1250 | 20 | 16 | 8 |
| 38 | 0 | 12 | 8 | 81 | 1 | 7 | 0 | 1500 | 25 | 0 | 0 |
| 39 | 0 | 13 | 0 | 82 | 1 | 7 | 4 | 1750 | 29 | 3 | 4 |
| 40 | 0 | 13 | 4 | 83 | 1 | 7 | 8 | 2000 | 33 | 6 | 8 |
| 41 | 0 | 13 | 8 | 84 | 1 | 8 | 0 | 2240 | 37 | 6 | 8 |
| 42 | 0 | 14 | 0 | 85 | 1 | 8 | 4 | 3000 | 50 | 0 | 0 |
| 43 | 0 | 14 | 4 | 86 | 1 | 8 | 8 | 5000 | 83 | 6 | 8 |

## 4½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 4½ | 44 | 0 | 15 | 7 | 87 | 1 | 10 | 9½ |
| 2 | 0 | 0 | 9 | 45 | 0 | 15 | 11½ | 88 | 1 | 11 | 2 |
| 3 | 0 | 1 | 1½ | 46 | 0 | 16 | 3½ | 89 | 1 | 11 | 6½ |
| 4 | 0 | 1 | 6 | 47 | 0 | 16 | 7½ | 90 | 1 | 11 | 10½ |
| 5 | 0 | 1 | 10½ | 48 | 0 | 17 | 0 | 91 | 1 | 12 | 2½ |
| 6 | 0 | 2 | 3 | 49 | 0 | 17 | 4½ | 92 | 1 | 12 | 7 |
| 7 | 0 | 2 | 7½ | 50 | 0 | 17 | 8½ | 93 | 1 | 12 | 11½ |
| 8 | 0 | 2 | 10 | 51 | 0 | 18 | 0½ | 94 | 1 | 13 | 3½ |
| 9 | 0 | 3 | 2½ | 52 | 0 | 18 | 5 | 95 | 1 | 13 | 7½ |
| 10 | 0 | 3 | 6½ | 53 | 0 | 18 | 9½ | 96 | 1 | 14 | 0 |
| 11 | 0 | 3 | 10½ | 54 | 0 | 19 | 1½ | 97 | 1 | 14 | 4½ |
| 12 | 0 | 4 | 3 | 55 | 0 | 19 | 5½ | 98 | 1 | 14 | 8½ |
| 13 | 0 | 4 | 7½ | 56 | 0 | 19 | 10 | 99 | 1 | 15 | 0½ |
| 14 | 0 | 4 | 11½ | 57 | 1 | 0 | 2½ | 100 | 1 | 15 | 5 |
| 15 | 0 | 5 | 3½ | 58 | 1 | 0 | 6½ | 108 | 1 | 18 | 3 |
| 16 | 0 | 5 | 8 | 59 | 1 | 0 | 10½ | 110 | 1 | 18 | 11½ |
| 17 | 0 | 6 | 0½ | 60 | 1 | 1 | 3 | 112 | 1 | 19 | 8 |
| 18 | 0 | 6 | 4½ | 61 | 1 | 1 | 7½ | 120 | 2 | 2 | 6 |
| 19 | 0 | 6 | 8½ | 62 | 1 | 1 | 11½ | 130 | 2 | 6 | 0½ |
| 20 | 0 | 7 | 1 | 63 | 1 | 2 | 3½ | 132 | 2 | 6 | 9 |
| 21 | 0 | 7 | 5½ | 64 | 1 | 2 | 8 | 140 | 2 | 9 | 7 |
| 22 | 0 | 7 | 9½ | 65 | 1 | 3 | 0½ | 144 | 2 | 11 | 0 |
| 23 | 0 | 8 | 1½ | 66 | 1 | 3 | 4½ | 150 | 2 | 13 | 1½ |
| 24 | 0 | 8 | 6 | 67 | 1 | 3 | 8½ | 175 | 3 | 1 | 11½ |
| 25 | 0 | 8 | 10½ | 68 | 1 | 4 | 1 | 200 | 3 | 10 | 10 |
| 26 | 0 | 9 | 2½ | 69 | 1 | 4 | 5½ | 250 | 4 | 8 | 6½ |
| 27 | 0 | 9 | 6½ | 70 | 1 | 4 | 9½ | 300 | 5 | 6 | 3 |
| 28 | 0 | 9 | 11 | 71 | 1 | 5 | 1½ | 365 | 6 | 9 | 3½ |
| 29 | 0 | 10 | 3½ | 72 | 1 | 5 | 6 | 400 | 7 | 1 | 8 |
| 30 | 0 | 10 | 7½ | 73 | 1 | 5 | 10½ | 500 | 8 | 17 | 1 |
| 31 | 0 | 10 | 11½ | 74 | 1 | 6 | 2½ | 600 | 10 | 12 | 6 |
| 32 | 0 | 11 | 4 | 75 | 1 | 6 | 6½ | 700 | 12 | 7 | 11 |
| 33 | 0 | 11 | 8½ | 76 | 1 | 6 | 11 | 750 | 13 | 5 | 7½ |
| 34 | 0 | 12 | 0½ | 77 | 1 | 7 | 3½ | 800 | 14 | 3 | 4 |
| 35 | 0 | 12 | 4½ | 78 | 1 | 7 | 7½ | 900 | 15 | 18 | 9 |
| 36 | 0 | 12 | 9 | 79 | 1 | 7 | 11½ | 1000 | 17 | 14 | 2 |
| 37 | 0 | 13 | 1½ | 80 | 1 | 8 | 4 | 1250 | 22 | 2 | 8½ |
| 38 | 0 | 13 | 5½ | 81 | 1 | 8 | 8½ | 1500 | 26 | 11 | 3 |
| 39 | 0 | 13 | 9½ | 82 | 1 | 9 | 0½ | 1750 | 30 | 19 | 9½ |
| 40 | 0 | 14 | 2 | 83 | 1 | 9 | 4½ | 2000 | 35 | 8 | 4 |
| 41 | 0 | 14 | 6½ | 84 | 1 | 9 | 9 | 2240 | 39 | 13 | 4 |
| 42 | 0 | 14 | 10½ | 85 | 1 | 10 | 1½ | 3000 | 53 | 2 | 6 |
| 43 | 0 | 15 | 2½ | 86 | 1 | 10 | 5½ | 5000 | 88 | 10 | 10 |

## 4½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 4½ | 44 | 0 | 16 | 6 | 87 | 1 | 12 | 7½ |
| 2 | 0 | 0 | 9 | 45 | 0 | 16 | 10½ | 88 | 1 | 13 | 0 |
| 3 | 0 | 1 | 1½ | 46 | 0 | 17 | 3 | 89 | 1 | 13 | 4½ |
| 4 | 0 | 1 | 6 | 47 | 0 | 17 | 7½ | 90 | 1 | 13 | 9 |
| 5 | 0 | 1 | 10½ | 48 | 0 | 18 | 0 | 91 | 1 | 14 | 1½ |
| 6 | 0 | 2 | 3 | 49 | 0 | 18 | 4½ | 92 | 1 | 14 | 6 |
| 7 | 0 | 2 | 7½ | 50 | 0 | 18 | 9 | 93 | 1 | 14 | 10½ |
| 8 | 0 | 3 | 0 | 51 | 0 | 19 | 1½ | 94 | 1 | 15 | 3 |
| 9 | 0 | 3 | 4½ | 52 | 0 | 19 | 6 | 95 | 1 | 15 | 7½ |
| 10 | 0 | 3 | 9 | 53 | 0 | 19 | 10½ | 96 | 1 | 16 | 0 |
| 11 | 0 | 4 | 1½ | 54 | 1 | 0 | 3 | 97 | 1 | 16 | 4½ |
| 12 | 0 | 4 | 6 | 55 | 1 | 0 | 7½ | 98 | 1 | 16 | 9 |
| 13 | 0 | 4 | 10½ | 56 | 1 | 1 | 0 | 99 | 1 | 17 | 1½ |
| 14 | 0 | 5 | 3 | 57 | 1 | 1 | 4½ | 100 | 1 | 17 | 6 |
| 15 | 0 | 5 | 7½ | 58 | 1 | 1 | 9 | 108 | 2 | 0 | 6 |
| 16 | 0 | 6 | 0 | 59 | 1 | 2 | 1½ | 110 | 2 | 1 | 3 |
| 17 | 0 | 6 | 4½ | 60 | 1 | 2 | 6 | 112 | 2 | 2 | 0 |
| 18 | 0 | 6 | 9 | 61 | 1 | 2 | 10½ | 120 | 2 | 5 | 0 |
| 19 | 0 | 7 | 1½ | 62 | 1 | 3 | 3 | 130 | 2 | 8 | 9 |
| 20 | 0 | 7 | 6 | 63 | 1 | 3 | 7½ | 132 | 2 | 9 | 6 |
| 21 | 0 | 7 | 10½ | 64 | 1 | 4 | 0 | 140 | 2 | 12 | 6 |
| 22 | 0 | 8 | 3 | 65 | 1 | 4 | 4½ | 144 | 2 | 14 | 0 |
| 23 | 0 | 8 | 7½ | 66 | 1 | 4 | 9 | 150 | 2 | 16 | 3 |
| 24 | 0 | 9 | 0 | 67 | 1 | 5 | 1½ | 175 | 3 | 5 | 7½ |
| 25 | 0 | 9 | 4½ | 68 | 1 | 5 | 6 | 200 | 3 | 15 | 0 |
| 26 | 0 | 9 | 9 | 69 | 1 | 5 | 10½ | 250 | 4 | 13 | 9 |
| 27 | 0 | 10 | 1½ | 70 | 1 | 6 | 3 | 300 | 5 | 12 | 6 |
| 28 | 0 | 10 | 6 | 71 | 1 | 6 | 7½ | 365 | 6 | 16 | 10½ |
| 29 | 0 | 10 | 10½ | 72 | 1 | 7 | 0 | 400 | 7 | 10 | 0 |
| 30 | 0 | 11 | 3 | 73 | 1 | 7 | 4½ | 500 | 9 | 7 | 6 |
| 31 | 0 | 11 | 7½ | 74 | 1 | 7 | 9 | 600 | 11 | 5 | 0 |
| 32 | 0 | 12 | 0 | 75 | 1 | 8 | 1½ | 700 | 13 | 2 | 6 |
| 33 | 0 | 12 | 4½ | 76 | 1 | 8 | 6 | 750 | 14 | 1 | 3 |
| 34 | 0 | 12 | 9 | 77 | 1 | 8 | 10½ | 800 | 15 | 0 | 0 |
| 35 | 0 | 13 | 1½ | 78 | 1 | 9 | 3 | 900 | 16 | 17 | 6 |
| 36 | 0 | 13 | 6 | 79 | 1 | 9 | 7½ | 1000 | 18 | 15 | 0 |
| 37 | 0 | 13 | 10½ | 80 | 1 | 10 | 0 | 1250 | 23 | 8 | 9 |
| 38 | 0 | 14 | 3 | 81 | 1 | 10 | 4½ | 1500 | 28 | 2 | 6 |
| 39 | 0 | 14 | 7½ | 82 | 1 | 10 | 9 | 1750 | 32 | 16 | 3 |
| 40 | 0 | 15 | 0 | 83 | 1 | 11 | 1½ | 2000 | 37 | 10 | 0 |
| 41 | 0 | 15 | 4½ | 84 | 1 | 11 | 6 | 2240 | 42 | 0 | 0 |
| 42 | 0 | 15 | 9 | 85 | 1 | 11 | 10½ | 3000 | 56 | 5 | 0 |
| 43 | 0 | 16 | 1½ | 86 | 1 | 12 | 3 | 5000 | 93 | 15 | 0 |

## 4½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 4½ | 44 | 0 | 16 | 5 | 87 | 1 | 14 | 5½ |
| 2 | 0 | 0 | 9 | 45 | 0 | 16 | 9½ | 88 | 1 | 14 | 10 |
| 3 | 0 | 1 | 1½ | 46 | 0 | 17 | 2½ | 89 | 1 | 15 | 2½ |
| 4 | 0 | 1 | 5½ | 47 | 0 | 17 | 7 | 90 | 1 | 15 | 7½ |
| 5 | 0 | 1 | 10 | 48 | 0 | 17 | 11½ | 91 | 1 | 16 | 0½ |
| 6 | 0 | 2 | 2½ | 49 | 0 | 18 | 4½ | 92 | 1 | 16 | 5 |
| 7 | 0 | 2 | 7 | 50 | 0 | 18 | 9 | 93 | 1 | 16 | 9½ |
| 8 | 0 | 2 | 11½ | 51 | 0 | 19 | 1½ | 94 | 1 | 17 | 2½ |
| 9 | 0 | 3 | 4 | 52 | 0 | 19 | 6 | 95 | 1 | 17 | 7½ |
| 10 | 0 | 3 | 8½ | 53 | 0 | 19 | 10½ | 96 | 1 | 18 | 0 |
| 11 | 0 | 4 | 1½ | 54 | 1 | 0 | 3 | 97 | 1 | 18 | 4½ |
| 12 | 0 | 4 | 5½ | 55 | 1 | 0 | 7½ | 98 | 1 | 18 | 9½ |
| 13 | 0 | 4 | 10 | 56 | 1 | 1 | 0 | 99 | 1 | 19 | 2½ |
| 14 | 0 | 5 | 2½ | 57 | 1 | 1 | 4½ | 100 | 1 | 19 | 7 |
| 15 | 0 | 5 | 7 | 58 | 1 | 1 | 8½ | 108 | 2 | 2 | 9 |
| 16 | 0 | 6 | 0½ | 59 | 1 | 1 | 11½ | 110 | 2 | 3 | 6½ |
| 17 | 0 | 6 | 4½ | 60 | 1 | 2 | 3 | 112 | 2 | 4 | 4 |
| 18 | 0 | 6 | 8½ | 61 | 1 | 2 | 7½ | 120 | 2 | 7 | 6 |
| 19 | 0 | 7 | 1½ | 62 | 1 | 2 | 11½ | 130 | 2 | 11 | 5½ |
| 20 | 0 | 7 | 5½ | 63 | 1 | 3 | 3½ | 132 | 2 | 12 | 3 |
| 21 | 0 | 7 | 9½ | 64 | 1 | 3 | 8 | 140 | 2 | 15 | 5 |
| 22 | 0 | 8 | 1½ | 65 | 1 | 3 | 11½ | 144 | 2 | 17 | 0 |
| 23 | 0 | 8 | 5½ | 66 | 1 | 4 | 2½ | 150 | 2 | 19 | 2 |
| 24 | 0 | 8 | 9½ | 67 | 1 | 4 | 6½ | 175 | 3 | 9 | 3½ |
| 25 | 0 | 9 | 1½ | 68 | 1 | 4 | 10½ | 200 | 3 | 19 | 2 |
| 26 | 0 | 9 | 5½ | 69 | 1 | 5 | 2½ | 250 | 4 | 18 | 11½ |
| 27 | 0 | 9 | 9½ | 70 | 1 | 5 | 6½ | 300 | 5 | 18 | 9 |
| 28 | 0 | 10 | 1½ | 71 | 1 | 5 | 10½ | 365 | 7 | 4 | 5½ |
| 29 | 0 | 10 | 5½ | 72 | 1 | 6 | 2½ | 400 | 7 | 18 | 4 |
| 30 | 0 | 10 | 9½ | 73 | 1 | 6 | 6½ | 500 | 9 | 17 | 11 |
| 31 | 0 | 11 | 1½ | 74 | 1 | 6 | 10½ | 600 | 11 | 17 | 0 |
| 32 | 0 | 11 | 5½ | 75 | 1 | 7 | 2½ | 700 | 13 | 17 | 1 |
| 33 | 0 | 11 | 9½ | 76 | 1 | 7 | 6½ | 750 | 14 | 16 | 10½ |
| 34 | 0 | 12 | 1½ | 77 | 1 | 7 | 10½ | 800 | 15 | 16 | 8 |
| 35 | 0 | 12 | 5½ | 78 | 1 | 8 | 2½ | 900 | 17 | 16 | 3 |
| 36 | 0 | 12 | 9½ | 79 | 1 | 8 | 6½ | 1000 | 19 | 15 | 10 |
| 37 | 0 | 13 | 1½ | 80 | 1 | 8 | 10½ | 1250 | 24 | 14 | 9½ |
| 38 | 0 | 13 | 5½ | 81 | 1 | 9 | 2½ | 1500 | 29 | 13 | 9 |
| 39 | 0 | 13 | 9½ | 82 | 1 | 9 | 6½ | 1750 | 34 | 12 | 8½ |
| 40 | 0 | 14 | 1½ | 83 | 1 | 9 | 10½ | 2000 | 39 | 11 | 8 |
| 41 | 0 | 14 | 5½ | 84 | 1 | 10 | 2½ | 2240 | 44 | 6 | 8 |
| 42 | 0 | 14 | 9½ | 85 | 1 | 10 | 6½ | 3000 | 59 | 7 | 6 |
| 43 | 0 | 15 | 1½ | 86 | 1 | 10 | 10½ | 5000 | 98 | 19 | 2 |

## 5d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 5 | 44 | 0 | 18 | 4 | 87 | 1 | 16 | 3 |
| 2 | 0 | 0 | 10 | 45 | 0 | 18 | 9 | 88 | 1 | 16 | 8 |
| 3 | 0 | 1 | 3 | 46 | 0 | 19 | 2 | 89 | 1 | 17 | 1 |
| 4 | 0 | 1 | 8 | 47 | 0 | 19 | 7 | 90 | 1 | 17 | 6 |
| 5 | 0 | 2 | 1 | 48 | 1 | 0 | 0 | 91 | 1 | 17 | 11 |
| 6 | 0 | 2 | 6 | 49 | 1 | 0 | 5 | 92 | 1 | 18 | 4 |
| 7 | 0 | 2 | 11 | 50 | 1 | 0 | 10 | 93 | 1 | 18 | 9 |
| 8 | 0 | 3 | 4 | 51 | 1 | 1 | 3 | 94 | 1 | 19 | 2 |
| 9 | 0 | 3 | 9 | 52 | 1 | 1 | 8 | 95 | 1 | 19 | 7 |
| 10 | 0 | 4 | 2 | 53 | 1 | 2 | 1 | 96 | 2 | 0 | 0 |
| 11 | 0 | 4 | 7 | 54 | 1 | 2 | 6 | 97 | 2 | 0 | 5 |
| 12 | 0 | 5 | 0 | 55 | 1 | 2 | 11 | 98 | 2 | 0 | 10 |
| 13 | 0 | 5 | 5 | 56 | 1 | 3 | 4 | 99 | 2 | 1 | 3 |
| 14 | 0 | 5 | 10 | 57 | 1 | 3 | 9 | 100 | 2 | 1 | 8 |
| 15 | 0 | 6 | 3 | 58 | 1 | 4 | 2 | 108 | 2 | 5 | 0 |
| 16 | 0 | 6 | 8 | 59 | 1 | 4 | 7 | 110 | 2 | 5 | 10 |
| 17 | 0 | 7 | 1 | 60 | 1 | 5 | 0 | 112 | 2 | 6 | 8 |
| 18 | 0 | 7 | 6 | 61 | 1 | 5 | 5 | 120 | 2 | 10 | 0 |
| 19 | 0 | 7 | 11 | 62 | 1 | 5 | 10 | 130 | 2 | 14 | 2 |
| 20 | 0 | 8 | 4 | 63 | 1 | 6 | 3 | 132 | 2 | 15 | 0 |
| 21 | 0 | 8 | 9 | 64 | 1 | 6 | 8 | 140 | 2 | 18 | 4 |
| 22 | 0 | 9 | 2 | 65 | 1 | 7 | 1 | 144 | 3 | 0 | 0 |
| 23 | 0 | 9 | 7 | 66 | 1 | 7 | 6 | 150 | 3 | 2 | 6 |
| 24 | 0 | 10 | 0 | 67 | 1 | 7 | 11 | 175 | 3 | 12 | 11 |
| 25 | 0 | 10 | 5 | 68 | 1 | 8 | 4 | 200 | 4 | 3 | 4 |
| 26 | 0 | 10 | 10 | 69 | 1 | 8 | 9 | 250 | 5 | 4 | 2 |
| 27 | 0 | 11 | 3 | 70 | 1 | 9 | 2 | 300 | 6 | 5 | 0 |
| 28 | 0 | 11 | 8 | 71 | 1 | 9 | 7 | 365 | 7 | 12 | 1 |
| 29 | 0 | 12 | 1 | 72 | 1 | 10 | 0 | 400 | 8 | 6 | 8 |
| 30 | 0 | 12 | 6 | 73 | 1 | 10 | 5 | 500 | 10 | 8 | 4 |
| 31 | 0 | 12 | 11 | 74 | 1 | 10 | 10 | 600 | 12 | 10 | 0 |
| 32 | 0 | 13 | 4 | 75 | 1 | 11 | 3 | 700 | 14 | 11 | 8 |
| 33 | 0 | 13 | 9 | 76 | 1 | 11 | 8 | 750 | 15 | 12 | 6 |
| 34 | 0 | 14 | 2 | 77 | 1 | 12 | 1 | 800 | 16 | 13 | 4 |
| 35 | 0 | 14 | 7 | 78 | 1 | 12 | 6 | 900 | 18 | 15 | 0 |
| 36 | 0 | 15 | 0 | 79 | 1 | 12 | 11 | 1000 | 20 | 16 | 8 |
| 37 | 0 | 15 | 5 | 80 | 1 | 13 | 4 | 1250 | 26 | 0 | 10 |
| 38 | 0 | 15 | 10 | 81 | 1 | 13 | 9 | 1500 | 31 | 5 | 0 |
| 39 | 0 | 16 | 3 | 82 | 1 | 14 | 2 | 1750 | 36 | 9 | 2 |
| 40 | 0 | 16 | 8 | 83 | 1 | 14 | 7 | 2000 | 41 | 13 | 4 |
| 41 | 0 | 17 | 1 | 84 | 1 | 15 | 0 | 2240 | 46 | 13 | 4 |
| 42 | 0 | 17 | 6 | 85 | 1 | 15 | 5 | 3000 | 62 | 10 | 0 |
| 43 | 0 | 17 | 11 | 86 | 1 | 15 | 10 | 5000 | 104 | 8 | 4 |

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 5½ | 44 | 0 | 19 | 3 | 87 | 1 | 18 | 0½ |
| 2 | 0 | 0 | 10½ | 45 | 0 | 19 | 8½ | 88 | 1 | 18 | 6 |
| 3 | 0 | 1 | 3½ | 46 | 1 | 0 | 1½ | 89 | 1 | 18 | 11½ |
| 4 | 0 | 1 | 9 | 47 | 1 | 0 | 6½ | 90 | 1 | 19 | 4½ |
| 5 | 0 | 2 | 2½ | 48 | 1 | 1 | 0 | 91 | 1 | 19 | 9½ |
| 6 | 0 | 2 | 7½ | 49 | 1 | 1 | 5½ | 92 | 2 | 0 | 3 |
| 7 | 0 | 3 | 0½ | 50 | 1 | 1 | 10½ | 93 | 2 | 0 | 8½ |
| 8 | 0 | 3 | 6 | 51 | 1 | 2 | 3½ | 94 | 2 | 1 | 1½ |
| 9 | 0 | 3 | 11½ | 52 | 1 | 2 | 9 | 95 | 2 | 1 | 6½ |
| 10 | 0 | 4 | 4½ | 53 | 1 | 3 | 2½ | 96 | 2 | 2 | 0 |
| 11 | 0 | 4 | 9½ | 54 | 1 | 3 | 7½ | 97 | 2 | 2 | 5½ |
| 12 | 0 | 5 | 3 | 55 | 1 | 4 | 0½ | 98 | 2 | 2 | 10½ |
| 13 | 0 | 5 | 8½ | 56 | 1 | 4 | 6 | 99 | 2 | 3 | 3½ |
| 14 | 0 | 6 | 1½ | 57 | 1 | 4 | 11½ | 100 | 2 | 3 | 9 |
| 15 | 0 | 6 | 6½ | 58 | 1 | 5 | 4½ | 108 | 2 | 7 | 3 |
| 16 | 0 | 7 | 0 | 59 | 1 | 5 | 9½ | 110 | 2 | 8 | 1½ |
| 17 | 0 | 7 | 5½ | 60 | 1 | 6 | 3 | 112 | 2 | 9 | 0 |
| 18 | 0 | 7 | 10½ | 61 | 1 | 6 | 8½ | 120 | 2 | 12 | 6 |
| 19 | 0 | 8 | 3½ | 62 | 1 | 7 | 1½ | 130 | 2 | 16 | 10½ |
| 20 | 0 | 8 | 9 | 63 | 1 | 7 | 6½ | 132 | 2 | 17 | 9 |
| 21 | 0 | 9 | 2½ | 64 | 1 | 8 | 0 | 140 | 3 | 1 | 3 |
| 22 | 0 | 9 | 7½ | 65 | 1 | 8 | 5½ | 144 | 3 | 3 | 0 |
| 23 | 0 | 10 | 0½ | 66 | 1 | 8 | 10½ | 150 | 3 | 5 | 7½ |
| 24 | 0 | 10 | 6 | 67 | 1 | 9 | 3½ | 175 | 3 | 16 | 6½ |
| 25 | 0 | 10 | 11½ | 68 | 1 | 9 | 9 | 200 | 4 | 7 | 6 |
| 26 | 0 | 11 | 4½ | 69 | 1 | 10 | 2½ | 250 | 5 | 9 | 4½ |
| 27 | 0 | 11 | 9½ | 70 | 1 | 10 | 7½ | 300 | 6 | 11 | 3 |
| 28 | 0 | 12 | 3 | 71 | 1 | 11 | 0½ | 365 | 7 | 10 | 8½ |
| 29 | 0 | 12 | 8½ | 72 | 1 | 11 | 6 | 400 | 8 | 15 | 0 |
| 30 | 0 | 13 | 1½ | 73 | 1 | 11 | 11½ | 500 | 10 | 18 | 9 |
| 31 | 0 | 13 | 6½ | 74 | 1 | 12 | 4½ | 600 | 13 | 2 | 6 |
| 32 | 0 | 14 | 0 | 75 | 1 | 12 | 9½ | 700 | 15 | 6 | 3 |
| 33 | 0 | 14 | 5½ | 76 | 1 | 13 | 3 | 750 | 16 | 8 | 1½ |
| 34 | 0 | 14 | 10½ | 77 | 1 | 13 | 8½ | 800 | 17 | 10 | 0 |
| 35 | 0 | 15 | 3½ | 78 | 1 | 14 | 1½ | 900 | 19 | 13 | 9 |
| 36 | 0 | 15 | 9 | 79 | 1 | 14 | 6½ | 1000 | 21 | 17 | 6 |
| 37 | 0 | 16 | 2½ | 80 | 1 | 15 | 0 | 1250 | 27 | 6 | 10½ |
| 38 | 0 | 16 | 7½ | 81 | 1 | 15 | 5½ | 1500 | 32 | 16 | 3 |
| 39 | 0 | 17 | 0½ | 82 | 1 | 15 | 10½ | 1750 | 38 | 5 | 7½ |
| 40 | 0 | 17 | 6 | 83 | 1 | 16 | 3½ | 2000 | 43 | 15 | 0 |
| 41 | 0 | 17 | 11½ | 84 | 1 | 16 | 9 | 2240 | 49 | 0 | 0 |
| 42 | 0 | 18 | 4½ | 85 | 1 | 17 | 2½ | 3000 | 65 | 12 | 6 |
| 43 | 0 | 18 | 9½ | 86 | 1 | 17 | 7½ | 5000 | 109 | 7 | 6 |

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 5½ | 44 | 1 | 1 | 1 | 87 | 2 | 1 | 8½ |
| 2 | 0 | 0 | 11½ | 45 | 1 | 1 | 6½ | 88 | 2 | 2 | 2 |
| 3 | 0 | 1 | 5½ | 46 | 1 | 2 | 0½ | 89 | 2 | 2 | 7½ |
| 4 | 0 | 1 | 11 | 47 | 1 | 2 | 6½ | 90 | 2 | 3 | 1½ |
| 5 | 0 | 2 | 4½ | 48 | 1 | 3 | 0 | 91 | 2 | 3 | 7½ |
| 6 | 0 | 2 | 10½ | 49 | 1 | 3 | 5½ | 92 | 2 | 4 | 1 |
| 7 | 0 | 3 | 4½ | 50 | 1 | 3 | 11½ | 93 | 2 | 4 | 6½ |
| 8 | 0 | 3 | 10 | 51 | 1 | 4 | 5½ | 94 | 2 | 5 | 0½ |
| 9 | 0 | 4 | 3½ | 52 | 1 | 4 | 11 | 95 | 2 | 5 | 6½ |
| 10 | 0 | 4 | 9½ | 53 | 1 | 5 | 4½ | 96 | 2 | 6 | 0 |
| 11 | 0 | 5 | 3½ | 54 | 1 | 5 | 10½ | 97 | 2 | 6 | 5½ |
| 12 | 0 | 5 | 9 | 55 | 1 | 6 | 4½ | 98 | 2 | 6 | 11½ |
| 13 | 0 | 6 | 2½ | 56 | 1 | 6 | 10 | 99 | 2 | 7 | 5½ |
| 14 | 0 | 6 | 8½ | 57 | 1 | 7 | 3½ | 100 | 2 | 7 | 11 |
| 15 | 0 | 7 | 2½ | 58 | 1 | 7 | 9½ | 108 | 2 | 11 | 9 |
| 16 | 0 | 7 | 8 | 59 | 1 | 8 | 3½ | 110 | 2 | 12 | 8½ |
| 17 | 0 | 8 | 1½ | 60 | 1 | 8 | 9 | 112 | 2 | 13 | 8 |
| 18 | 0 | 8 | 7½ | 61 | 1 | 9 | 2½ | 120 | 2 | 17 | 6 |
| 19 | 0 | 9 | 1½ | 62 | 1 | 9 | 8½ | 130 | 3 | 2 | 3½ |
| 20 | 0 | 9 | 7 | 63 | 1 | 10 | 2½ | 132 | 3 | 3 | 3 |
| 21 | 0 | 10 | 0½ | 64 | 1 | 10 | 8 | 140 | 3 | 7 | 1 |
| 22 | 0 | 10 | 6½ | 65 | 1 | 11 | 1½ | 144 | 3 | 9 | 0 |
| 23 | 0 | 11 | 0½ | 66 | 1 | 11 | 7½ | 150 | 3 | 11 | 10½ |
| 24 | 0 | 11 | 6 | 67 | 1 | 12 | 1½ | 175 | 4 | 3 | 10½ |
| 25 | 0 | 11 | 11½ | 68 | 1 | 12 | 7 | 200 | 4 | 15 | 10 |
| 26 | 0 | 12 | 5½ | 69 | 1 | 13 | 0½ | 250 | 5 | 19 | 9½ |
| 27 | 0 | 12 | 11½ | 70 | 1 | 13 | 6½ | 300 | 7 | 3 | 9 |
| 28 | 0 | 13 | 5 | 71 | 1 | 14 | 0½ | 365 | 8 | 14 | 10½ |
| 29 | 0 | 13 | 10½ | 72 | 1 | 14 | 6 | 400 | 9 | 11 | 8 |
| 30 | 0 | 14 | 4½ | 73 | 1 | 14 | 11½ | 500 | 11 | 19 | 7 |
| 31 | 0 | 14 | 10½ | 74 | 1 | 15 | 5½ | 600 | 14 | 7 | 6 |
| 32 | 0 | 15 | 4 | 75 | 1 | 15 | 11½ | 700 | 16 | 15 | 5 |
| 33 | 0 | 15 | 9½ | 76 | 1 | 16 | 5 | 750 | 17 | 19 | 4½ |
| 34 | 0 | 16 | 3½ | 77 | 1 | 16 | 10½ | 800 | 19 | 3 | 4 |
| 35 | 0 | 16 | 9½ | 78 | 1 | 17 | 4½ | 900 | 21 | 11 | 3 |
| 36 | 0 | 17 | 3 | 79 | 1 | 17 | 10½ | 1000 | 23 | 19 | 2 |
| 37 | 0 | 17 | 8½ | 80 | 1 | 18 | 4 | 1250 | 29 | 19 | 11½ |
| 38 | 0 | 18 | 2½ | 81 | 1 | 18 | 9½ | 1500 | 35 | 18 | 9 |
| 39 | 0 | 18 | 8½ | 82 | 1 | 19 | 3½ | 1750 | 41 | 18 | 6½ |
| 40 | 0 | 19 | 2 | 83 | 1 | 19 | 9½ | 2000 | 47 | 18 | 4 |
| 41 | 0 | 19 | 7½ | 84 | 2 | 0 | 3 | 2240 | 53 | 13 | 4 |
| 42 | 1 | 0 | 1½ | 85 | 2 | 0 | 8½ | 3000 | 71 | 17 | 6 |
| 43 | 1 | 0 | 7½ | 86 | 2 | 1 | 2½ | 5000 | 119 | 15 | 10 |

## 5½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 5½ | 44 | 1 | 0 | 2 | 87 | 1 | 19 | 10½ |
| 2 | 0 | 0 | 11 | 45 | 1 | 0 | 7½ | 88 | 2 | 0 | 4 |
| 3 | 0 | 1 | 4½ | 46 | 1 | 1 | 1 | 89 | 2 | 0 | 9½ |
| 4 | 0 | 1 | 10 | 47 | 1 | 1 | 6½ | 90 | 2 | 1 | 3 |
| 5 | 0 | 2 | 3½ | 48 | 1 | 2 | 0 | 91 | 2 | 1 | 8½ |
| 6 | 0 | 2 | 9 | 49 | 1 | 2 | 5½ | 92 | 2 | 2 | 2 |
| 7 | 0 | 3 | 2½ | 50 | 1 | 2 | 11 | 93 | 2 | 2 | 7½ |
| 8 | 0 | 3 | 8 | 51 | 1 | 3 | 4½ | 94 | 2 | 3 | 1 |
| 9 | 0 | 4 | 1½ | 52 | 1 | 3 | 10 | 95 | 2 | 3 | 6½ |
| 10 | 0 | 4 | 7 | 53 | 1 | 4 | 3½ | 96 | 2 | 4 | 0 |
| 11 | 0 | 5 | 0½ | 54 | 1 | 4 | 9 | 97 | 2 | 4 | 5½ |
| 12 | 0 | 5 | 6 | 55 | 1 | 5 | 2½ | 98 | 2 | 4 | 11 |
| 13 | 0 | 5 | 11½ | 56 | 1 | 5 | 8 | 99 | 2 | 5 | 4½ |
| 14 | 0 | 6 | 5 | 57 | 1 | 6 | 1½ | 100 | 2 | 5 | 10 |
| 15 | 0 | 6 | 10½ | 58 | 1 | 6 | 7 | 108 | 2 | 9 | 6 |
| 16 | 0 | 7 | 4 | 59 | 1 | 7 | 0½ | 110 | 2 | 10 | 5 |
| 17 | 0 | 7 | 9½ | 60 | 1 | 7 | 6 | 112 | 2 | 11 | 4 |
| 18 | 0 | 8 | 3 | 61 | 1 | 7 | 11½ | 120 | 2 | 15 | 0 |
| 19 | 0 | 8 | 8½ | 62 | 1 | 8 | 5 | 130 | 2 | 19 | 7 |
| 20 | 0 | 9 | 2 | 63 | 1 | 8 | 10½ | 132 | 3 | 0 | 6 |
| 21 | 0 | 9 | 7½ | 64 | 1 | 9 | 4 | 140 | 3 | 4 | 2 |
| 22 | 0 | 10 | 1 | 65 | 1 | 9 | 9½ | 144 | 3 | 6 | 0 |
| 23 | 0 | 10 | 6½ | 66 | 1 | 10 | 3 | 150 | 3 | 8 | 9 |
| 24 | 0 | 11 | 0 | 67 | 1 | 10 | 8½ | 175 | 4 | 0 | 2½ |
| 25 | 0 | 11 | 5½ | 68 | 1 | 11 | 2 | 200 | 4 | 11 | 8 |
| 26 | 0 | 11 | 11 | 69 | 1 | 11 | 7½ | 250 | 5 | 14 | 7 |
| 27 | 0 | 12 | 4½ | 70 | 1 | 12 | 1 | 300 | 6 | 17 | 6 |
| 28 | 0 | 12 | 10 | 71 | 1 | 12 | 6½ | 365 | 8 | 7 | 3½ |
| 29 | 0 | 13 | 3½ | 72 | 1 | 13 | 0 | 400 | 9 | 3 | 4 |
| 30 | 0 | 13 | 9 | 73 | 1 | 13 | 5½ | 500 | 11 | 9 | 2 |
| 31 | 0 | 14 | 2½ | 74 | 1 | 13 | 11 | 600 | 13 | 15 | 0 |
| 32 | 0 | 14 | 8 | 75 | 1 | 14 | 4½ | 700 | 16 | 0 | 10 |
| 33 | 0 | 15 | 1½ | 76 | 1 | 14 | 10 | 750 | 17 | 3 | 9 |
| 34 | 0 | 15 | 7 | 77 | 1 | 15 | 3½ | 800 | 18 | 6 | 8 |
| 35 | 0 | 16 | 0½ | 78 | 1 | 15 | 9 | 900 | 20 | 12 | 6 |
| 36 | 0 | 16 | 6 | 79 | 1 | 16 | 2½ | 1000 | 22 | 18 | 4 |
| 37 | 0 | 16 | 11½ | 80 | 1 | 16 | 8 | 1250 | 28 | 12 | 11 |
| 38 | 0 | 17 | 5 | 81 | 1 | 17 | 1½ | 1500 | 34 | 7 | 6 |
| 39 | 0 | 17 | 10½ | 82 | 1 | 17 | 7 | 1750 | 40 | 2 | 1 |
| 40 | 0 | 18 | 4 | 83 | 1 | 18 | 0½ | 2000 | 45 | 16 | 8 |
| 41 | 0 | 18 | 9½ | 84 | 1 | 18 | 6 | 2240 | 51 | 6 | 8 |
| 42 | 0 | 19 | 3 | 85 | 1 | 18 | 11½ | 3000 | 68 | 15 | 0 |
| 43 | 0 | 19 | 8½ | 86 | 1 | 19 | 5 | 5000 | 114 | 11 | 8 |

## 6d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 6 | 44 | 1 | 2 | 0 | 87 | 2 | 3 | 6 |
| 2 | 0 | 1 | 0 | 45 | 1 | 2 | 6 | 88 | 2 | 4 | 0 |
| 3 | 0 | 1 | 6 | 46 | 1 | 3 | 0 | 89 | 2 | 4 | 6 |
| 4 | 0 | 2 | 0 | 47 | 1 | 3 | 6 | 90 | 2 | 5 | 0 |
| 5 | 0 | 2 | 6 | 48 | 1 | 4 | 0 | 91 | 2 | 5 | 6 |
| 6 | 0 | 3 | 0 | 49 | 1 | 4 | 6 | 92 | 2 | 6 | 0 |
| 7 | 0 | 3 | 6 | 50 | 1 | 5 | 0 | 93 | 2 | 6 | 6 |
| 8 | 0 | 4 | 0 | 51 | 1 | 5 | 6 | 94 | 2 | 7 | 0 |
| 9 | 0 | 4 | 6 | 52 | 1 | 6 | 0 | 95 | 2 | 7 | 6 |
| 10 | 0 | 5 | 0 | 53 | 1 | 6 | 6 | 96 | 2 | 8 | 0 |
| 11 | 0 | 5 | 6 | 54 | 1 | 7 | 0 | 97 | 2 | 8 | 6 |
| 12 | 0 | 6 | 0 | 55 | 1 | 7 | 6 | 98 | 2 | 9 | 0 |
| 13 | 0 | 6 | 6 | 56 | 1 | 8 | 0 | 99 | 2 | 9 | 6 |
| 14 | 0 | 7 | 0 | 57 | 1 | 8 | 6 | 100 | 2 | 10 | 0 |
| 15 | 0 | 7 | 6 | 58 | 1 | 9 | 0 | 108 | 2 | 14 | 0 |
| 16 | 0 | 8 | 0 | 59 | 1 | 9 | 6 | 110 | 2 | 15 | 0 |
| 17 | 0 | 8 | 6 | 60 | 1 | 10 | 0 | 112 | 2 | 16 | 0 |
| 18 | 0 | 9 | 0 | 61 | 1 | 10 | 6 | 120 | 3 | 0 | 0 |
| 19 | 0 | 9 | 6 | 62 | 1 | 11 | 0 | 130 | 3 | 5 | 0 |
| 20 | 0 | 10 | 0 | 63 | 1 | 11 | 6 | 132 | 3 | 6 | 0 |
| 21 | 0 | 10 | 6 | 64 | 1 | 12 | 0 | 140 | 3 | 10 | 0 |
| 22 | 0 | 11 | 0 | 65 | 1 | 12 | 6 | 144 | 3 | 12 | 0 |
| 23 | 0 | 11 | 6 | 66 | 1 | 13 | 0 | 150 | 3 | 15 | 0 |
| 24 | 0 | 12 | 0 | 67 | 1 | 13 | 6 | 175 | 4 | 7 | 6 |
| 25 | 0 | 12 | 6 | 68 | 1 | 14 | 0 | 200 | 5 | 0 | 0 |
| 26 | 0 | 13 | 0 | 69 | 1 | 14 | 6 | 250 | 6 | 5 | 0 |
| 27 | 0 | 13 | 6 | 70 | 1 | 15 | 0 | 300 | 7 | 10 | 0 |
| 28 | 0 | 14 | 0 | 71 | 1 | 15 | 6 | 365 | 9 | 2 | 6 |
| 29 | 0 | 14 | 6 | 72 | 1 | 16 | 0 | 400 | 10 | 0 | 0 |
| 30 | 0 | 15 | 0 | 73 | 1 | 16 | 6 | 500 | 12 | 10 | 0 |
| 31 | 0 | 15 | 6 | 74 | 1 | 17 | 0 | 600 | 15 | 0 | 0 |
| 32 | 0 | 16 | 0 | 75 | 1 | 17 | 6 | 700 | 17 | 10 | 0 |
| 33 | 0 | 16 | 6 | 76 | 1 | 18 | 0 | 750 | 18 | 15 | 0 |
| 34 | 0 | 17 | 0 | 77 | 1 | 18 | 6 | 800 | 20 | 0 | 0 |
| 35 | 0 | 17 | 6 | 78 | 1 | 19 | 0 | 900 | 22 | 10 | 0 |
| 36 | 0 | 18 | 0 | 79 | 1 | 19 | 6 | 1000 | 25 | 0 | 0 |
| 37 | 0 | 18 | 6 | 80 | 2 | 0 | 0 | 1250 | 31 | 5 | 0 |
| 38 | 0 | 19 | 0 | 81 | 2 | 0 | 6 | 1500 | 37 | 10 | 0 |
| 39 | 0 | 19 | 6 | 82 | 2 | 1 | 0 | 1750 | 43 | 15 | 0 |
| 40 | 1 | 0 | 0 | 83 | 2 | 1 | 6 | 2000 | 50 | 0 | 0 |
| 41 | 1 | 0 | 6 | 84 | 2 | 2 | 0 | 2240 | 56 | 0 | 0 |
| 42 | 1 | 1 | 0 | 85 | 2 | 2 | 6 | 3000 | 75 | 0 | 0 |
| 43 | 1 | 1 | 6 | 86 | 2 | 3 | 0 | 5000 | 125 | 0 | 0 |

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 6½ | 44 | 1 | 2 | 11 | 87 | 2 | 5 | 3½ |
| 2 | 0 | 1 | 0½ | 45 | 1 | 3 | 5½ | 88 | 2 | 5 | 10 |
| 3 | 0 | 1 | 6½ | 46 | 1 | 3 | 11½ | 89 | 2 | 6 | 4½ |
| 4 | 0 | 2 | 1 | 47 | 1 | 4 | 5½ | 90 | 2 | 6 | 10½ |
| 5 | 0 | 2 | 7½ | 48 | 1 | 5 | 0 | 91 | 2 | 7 | 4½ |
| 6 | 0 | 3 | 1½ | 49 | 1 | 5 | 6½ | 92 | 2 | 7 | 11 |
| 7 | 0 | 3 | 7½ | 50 | 1 | 6 | 0½ | 93 | 2 | 8 | 5½ |
| 8 | 0 | 4 | 2 | 51 | 1 | 6 | 6½ | 94 | 2 | 8 | 11½ |
| 9 | 0 | 4 | 8½ | 52 | 1 | 7 | 1 | 95 | 2 | 9 | 5½ |
| 10 | 0 | 5 | 2½ | 53 | 1 | 7 | 7½ | 96 | 2 | 10 | 0 |
| 11 | 0 | 5 | 8½ | 54 | 1 | 8 | 1½ | 97 | 2 | 10 | 6½ |
| 12 | 0 | 6 | 3 | 55 | 1 | 8 | 7½ | 98 | 2 | 11 | 0½ |
| 13 | 0 | 6 | 9½ | 56 | 1 | 9 | 2 | 99 | 2 | 11 | 6½ |
| 14 | 0 | 7 | 3½ | 57 | 1 | 9 | 8½ | 100 | 2 | 12 | 1 |
| 15 | 0 | 7 | 9½ | 58 | 1 | 10 | 2½ | 108 | 2 | 16 | 3 |
| 16 | 0 | 8 | 4 | 59 | 1 | 10 | 8½ | 110 | 2 | 17 | 3½ |
| 17 | 0 | 8 | 10½ | 60 | 1 | 11 | 3 | 112 | 2 | 18 | 4 |
| 18 | 0 | 9 | 4½ | 61 | 1 | 11 | 9½ | 120 | 3 | 2 | 6 |
| 19 | 0 | 9 | 10½ | 62 | 1 | 12 | 3½ | 130 | 3 | 7 | 8½ |
| 20 | 0 | 10 | 5 | 63 | 1 | 12 | 9½ | 132 | 3 | 8 | 9 |
| 21 | 0 | 10 | 11½ | 64 | 1 | 13 | 4 | 140 | 3 | 12 | 11 |
| 22 | 0 | 11 | 5½ | 65 | 1 | 13 | 10½ | 144 | 3 | 15 | 0 |
| 23 | 0 | 11 | 11½ | 66 | 1 | 14 | 4½ | 150 | 3 | 18 | 1½ |
| 24 | 0 | 12 | 6 | 67 | 1 | 14 | 10½ | 175 | 4 | 11 | 1½ |
| 25 | 0 | 13 | 0½ | 68 | 1 | 15 | 5 | 200 | 5 | 4 | 2 |
| 26 | 0 | 13 | 6½ | 69 | 1 | 15 | 11½ | 250 | 6 | 10 | 2½ |
| 27 | 0 | 14 | 0½ | 70 | 1 | 16 | 5½ | 300 | 7 | 16 | 3 |
| 28 | 0 | 14 | 7 | 71 | 1 | 16 | 11½ | 365 | 9 | 10 | 1½ |
| 29 | 0 | 15 | 1½ | 72 | 1 | 17 | 6 | 400 | 10 | 8 | 4 |
| 30 | 0 | 15 | 7½ | 73 | 1 | 18 | 0½ | 500 | 13 | 0 | 5 |
| 31 | 0 | 16 | 1½ | 74 | 1 | 18 | 6½ | 600 | 15 | 12 | 6 |
| 32 | 0 | 16 | 8 | 75 | 1 | 19 | 0½ | 700 | 18 | 4 | 7 |
| 33 | 0 | 17 | 2½ | 76 | 1 | 19 | 7 | 750 | 19 | 10 | 7½ |
| 34 | 0 | 17 | 8½ | 77 | 2 | 0 | 1½ | 800 | 20 | 16 | 8 |
| 35 | 0 | 18 | 2½ | 78 | 2 | 0 | 7½ | 900 | 23 | 8 | 9 |
| 36 | 0 | 18 | 9 | 79 | 2 | 1 | 1½ | 1000 | 26 | 0 | 10 |
| 37 | 0 | 19 | 3½ | 80 | 2 | 1 | 8 | 1250 | 32 | 11 | 0½ |
| 38 | 0 | 19 | 9½ | 81 | 2 | 2 | 2½ | 1500 | 39 | 1 | 3 |
| 39 | 1 | 0 | 3½ | 82 | 2 | 2 | 8½ | 1750 | 45 | 11 | 5½ |
| 40 | 1 | 0 | 10 | 83 | 2 | 3 | 2½ | 2000 | 52 | 1 | 8 |
| 41 | 1 | 1 | 4½ | 84 | 2 | 3 | 9 | 2240 | 58 | 6 | 8 |
| 42 | 1 | 1 | 10½ | 85 | 2 | 4 | 3½ | 3000 | 78 | 2 | 6 |
| 43 | 1 | 2 | 4½ | 86 | 2 | 4 | 9½ | 5000 | 130 | 4 | 2 |

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 6½ | 44 | 1 | 4 | 9 | 87 | 2 | 8 | 11½ |
| 2 | 0 | 1 | 1½ | 45 | 1 | 5 | 3½ | 88 | 2 | 9 | 6 |
| 3 | 0 | 1 | 8½ | 46 | 1 | 5 | 10½ | 89 | 2 | 10 | 0½ |
| 4 | 0 | 2 | 3 | 47 | 1 | 6 | 5½ | 90 | 2 | 10 | 7½ |
| 5 | 0 | 2 | 9½ | 48 | 1 | 7 | 0 | 91 | 2 | 11 | 2½ |
| 6 | 0 | 3 | 4½ | 49 | 1 | 7 | 6½ | 92 | 2 | 11 | 9 |
| 7 | 0 | 3 | 11½ | 50 | 1 | 8 | 1½ | 93 | 2 | 12 | 3½ |
| 8 | 0 | 4 | 6 | 51 | 1 | 8 | 8½ | 94 | 2 | 12 | 10½ |
| 9 | 0 | 5 | 0½ | 52 | 1 | 9 | 3 | 95 | 2 | 13 | 5½ |
| 10 | 0 | 5 | 7½ | 53 | 1 | 9 | 9½ | 96 | 2 | 14 | 0 |
| 11 | 0 | 6 | 2½ | 54 | 1 | 10 | 4½ | 97 | 2 | 14 | 6½ |
| 12 | 0 | 6 | 9 | 55 | 1 | 10 | 11½ | 98 | 2 | 15 | 1½ |
| 13 | 0 | 7 | 3½ | 56 | 1 | 11 | 6 | 99 | 2 | 15 | 8½ |
| 14 | 0 | 7 | 10½ | 57 | 1 | 12 | 0½ | 100 | 2 | 16 | 3 |
| 15 | 0 | 8 | 5½ | 58 | 1 | 12 | 7½ | 108 | 3 | 0 | 9 |
| 16 | 0 | 9 | 0 | 59 | 1 | 13 | 2½ | 110 | 3 | 1 | 10½ |
| 17 | 0 | 9 | 6½ | 60 | 1 | 13 | 9 | 112 | 3 | 3 | 0 |
| 18 | 0 | 10 | 1½ | 61 | 1 | 14 | 3½ | 120 | 3 | 7 | 6 |
| 19 | 0 | 10 | 8½ | 62 | 1 | 14 | 10½ | 130 | 3 | 13 | 1½ |
| 20 | 0 | 11 | 3 | 63 | 1 | 15 | 5½ | 132 | 3 | 14 | 3 |
| 21 | 0 | 11 | 9½ | 64 | 1 | 16 | 0 | 140 | 3 | 18 | 9 |
| 22 | 0 | 12 | 4½ | 65 | 1 | 16 | 6½ | 144 | 4 | 1 | 0 |
| 23 | 0 | 12 | 11½ | 66 | 1 | 17 | 1½ | 150 | 4 | 4 | 4½ |
| 24 | 0 | 13 | 6 | 67 | 1 | 17 | 8½ | 175 | 4 | 18 | 5½ |
| 25 | 0 | 14 | 0½ | 68 | 1 | 18 | 3 | 200 | 5 | 12 | 6 |
| 26 | 0 | 14 | 7½ | 69 | 1 | 18 | 9½ | 250 | 7 | 0 | 7½ |
| 27 | 0 | 15 | 2½ | 70 | 1 | 19 | 4½ | 300 | 8 | 8 | 9 |
| 28 | 0 | 15 | 9 | 71 | 1 | 19 | 11½ | 365 | 10 | 5 | 3½ |
| 29 | 0 | 16 | 3½ | 72 | 2 | 0 | 6 | 400 | 11 | 5 | 0 |
| 30 | 0 | 16 | 10½ | 73 | 2 | 1 | 0½ | 500 | 14 | 1 | 3 |
| 31 | 0 | 17 | 5½ | 74 | 2 | 1 | 7½ | 600 | 16 | 17 | 6 |
| 32 | 0 | 18 | 0 | 75 | 2 | 2 | 2½ | 700 | 19 | 13 | 9 |
| 33 | 0 | 18 | 6½ | 76 | 2 | 2 | 9 | 750 | 21 | 1 | 10½ |
| 34 | 0 | 19 | 1½ | 77 | 2 | 3 | 3½ | 800 | 22 | 10 | 0 |
| 35 | 0 | 19 | 8½ | 78 | 2 | 3 | 10½ | 900 | 25 | 6 | 3 |
| 36 | 1 | 0 | 3 | 79 | 2 | 4 | 5½ | 1000 | 28 | 2 | 6 |
| 37 | 1 | 0 | 9½ | 80 | 2 | 5 | 0 | 1250 | 35 | 3 | 1½ |
| 38 | 1 | 1 | 4½ | 81 | 2 | 5 | 6½ | 1500 | 42 | 3 | 9 |
| 39 | 1 | 1 | 11½ | 82 | 2 | 6 | 1½ | 1750 | 49 | 4 | 4½ |
| 40 | 1 | 2 | 6 | 83 | 2 | 6 | 8½ | 2000 | 56 | 5 | 0 |
| 41 | 1 | 3 | 0½ | 84 | 2 | 7 | 3 | 2240 | 63 | 0 | 0 |
| 42 | 1 | 3 | 7½ | 85 | 2 | 7 | 9½ | 3000 | 84 | 7 | 6 |
| 43 | 1 | 4 | 2½ | 86 | 2 | 8 | 4½ | 5000 | 140 | 12 | 6 |

## 6½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 6½ | 44 | 1 | 3 | 10 | 87 | 2 | 7 | 1½ |
| 2 | 0 | 1 | 1 | 45 | 1 | 4 | 4½ | 88 | 2 | 7 | 8 |
| 3 | 0 | 1 | 7½ | 46 | 1 | 4 | 11 | 89 | 2 | 8 | 2½ |
| 4 | 0 | 2 | 2 | 47 | 1 | 5 | 5½ | 90 | 2 | 8 | 9 |
| 5 | 0 | 2 | 8½ | 48 | 1 | 6 | 0 | 91 | 2 | 9 | 3½ |
| 6 | 0 | 3 | 3 | 49 | 1 | 6 | 6½ | 92 | 2 | 9 | 10 |
| 7 | 0 | 3 | 9½ | 50 | 1 | 7 | 1 | 93 | 2 | 10 | 4½ |
| 8 | 0 | 4 | 4 | 51 | 1 | 7 | 7½ | 94 | 2 | 10 | 11 |
| 9 | 0 | 4 | 10½ | 52 | 1 | 8 | 2 | 95 | 2 | 11 | 5½ |
| 10 | 0 | 5 | 5 | 53 | 1 | 8 | 8½ | 96 | 2 | 12 | 0 |
| 11 | 0 | 5 | 11½ | 54 | 1 | 9 | 3 | 97 | 2 | 12 | 6½ |
| 12 | 0 | 6 | 6 | 55 | 1 | 9 | 9½ | 98 | 2 | 13 | 1 |
| 13 | 0 | 7 | 0½ | 56 | 1 | 10 | 4 | 99 | 2 | 13 | 7½ |
| 14 | 0 | 7 | 7 | 57 | 1 | 10 | 10½ | 100 | 2 | 14 | 2 |
| 15 | 0 | 8 | 1½ | 58 | 1 | 11 | 5 | 108 | 2 | 18 | 6 |
| 16 | 0 | 8 | 8 | 59 | 1 | 11 | 11½ | 110 | 2 | 19 | 7 |
| 17 | 0 | 9 | 2½ | 60 | 1 | 12 | 6 | 112 | 3 | 0 | 8 |
| 18 | 0 | 9 | 9 | 61 | 1 | 13 | 0½ | 120 | 3 | 5 | 0 |
| 19 | 0 | 10 | 3½ | 62 | 1 | 13 | 7 | 130 | 3 | 10 | 5 |
| 20 | 0 | 10 | 10 | 63 | 1 | 14 | 1½ | 132 | 3 | 11 | 6 |
| 21 | 0 | 11 | 4½ | 64 | 1 | 14 | 8 | 140 | 3 | 15 | 10 |
| 22 | 0 | 11 | 11 | 65 | 1 | 15 | 2½ | 144 | 3 | 18 | 0 |
| 23 | 0 | 12 | 5½ | 66 | 1 | 15 | 9 | 150 | 4 | 1 | 3 |
| 24 | 0 | 13 | 0 | 67 | 1 | 16 | 3½ | 175 | 4 | 14 | 9½ |
| 25 | 0 | 13 | 6½ | 68 | 1 | 16 | 10 | 200 | 5 | 8 | 4 |
| 26 | 0 | 14 | 1 | 69 | 1 | 17 | 4½ | 250 | 6 | 15 | 5 |
| 27 | 0 | 14 | 7½ | 70 | 1 | 17 | 11 | 300 | 8 | 2 | 6 |
| 28 | 0 | 15 | 2 | 71 | 1 | 18 | 5½ | 365 | 9 | 17 | 8½ |
| 29 | 0 | 15 | 8½ | 72 | 1 | 19 | 0 | 400 | 10 | 16 | 8 |
| 30 | 0 | 16 | 3 | 73 | 1 | 19 | 6½ | 500 | 13 | 10 | 10 |
| 31 | 0 | 16 | 9½ | 74 | 2 | 0 | 1 | 600 | 16 | 5 | 0 |
| 32 | 0 | 17 | 4 | 75 | 2 | 0 | 7½ | 700 | 18 | 19 | 2 |
| 33 | 0 | 17 | 10½ | 76 | 2 | 1 | 2 | 750 | 20 | 6 | 3 |
| 34 | 0 | 18 | 5 | 77 | 2 | 1 | 8½ | 800 | 21 | 13 | 4 |
| 35 | 0 | 18 | 11½ | 78 | 2 | 2 | 3 | 900 | 24 | 7 | 6 |
| 36 | 0 | 19 | 6 | 79 | 2 | 2 | 9½ | 1000 | 27 | 1 | 8 |
| 37 | 1 | 0 | 0½ | 80 | 2 | 3 | 4 | 1250 | 33 | 17 | 1 |
| 38 | 1 | 0 | 7 | 81 | 2 | 3 | 10½ | 1500 | 40 | 12 | 6 |
| 39 | 1 | 1 | 1½ | 82 | 2 | 4 | 5 | 1750 | 47 | 7 | 11 |
| 40 | 1 | 1 | 8 | 83 | 2 | 4 | 11½ | 2000 | 54 | 3 | 4 |
| 41 | 1 | 2 | 2½ | 84 | 2 | 5 | 6 | 2240 | 60 | 13 | 4 |
| 42 | 1 | 2 | 9 | 85 | 2 | 6 | 0½ | 3000 | 81 | 5 | 0 |
| 43 | 1 | 3 | 3½ | 86 | 2 | 6 | 7 | 5000 | 135 | 8 | 4 |

## 7d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 7 | 44 | 1 | 5 | 8 | 87 | 2 | 10 | 9 |
| 2 | 0 | 1 | 2 | 45 | 1 | 6 | 3 | 88 | 2 | 11 | 4 |
| 3 | 0 | 1 | 9 | 46 | 1 | 6 | 10 | 89 | 2 | 11 | 11 |
| 4 | 0 | 2 | 4 | 47 | 1 | 7 | 5 | 90 | 2 | 12 | 6 |
| 5 | 0 | 2 | 11 | 48 | 1 | 8 | 0 | 91 | 2 | 13 | 1 |
| 6 | 0 | 3 | 6 | 49 | 1 | 8 | 7 | 92 | 2 | 13 | 8 |
| 7 | 0 | 4 | 1 | 50 | 1 | 9 | 2 | 93 | 2 | 14 | 3 |
| 8 | 0 | 4 | 8 | 51 | 1 | 9 | 9 | 94 | 2 | 14 | 10 |
| 9 | 0 | 5 | 3 | 52 | 1 | 10 | 4 | 95 | 2 | 15 | 5 |
| 10 | 0 | 5 | 10 | 53 | 1 | 10 | 11 | 96 | 2 | 16 | 0 |
| 11 | 0 | 6 | 5 | 54 | 1 | 11 | 6 | 97 | 2 | 16 | 7 |
| 12 | 0 | 7 | 0 | 55 | 1 | 12 | 1 | 98 | 2 | 17 | 2 |
| 13 | 0 | 7 | 7 | 56 | 1 | 12 | 8 | 99 | 2 | 17 | 9 |
| 14 | 0 | 8 | 2 | 57 | 1 | 13 | 3 | 100 | 2 | 18 | 4 |
| 15 | 0 | 8 | 9 | 58 | 1 | 13 | 10 | 108 | 3 | 3 | 0 |
| 16 | 0 | 9 | 4 | 59 | 1 | 14 | 5 | 110 | 3 | 4 | 2 |
| 17 | 0 | 9 | 11 | 60 | 1 | 15 | 0 | 112 | 3 | 5 | 4 |
| 18 | 0 | 10 | 6 | 61 | 1 | 15 | 7 | 120 | 3 | 10 | 0 |
| 19 | 0 | 11 | 1 | 62 | 1 | 16 | 2 | 130 | 3 | 15 | 10 |
| 20 | 0 | 11 | 8 | 63 | 1 | 16 | 9 | 132 | 3 | 17 | 0 |
| 21 | 0 | 12 | 3 | 64 | 1 | 17 | 4 | 140 | 4 | 1 | 8 |
| 22 | 0 | 12 | 10 | 65 | 1 | 17 | 11 | 144 | 4 | 4 | 0 |
| 23 | 0 | 13 | 5 | 66 | 1 | 18 | 6 | 150 | 4 | 7 | 6 |
| 24 | 0 | 14 | 0 | 67 | 1 | 19 | 1 | 175 | 5 | 2 | 1 |
| 25 | 0 | 14 | 7 | 68 | 1 | 19 | 8 | 200 | 5 | 16 | 8 |
| 26 | 0 | 15 | 2 | 69 | 2 | 0 | 3 | 250 | 7 | 5 | 10 |
| 27 | 0 | 15 | 9 | 70 | 2 | 0 | 10 | 300 | 8 | 15 | 0 |
| 28 | 0 | 16 | 4 | 71 | 2 | 1 | 5 | 365 | 10 | 12 | 11 |
| 29 | 0 | 16 | 11 | 72 | 2 | 2 | 0 | 400 | 11 | 13 | 4 |
| 30 | 0 | 17 | 6 | 73 | 2 | 2 | 7 | 500 | 14 | 11 | 8 |
| 31 | 0 | 18 | 1 | 74 | 2 | 2 | 2 | 600 | 17 | 10 | 0 |
| 32 | 0 | 18 | 8 | 75 | 2 | 8 | 9 | 700 | 20 | 8 | 4 |
| 33 | 0 | 19 | 3 | 76 | 2 | 4 | 4 | 750 | 21 | 17 | 6 |
| 34 | 0 | 19 | 10 | 77 | 2 | 4 | 11 | 800 | 23 | 6 | 8 |
| 35 | 1 | 0 | 5 | 78 | 2 | 5 | 6 | 900 | 26 | 5 | 0 |
| 36 | 1 | 1 | 0 | 79 | 2 | 6 | 1 | 1000 | 29 | 3 | 4 |
| 37 | 1 | 1 | 7 | 80 | 2 | 6 | 8 | 1250 | 36 | 9 | 2 |
| 38 | 1 | 2 | 2 | 81 | 2 | 7 | 3 | 1500 | 43 | 15 | 0 |
| 39 | 1 | 2 | 9 | 82 | 2 | 7 | 10 | 1750 | 51 | 0 | 10 |
| 40 | 1 | 3 | 4 | 83 | 2 | 8 | 5 | 2000 | 58 | 6 | 8 |
| 41 | 1 | 3 | 11 | 84 | 2 | 9 | 0 | 2240 | 65 | 6 | 8 |
| 42 | 1 | 4 | 6 | 85 | 2 | 9 | 7 | 3000 | 87 | 10 | 0 |
| 43 | 1 | 5 | 1 | 86 | 2 | 10 | 2 | 5000 | 145 | 16 | 8 |

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 7½ | 44 | 1 | 6 | 7 | 87 | 2 | 12 | 6½ |
| 2 | 0 | 1 | 2½ | 45 | 1 | 7 | 2½ | 88 | 2 | 13 | 2 |
| 3 | 0 | 1 | 9½ | 46 | 1 | 7 | 9½ | 89 | 2 | 13 | 9½ |
| 4 | 0 | 2 | 5 | 47 | 1 | 8 | 4½ | 90 | 2 | 14 | 4½ |
| 5 | 0 | 3 | 0½ | 48 | 1 | 9 | 0 | 91 | 2 | 14 | 11½ |
| 6 | 0 | 3 | 7½ | 49 | 1 | 9 | 7½ | 92 | 2 | 15 | 7 |
| 7 | 0 | 4 | 2½ | 50 | 1 | 10 | 2½ | 93 | 2 | 16 | 2½ |
| 8 | 0 | 4 | 10 | 51 | 1 | 10 | 9½ | 94 | 2 | 16 | 9½ |
| 9 | 0 | 5 | 5½ | 52 | 1 | 11 | 5 | 95 | 2 | 17 | 4½ |
| 10 | 0 | 6 | 0½ | 53 | 1 | 12 | 0½ | 96 | 2 | 18 | 0 |
| 11 | 0 | 6 | 7½ | 54 | 1 | 12 | 7½ | 97 | 2 | 18 | 7½ |
| 12 | 0 | 7 | 3 | 55 | 1 | 13 | 2½ | 98 | 2 | 19 | 2½ |
| 13 | 0 | 7 | 10½ | 56 | 1 | 13 | 10 | 99 | 2 | 19 | 9½ |
| 14 | 0 | 8 | 5½ | 57 | 1 | 14 | 5½ | 100 | 3 | 0 | 5 |
| 15 | 0 | 9 | 0½ | 58 | 1 | 15 | 0½ | 108 | 3 | 5 | 3 |
| 16 | 0 | 9 | 8 | 59 | 1 | 15 | 7½ | 110 | 3 | 6 | 5½ |
| 17 | 0 | 10 | 3½ | 60 | 1 | 16 | 3 | 112 | 3 | 7 | 8 |
| 18 | 0 | 10 | 10½ | 61 | 1 | 16 | 10½ | 120 | 3 | 12 | 6 |
| 19 | 0 | 11 | 5½ | 62 | 1 | 17 | 5½ | 130 | 3 | 18 | 6½ |
| 20 | 0 | 12 | 1 | 63 | 1 | 18 | 0½ | 132 | 3 | 19 | 9 |
| 21 | 0 | 12 | 8½ | 64 | 1 | 18 | 8 | 140 | 4 | 4 | 7 |
| 22 | 0 | 13 | 3½ | 65 | 1 | 19 | 3½ | 144 | 4 | 7 | 0 |
| 23 | 0 | 13 | 10½ | 66 | 1 | 19 | 10½ | 150 | 4 | 10 | 7½ |
| 24 | 0 | 14 | 6 | 67 | 2 | 0 | 5½ | 175 | 5 | 5 | 8½ |
| 25 | 0 | 15 | 1½ | 68 | 2 | 1 | 1 | 200 | 6 | 0 | 10 |
| 26 | 0 | 15 | 8½ | 69 | 2 | 1 | 8½ | 250 | 7 | 11 | 0½ |
| 27 | 0 | 16 | 3½ | 70 | 2 | 2 | 3½ | 300 | 9 | 1 | 3 |
| 28 | 0 | 16 | 11 | 71 | 2 | 2 | 10½ | 365 | 11 | 0 | 6½ |
| 29 | 0 | 17 | 6½ | 72 | 2 | 3 | 6 | 400 | 12 | 1 | 8 |
| 30 | 0 | 18 | 1½ | 73 | 2 | 4 | 1½ | 500 | 15 | 2 | 1 |
| 31 | 0 | 18 | 8½ | 74 | 2 | 4 | 8½ | 600 | 18 | 2 | 6 |
| 32 | 0 | 19 | 4 | 75 | 2 | 5 | 3½ | 700 | 21 | 2 | 11 |
| 33 | 0 | 19 | 11½ | 76 | 2 | 5 | 11 | 750 | 22 | 13 | 1½ |
| 34 | 1 | 0 | 6½ | 77 | 2 | 6 | 6½ | 800 | 24 | 3 | 4 |
| 35 | 1 | 1 | 1½ | 78 | 2 | 7 | 1½ | 900 | 27 | 3 | 9 |
| 36 | 1 | 1 | 9 | 79 | 2 | 7 | 8½ | 1000 | 30 | 4 | 2 |
| 37 | 1 | 2 | 4½ | 80 | 2 | 8 | 4 | 1250 | 37 | 15 | 2½ |
| 38 | 1 | 2 | 11½ | 81 | 2 | 8 | 11½ | 1500 | 45 | 6 | 3 |
| 39 | 1 | 3 | 6½ | 82 | 2 | 9 | 6½ | 1750 | 52 | 17 | 3½ |
| 40 | 1 | 4 | 2 | 83 | 2 | 10 | 1½ | 2000 | 60 | 8 | 4 |
| 41 | 1 | 4 | 9½ | 84 | 2 | 10 | 9 | 2240 | 67 | 13 | 4 |
| 42 | 1 | 5 | 4½ | 85 | 2 | 11 | 4½ | 3000 | 90 | 12 | 6 |
| 43 | 1 | 5 | 11½ | 86 | 2 | 11 | 11½ | 5000 | 151 | 0 | 10 |

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 7⅝ | 44 | 1 | 8 | 5 | 87 | 2 | 16 | 2½ |
| 2 | 0 | 1 | 3⅛ | 45 | 1 | 9 | 0⅝ | 88 | 2 | 16 | 10 |
| 3 | 0 | 1 | 11⅛ | 46 | 1 | 9 | 8⅛ | 89 | 2 | 17 | 5⅛ |
| 4 | 0 | 2 | 7 | 47 | 1 | 10 | 4⅛ | 90 | 2 | 18 | 1⅛ |
| 5 | 0 | 3 | 2⅛ | 48 | 1 | 11 | 0 | 91 | 2 | 18 | 9⅛ |
| 6 | 0 | 3 | 10⅛ | 49 | 1 | 11 | 7⅛ | 92 | 2 | 19 | 5 |
| 7 | 0 | 4 | 6⅛ | 50 | 1 | 12 | 3⅛ | 93 | 3 | 0 | 0⅛ |
| 8 | 0 | 5 | 2 | 51 | 1 | 12 | 11⅛ | 94 | 3 | 0 | 8⅛ |
| 9 | 0 | 5 | 9⅛ | 52 | 1 | 13 | 7 | 95 | 3 | 1 | 4⅛ |
| 10 | 0 | 6 | 5⅛ | 53 | 1 | 14 | 2⅛ | 96 | 3 | 2 | 0 |
| 11 | 0 | 7 | 1⅛ | 54 | 1 | 14 | 10⅛ | 97 | 3 | 2 | 7⅛ |
| 12 | 0 | 7 | 9 | 55 | 1 | 15 | 6⅛ | 98 | 3 | 3 | 3⅛ |
| 13 | 0 | 8 | 4⅛ | 56 | 1 | 16 | 2 | 99 | 3 | 3 | 11⅛ |
| 14 | 0 | 9 | 0⅛ | 57 | 1 | 16 | 9⅛ | 100 | 3 | 4 | 7 |
| 15 | 0 | 9 | 8⅛ | 58 | 1 | 17 | 5⅛ | 108 | 3 | 9 | 9 |
| 16 | 0 | 10 | 4 | 59 | 1 | 18 | 1⅛ | 110 | 3 | 11 | 0⅛ |
| 17 | 0 | 10 | 11⅛ | 60 | 1 | 18 | 9 | 112 | 3 | 12 | 4 |
| 18 | 0 | 11 | 7⅛ | 61 | 1 | 19 | 4⅛ | 120 | 3 | 17 | 6 |
| 19 | 0 | 12 | 3⅛ | 62 | 2 | 0 | 0⅛ | 130 | 4 | 3 | 11⅛ |
| 20 | 0 | 12 | 11 | 63 | 2 | 0 | 8⅛ | 132 | 4 | 5 | 3 |
| 21 | 0 | 13 | 6⅛ | 64 | 2 | 1 | 4 | 140 | 4 | 10 | 5 |
| 22 | 0 | 14 | 2⅛ | 65 | 2 | 1 | 11⅛ | 144 | 4 | 13 | 0 |
| 23 | 0 | 14 | 10⅛ | 66 | 2 | 2 | 7⅛ | 150 | 4 | 16 | 10⅛ |
| 24 | 0 | 15 | 6 | 67 | 2 | 3 | 3⅛ | 175 | 5 | 13 | 0⅛ |
| 25 | 0 | 16 | 1⅛ | 68 | 2 | 3 | 11 | 200 | 6 | 9 | 2 |
| 26 | 0 | 16 | 9⅛ | 69 | 2 | 4 | 6⅛ | 250 | 8 | 1 | 5⅛ |
| 27 | 0 | 17 | 5⅛ | 70 | 2 | 5 | 2⅛ | 300 | 9 | 13 | 9 |
| 28 | 0 | 18 | 1 | 71 | 2 | 5 | 10⅛ | 365 | 11 | 15 | 8⅛ |
| 29 | 0 | 18 | 8⅛ | 72 | 2 | 6 | 6 | 400 | 12 | 18 | 4 |
| 30 | 0 | 19 | 4⅛ | 73 | 2 | 7 | 1⅛ | 500 | 16 | 2 | 11 |
| 31 | 1 | 0 | 0⅛ | 74 | 2 | 7 | 9⅛ | 600 | 19 | 7 | 6 |
| 32 | 1 | 0 | 8 | 75 | 2 | 8 | 5⅛ | 700 | 22 | 12 | 1 |
| 33 | 1 | 1 | 3⅛ | 76 | 2 | 9 | 1 | 750 | 24 | 4 | 4⅛ |
| 34 | 1 | 1 | 11⅛ | 77 | 2 | 9 | 8⅛ | 800 | 25 | 16 | 8 |
| 35 | 1 | 2 | 7⅛ | 78 | 2 | 10 | 4⅛ | 900 | 29 | 1 | 3 |
| 36 | 1 | 3 | 3 | 79 | 2 | 11 | 0⅛ | 1000 | 32 | 5 | 10 |
| 37 | 1 | 3 | 10⅛ | 80 | 2 | 11 | 8 | 1250 | 40 | 7 | 3⅛ |
| 38 | 1 | 4 | 6⅛ | 81 | 2 | 12 | 3⅛ | 1500 | 48 | 8 | 9 |
| 39 | 1 | 5 | 2⅛ | 82 | 2 | 12 | 11⅛ | 1750 | 56 | 10 | 2⅛ |
| 40 | 1 | 5 | 10 | 83 | 2 | 13 | 7⅛ | 2000 | 64 | 11 | 8 |
| 41 | 1 | 6 | 5⅛ | 84 | 2 | 14 | 3 | 2240 | 72 | 6 | 8 |
| 42 | 1 | 7 | 1⅛ | 85 | 2 | 14 | 10⅛ | 3000 | 96 | 17 | 6 |
| 43 | 1 | 7 | 9⅛ | 86 | 2 | 15 | 6⅛ | 5000 | 161 | 9 | 2 |

## 7½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 7½ | 44 | 1 | 7 | 6 | 87 | 2 | 14 | 4½ |
| 2 | 0 | 1 | 3 | 45 | 1 | 8 | 1½ | 88 | 2 | 15 | 0 |
| 3 | 0 | 1 | 10½ | 46 | 1 | 8 | 9 | 89 | 2 | 15 | 7½ |
| 4 | 0 | 2 | 6 | 47 | 1 | 9 | 4½ | 90 | 2 | 16 | 3 |
| 5 | 0 | 3 | 1½ | 48 | 1 | 10 | 0 | 91 | 2 | 16 | 10½ |
| 6 | 0 | 3 | 9 | 49 | 1 | 10 | 7½ | 92 | 2 | 17 | 6 |
| 7 | 0 | 4 | 4½ | 50 | 1 | 11 | 3 | 93 | 2 | 18 | 1½ |
| 8 | 0 | 5 | 0 | 51 | 1 | 11 | 10½ | 94 | 2 | 18 | 9 |
| 9 | 0 | 5 | 7½ | 52 | 1 | 12 | 6 | 95 | 2 | 19 | 4½ |
| 10 | 0 | 6 | 3 | 53 | 1 | 13 | 1½ | 96 | 3 | 0 | 0 |
| 11 | 0 | 6 | 10½ | 54 | 1 | 13 | 9 | 97 | 3 | 0 | 7½ |
| 12 | 0 | 7 | 6 | 55 | 1 | 14 | 4½ | 98 | 3 | 1 | 3 |
| 13 | 0 | 8 | 1½ | 56 | 1 | 15 | 0 | 99 | 3 | 1 | 10½ |
| 14 | 0 | 8 | 9 | 57 | 1 | 15 | 7½ | 100 | 3 | 2 | 6 |
| 15 | 0 | 9 | 4½ | 58 | 1 | 16 | 3 | 108 | 3 | 7 | 0 |
| 16 | 0 | 10 | 0 | 59 | 1 | 16 | 10½ | 110 | 3 | 8 | 9 |
| 17 | 0 | 10 | 7½ | 60 | 1 | 17 | 6 | 112 | 3 | 10 | 0 |
| 18 | 0 | 11 | 3 | 61 | 1 | 18 | 1½ | 120 | 3 | 15 | 0 |
| 19 | 0 | 11 | 10½ | 62 | 1 | 18 | 9 | 130 | 4 | 1 | 3 |
| 20 | 0 | 12 | 6 | 63 | 1 | 19 | 4½ | 132 | 4 | 2 | 6 |
| 21 | 0 | 13 | 1½ | 64 | 2 | 0 | 0 | 140 | 4 | 7 | 6 |
| 22 | 0 | 13 | 9 | 65 | 2 | 0 | 7½ | 144 | 4 | 10 | 0 |
| 23 | 0 | 14 | 4½ | 66 | 2 | 1 | 3 | 150 | 4 | 13 | 9 |
| 24 | 0 | 15 | 0 | 67 | 2 | 1 | 10½ | 175 | 5 | 9 | 4½ |
| 25 | 0 | 15 | 7½ | 68 | 2 | 2 | 6 | 200 | 6 | 5 | 0 |
| 26 | 0 | 16 | 3 | 69 | 2 | 3 | 1½ | 250 | 7 | 16 | 3 |
| 27 | 0 | 16 | 10½ | 70 | 2 | 3 | 9 | 300 | 9 | 7 | 6 |
| 28 | 0 | 17 | 6 | 71 | 2 | 4 | 4½ | 365 | 11 | 8 | 1½ |
| 29 | 0 | 18 | 1½ | 72 | 2 | 5 | 0 | 400 | 12 | 10 | 0 |
| 30 | 0 | 18 | 9 | 73 | 2 | 5 | 7½ | 500 | 15 | 12 | 6 |
| 31 | 0 | 19 | 4½ | 74 | 2 | 6 | 3 | 600 | 18 | 15 | 0 |
| 32 | 1 | 0 | 0 | 75 | 2 | 6 | 10½ | 700 | 21 | 17 | 6 |
| 33 | 1 | 0 | 7½ | 76 | 2 | 7 | 6 | 750 | 23 | 8 | 9 |
| 34 | 1 | 1 | 3 | 77 | 2 | 8 | 1½ | 800 | 25 | 0 | 0 |
| 35 | 1 | 1 | 10½ | 78 | 2 | 8 | 9 | 900 | 28 | 2 | 6 |
| 36 | 1 | 2 | 6 | 79 | 2 | 9 | 4½ | 1000 | 31 | 5 | 0 |
| 37 | 1 | 3 | 1½ | 80 | 2 | 10 | 0 | 1250 | 39 | 1 | 3 |
| 38 | 1 | 3 | 9 | 81 | 2 | 10 | 7½ | 1500 | 46 | 17 | 6 |
| 39 | 1 | 4 | 4½ | 82 | 2 | 11 | 3 | 1750 | 54 | 13 | 9 |
| 40 | 1 | 5 | 0 | 83 | 2 | 11 | 10½ | 2000 | 62 | 10 | 0 |
| 41 | 1 | 5 | 7½ | 84 | 2 | 12 | 6 | 2240 | 70 | 0 | 0 |
| 42 | 1 | 6 | 3 | 85 | 2 | 13 | 1½ | 3000 | 93 | 15 | 0 |
| 43 | 1 | 6 | 10½ | 86 | 2 | 13 | 9 | 5000 | 156 | 5 | 0 |

## 8d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 8 | 44 | 1 | 9 | 4 | 87 | 2 | 18 | 0 |
| 2 | 0 | 1 | 4 | 45 | 1 | 10 | 0 | 88 | 2 | 18 | 8 |
| 3 | 0 | 2 | 0 | 46 | 1 | 10 | 8 | 89 | 2 | 19 | 4 |
| 4 | 0 | 2 | 8 | 47 | 1 | 11 | 4 | 90 | 3 | 0 | 0 |
| 5 | 0 | 3 | 4 | 48 | 1 | 12 | 0 | 91 | 3 | 0 | 8 |
| 6 | 0 | 4 | 0 | 49 | 1 | 12 | 8 | 92 | 3 | 1 | 4 |
| 7 | 0 | 4 | 8 | 50 | 1 | 13 | 4 | 93 | 3 | 2 | 0 |
| 8 | 0 | 5 | 4 | 51 | 1 | 14 | 0 | 94 | 3 | 2 | 8 |
| 9 | 0 | 6 | 0 | 52 | 1 | 14 | 8 | 95 | 3 | 3 | 4 |
| 10 | 0 | 6 | 8 | 53 | 1 | 15 | 4 | 96 | 3 | 4 | 0 |
| 11 | 0 | 7 | 4 | 54 | 1 | 16 | 0 | 97 | 3 | 4 | 8 |
| 12 | 0 | 8 | 0 | 55 | 1 | 16 | 8 | 98 | 3 | 5 | 4 |
| 13 | 0 | 8 | 8 | 56 | 1 | 17 | 4 | 99 | 3 | 6 | 0 |
| 14 | 0 | 9 | 4 | 57 | 1 | 18 | 0 | 100 | 3 | 6 | 8 |
| 15 | 0 | 10 | 0 | 58 | 1 | 18 | 8 | 108 | 3 | 12 | 0 |
| 16 | 0 | 10 | 8 | 59 | 1 | 19 | 4 | 110 | 3 | 13 | 4 |
| 17 | 0 | 11 | 4 | 60 | 2 | 0 | 0 | 112 | 3 | 14 | 8 |
| 18 | 0 | 12 | 0 | 61 | 2 | 0 | 8 | 120 | 4 | 0 | 0 |
| 19 | 0 | 12 | 8 | 62 | 2 | 1 | 4 | 130 | 4 | 6 | 8 |
| 20 | 0 | 13 | 4 | 63 | 2 | 2 | 0 | 132 | 4 | 8 | 0 |
| 21 | 0 | 14 | 0 | 64 | 2 | 2 | 8 | 140 | 4 | 13 | 4 |
| 22 | 0 | 14 | 8 | 65 | 2 | 3 | 4 | 144 | 4 | 16 | 0 |
| 23 | 0 | 15 | 4 | 66 | 2 | 4 | 0 | 150 | 5 | 0 | 0 |
| 24 | 0 | 16 | 0 | 67 | 2 | 4 | 8 | 175 | 5 | 16 | 8 |
| 25 | 0 | 16 | 8 | 68 | 2 | 5 | 4 | 200 | 8 | 13 | 4 |
| 26 | 0 | 17 | 4 | 69 | 2 | 6 | 0 | 250 | 8 | 6 | 8 |
| 27 | 0 | 18 | 0 | 70 | 2 | 6 | 8 | 300 | 10 | 0 | 0 |
| 28 | 0 | 18 | 8 | 71 | 2 | 7 | 4 | 365 | 12 | 3 | 4 |
| 29 | 0 | 19 | 4 | 72 | 2 | 8 | 0 | 400 | 13 | 6 | 8 |
| 30 | 1 | 0 | 0 | 73 | 2 | 8 | 8 | 500 | 16 | 13 | 4 |
| 31 | 1 | 0 | 8 | 74 | 2 | 9 | 4 | 600 | 20 | 0 | 0 |
| 32 | 1 | 1 | 4 | 75 | 2 | 10 | 0 | 700 | 23 | 6 | 8 |
| 33 | 1 | 2 | 0 | 76 | 2 | 10 | 8 | 750 | 25 | 0 | 0 |
| 34 | 1 | 2 | 8 | 77 | 2 | 11 | 4 | 800 | 26 | 13 | 4 |
| 35 | 1 | 3 | 4 | 78 | 2 | 12 | 0 | 900 | 30 | 0 | 0 |
| 36 | 1 | 4 | 0 | 79 | 2 | 12 | 8 | 1000 | 33 | 6 | 8 |
| 37 | 1 | 4 | 8 | 80 | 2 | 13 | 4 | 1250 | 41 | 13 | 4 |
| 38 | 1 | 5 | 4 | 81 | 2 | 14 | 0 | 1500 | 50 | 0 | 0 |
| 39 | 1 | 6 | 0 | 82 | 2 | 14 | 8 | 1750 | 58 | 6 | 8 |
| 40 | 1 | 6 | 8 | 83 | 2 | 15 | 4 | 2000 | 66 | 13 | 4 |
| 41 | 1 | 7 | 4 | 84 | 2 | 16 | 0 | 2240 | 74 | 13 | 4 |
| 42 | 1 | 8 | 0 | 85 | 2 | 16 | 8 | 3000 | 100 | 0 | 0 |
| 43 | 1 | 8 | 8 | 86 | 2 | 17 | 4 | 5000 | 166 | 13 | 4 |

## 8¼d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 8¼ | 44 | 1 | 10 | 3 | 87 | 2 | 19 | 9¾ |
| 2 | 0 | 1 | 4½ | 45 | 1 | 10 | 11¼ | 88 | 3 | 0 | 6 |
| 3 | 0 | 2 | 0¾ | 46 | 1 | 11 | 7½ | 89 | 3 | 1 | 2¼ |
| 4 | 0 | 2 | 9 | 47 | 1 | 12 | 3¾ | 90 | 3 | 1 | 10½ |
| 5 | 0 | 3 | 5¼ | 48 | 1 | 13 | 0 | 91 | 3 | 2 | 6¾ |
| 6 | 0 | 4 | 1½ | 49 | 1 | 13 | 8¼ | 92 | 3 | 3 | 3 |
| 7 | 0 | 4 | 9¾ | 50 | 1 | 14 | 4½ | 93 | 3 | 3 | 11¼ |
| 8 | 0 | 5 | 6 | 51 | 1 | 15 | 0¾ | 94 | 3 | 4 | 7½ |
| 9 | 0 | 6 | 2¼ | 52 | 1 | 15 | 9 | 95 | 3 | 5 | 3¾ |
| 10 | 0 | 6 | 10½ | 53 | 1 | 16 | 5¼ | 96 | 3 | 6 | 0 |
| 11 | 0 | 7 | 6¾ | 54 | 1 | 17 | 1½ | 97 | 3 | 6 | 8¼ |
| 12 | 0 | 8 | 3 | 55 | 1 | 17 | 9¾ | 98 | 3 | 7 | 4½ |
| 13 | 0 | 8 | 11¼ | 56 | 1 | 18 | 6 | 99 | 3 | 8 | 0¾ |
| 14 | 0 | 9 | 7½ | 57 | 1 | 19 | 2¼ | 100 | 3 | 8 | 9 |
| 15 | 0 | 10 | 3¾ | 58 | 1 | 19 | 10½ | 108 | 3 | 14 | 3 |
| 16 | 0 | 11 | 0 | 59 | 2 | 0 | 6¾ | 110 | 3 | 15 | 7½ |
| 17 | 0 | 11 | 8¼ | 60 | 2 | 1 | 3 | 112 | 3 | 17 | 0 |
| 18 | 0 | 12 | 4½ | 61 | 2 | 1 | 11¼ | 120 | 4 | 2 | 6 |
| 19 | 0 | 13 | 0¾ | 62 | 2 | 2 | 7½ | 130 | 4 | 9 | 4½ |
| 20 | 0 | 13 | 9 | 63 | 2 | 3 | 3¾ | 132 | 4 | 10 | 9 |
| 21 | 0 | 14 | 5¼ | 64 | 2 | 4 | 0 | 140 | 4 | 16 | 3 |
| 22 | 0 | 15 | 1½ | 65 | 2 | 4 | 8¼ | 144 | 4 | 19 | 0 |
| 23 | 0 | 15 | 9¾ | 66 | 2 | 5 | 4½ | 150 | 5 | 3 | 1½ |
| 24 | 0 | 16 | 6 | 67 | 2 | 6 | 0¾ | 175 | 6 | 0 | 3¾ |
| 25 | 0 | 17 | 2¼ | 68 | 2 | 6 | 9 | 200 | 6 | 17 | 6 |
| 26 | 0 | 17 | 10½ | 69 | 2 | 7 | 5¼ | 250 | 8 | 11 | 10½ |
| 27 | 0 | 18 | 6¾ | 70 | 2 | 8 | 1½ | 300 | 10 | 6 | 3 |
| 28 | 0 | 19 | 3 | 71 | 2 | 8 | 9¾ | 365 | 12 | 10 | 11¼ |
| 29 | 0 | 19 | 11¼ | 72 | 2 | 9 | 6 | 400 | 13 | 15 | 0 |
| 30 | 1 | 0 | 7½ | 73 | 2 | 10 | 2¼ | 500 | 17 | 3 | 9 |
| 31 | 1 | 1 | 3¾ | 74 | 2 | 10 | 10½ | 600 | 20 | 12 | 6 |
| 32 | 1 | 2 | 0 | 75 | 2 | 11 | 6¾ | 700 | 24 | 1 | 3 |
| 33 | 1 | 2 | 8¼ | 76 | 2 | 12 | 3 | 750 | 25 | 15 | 7½ |
| 34 | 1 | 3 | 4½ | 77 | 2 | 12 | 11¼ | 800 | 27 | 10 | 0 |
| 35 | 1 | 4 | 0¾ | 78 | 2 | 13 | 7½ | 900 | 30 | 18 | 9 |
| 36 | 1 | 4 | 9 | 79 | 2 | 14 | 3¾ | 1000 | 34 | 7 | 6 |
| 37 | 1 | 5 | 5¼ | 80 | 2 | 15 | 0 | 1250 | 42 | 19 | 4½ |
| 38 | 1 | 6 | 1½ | 81 | 2 | 15 | 8¼ | 1500 | 51 | 11 | 3 |
| 39 | 1 | 6 | 9¾ | 82 | 2 | 16 | 4½ | 1750 | 60 | 3 | 1½ |
| 40 | 1 | 7 | 6 | 83 | 2 | 17 | 0¾ | 2000 | 68 | 15 | 0 |
| 41 | 1 | 8 | 2¼ | 84 | 2 | 17 | 9 | 2240 | 77 | 0 | 0 |
| 42 | 1 | 8 | 10½ | 85 | 2 | 18 | 5¼ | 3000 | 103 | 2 | 6 |
| 43 | 1 | 9 | 6¾ | 86 | 2 | 19 | 1½ | 5000 | 171 | 17 | 6 |

## 8¾d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 8¾ | 44 | 1 | 12 | 1 | 87 | 3 | 3 | 5¼ |
| 2 | 0 | 1 | 5¼ | 45 | 1 | 12 | 9¾ | 88 | 3 | 4 | 2 |
| 3 | 0 | 2 | 2¾ | 46 | 1 | 13 | 6¼ | 89 | 3 | 4 | 10¾ |
| 4 | 0 | 2 | 11 | 47 | 1 | 14 | 3¾ | 90 | 3 | 5 | 7¼ |
| 5 | 0 | 3 | 7¾ | 48 | 1 | 15 | 0 | 91 | 3 | 6 | 4¼ |
| 6 | 0 | 4 | 4¼ | 49 | 1 | 15 | 8¾ | 92 | 3 | 7 | 1 |
| 7 | 0 | 5 | 1¾ | 50 | 1 | 16 | 5¼ | 93 | 3 | 7 | 9¾ |
| 8 | 0 | 5 | 10 | 51 | 1 | 17 | 2¾ | 94 | 3 | 8 | 6¼ |
| 9 | 0 | 6 | 6¾ | 52 | 1 | 17 | 11 | 95 | 3 | 9 | 3¼ |
| 10 | 0 | 7 | 3¼ | 53 | 1 | 18 | 7¾ | 96 | 3 | 10 | 0 |
| 11 | 0 | 8 | 0¼ | 54 | 1 | 19 | 4¼ | 97 | 3 | 10 | 8¾ |
| 12 | 0 | 8 | 9 | 55 | 2 | 0 | 1¾ | 98 | 3 | 11 | 5¼ |
| 13 | 0 | 9 | 5¾ | 56 | 2 | 0 | 10 | 99 | 3 | 12 | 2¾ |
| 14 | 0 | 10 | 2¼ | 57 | 2 | 1 | 6¾ | 100 | 3 | 12 | 11 |
| 15 | 0 | 10 | 11¼ | 58 | 2 | 2 | 3¼ | 108 | 3 | 18 | 9 |
| 16 | 0 | 11 | 8 | 59 | 2 | 3 | 0¼ | 110 | 4 | 0 | 2¼ |
| 17 | 0 | 12 | 4¾ | 60 | 2 | 3 | 9 | 112 | 4 | 1 | 8 |
| 18 | 0 | 13 | 1¼ | 61 | 2 | 4 | 5¾ | 120 | 4 | 7 | 6 |
| 19 | 0 | 13 | 10¼ | 62 | 2 | 5 | 2¼ | 130 | 4 | 14 | 9¼ |
| 20 | 0 | 14 | 7 | 63 | 2 | 5 | 11¼ | 132 | 4 | 16 | 3 |
| 21 | 0 | 15 | 3¾ | 64 | 2 | 6 | 8 | 140 | 5 | 2 | 1 |
| 22 | 0 | 16 | 0¼ | 65 | 2 | 7 | 4¾ | 144 | 5 | 5 | 0 |
| 23 | 0 | 16 | 9¼ | 66 | 2 | 8 | 1¼ | 150 | 5 | 9 | 4¼ |
| 24 | 0 | 17 | 6 | 67 | 2 | 8 | 10¼ | 175 | 6 | 7 | 7¼ |
| 25 | 0 | 18 | 2¾ | 68 | 2 | 9 | 7 | 200 | 7 | 5 | 10 |
| 26 | 0 | 18 | 11¼ | 69 | 2 | 10 | 3¾ | 250 | 9 | 2 | 3¼ |
| 27 | 0 | 19 | 8¼ | 70 | 2 | 11 | 0¼ | 300 | 10 | 18 | 9 |
| 28 | 1 | 0 | 5 | 71 | 2 | 11 | 9¼ | 365 | 13 | 6 | 1¾ |
| 29 | 1 | 1 | 1¾ | 72 | 2 | 12 | 6 | 400 | 14 | 11 | 8 |
| 30 | 1 | 1 | 10¼ | 73 | 2 | 13 | 2¾ | 500 | 18 | 4 | 7 |
| 31 | 1 | 2 | 7¼ | 74 | 2 | 13 | 11¼ | 600 | 21 | 17 | 6 |
| 32 | 1 | 3 | 4 | 75 | 2 | 14 | 8¼ | 700 | 25 | 10 | 5 |
| 33 | 1 | 4 | 0¾ | 76 | 2 | 15 | 5 | 750 | 27 | 6 | 10¼ |
| 34 | 1 | 4 | 9¼ | 77 | 2 | 16 | 1¾ | 800 | 29 | 3 | 4 |
| 35 | 1 | 5 | 6¼ | 78 | 2 | 16 | 10¼ | 900 | 32 | 16 | 3 |
| 36 | 1 | 6 | 3 | 79 | 2 | 17 | 7¼ | 1000 | 36 | 9 | 2 |
| 37 | 1 | 6 | 11¾ | 80 | 2 | 18 | 4 | 1250 | 45 | 11 | 5¼ |
| 38 | 1 | 7 | 8¼ | 81 | 2 | 19 | 0¾ | 1500 | 54 | 13 | 9 |
| 39 | 1 | 8 | 5¼ | 82 | 2 | 19 | 9¼ | 1750 | 63 | 16 | 0¼ |
| 40 | 1 | 9 | 2 | 83 | 3 | 0 | 6¼ | 2000 | 72 | 18 | 4 |
| 41 | 1 | 9 | 10¾ | 84 | 3 | 1 | 3 | 2240 | 81 | 13 | 4 |
| 42 | 1 | 10 | 7¼ | 85 | 3 | 1 | 11¾ | 3000 | 109 | 7 | 6 |
| 43 | 1 | 11 | 4¼ | 86 | 3 | 2 | 8¼ | 5000 | 182 | 5 | 10 |

## 8½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 8½ | 44 | 1 | 11 | 2 | 87 | 3 | 1 | 7½ |
| 2 | 0 | 1 | 5 | 45 | 1 | 11 | 10½ | 88 | 3 | 2 | 4 |
| 3 | 0 | 2 | 1½ | 46 | 1 | 12 | 7 | 89 | 3 | 3 | 0½ |
| 4 | 0 | 2 | 10 | 47 | 1 | 13 | 3½ | 90 | 3 | 3 | 9 |
| 5 | 0 | 3 | 6½ | 48 | 1 | 14 | 0 | 91 | 3 | 4 | 5½ |
| 6 | 0 | 4 | 3 | 49 | 1 | 14 | 8½ | 92 | 3 | 5 | 2 |
| 7 | 0 | 4 | 11½ | 50 | 1 | 15 | 5 | 93 | 3 | 5 | 10½ |
| 8 | 0 | 5 | 8 | 51 | 1 | 16 | 1½ | 94 | 3 | 6 | 7 |
| 9 | 0 | 6 | 4½ | 52 | 1 | 16 | 10 | 95 | 3 | 7 | 3½ |
| 10 | 0 | 7 | 1 | 53 | 1 | 17 | 6½ | 96 | 3 | 8 | 0 |
| 11 | 0 | 7 | 9½ | 54 | 1 | 18 | 3 | 97 | 3 | 8 | 8½ |
| 12 | 0 | 8 | 6 | 55 | 1 | 18 | 11½ | 98 | 3 | 9 | 5 |
| 13 | 0 | 9 | 2½ | 56 | 1 | 19 | 8 | 99 | 3 | 10 | 1½ |
| 14 | 0 | 9 | 11 | 57 | 2 | 0 | 4½ | 100 | 3 | 10 | 10 |
| 15 | 0 | 10 | 7½ | 58 | 2 | 1 | 1 | 108 | 3 | 16 | 6 |
| 16 | 0 | 11 | 4 | 59 | 2 | 1 | 9½ | 110 | 3 | 17 | 11 |
| 17 | 0 | 12 | 0½ | 60 | 2 | 2 | 6 | 112 | 3 | 19 | 4 |
| 18 | 0 | 12 | 9 | 61 | 2 | 3 | 2½ | 120 | 4 | 5 | 0 |
| 19 | 0 | 13 | 5½ | 62 | 2 | 3 | 11 | 130 | 4 | 12 | 1 |
| 20 | 0 | 14 | 2 | 63 | 2 | 4 | 7½ | 132 | 4 | 13 | 6 |
| 21 | 0 | 14 | 10½ | 64 | 2 | 5 | 4 | 140 | 4 | 19 | 2 |
| 22 | 0 | 15 | 7 | 65 | 2 | 6 | 0½ | 144 | 5 | 2 | 0 |
| 23 | 0 | 16 | 3½ | 66 | 2 | 6 | 9 | 150 | 5 | 6 | 3 |
| 24 | 0 | 17 | 0 | 67 | 2 | 7 | 5½ | 175 | 6 | 3 | 11½ |
| 25 | 0 | 17 | 8½ | 68 | 2 | 8 | 2 | 200 | 7 | 1 | 8 |
| 26 | 0 | 18 | 5 | 69 | 2 | 8 | 10½ | 250 | 8 | 17 | 1 |
| 27 | 0 | 19 | 1½ | 70 | 2 | 9 | 7 | 300 | 10 | 12 | 6 |
| 28 | 0 | 19 | 10 | 71 | 2 | 10 | 3½ | 365 | 12 | 18 | 6½ |
| 29 | 1 | 0 | 6½ | 72 | 2 | 11 | 0 | 400 | 14 | 3 | 4 |
| 30 | 1 | 1 | 3 | 73 | 2 | 11 | 8½ | 500 | 17 | 14 | 2 |
| 31 | 1 | 1 | 11½ | 74 | 2 | 12 | 5 | 600 | 21 | 5 | 0 |
| 32 | 1 | 2 | 8 | 75 | 2 | 13 | 1½ | 700 | 24 | 15 | 10 |
| 33 | 1 | 3 | 4½ | 76 | 2 | 13 | 10 | 750 | 26 | 11 | 3 |
| 34 | 1 | 4 | 1 | 77 | 2 | 14 | 6½ | 800 | 28 | 6 | 8 |
| 35 | 1 | 4 | 9½ | 78 | 2 | 15 | 3 | 900 | 31 | 17 | 6 |
| 36 | 1 | 5 | 6 | 79 | 2 | 15 | 11½ | 1000 | 35 | 8 | 4 |
| 37 | 1 | 6 | 2½ | 80 | 2 | 16 | 8 | 1250 | 44 | 5 | 5 |
| 38 | 1 | 6 | 11 | 81 | 2 | 17 | 4½ | 1500 | 53 | 2 | 6 |
| 39 | 1 | 7 | 7½ | 82 | 2 | 18 | 1 | 1750 | 61 | 19 | 7 |
| 40 | 1 | 8 | 4 | 83 | 2 | 18 | 9½ | 2000 | 70 | 16 | 8 |
| 41 | 1 | 9 | 0½ | 84 | 2 | 19 | 6 | 2240 | 79 | 6 | 8 |
| 42 | 1 | 9 | 9 | 85 | 3 | 0 | 2½ | 3000 | 106 | 5 | 0 |
| 43 | 1 | 10 | 5½ | 86 | 3 | 0 | 11 | 5000 | 177 | 1 | 8 |

## 9d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 9 | 44 | 1 | 13 | 0 | 87 | 3 | 5 | 3 |
| 2 | 0 | 1 | 6 | 45 | 1 | 13 | 9 | 88 | 3 | 6 | 0 |
| 3 | 0 | 2 | 3 | 46 | 1 | 14 | 6 | 89 | 3 | 6 | 9 |
| 4 | 0 | 3 | 0 | 47 | 1 | 15 | 3 | 90 | 3 | 7 | 6 |
| 5 | 0 | 3 | 9 | 48 | 1 | 16 | 0 | 91 | 3 | 8 | 3 |
| 6 | 0 | 4 | 6 | 49 | 1 | 16 | 9 | 92 | 3 | 9 | 0 |
| 7 | 0 | 5 | 3 | 50 | 1 | 17 | 6 | 93 | 3 | 9 | 9 |
| 8 | 0 | 6 | 0 | 51 | 1 | 18 | 3 | 94 | 3 | 10 | 6 |
| 9 | 0 | 6 | 9 | 52 | 1 | 19 | 0 | 95 | 3 | 11 | 3 |
| 10 | 0 | 7 | 6 | 53 | 1 | 19 | 9 | 96 | 3 | 12 | 0 |
| 11 | 0 | 8 | 3 | 54 | 2 | 0 | 6 | 97 | 3 | 12 | 9 |
| 12 | 0 | 9 | 0 | 55 | 2 | 1 | 3 | 98 | 3 | 13 | 6 |
| 13 | 0 | 9 | 9 | 56 | 2 | 2 | 0 | 99 | 3 | 14 | 3 |
| 14 | 0 | 10 | 6 | 57 | 2 | 2 | 9 | 100 | 3 | 15 | 0 |
| 15 | 0 | 11 | 3 | 58 | 2 | 3 | 6 | 108 | 4 | 1 | 0 |
| 16 | 0 | 12 | 0 | 59 | 2 | 4 | 3 | 110 | 4 | 2 | 6 |
| 17 | 0 | 12 | 9 | 60 | 2 | 5 | 0 | 112 | 4 | 4 | 0 |
| 18 | 0 | 13 | 6 | 61 | 2 | 5 | 9 | 120 | 4 | 10 | 0 |
| 19 | 0 | 14 | 3 | 62 | 2 | 6 | 6 | 130 | 4 | 17 | 6 |
| 20 | 0 | 15 | 0 | 63 | 2 | 7 | 3 | 132 | 4 | 19 | 0 |
| 21 | 0 | 15 | 9 | 64 | 2 | 8 | 0 | 140 | 5 | 5 | 0 |
| 22 | 0 | 16 | 6 | 65 | 2 | 8 | 9 | 144 | 5 | 8 | 0 |
| 23 | 0 | 17 | 3 | 66 | 2 | 9 | 6 | 150 | 5 | 12 | 6 |
| 24 | 0 | 18 | 0 | 67 | 2 | 10 | 3 | 175 | 6 | 11 | 3 |
| 25 | 0 | 18 | 9 | 68 | 2 | 11 | 0 | 200 | 7 | 10 | 0 |
| 26 | 0 | 19 | 6 | 69 | 2 | 11 | 9 | 250 | 9 | 7 | 6 |
| 27 | 1 | 0 | 3 | 70 | 2 | 12 | 6 | 300 | 11 | 5 | 0 |
| 28 | 1 | 1 | 0 | 71 | 2 | 13 | 3 | 365 | 13 | 13 | 9 |
| 29 | 1 | 1 | 9 | 72 | 2 | 14 | 0 | 400 | 15 | 0 | 0 |
| 30 | 1 | 2 | 6 | 73 | 2 | 14 | 9 | 500 | 18 | 15 | 0 |
| 31 | 1 | 3 | 3 | 74 | 2 | 15 | 6 | 600 | 22 | 10 | 0 |
| 32 | 1 | 4 | 0 | 75 | 2 | 16 | 3 | 700 | 26 | 5 | 0 |
| 33 | 1 | 4 | 9 | 76 | 2 | 17 | 0 | 750 | 28 | 2 | 6 |
| 34 | 1 | 5 | 6 | 77 | 2 | 17 | 9 | 800 | 30 | 0 | 0 |
| 35 | 1 | 6 | 3 | 78 | 2 | 18 | 6 | 900 | 33 | 15 | 0 |
| 36 | 1 | 7 | 0 | 79 | 2 | 19 | 3 | 1000 | 37 | 10 | 0 |
| 37 | 1 | 7 | 9 | 80 | 3 | 0 | 0 | 1250 | 46 | 17 | 6 |
| 38 | 1 | 8 | 6 | 81 | 3 | 0 | 9 | 1500 | 56 | 5 | 0 |
| 39 | 1 | 9 | 3 | 82 | 3 | 1 | 6 | 1750 | 65 | 12 | 6 |
| 40 | 1 | 10 | 0 | 83 | 3 | 2 | 3 | 2000 | 75 | 0 | 0 |
| 41 | 1 | 10 | 9 | 84 | 3 | 3 | 0 | 2240 | 84 | 0 | 0 |
| 42 | 1 | 11 | 6 | 85 | 3 | 3 | 9 | 3000 | 112 | 10 | 0 |
| 43 | 1 | 12 | 3 | 86 | 3 | 4 | 6 | 5000 | 187 | 10 | 0 |

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 9½ | 44 | 1 | 13 | 11 | 87 | 3 | 7 | 0½ |
| 2 | 0 | 1 | 6½ | 45 | 1 | 14 | 8½ | 88 | 3 | 7 | 10 |
| 3 | 0 | 2 | 3½ | 46 | 1 | 15 | 5½ | 89 | 3 | 8 | 7½ |
| 4 | 0 | 3 | 1 | 47 | 1 | 16 | 2½ | 90 | 3 | 9 | 4½ |
| 5 | 0 | 3 | 10½ | 48 | 1 | 17 | 0 | 91 | 3 | 10 | 1½ |
| 6 | 0 | 4 | 7½ | 49 | 1 | 17 | 9½ | 92 | 3 | 10 | 11 |
| 7 | 0 | 5 | 4½ | 50 | 1 | 18 | 6½ | 93 | 3 | 11 | 8½ |
| 8 | 0 | 6 | 2 | 51 | 1 | 19 | 3½ | 94 | 3 | 12 | 5½ |
| 9 | 0 | 6 | 11½ | 52 | 2 | 0 | 1 | 95 | 3 | 13 | 2½ |
| 10 | 0 | 7 | 8½ | 53 | 2 | 0 | 10½ | 96 | 3 | 14 | 0 |
| 11 | 0 | 8 | 5½ | 54 | 2 | 1 | 7½ | 97 | 3 | 14 | 9½ |
| 12 | 0 | 9 | 3 | 55 | 2 | 2 | 4½ | 98 | 3 | 15 | 6½ |
| 13 | 0 | 10 | 0½ | 56 | 2 | 3 | 2 | 99 | 3 | 16 | 3½ |
| 14 | 0 | 10 | 9½ | 57 | 2 | 3 | 11½ | 100 | 3 | 17 | 1 |
| 15 | 0 | 11 | 6½ | 58 | 2 | 4 | 8½ | 108 | 4 | 3 | 3 |
| 16 | 0 | 12 | 4 | 59 | 2 | 5 | 5½ | 110 | 4 | 4 | 9½ |
| 17 | 0 | 13 | 1½ | 60 | 2 | 6 | 3 | 112 | 4 | 6 | 4 |
| 18 | 0 | 13 | 10½ | 61 | 2 | 7 | 0½ | 120 | 4 | 12 | 6 |
| 19 | 0 | 14 | 7½ | 62 | 2 | 7 | 9½ | 130 | 5 | 0 | 2½ |
| 20 | 0 | 15 | 5 | 63 | 2 | 8 | 6½ | 132 | 5 | 1 | 9 |
| 21 | 0 | 16 | 2½ | 64 | 2 | 9 | 4 | 140 | 5 | 7 | 11 |
| 22 | 0 | 16 | 11½ | 65 | 2 | 10 | 1½ | 144 | 5 | 11 | 0 |
| 23 | 0 | 17 | 8½ | 66 | 2 | 10 | 10½ | 150 | 5 | 15 | 7½ |
| 24 | 0 | 18 | 6 | 67 | 2 | 11 | 7½ | 175 | 6 | 14 | 10½ |
| 25 | 0 | 19 | 3½ | 68 | 2 | 12 | 5 | 200 | 7 | 14 | 2 |
| 26 | 1 | 0 | 0½ | 69 | 2 | 13 | 2½ | 250 | 9 | 12 | 8½ |
| 27 | 1 | 0 | 9½ | 70 | 2 | 13 | 11½ | 300 | 11 | 11 | 3 |
| 28 | 1 | 1 | 7 | 71 | 2 | 14 | 8½ | 365 | 14 | 1 | 4½ |
| 29 | 1 | 2 | 4½ | 72 | 2 | 15 | 6 | 400 | 15 | 8 | 4 |
| 30 | 1 | 3 | 1½ | 73 | 2 | 16 | 3½ | 500 | 19 | 5 | 5 |
| 31 | 1 | 3 | 10½ | 74 | 2 | 17 | 0½ | 600 | 23 | 2 | 6 |
| 32 | 1 | 4 | 8 | 75 | 2 | 17 | 9½ | 700 | 26 | 19 | 7 |
| 33 | 1 | 5 | 5½ | 76 | 2 | 18 | 7 | 750 | 28 | 18 | 1½ |
| 34 | 1 | 6 | 2½ | 77 | 2 | 19 | 4½ | 800 | 30 | 16 | 8 |
| 35 | 1 | 6 | 11½ | 78 | 3 | 0 | 1½ | 900 | 34 | 13 | 9 |
| 36 | 1 | 7 | 9 | 79 | 3 | 0 | 10½ | 1000 | 38 | 10 | 10 |
| 37 | 1 | 8 | 6½ | 80 | 3 | 1 | 8 | 1250 | 48 | 3 | 6½ |
| 38 | 1 | 9 | 3½ | 81 | 3 | 2 | 5½ | 1500 | 57 | 16 | 3 |
| 39 | 1 | 10 | 0½ | 82 | 3 | 3 | 2½ | 1750 | 67 | 8 | 11½ |
| 40 | 1 | 10 | 10 | 83 | 3 | 3 | 11½ | 2000 | 77 | 1 | 8 |
| 41 | 1 | 11 | 7½ | 84 | 3 | 4 | 9 | 2240 | 86 | 6 | 8 |
| 42 | 1 | 12 | 4½ | 85 | 3 | 5 | 6½ | 3000 | 115 | 12 | 6 |
| 43 | 1 | 13 | 1½ | 86 | 3 | 6 | 3½ | 5000 | 192 | 14 | 2 |

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 9¾ | 44 | 1 | 15 | 9 | 87 | 3 | 10 | 8½ |
| 2 | 0 | 1 | 7½ | 45 | 1 | 16 | 6½ | 88 | 3 | 11 | 6 |
| 3 | 0 | 2 | 5½ | 46 | 1 | 17 | 4½ | 89 | 3 | 12 | 3½ |
| 4 | 0 | 3 | 3 | 47 | 1 | 18 | 2½ | 90 | 3 | 13 | 1½ |
| 5 | 0 | 4 | 0½ | 48 | 1 | 19 | 0 | 91 | 3 | 13 | 11½ |
| 6 | 0 | 4 | 10½ | 49 | 1 | 19 | 9½ | 92 | 3 | 14 | 9 |
| 7 | 0 | 5 | 8½ | 50 | 2 | 0 | 7½ | 93 | 3 | 15 | 6½ |
| 8 | 0 | 6 | 6 | 51 | 2 | 1 | 5½ | 94 | 3 | 16 | 4½ |
| 9 | 0 | 7 | 3½ | 52 | 2 | 2 | 3 | 95 | 3 | 17 | 2½ |
| 10 | 0 | 8 | 1½ | 53 | 2 | 3 | 0½ | 96 | 3 | 18 | 0 |
| 11 | 0 | 8 | 11½ | 54 | 2 | 3 | 10½ | 97 | 3 | 18 | 9½ |
| 12 | 0 | 9 | 9 | 55 | 2 | 4 | 8½ | 98 | 3 | 19 | 7½ |
| 13 | 0 | 10 | 6½ | 56 | 2 | 5 | 6 | 99 | 4 | 0 | 5½ |
| 14 | 0 | 11 | 4½ | 57 | 2 | 6 | 3½ | 100 | 4 | 1 | 3 |
| 15 | 0 | 12 | 2½ | 58 | 2 | 7 | 1½ | 108 | 4 | 7 | 9 |
| 16 | 0 | 13 | 0 | 59 | 2 | 7 | 11½ | 110 | 4 | 9 | 4½ |
| 17 | 0 | 13 | 9½ | 60 | 2 | 8 | 9 | 112 | 4 | 11 | 0 |
| 18 | 0 | 14 | 7½ | 61 | 2 | 9 | 6½ | 120 | 4 | 17 | 6 |
| 19 | 0 | 15 | 5½ | 62 | 2 | 10 | 4½ | 130 | 5 | 5 | 7½ |
| 20 | 0 | 16 | 3 | 63 | 2 | 11 | 2½ | 132 | 5 | 7 | 3 |
| 21 | 0 | 17 | 0½ | 64 | 2 | 12 | 0 | 140 | 5 | 13 | 9 |
| 22 | 0 | 17 | 10½ | 65 | 2 | 12 | 9½ | 144 | 5 | 17 | 0 |
| 23 | 0 | 18 | 8½ | 66 | 2 | 13 | 7½ | 150 | 6 | 1 | 10½ |
| 24 | 0 | 19 | 6 | 67 | 2 | 14 | 5½ | 175 | 7 | 2 | 2½ |
| 25 | 1 | 0 | 3½ | 68 | 2 | 15 | 3 | 200 | 8 | 2 | 6 |
| 26 | 1 | 1 | 1½ | 69 | 2 | 16 | 0½ | 250 | 10 | 3 | 1½ |
| 27 | 1 | 1 | 11½ | 70 | 2 | 16 | 10½ | 300 | 12 | 3 | 9 |
| 28 | 1 | 2 | 9 | 71 | 2 | 17 | 8½ | 365 | 14 | 16 | 6½ |
| 29 | 1 | 3 | 6½ | 72 | 2 | 18 | 6 | 400 | 16 | 5 | 0 |
| 30 | 1 | 4 | 4½ | 73 | 2 | 19 | 3½ | 500 | 20 | 6 | 3 |
| 31 | 1 | 5 | 2½ | 74 | 3 | 0 | 1½ | 600 | 24 | 7 | 6 |
| 32 | 1 | 6 | 0 | 75 | 3 | 0 | 11½ | 700 | 28 | 8 | 9 |
| 33 | 1 | 6 | 9½ | 76 | 3 | 1 | 9 | 750 | 30 | 9 | 4½ |
| 34 | 1 | 7 | 7½ | 77 | 3 | 2 | 6½ | 800 | 32 | 10 | 0 |
| 35 | 1 | 8 | 5½ | 78 | 3 | 3 | 4½ | 900 | 36 | 11 | 3 |
| 36 | 1 | 9 | 3 | 79 | 3 | 4 | 2½ | 1000 | 40 | 12 | 6 |
| 37 | 1 | 10 | 0½ | 80 | 3 | 5 | 0 | 1250 | 50 | 15 | 7½ |
| 38 | 1 | 10 | 10½ | 81 | 3 | 5 | 9½ | 1500 | 60 | 18 | 9 |
| 39 | 1 | 11 | 8½ | 82 | 3 | 6 | 7½ | 1750 | 71 | 1 | 10½ |
| 40 | 1 | 12 | 6 | 83 | 3 | 7 | 5½ | 2000 | 81 | 5 | 0 |
| 41 | 1 | 13 | 3½ | 84 | 3 | 8 | 3 | 2240 | 91 | 0 | 0 |
| 42 | 1 | 14 | 1½ | 85 | 3 | 9 | 0½ | 3000 | 121 | 17 | 6 |
| 43 | 1 | 14 | 11½ | 86 | 3 | 9 | 10½ | 5000 | 203 | 2 | 6 |

## 9¼d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 9¼ | 44 | 1 | 14 | 10 | 87 | 3 | 8 | 10½ |
| 2 | 0 | 1 | 7 | 45 | 1 | 15 | 7½ | 88 | 3 | 9 | 8 |
| 3 | 0 | 2 | 4½ | 46 | 1 | 16 | 5 | 89 | 3 | 10 | 5½ |
| 4 | 0 | 3 | 2 | 47 | 1 | 17 | 2½ | 90 | 3 | 11 | 3 |
| 5 | 0 | 3 | 11¼ | 48 | 1 | 18 | 0 | 91 | 3 | 12 | 0½ |
| 6 | 0 | 4 | 9 | 49 | 1 | 18 | 9½ | 92 | 3 | 12 | 10 |
| 7 | 0 | 5 | 6½ | 50 | 1 | 19 | 7 | 93 | 3 | 13 | 7½ |
| 8 | 0 | 6 | 4 | 51 | 2 | 0 | 4½ | 94 | 3 | 14 | 5 |
| 9 | 0 | 7 | 1½ | 52 | 2 | 1 | 2 | 95 | 3 | 15 | 2½ |
| 10 | 0 | 7 | 11 | 53 | 2 | 1 | 11½ | 96 | 3 | 16 | 0 |
| 11 | 0 | 8 | 8½ | 54 | 2 | 2 | 9 | 97 | 3 | 16 | 9½ |
| 12 | 0 | 9 | 6 | 55 | 2 | 3 | 6½ | 98 | 3 | 17 | 7 |
| 13 | 0 | 10 | 3½ | 56 | 2 | 4 | 4 | 99 | 3 | 18 | 4½ |
| 14 | 0 | 11 | 1 | 57 | 2 | 5 | 1½ | 100 | 3 | 19 | 2 |
| 15 | 0 | 11 | 10½ | 58 | 2 | 5 | 11 | 108 | 4 | 5 | 6 |
| 16 | 0 | 12 | 8 | 59 | 2 | 6 | 8½ | 110 | 4 | 7 | 1 |
| 17 | 0 | 13 | 5½ | 60 | 2 | 7 | 6 | 112 | 4 | 8 | 8 |
| 18 | 0 | 14 | 3 | 61 | 2 | 8 | 3½ | 120 | 4 | 15 | 0 |
| 19 | 0 | 15 | 0½ | 62 | 2 | 9 | 1 | 130 | 5 | 2 | 11 |
| 20 | 0 | 15 | 10 | 63 | 2 | 9 | 10½ | 132 | 5 | 4 | 6 |
| 21 | 0 | 16 | 7½ | 64 | 2 | 10 | 8 | 140 | 5 | 10 | 10 |
| 22 | 0 | 17 | 5 | 65 | 2 | 11 | 5½ | 144 | 5 | 14 | 0 |
| 23 | 0 | 18 | 2½ | 66 | 2 | 12 | 3 | 150 | 5 | 18 | 9 |
| 24 | 0 | 19 | 0 | 67 | 2 | 13 | 0½ | 175 | 6 | 18 | 6½ |
| 25 | 0 | 19 | 9½ | 68 | 2 | 13 | 10 | 200 | 7 | 18 | 4 |
| 26 | 1 | 0 | 7 | 69 | 2 | 14 | 7½ | 250 | 9 | 17 | 11 |
| 27 | 1 | 1 | 4½ | 70 | 2 | 15 | 5 | 300 | 11 | 17 | 6 |
| 28 | 1 | 2 | 2 | 71 | 2 | 16 | 2½ | 365 | 14 | 8 | 11½ |
| 29 | 1 | 2 | 11½ | 72 | 2 | 17 | 0 | 400 | 15 | 16 | 8 |
| 30 | 1 | 3 | 9 | 73 | 2 | 17 | 9½ | 500 | 19 | 15 | 10 |
| 31 | 1 | 4 | 6½ | 74 | 2 | 18 | 7 | 600 | 23 | 15 | 0 |
| 32 | 1 | 5 | 4 | 75 | 2 | 19 | 4½ | 700 | 27 | 14 | 2 |
| 33 | 1 | 6 | 1½ | 76 | 3 | 0 | 2 | 750 | 29 | 13 | 9 |
| 34 | 1 | 6 | 11 | 77 | 3 | 0 | 11½ | 800 | 31 | 13 | 4 |
| 35 | 1 | 7 | 8½ | 78 | 3 | 1 | 9 | 900 | 35 | 12 | 6 |
| 36 | 1 | 8 | 6 | 79 | 3 | 2 | 6½ | 1000 | 39 | 11 | 8 |
| 37 | 1 | 9 | 3½ | 80 | 3 | 3 | 4 | 1250 | 49 | 9 | 7 |
| 38 | 1 | 10 | 1 | 81 | 3 | 4 | 1½ | 1500 | 59 | 7 | 6 |
| 39 | 1 | 10 | 10½ | 82 | 3 | 4 | 11 | 1750 | 69 | 5 | 5 |
| 40 | 1 | 11 | 8 | 83 | 3 | 5 | 8½ | 2000 | 79 | 3 | 4 |
| 41 | 1 | 12 | 5½ | 84 | 3 | 6 | 6 | 2240 | 88 | 13 | 4 |
| 42 | 1 | 13 | 3 | 85 | 3 | 7 | 3½ | 3000 | 118 | 15 | 0 |
| 43 | 1 | 14 | 0½ | 86 | 3 | 8 | 1 | 5000 | 197 | 18 | 4 |

## 10d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 10 | 44 | 1 | 16 | 8 | 87 | 3 | 12 | 6 |
| 2 | 0 | 1 | 8 | 45 | 1 | 17 | 6 | 88 | 3 | 13 | 4 |
| 3 | 0 | 2 | 6 | 46 | 1 | 18 | 4 | 89 | 3 | 14 | 2 |
| 4 | 0 | 3 | 4 | 47 | 1 | 19 | 2 | 90 | 3 | 15 | 0 |
| 5 | 0 | 4 | 2 | 48 | 2 | 0 | 0 | 91 | 3 | 15 | 10 |
| 6 | 0 | 5 | 0 | 49 | 2 | 0 | 10 | 92 | 3 | 16 | 8 |
| 7 | 0 | 5 | 10 | 50 | 2 | 1 | 8 | 93 | 3 | 17 | 6 |
| 8 | 0 | 6 | 8 | 51 | 2 | 2 | 6 | 94 | 3 | 18 | 4 |
| 9 | 0 | 7 | 6 | 52 | 2 | 3 | 4 | 95 | 3 | 19 | 2 |
| 10 | 0 | 8 | 4 | 53 | 2 | 4 | 2 | 96 | 4 | 0 | 0 |
| 11 | 0 | 9 | 2 | 54 | 2 | 5 | 0 | 97 | 4 | 0 | 10 |
| 12 | 0 | 10 | 0 | 55 | 2 | 5 | 10 | 98 | 4 | 1 | 8 |
| 13 | 0 | 10 | 10 | 56 | 2 | 6 | 8 | 99 | 4 | 2 | 6 |
| 14 | 0 | 11 | 8 | 57 | 2 | 7 | 6 | 100 | 4 | 3 | 4 |
| 15 | 0 | 12 | 6 | 58 | 2 | 8 | 4 | 108 | 4 | 10 | 0 |
| 16 | 0 | 13 | 4 | 59 | 2 | 9 | 2 | 110 | 4 | 11 | 8 |
| 17 | 0 | 14 | 2 | 60 | 2 | 10 | 0 | 112 | 4 | 13 | 4 |
| 18 | 0 | 15 | 0 | 61 | 2 | 10 | 10 | 120 | 5 | 0 | 0 |
| 19 | 0 | 15 | 10 | 62 | 2 | 11 | 8 | 130 | 5 | 8 | 4 |
| 20 | 0 | 16 | 8 | 63 | 2 | 12 | 6 | 132 | 5 | 10 | 0 |
| 21 | 0 | 17 | 6 | 64 | 2 | 13 | 4 | 140 | 5 | 16 | 8 |
| 22 | 0 | 18 | 4 | 65 | 2 | 14 | 2 | 144 | 6 | 0 | 0 |
| 23 | 0 | 19 | 2 | 66 | 2 | 15 | 0 | 150 | 6 | 5 | 0 |
| 24 | 1 | 0 | 0 | 67 | 2 | 15 | 10 | 175 | 7 | 5 | 10 |
| 25 | 1 | 0 | 10 | 68 | 2 | 16 | 8 | 200 | 8 | 6 | 8 |
| 26 | 1 | 1 | 8 | 69 | 2 | 17 | 6 | 250 | 10 | 8 | 4 |
| 27 | 1 | 2 | 6 | 70 | 2 | 18 | 4 | 300 | 12 | 10 | 0 |
| 28 | 1 | 3 | 4 | 71 | 2 | 19 | 2 | 365 | 15 | 4 | 2 |
| 29 | 1 | 4 | 2 | 72 | 3 | 0 | 0 | 400 | 16 | 13 | 4 |
| 30 | 1 | 5 | 0 | 73 | 3 | 0 | 10 | 500 | 20 | 16 | 8 |
| 31 | 1 | 5 | 10 | 74 | 3 | 1 | 8 | 600 | 25 | 0 | 0 |
| 32 | 1 | 6 | 8 | 75 | 3 | 2 | 6 | 700 | 29 | 3 | 4 |
| 33 | 1 | 7 | 6 | 76 | 3 | 3 | 4 | 750 | 31 | 5 | 0 |
| 34 | 1 | 8 | 4 | 77 | 3 | 4 | 2 | 800 | 33 | 6 | 8 |
| 35 | 1 | 9 | 2 | 78 | 3 | 5 | 0 | 900 | 37 | 10 | 0 |
| 36 | 1 | 10 | 0 | 79 | 3 | 5 | 10 | 1000 | 41 | 13 | 4 |
| 37 | 1 | 10 | 10 | 80 | 3 | 6 | 8 | 1250 | 52 | 1 | 8 |
| 38 | 1 | 11 | 8 | 81 | 3 | 7 | 6 | 1500 | 62 | 10 | 0 |
| 39 | 1 | 12 | 6 | 82 | 3 | 8 | 4 | 1750 | 72 | 18 | 4 |
| 40 | 1 | 13 | 4 | 83 | 3 | 9 | 2 | 2000 | 83 | 6 | 8 |
| 41 | 1 | 14 | 2 | 84 | 3 | 10 | 0 | 2240 | 93 | 6 | 8 |
| 42 | 1 | 15 | 0 | 85 | 3 | 10 | 10 | 3000 | 125 | 0 | 0 |
| 43 | 1 | 15 | 10 | 86 | 3 | 11 | 8 | 5000 | 208 | 6 | 8 |

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 10½ | 44 | 1 | 17 | 7 | 87 | 3 | 14 | 3½ |
| 2 | 0 | 1 | 8½ | 45 | 1 | 18 | 5½ | 88 | 3 | 15 | 2 |
| 3 | 0 | 2 | 6½ | 46 | 1 | 19 | 3½ | 89 | 3 | 16 | 0½ |
| 4 | 0 | 3 | 5 | 47 | 2 | 0 | 1½ | 90 | 3 | 16 | 10½ |
| 5 | 0 | 4 | 3½ | 48 | 2 | 1 | 0 | 91 | 3 | 17 | 8½ |
| 6 | 0 | 5 | 1½ | 49 | 2 | 1 | 10½ | 92 | 3 | 18 | 7 |
| 7 | 0 | 5 | 11½ | 50 | 2 | 2 | 8½ | 93 | 3 | 19 | 5½ |
| 8 | 0 | 6 | 10 | 51 | 2 | 3 | 6½ | 94 | 4 | 0 | 3½ |
| 9 | 0 | 7 | 8½ | 52 | 2 | 4 | 5 | 95 | 4 | 1 | 1½ |
| 10 | 0 | 8 | 6½ | 53 | 2 | 5 | 3½ | 96 | 4 | 2 | 0 |
| 11 | 0 | 9 | 4½ | 54 | 2 | 6 | 1½ | 97 | 4 | 2 | 10½ |
| 12 | 0 | 10 | 3 | 55 | 2 | 6 | 11½ | 98 | 4 | 3 | 8½ |
| 13 | 0 | 11 | 1½ | 56 | 2 | 7 | 10 | 99 | 4 | 4 | 6½ |
| 14 | 0 | 11 | 11½ | 57 | 2 | 8 | 8½ | 100 | 4 | 5 | 5 |
| 15 | 0 | 12 | 9½ | 58 | 2 | 9 | 6½ | 108 | 4 | 12 | 3 |
| 16 | 0 | 13 | 8 | 59 | 2 | 10 | 4½ | 110 | 4 | 13 | 11½ |
| 17 | 0 | 14 | 6½ | 60 | 2 | 11 | 3 | 112 | 4 | 15 | 8 |
| 18 | 0 | 15 | 4½ | 61 | 2 | 12 | 1½ | 120 | 5 | 2 | 6 |
| 19 | 0 | 16 | 2½ | 62 | 2 | 12 | 11½ | 130 | 5 | 11 | 0½ |
| 20 | 0 | 17 | 1 | 63 | 2 | 13 | 9½ | 132 | 5 | 12 | 9 |
| 21 | 0 | 17 | 11½ | 64 | 2 | 14 | 8 | 140 | 5 | 19 | 7 |
| 22 | 0 | 18 | 9½ | 65 | 2 | 15 | 6½ | 144 | 6 | 3 | 0 |
| 23 | 0 | 19 | 7½ | 66 | 2 | 16 | 4½ | 150 | 6 | 8 | 1½ |
| 24 | 1 | 0 | 6 | 67 | 2 | 17 | 2½ | 175 | 7 | 9 | 5½ |
| 25 | 1 | 1 | 4½ | 68 | 2 | 18 | 1 | 200 | 8 | 10 | 10 |
| 26 | 1 | 2 | 2½ | 69 | 2 | 18 | 11½ | 250 | 10 | 13 | 6½ |
| 27 | 1 | 3 | 0½ | 70 | 2 | 19 | 9½ | 300 | 12 | 16 | 3 |
| 28 | 1 | 3 | 11 | 71 | 3 | 0 | 7½ | 365 | 15 | 11 | 9½ |
| 29 | 1 | 4 | 9½ | 72 | 3 | 1 | 6 | 400 | 17 | 1 | 8 |
| 30 | 1 | 5 | 7½ | 73 | 3 | 2 | 4½ | 500 | 21 | 7 | 1 |
| 31 | 1 | 6 | 5½ | 74 | 3 | 3 | 2½ | 600 | 25 | 12 | 6 |
| 32 | 1 | 7 | 4 | 75 | 3 | 4 | 0½ | 700 | 29 | 17 | 11 |
| 33 | 1 | 8 | 2½ | 76 | 3 | 4 | 11 | 750 | 32 | 0 | 7½ |
| 34 | 1 | 9 | 0½ | 77 | 3 | 5 | 9½ | 800 | 34 | 3 | 4 |
| 35 | 1 | 9 | 10½ | 78 | 3 | 6 | 7½ | 900 | 38 | 8 | 9 |
| 36 | 1 | 10 | 9 | 79 | 3 | 7 | 5½ | 1000 | 42 | 14 | 2 |
| 37 | 1 | 11 | 7½ | 80 | 3 | 8 | 4 | 1250 | 53 | 7 | 8½ |
| 38 | 1 | 12 | 5½ | 81 | 3 | 9 | 2½ | 1500 | 64 | 1 | 3 |
| 39 | 1 | 13 | 3½ | 82 | 3 | 10 | 0½ | 1750 | 74 | 14 | 9½ |
| 40 | 1 | 14 | 2 | 83 | 3 | 10 | 10½ | 2000 | 85 | 8 | 4 |
| 41 | 1 | 15 | 0½ | 84 | 3 | 11 | 9 | 2240 | 95 | 13 | 4 |
| 42 | 1 | 15 | 10½ | 85 | 3 | 12 | 7½ | 3000 | 128 | 2 | 6 |
| 43 | 1 | 16 | 8½ | 86 | 3 | 13 | 5½ | 5000 | 213 | 10 | 10 |

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 10½ | 44 | 1 | 19 | 5 | 87 | 3 | 17 | 11½ |
| 2 | 0 | 1 | 9½ | 45 | 2 | 0 | 3½ | 88 | 3 | 18 | 10 |
| 3 | 0 | 2 | 8½ | 46 | 2 | 1 | 2½ | 89 | 3 | 19 | 8½ |
| 4 | 0 | 3 | 7 | 47 | 2 | 2 | 1½ | 90 | 4 | 0 | 7½ |
| 5 | 0 | 4 | 5½ | 48 | 2 | 3 | 0 | 91 | 4 | 1 | 6½ |
| 6 | 0 | 5 | 4½ | 49 | 2 | 3 | 10½ | 92 | 4 | 2 | 5 |
| 7 | 0 | 6 | 3½ | 50 | 2 | 4 | 9½ | 93 | 4 | 3 | 3½ |
| 8 | 0 | 7 | 2 | 51 | 2 | 5 | 8½ | 94 | 4 | 4 | 2½ |
| 9 | 0 | 8 | 0½ | 52 | 2 | 6 | 7 | 95 | 4 | 5 | 1½ |
| 10 | 0 | 8 | 11½ | 53 | 2 | 7 | 5½ | 96 | 4 | 6 | 0 |
| 11 | 0 | 9 | 10½ | 54 | 2 | 8 | 4½ | 97 | 4 | 6 | 10½ |
| 12 | 0 | 10 | 9 | 55 | 2 | 9 | 3½ | 98 | 4 | 7 | 9½ |
| 13 | 0 | 11 | 7½ | 56 | 2 | 10 | 2 | 99 | 4 | 8 | 8½ |
| 14 | 0 | 12 | 6½ | 57 | 2 | 11 | 0½ | 100 | 4 | 9 | 7 |
| 15 | 0 | 13 | 5½ | 58 | 2 | 11 | 11½ | 108 | 4 | 16 | 9 |
| 16 | 0 | 14 | 4 | 59 | 2 | 12 | 10½ | 110 | 4 | 18 | 6½ |
| 17 | 0 | 15 | 2½ | 60 | 2 | 13 | 9 | 112 | 5 | 0 | 4 |
| 18 | 0 | 16 | 1½ | 61 | 2 | 14 | 7½ | 120 | 5 | 7 | 6 |
| 19 | 0 | 17 | 0½ | 62 | 2 | 15 | 6½ | 130 | 5 | 16 | 5½ |
| 20 | 0 | 17 | 11 | 63 | 2 | 16 | 5½ | 132 | 5 | 18 | 3 |
| 21 | 0 | 18 | 9½ | 64 | 2 | 17 | 4 | 140 | 6 | 5 | 5 |
| 22 | 0 | 19 | 8½ | 65 | 2 | 18 | 2½ | 144 | 6 | 9 | 0 |
| 23 | 1 | 0 | 7½ | 66 | 2 | 19 | 1½ | 150 | 6 | 14 | 4½ |
| 24 | 1 | 1 | 6 | 67 | 3 | 0 | 0½ | 175 | 7 | 16 | 9½ |
| 25 | 1 | 2 | 4½ | 68 | 3 | 0 | 11 | 200 | 8 | 19 | 2 |
| 26 | 1 | 3 | 3½ | 69 | 3 | 1 | 9½ | 250 | 11 | 3 | 11½ |
| 27 | 1 | 4 | 2½ | 70 | 3 | 2 | 8½ | 300 | 13 | 8 | 9 |
| 28 | 1 | 5 | 1 | 71 | 3 | 3 | 7½ | 365 | 16 | 6 | 11½ |
| 29 | 1 | 5 | 11½ | 72 | 3 | 4 | 6 | 400 | 17 | 18 | 4 |
| 30 | 1 | 6 | 10½ | 73 | 3 | 5 | 4½ | 500 | 22 | 7 | 11 |
| 31 | 1 | 7 | 9½ | 74 | 3 | 6 | 3½ | 600 | 26 | 17 | 6 |
| 32 | 1 | 8 | 8 | 75 | 3 | 7 | 2½ | 700 | 31 | 7 | 1 |
| 33 | 1 | 9 | 6½ | 76 | 3 | 8 | 1 | 750 | 33 | 11 | 10½ |
| 34 | 1 | 10 | 5½ | 77 | 3 | 8 | 11½ | 800 | 35 | 16 | 8 |
| 35 | 1 | 11 | 4½ | 78 | 3 | 9 | 10½ | 900 | 40 | 6 | 3 |
| 36 | 1 | 12 | 3 | 79 | 3 | 10 | 9½ | 1000 | 44 | 15 | 10 |
| 37 | 1 | 13 | 1½ | 80 | 3 | 11 | 8 | 1250 | 55 | 19 | 9½ |
| 38 | 1 | 14 | 0½ | 81 | 3 | 12 | 6½ | 1500 | 67 | 3 | 9 |
| 39 | 1 | 14 | 11½ | 82 | 3 | 13 | 5½ | 1750 | 78 | 7 | 8½ |
| 40 | 1 | 15 | 10 | 83 | 3 | 14 | 4½ | 2000 | 89 | 11 | 8 |
| 41 | 1 | 16 | 8½ | 84 | 3 | 15 | 3 | 2240 | 100 | 6 | 8 |
| 42 | 1 | 17 | 7½ | 85 | 3 | 16 | 1½ | 3000 | 134 | 7 | 6 |
| 43 | 1 | 18 | 6½ | 86 | 3 | 17 | 0½ | 5000 | 223 | 19 | 2 |

## 10½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 10½ | 44 | 1 | 18 | 6 | 87 | 3 | 16 | 1½ |
| 2 | 0 | 1 | 9 | 45 | 1 | 19 | 4½ | 88 | 3 | 17 | 0 |
| 3 | 0 | 2 | 7½ | 46 | 2 | 0 | 3 | 89 | 3 | 17 | 10½ |
| 4 | 0 | 3 | 6 | 47 | 2 | 1 | 1½ | 90 | 3 | 18 | 9 |
| 5 | 0 | 4 | 4½ | 48 | 2 | 2 | 0 | 91 | 3 | 19 | 7½ |
| 6 | 0 | 5 | 3 | 49 | 2 | 2 | 10½ | 92 | 4 | 0 | 6 |
| 7 | 0 | 6 | 1½ | 50 | 2 | 3 | 9 | 93 | 4 | 1 | 4½ |
| 8 | 0 | 7 | 0 | 51 | 2 | 4 | 7½ | 94 | 4 | 2 | 3 |
| 9 | 0 | 7 | 10½ | 52 | 2 | 5 | 6 | 95 | 4 | 3 | 1½ |
| 10 | 0 | 8 | 9 | 53 | 2 | 6 | 4½ | 96 | 4 | 4 | 0 |
| 11 | 0 | 9 | 7½ | 54 | 2 | 7 | 3 | 97 | 4 | 4 | 10½ |
| 12 | 0 | 10 | 6 | 55 | 2 | 8 | 1½ | 98 | 4 | 5 | 9 |
| 13 | 0 | 11 | 4½ | 56 | 2 | 9 | 0 | 99 | 4 | 6 | 7½ |
| 14 | 0 | 12 | 3 | 57 | 2 | 9 | 10½ | 100 | 4 | 7 | 6 |
| 15 | 0 | 13 | 1½ | 58 | 2 | 10 | 9 | 108 | 4 | 14 | 6 |
| 16 | 0 | 14 | 0 | 59 | 2 | 11 | 7½ | 110 | 4 | 16 | 3 |
| 17 | 0 | 14 | 10½ | 60 | 2 | 12 | 6 | 112 | 4 | 18 | 0 |
| 18 | 0 | 15 | 9 | 61 | 2 | 13 | 4½ | 120 | 5 | 5 | 0 |
| 19 | 0 | 16 | 7½ | 62 | 2 | 14 | 3 | 130 | 5 | 13 | 9 |
| 20 | 0 | 17 | 6 | 63 | 2 | 15 | 1½ | 132 | 5 | 15 | 6 |
| 21 | 0 | 18 | 4½ | 64 | 2 | 16 | 0 | 140 | 6 | 2 | 6 |
| 22 | 0 | 19 | 3 | 65 | 2 | 16 | 10½ | 144 | 6 | 6 | 0 |
| 23 | 1 | 0 | 1½ | 66 | 2 | 17 | 9 | 150 | 6 | 11 | 3 |
| 24 | 1 | 1 | 0 | 67 | 2 | 18 | 7½ | 175 | 7 | 13 | 1½ |
| 25 | 1 | 1 | 10½ | 68 | 2 | 19 | 6 | 200 | 8 | 15 | 0 |
| 26 | 1 | 2 | 9 | 69 | 3 | 0 | 4½ | 250 | 10 | 18 | 9 |
| 27 | 1 | 3 | 7½ | 70 | 3 | 1 | 3 | 300 | 13 | 2 | 6 |
| 28 | 1 | 4 | 6 | 71 | 3 | 2 | 1½ | 365 | 15 | 19 | 4½ |
| 29 | 1 | 5 | 4½ | 72 | 3 | 3 | 0 | 400 | 17 | 10 | 0 |
| 30 | 1 | 6 | 3 | 73 | 3 | 3 | 10½ | 500 | 21 | 17 | 6 |
| 31 | 1 | 7 | 1½ | 74 | 3 | 4 | 9 | 600 | 26 | 5 | 0 |
| 32 | 1 | 8 | 0 | 75 | 3 | 5 | 7½ | 700 | 30 | 12 | 6 |
| 33 | 1 | 8 | 10½ | 76 | 3 | 6 | 6 | 750 | 32 | 16 | 3 |
| 34 | 1 | 9 | 9 | 77 | 3 | 7 | 4½ | 800 | 35 | 0 | 0 |
| 35 | 1 | 10 | 7½ | 78 | 3 | 8 | 3 | 900 | 39 | 7 | 6 |
| 36 | 1 | 11 | 6 | 79 | 3 | 9 | 1½ | 1000 | 43 | 15 | 0 |
| 37 | 1 | 12 | 4½ | 80 | 3 | 10 | 0 | 1250 | 54 | 13 | 9 |
| 38 | 1 | 13 | 3 | 81 | 3 | 10 | 10½ | 1500 | 65 | 12 | 6 |
| 39 | 1 | 14 | 1½ | 82 | 3 | 11 | 9 | 1750 | 76 | 11 | 3 |
| 40 | 1 | 15 | 0 | 83 | 3 | 12 | 7½ | 2000 | 87 | 10 | 0 |
| 41 | 1 | 15 | 10½ | 84 | 3 | 13 | 6 | 2240 | 98 | 0 | 0 |
| 42 | 1 | 16 | 9 | 85 | 3 | 14 | 4½ | 3000 | 131 | 5 | 0 |
| 43 | 1 | 17 | 7½ | 86 | 3 | 15 | 3 | 5000 | 218 | 15 | 0 |

## 11d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 11 | 44 | 2 | 0 | 4 | 87 | 3 | 19 | 9 |
| 2 | 0 | 1 | 10 | 45 | 2 | 1 | 3 | 88 | 4 | 0 | 8 |
| 3 | 0 | 2 | 9 | 46 | 2 | 2 | 2 | 89 | 4 | 1 | 7 |
| 4 | 0 | 3 | 8 | 47 | 2 | 3 | 1 | 90 | 4 | 2 | 6 |
| 5 | 0 | 4 | 7 | 48 | 2 | 4 | 0 | 91 | 4 | 3 | 5 |
| 6 | 0 | 5 | 6 | 49 | 2 | 4 | 11 | 92 | 4 | 4 | 4 |
| 7 | 0 | 6 | 5 | 50 | 2 | 5 | 10 | 93 | 4 | 5 | 3 |
| 8 | 0 | 7 | 4 | 51 | 2 | 6 | 9 | 94 | 4 | 6 | 2 |
| 9 | 0 | 8 | 3 | 52 | 2 | 7 | 8 | 95 | 4 | 7 | 1 |
| 10 | 0 | 9 | 2 | 53 | 2 | 8 | 7 | 96 | 4 | 8 | 0 |
| 11 | 0 | 10 | 1 | 54 | 2 | 9 | 6 | 97 | 4 | 8 | 11 |
| 12 | 0 | 11 | 0 | 55 | 2 | 10 | 5 | 98 | 4 | 9 | 10 |
| 13 | 0 | 11 | 11 | 56 | 2 | 11 | 4 | 99 | 4 | 10 | 9 |
| 14 | 0 | 12 | 10 | 57 | 2 | 12 | 3 | 100 | 4 | 11 | 8 |
| 15 | 0 | 13 | 9 | 58 | 2 | 18 | 2 | 108 | 4 | 19 | 0 |
| 16 | 0 | 14 | 8 | 59 | 2 | 14 | 1 | 110 | 5 | 0 | 10 |
| 17 | 0 | 15 | 7 | 60 | 2 | 15 | 0 | 112 | 5 | 2 | 8 |
| 18 | 0 | 16 | 6 | 61 | 2 | 15 | 11 | 120 | 5 | 10 | 0 |
| 19 | 0 | 17 | 5 | 62 | 2 | 16 | 10 | 130 | 5 | 19 | 2 |
| 20 | 0 | 18 | 4 | 63 | 2 | 17 | 9 | 132 | 6 | 1 | 0 |
| 21 | 0 | 19 | 3 | 64 | 2 | 18 | 8 | 140 | 6 | 8 | 4 |
| 22 | 1 | 0 | 2 | 65 | 2 | 19 | 7 | 144 | 6 | 12 | 0 |
| 23 | 1 | 1 | 1 | 66 | 3 | 0 | 6 | 150 | 6 | 17 | 6 |
| 24 | 1 | 2 | 0 | 67 | 3 | 1 | 5 | 175 | 8 | 0 | 5 |
| 25 | 1 | 2 | 11 | 68 | 3 | 2 | 4 | 200 | 9 | 3 | 4 |
| 26 | 1 | 3 | 10 | 69 | 3 | 3 | 3 | 250 | 11 | 9 | 2 |
| 27 | 1 | 4 | 9 | 70 | 3 | 4 | 2 | 300 | 13 | 15 | 0 |
| 28 | 1 | 5 | 8 | 71 | 3 | 5 | 1 | 365 | 16 | 14 | 7 |
| 29 | 1 | 6 | 7 | 72 | 3 | 6 | 0 | 400 | 18 | 6 | 8 |
| 30 | 1 | 7 | 6 | 73 | 3 | 6 | 11 | 500 | 22 | 18 | 4 |
| 31 | 1 | 8 | 5 | 74 | 3 | 7 | 10 | 600 | 27 | 10 | 0 |
| 32 | 1 | 9 | 4 | 75 | 3 | 8 | 9 | 700 | 32 | 1 | 8 |
| 33 | 1 | 10 | 3 | 76 | 3 | 9 | 8 | 750 | 34 | 7 | 6 |
| 34 | 1 | 11 | 2 | 77 | 3 | 10 | 7 | 800 | 36 | 13 | 4 |
| 35 | 1 | 12 | 1 | 78 | 3 | 11 | 6 | 900 | 41 | 5 | 0 |
| 36 | 1 | 13 | 0 | 79 | 3 | 12 | 5 | 1000 | 45 | 16 | 8 |
| 37 | 1 | 13 | 11 | 80 | 3 | 13 | 4 | 1250 | 57 | 5 | 10 |
| 38 | 1 | 14 | 10 | 81 | 3 | 14 | 3 | 1500 | 68 | 15 | 0 |
| 39 | 1 | 15 | 9 | 82 | 3 | 15 | 2 | 1750 | 80 | 4 | 2 |
| 40 | 1 | 16 | 8 | 83 | 3 | 16 | 1 | 2000 | 91 | 13 | 4 |
| 41 | 1 | 17 | 7 | 84 | 3 | 17 | 0 | 2240 | 102 | 13 | 4 |
| 42 | 1 | 18 | 6 | 85 | 3 | 17 | 11 | 3000 | 137 | 10 | 0 |
| 43 | 1 | 19 | 5 | 86 | 3 | 18 | 10 | 5000 | 229 | 3 | 4 |

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 11½ | 44 | 2 | 1 | 3 | 87 | 4 | 1 | 6½ |
| 2 | 0 | 1 | 10½ | 45 | 2 | 2 | 2½ | 88 | 4 | 2 | 6 |
| 3 | 0 | 2 | 9½ | 46 | 2 | 3 | 1½ | 89 | 4 | 3 | 5½ |
| 4 | 0 | 3 | 9 | 47 | 2 | 4 | 0½ | 90 | 4 | 4 | 4½ |
| 5 | 0 | 4 | 8½ | 48 | 2 | 5 | 0 | 91 | 4 | 5 | 3½ |
| 6 | 0 | 5 | 7½ | 49 | 2 | 5 | 11½ | 92 | 4 | 6 | 3 |
| 7 | 0 | 6 | 6½ | 50 | 2 | 6 | 10½ | 93 | 4 | 7 | 2½ |
| 8 | 0 | 7 | 6 | 51 | 2 | 7 | 9½ | 94 | 4 | 8 | 1½ |
| 9 | 0 | 8 | 5½ | 52 | 2 | 8 | 9 | 95 | 4 | 9 | 0½ |
| 10 | 0 | 9 | 4½ | 53 | 2 | 9 | 8½ | 96 | 4 | 10 | 0 |
| 11 | 0 | 10 | 3½ | 54 | 2 | 10 | 7½ | 97 | 4 | 10 | 11½ |
| 12 | 0 | 11 | 3 | 55 | 2 | 11 | 6½ | 98 | 4 | 11 | 10½ |
| 13 | 0 | 12 | 2½ | 56 | 2 | 12 | 6 | 99 | 4 | 12 | 9½ |
| 14 | 0 | 13 | 1½ | 57 | 2 | 13 | 5½ | 100 | 4 | 13 | 9 |
| 15 | 0 | 14 | 0½ | 58 | 2 | 14 | 4½ | 108 | 5 | 1 | 3 |
| 16 | 0 | 15 | 0 | 59 | 2 | 15 | 3½ | 110 | 5 | 3 | 1½ |
| 17 | 0 | 15 | 11½ | 60 | 2 | 16 | 3 | 112 | 5 | 5 | 0 |
| 18 | 0 | 16 | 10½ | 61 | 2 | 17 | 2½ | 120 | 5 | 12 | 6 |
| 19 | 0 | 17 | 9½ | 62 | 2 | 18 | 1½ | 130 | 6 | 1 | 10½ |
| 20 | 0 | 18 | 9 | 63 | 2 | 19 | 0½ | 132 | 6 | 3 | 9 |
| 21 | 0 | 19 | 8½ | 64 | 3 | 0 | 0 | 140 | 6 | 11 | 3 |
| 22 | 1 | 0 | 7½ | 65 | 3 | 0 | 11½ | 144 | 6 | 15 | 0 |
| 23 | 1 | 1 | 6½ | 66 | 3 | 1 | 10½ | 150 | 7 | 0 | 7½ |
| 24 | 1 | 2 | 6 | 67 | 3 | 2 | 9½ | 175 | 8 | 4 | 0½ |
| 25 | 1 | 3 | 5½ | 68 | 3 | 3 | 9 | 200 | 9 | 7 | 6 |
| 26 | 1 | 4 | 4½ | 69 | 3 | 4 | 8½ | 250 | 11 | 14 | 4½ |
| 27 | 1 | 5 | 3½ | 70 | 3 | 5 | 7½ | 300 | 14 | 1 | 3 |
| 28 | 1 | 6 | 3 | 71 | 3 | 6 | 6½ | 365 | 17 | 2 | 2½ |
| 29 | 1 | 7 | 2½ | 72 | 3 | 7 | 6 | 400 | 18 | 15 | 0 |
| 30 | 1 | 8 | 1½ | 73 | 3 | 8 | 5½ | 500 | 23 | 8 | 9 |
| 31 | 1 | 9 | 0½ | 74 | 3 | 9 | 4½ | 600 | 28 | 2 | 6 |
| 32 | 1 | 10 | 0 | 75 | 3 | 10 | 3½ | 700 | 32 | 16 | 3 |
| 33 | 1 | 10 | 11½ | 76 | 3 | 11 | 3 | 750 | 35 | 3 | 1½ |
| 34 | 1 | 11 | 10½ | 77 | 3 | 12 | 2½ | 800 | 37 | 10 | 0 |
| 35 | 1 | 12 | 9½ | 78 | 3 | 13 | 1½ | 900 | 42 | 3 | 9 |
| 36 | 1 | 13 | 9 | 79 | 3 | 14 | 0½ | 1000 | 46 | 17 | 6 |
| 37 | 1 | 14 | 8½ | 80 | 3 | 15 | 0 | 1250 | 58 | 11 | 10½ |
| 38 | 1 | 15 | 7½ | 81 | 3 | 15 | 11½ | 1500 | 70 | 6 | 3 |
| 39 | 1 | 16 | 6½ | 82 | 3 | 16 | 10½ | 1750 | 82 | 0 | 7½ |
| 40 | 1 | 17 | 6 | 83 | 3 | 17 | 9½ | 2000 | 93 | 15 | 0 |
| 41 | 1 | 18 | 5½ | 84 | 3 | 18 | 9 | 2240 | 105 | 0 | 0 |
| 42 | 1 | 19 | 4½ | 85 | 3 | 19 | 8½ | 3000 | 140 | 12 | 6 |
| 43 | 2 | 0 | 3½ | 86 | 4 | 0 | 7½ | 5000 | 234 | 7 | 6 |

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 11¾ | 44 | 2 | 3 | 1 | 87 | 4 | 5 | 2¼ |
| 2 | 0 | 1 | 11¾ | 45 | 2 | 4 | 0¾ | 88 | 4 | 6 | 2 |
| 3 | 0 | 2 | 11¾ | 46 | 2 | 5 | 0¾ | 89 | 4 | 7 | 1¾ |
| 4 | 0 | 3 | 11 | 47 | 2 | 6 | 0¼ | 90 | 4 | 8 | 1¾ |
| 5 | 0 | 4 | 10¾ | 48 | 2 | 7 | 0 | 91 | 4 | 9 | 1¼ |
| 6 | 0 | 5 | 10¾ | 49 | 2 | 7 | 11¾ | 92 | 4 | 10 | 1 |
| 7 | 0 | 6 | 10¾ | 50 | 2 | 8 | 11¾ | 93 | 4 | 11 | 0¾ |
| 8 | 0 | 7 | 10 | 51 | 2 | 9 | 11¾ | 94 | 4 | 12 | 0¾ |
| 9 | 0 | 8 | 9¾ | 52 | 2 | 10 | 11 | 95 | 4 | 13 | 0¼ |
| 10 | 0 | 9 | 9¼ | 53 | 2 | 11 | 10¾ | 96 | 4 | 14 | 0 |
| 11 | 0 | 10 | 9¼ | 54 | 2 | 12 | 10¾ | 97 | 4 | 14 | 11¾ |
| 12 | 0 | 11 | 9 | 55 | 2 | 13 | 10¾ | 98 | 4 | 15 | 11¼ |
| 13 | 0 | 12 | 8¾ | 56 | 2 | 14 | 10 | 99 | 4 | 16 | 11¼ |
| 14 | 0 | 13 | 8¾ | 57 | 2 | 15 | 9¾ | 100 | 4 | 17 | 11 |
| 15 | 0 | 14 | 8¾ | 58 | 2 | 16 | 9¼ | 108 | 5 | 5 | 9 |
| 16 | 0 | 15 | 8 | 59 | 2 | 17 | 9¼ | 110 | 5 | 7 | 8¾ |
| 17 | 0 | 16 | 7¾ | 60 | 2 | 18 | 9 | 112 | 5 | 9 | 8 |
| 18 | 0 | 17 | 7¾ | 61 | 2 | 19 | 8¾ | 120 | 5 | 17 | 6 |
| 19 | 0 | 18 | 7¼ | 62 | 3 | 0 | 8¾ | 130 | 6 | 7 | 3¾ |
| 20 | 0 | 19 | 7 | 63 | 3 | 1 | 8¼ | 132 | 6 | 9 | 3 |
| 21 | 1 | 0 | 6¾ | 64 | 3 | 2 | 8 | 140 | 6 | 17 | 1 |
| 22 | 1 | 1 | 6¾ | 65 | 3 | 3 | 7¾ | 144 | 7 | 1 | 0 |
| 23 | 1 | 2 | 6¼ | 66 | 3 | 4 | 7¼ | 150 | 7 | 6 | 10¾ |
| 24 | 1 | 3 | 6 | 67 | 3 | 5 | 7¼ | 175 | 8 | 11 | 4¾ |
| 25 | 1 | 4 | 5¾ | 68 | 3 | 6 | 7 | 200 | 9 | 15 | 10 |
| 26 | 1 | 5 | 5¾ | 69 | 3 | 7 | 6¾ | 250 | 12 | 4 | 9¾ |
| 27 | 1 | 6 | 5¼ | 70 | 3 | 8 | 6¼ | 300 | 14 | 13 | 9 |
| 28 | 1 | 7 | 5 | 71 | 3 | 9 | 6¼ | 365 | 17 | 17 | 4¾ |
| 29 | 1 | 8 | 4¾ | 72 | 3 | 10 | 6 | 400 | 19 | 11 | 8 |
| 30 | 1 | 9 | 4¾ | 73 | 3 | 11 | 5¾ | 500 | 24 | 9 | 7 |
| 31 | 1 | 10 | 4¼ | 74 | 3 | 12 | 5¼ | 600 | 29 | 7 | 6 |
| 32 | 1 | 11 | 4 | 75 | 3 | 13 | 5¼ | 700 | 34 | 5 | 5 |
| 33 | 1 | 12 | 3¾ | 76 | 3 | 14 | 5 | 750 | 36 | 14 | 4¾ |
| 34 | 1 | 13 | 3¾ | 77 | 3 | 15 | 4¾ | 800 | 39 | 3 | 4 |
| 35 | 1 | 14 | 3¼ | 78 | 3 | 16 | 4¼ | 900 | 44 | 1 | 3 |
| 36 | 1 | 15 | 3 | 79 | 3 | 17 | 4¼ | 1000 | 48 | 19 | 2 |
| 37 | 1 | 16 | 2¾ | 80 | 3 | 18 | 4 | 1250 | 61 | 3 | 11¼ |
| 38 | 1 | 17 | 2¾ | 81 | 3 | 19 | 3¾ | 1500 | 73 | 8 | 9 |
| 39 | 1 | 18 | 2¼ | 82 | 4 | 0 | 3¾ | 1750 | 85 | 13 | 6¾ |
| 40 | 1 | 19 | 2 | 83 | 4 | 1 | 3¼ | 2000 | 97 | 18 | 4 |
| 41 | 2 | 0 | 1¾ | 84 | 4 | 2 | 3 | 2240 | 109 | 13 | 4 |
| 42 | 2 | 1 | 1¾ | 85 | 4 | 3 | 2¾ | 3000 | 146 | 17 | 6 |
| 43 | 2 | 2 | 1¼ | 86 | 4 | 4 | 2¼ | 5000 | 244 | 15 | 10 |

## 11½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 11½ | 44 | 2 | 2 | 2 | 87 | 4 | 3 | 4½ |
| 2 | 0 | 1 | 11 | 45 | 2 | 3 | 1½ | 88 | 4 | 4 | 4 |
| 3 | 0 | 2 | 10½ | 46 | 2 | 4 | 1 | 89 | 4 | 5 | 3½ |
| 4 | 0 | 3 | 10 | 47 | 2 | 5 | 0½ | 90 | 4 | 6 | 3 |
| 5 | 0 | 4 | 9½ | 48 | 2 | 6 | 0 | 91 | 4 | 7 | 2½ |
| 6 | 0 | 5 | 9 | 49 | 2 | 6 | 11½ | 92 | 4 | 8 | 2 |
| 7 | 0 | 6 | 8½ | 50 | 2 | 7 | 11 | 93 | 4 | 9 | 1½ |
| 8 | 0 | 7 | 8 | 51 | 2 | 8 | 10½ | 94 | 4 | 10 | 1 |
| 9 | 0 | 8 | 7½ | 52 | 2 | 9 | 10 | 95 | 4 | 11 | 0½ |
| 10 | 0 | 9 | 7 | 53 | 2 | 10 | 9½ | 96 | 4 | 12 | 0 |
| 11 | 0 | 10 | 6½ | 54 | 2 | 11 | 9 | 97 | 4 | 12 | 11½ |
| 12 | 0 | 11 | 6 | 55 | 2 | 12 | 8½ | 98 | 4 | 13 | 11 |
| 13 | 0 | 12 | 5½ | 56 | 2 | 13 | 8 | 99 | 4 | 14 | 10½ |
| 14 | 0 | 13 | 5 | 57 | 2 | 14 | 7½ | 100 | 4 | 15 | 10 |
| 15 | 0 | 14 | 4½ | 58 | 2 | 15 | 7 | 108 | 5 | 3 | 6 |
| 16 | 0 | 15 | 4 | 59 | 2 | 16 | 6½ | 110 | 5 | 5 | 5 |
| 17 | 0 | 16 | 3½ | 60 | 2 | 17 | 6 | 112 | 5 | 7 | 4 |
| 18 | 0 | 17 | 3 | 61 | 2 | 18 | 5½ | 120 | 5 | 15 | 0 |
| 19 | 0 | 18 | 2½ | 62 | 2 | 19 | 5 | 130 | 6 | 4 | 7 |
| 20 | 0 | 19 | 2 | 63 | 3 | 0 | 4½ | 132 | 6 | 6 | 6 |
| 21 | 1 | 0 | 1½ | 64 | 3 | 1 | 4 | 140 | 6 | 14 | 2 |
| 22 | 1 | 1 | 1 | 65 | 3 | 2 | 3½ | 144 | 6 | 18 | 0 |
| 23 | 1 | 2 | 0½ | 66 | 3 | 3 | 3 | 150 | 7 | 3 | 9 |
| 24 | 1 | 3 | 0 | 67 | 3 | 4 | 2½ | 175 | 8 | 7 | 8½ |
| 25 | 1 | 3 | 11½ | 68 | 3 | 5 | 2 | 200 | 9 | 11 | 8 |
| 26 | 1 | 4 | 11 | 69 | 3 | 6 | 1½ | 250 | 11 | 19 | 7 |
| 27 | 1 | 5 | 10½ | 70 | 3 | 7 | 1 | 300 | 14 | 7 | 6 |
| 28 | 1 | 6 | 10 | 71 | 3 | 8 | 0½ | 365 | 17 | 9 | 9½ |
| 29 | 1 | 7 | 9½ | 72 | 3 | 9 | 0 | 400 | 19 | 3 | 4 |
| 30 | 1 | 8 | 9 | 73 | 3 | 9 | 11½ | 500 | 23 | 19 | 2 |
| 31 | 1 | 9 | 8½ | 74 | 3 | 10 | 11 | 600 | 28 | 15 | 0 |
| 32 | 1 | 10 | 8 | 75 | 3 | 11 | 10½ | 700 | 33 | 10 | 10 |
| 33 | 1 | 11 | 7½ | 76 | 3 | 12 | 10 | 750 | 35 | 18 | 9 |
| 34 | 1 | 12 | 7 | 77 | 3 | 13 | 9½ | 800 | 38 | 6 | 8 |
| 35 | 1 | 13 | 6½ | 78 | 3 | 14 | 9 | 900 | 43 | 2 | 6 |
| 36 | 1 | 14 | 6 | 79 | 3 | 15 | 8½ | 1000 | 47 | 18 | 4 |
| 37 | 1 | 15 | 5½ | 80 | 3 | 16 | 8 | 1250 | 59 | 17 | 11 |
| 38 | 1 | 16 | 5 | 81 | 3 | 17 | 7½ | 1500 | 71 | 17 | 6 |
| 39 | 1 | 17 | 4½ | 82 | 3 | 18 | 7 | 1750 | 83 | 17 | 1 |
| 40 | 1 | 18 | 4 | 83 | 3 | 19 | 6½ | 2000 | 95 | 16 | 8 |
| 41 | 1 | 19 | 3½ | 84 | 4 | 0 | 6 | 2240 | 107 | 6 | 8 |
| 42 | 2 | 0 | 3 | 85 | 4 | 1 | 5½ | 3000 | 143 | 15 | 0 |
| 43 | 2 | 1 | 2½ | 86 | 4 | 2 | 5 | 5000 | 239 | 11 | 8 |

## 1s.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 0 | 44 | 2 | 4 | 0 | 87 | 4 | 7 | 0 |
| 2 | 0 | 2 | 0 | 45 | 2 | 5 | 0 | 88 | 4 | 8 | 0 |
| 3 | 0 | 3 | 0 | 46 | 2 | 6 | 0 | 89 | 4 | 9 | 0 |
| 4 | 0 | 4 | 0 | 47 | 2 | 7 | 0 | 90 | 4 | 10 | 0 |
| 5 | 0 | 5 | 0 | 48 | 2 | 8 | 0 | 91 | 4 | 11 | 0 |
| 6 | 0 | 6 | 0 | 49 | 2 | 9 | 0 | 92 | 4 | 12 | 0 |
| 7 | 0 | 7 | 0 | 50 | 2 | 10 | 0 | 93 | 4 | 13 | 0 |
| 8 | 0 | 8 | 0 | 51 | 2 | 11 | 0 | 94 | 4 | 14 | 0 |
| 9 | 0 | 9 | 0 | 52 | 2 | 12 | 0 | 95 | 4 | 15 | 0 |
| 10 | 0 | 10 | 0 | 53 | 2 | 13 | 0 | 96 | 4 | 16 | 0 |
| 11 | 0 | 11 | 0 | 54 | 2 | 14 | 0 | 97 | 4 | 17 | 0 |
| 12 | 0 | 12 | 0 | 55 | 2 | 15 | 0 | 98 | 4 | 18 | 0 |
| 13 | 0 | 13 | 0 | 56 | 2 | 16 | 0 | 99 | 4 | 19 | 0 |
| 14 | 0 | 14 | 0 | 57 | 2 | 17 | 0 | 100 | 5 | 0 | 0 |
| 15 | 0 | 15 | 0 | 58 | 2 | 18 | 0 | 108 | 5 | 8 | 0 |
| 16 | 0 | 16 | 0 | 59 | 2 | 19 | 0 | 110 | 5 | 10 | 0 |
| 17 | 0 | 17 | 0 | 60 | 3 | 0 | 0 | 112 | 5 | 12 | 0 |
| 18 | 0 | 18 | 0 | 61 | 3 | 1 | 0 | 120 | 6 | 0 | 0 |
| 19 | 0 | 19 | 0 | 62 | 3 | 2 | 0 | 130 | 6 | 10 | 0 |
| 20 | 1 | 0 | 0 | 63 | 3 | 3 | 0 | 132 | 6 | 12 | 0 |
| 21 | 1 | 1 | 0 | 64 | 3 | 4 | 0 | 140 | 7 | 0 | 0 |
| 22 | 1 | 2 | 0 | 65 | 3 | 5 | 0 | 144 | 7 | 4 | 0 |
| 23 | 1 | 3 | 0 | 66 | 3 | 6 | 0 | 150 | 7 | 10 | 0 |
| 24 | 1 | 4 | 0 | 67 | 3 | 7 | 0 | 175 | 8 | 15 | 0 |
| 25 | 1 | 5 | 0 | 68 | 3 | 8 | 0 | 200 | 10 | 0 | 0 |
| 26 | 1 | 6 | 0 | 69 | 3 | 9 | 0 | 250 | 12 | 10 | 0 |
| 27 | 1 | 7 | 0 | 70 | 3 | 10 | 0 | 300 | 15 | 0 | 0 |
| 28 | 1 | 8 | 0 | 71 | 3 | 11 | 0 | 365 | 18 | 5 | 0 |
| 29 | 1 | 9 | 0 | 72 | 3 | 12 | 0 | 400 | 20 | 0 | 0 |
| 30 | 1 | 10 | 0 | 73 | 3 | 13 | 0 | 500 | 25 | 0 | 0 |
| 31 | 1 | 11 | 0 | 74 | 3 | 14 | 0 | 600 | 30 | 0 | 0 |
| 32 | 1 | 12 | 0 | 75 | 3 | 15 | 0 | 700 | 35 | 0 | 0 |
| 33 | 1 | 13 | 0 | 76 | 3 | 16 | 0 | 750 | 37 | 10 | 0 |
| 34 | 1 | 14 | 0 | 77 | 3 | 17 | 0 | 800 | 40 | 0 | 0 |
| 35 | 1 | 15 | 0 | 78 | 3 | 18 | 0 | 900 | 45 | 0 | 0 |
| 36 | 1 | 16 | 0 | 79 | 3 | 19 | 0 | 1000 | 50 | 0 | 0 |
| 37 | 1 | 17 | 0 | 80 | 4 | 0 | 0 | 1250 | 62 | 10 | 0 |
| 38 | 1 | 18 | 0 | 81 | 4 | 1 | 0 | 1500 | 75 | 0 | 0 |
| 39 | 1 | 19 | 0 | 82 | 4 | 2 | 0 | 1750 | 87 | 10 | 0 |
| 40 | 2 | 0 | 0 | 83 | 4 | 3 | 0 | 2000 | 100 | 0 | 0 |
| 41 | 2 | 1 | 0 | 84 | 4 | 4 | 0 | 2240 | 112 | 0 | 0 |
| 42 | 2 | 2 | 0 | 85 | 4 | 5 | 0 | 3000 | 150 | 0 | 0 |
| 43 | 2 | 3 | 0 | 86 | 4 | 6 | 0 | 5000 | 250 | 0 | 0 |

## 1s. 0½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 0½ | 44 | 2 | 4 | 11 | 87 | 4 | 8 | 9½ |
| 2 | 0 | 2 | 0½ | 45 | 2 | 5 | 11½ | 88 | 4 | 9 | 10 |
| 3 | 0 | 3 | 0½ | 46 | 2 | 6 | 11½ | 89 | 4 | 10 | 10½ |
| 4 | 0 | 4 | 1 | 47 | 2 | 7 | 11½ | 90 | 4 | 11 | 10½ |
| 5 | 0 | 5 | 1½ | 48 | 2 | 9 | 0 | 91 | 4 | 12 | 10½ |
| 6 | 0 | 6 | 1½ | 49 | 2 | 10 | 0½ | 92 | 4 | 13 | 11 |
| 7 | 0 | 7 | 1½ | 50 | 2 | 11 | 0½ | 93 | 4 | 14 | 11½ |
| 8 | 0 | 8 | 2 | 51 | 2 | 12 | 0½ | 94 | 4 | 15 | 11½ |
| 9 | 0 | 9 | 2½ | 52 | 2 | 13 | 1 | 95 | 4 | 16 | 11½ |
| 10 | 0 | 10 | 2½ | 53 | 2 | 14 | 1½ | 96 | 4 | 18 | 0 |
| 11 | 0 | 11 | 2½ | 54 | 2 | 15 | 1½ | 97 | 4 | 19 | 0½ |
| 12 | 0 | 12 | 3 | 55 | 2 | 16 | 1½ | 98 | 5 | 0 | 0½ |
| 13 | 0 | 13 | 3½ | 56 | 2 | 17 | 2 | 99 | 5 | 1 | 0½ |
| 14 | 0 | 14 | 3½ | 57 | 2 | 18 | 2½ | 100 | 5 | 2 | 1 |
| 15 | 0 | 15 | 3½ | 58 | 2 | 19 | 2½ | 108 | 5 | 10 | 3 |
| 16 | 0 | 16 | 4 | 59 | 3 | 0 | 2½ | 110 | 5 | 12 | 3½ |
| 17 | 0 | 17 | 4½ | 60 | 3 | 1 | 3 | 112 | 5 | 14 | 4 |
| 18 | 0 | 18 | 4½ | 61 | 3 | 2 | 3½ | 120 | 6 | 2 | 6 |
| 19 | 0 | 19 | 4½ | 62 | 3 | 3 | 3½ | 130 | 6 | 12 | 8½ |
| 20 | 1 | 0 | 5 | 63 | 3 | 4 | 3½ | 132 | 6 | 14 | 9 |
| 21 | 1 | 1 | 5½ | 64 | 3 | 5 | 4 | 140 | 7 | 2 | 11 |
| 22 | 1 | 2 | 5½ | 65 | 3 | 6 | 4½ | 144 | 7 | 7 | 0 |
| 23 | 1 | 3 | 5½ | 66 | 3 | 7 | 4½ | 150 | 7 | 13 | 1½ |
| 24 | 1 | 4 | 6 | 67 | 3 | 8 | 4½ | 175 | 8 | 18 | 7½ |
| 25 | 1 | 5 | 6½ | 68 | 3 | 9 | 5 | 200 | 10 | 4 | 2 |
| 26 | 1 | 6 | 6½ | 69 | 3 | 10 | 5½ | 250 | 12 | 15 | 2½ |
| 27 | 1 | 7 | 6½ | 70 | 3 | 11 | 5½ | 300 | 15 | 6 | 3 |
| 28 | 1 | 8 | 7 | 71 | 3 | 12 | 5½ | 365 | 18 | 12 | 7½ |
| 29 | 1 | 9 | 7½ | 72 | 3 | 13 | 6 | 400 | 20 | 8 | 4 |
| 30 | 1 | 10 | 7½ | 73 | 3 | 14 | 6½ | 500 | 25 | 10 | 5 |
| 31 | 1 | 11 | 7½ | 74 | 3 | 15 | 6½ | 600 | 30 | 12 | 6 |
| 32 | 1 | 12 | 8 | 75 | 3 | 16 | 6½ | 700 | 35 | 14 | 7 |
| 33 | 1 | 13 | 8½ | 76 | 3 | 17 | 7 | 750 | 38 | 5 | 7½ |
| 34 | 1 | 14 | 8½ | 77 | 3 | 18 | 7½ | 800 | 40 | 16 | 8 |
| 35 | 1 | 15 | 8½ | 78 | 3 | 19 | 7½ | 900 | 45 | 18 | 9 |
| 36 | 1 | 16 | 9 | 79 | 4 | 0 | 7½ | 1000 | 51 | 0 | 10 |
| 37 | 1 | 17 | 9½ | 80 | 4 | 1 | 8 | 1250 | 63 | 16 | 0½ |
| 38 | 1 | 18 | 9½ | 81 | 4 | 2 | 8½ | 1500 | 76 | 11 | 3 |
| 39 | 1 | 19 | 9½ | 82 | 4 | 3 | 8½ | 1750 | 89 | 6 | 5½ |
| 40 | 2 | 0 | 10 | 83 | 4 | 4 | 8½ | 2000 | 102 | 1 | 8 |
| 41 | 2 | 1 | 10½ | 84 | 4 | 5 | 9 | 2240 | 114 | 6 | 8 |
| 42 | 2 | 2 | 10½ | 85 | 4 | 6 | 9½ | 3000 | 153 | 2 | 6 |
| 43 | 2 | 3 | 10½ | 86 | 4 | 7 | 9½ | 5000 | 255 | 4 | 2 |

## 1s. 0¾d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 0¾ | 44 | 2 | 6 | 9 | 87 | 4 | 12 | 5½ |
| 2 | 0 | 2 | 1½ | 45 | 2 | 7 | 9¾ | 88 | 4 | 13 | 6 |
| 3 | 0 | 3 | 2¼ | 46 | 2 | 8 | 10¼ | 89 | 4 | 14 | 6¾ |
| 4 | 0 | 4 | 3 | 47 | 2 | 9 | 11¼ | 90 | 4 | 15 | 7½ |
| 5 | 0 | 5 | 3¾ | 48 | 2 | 11 | 0 | 91 | 4 | 16 | 8¼ |
| 6 | 0 | 6 | 4½ | 49 | 2 | 12 | 0¾ | 92 | 4 | 17 | 9 |
| 7 | 0 | 7 | 5¼ | 50 | 2 | 13 | 1½ | 93 | 4 | 18 | 9¾ |
| 8 | 0 | 8 | 6 | 51 | 2 | 14 | 2¼ | 94 | 4 | 19 | 10½ |
| 9 | 0 | 9 | 6¾ | 52 | 2 | 15 | 3 | 95 | 5 | 0 | 11¼ |
| 10 | 0 | 10 | 7½ | 53 | 2 | 16 | 3¾ | 96 | 5 | 2 | 0 |
| 11 | 0 | 11 | 8¼ | 54 | 2 | 17 | 4½ | 97 | 5 | 3 | 0¾ |
| 12 | 0 | 12 | 9 | 55 | 2 | 18 | 5¼ | 98 | 5 | 4 | 1½ |
| 13 | 0 | 13 | 9¾ | 56 | 2 | 19 | 6 | 99 | 5 | 5 | 2¼ |
| 14 | 0 | 14 | 10½ | 57 | 3 | 0 | 6¾ | 100 | 5 | 6 | 3 |
| 15 | 0 | 15 | 11¼ | 58 | 3 | 1 | 7½ | 108 | 5 | 14 | 9 |
| 16 | 0 | 17 | 0 | 59 | 3 | 2 | 8¼ | 110 | 5 | 16 | 10½ |
| 17 | 0 | 18 | 0¾ | 60 | 3 | 3 | 9 | 112 | 5 | 19 | 0 |
| 18 | 0 | 19 | 1½ | 61 | 3 | 4 | 9¾ | 120 | 6 | 7 | 6 |
| 19 | 1 | 0 | 2¼ | 62 | 3 | 5 | 10½ | 130 | 6 | 18 | 1½ |
| 20 | 1 | 1 | 3 | 63 | 3 | 6 | 11¼ | 132 | 7 | 0 | 3 |
| 21 | 1 | 2 | 3¾ | 64 | 3 | 8 | 0 | 140 | 7 | 8 | 9 |
| 22 | 1 | 3 | 4½ | 65 | 3 | 9 | 0¾ | 144 | 7 | 13 | 0 |
| 23 | 1 | 4 | 5¼ | 66 | 3 | 10 | 1½ | 150 | 7 | 19 | 4½ |
| 24 | 1 | 5 | 6 | 67 | 3 | 11 | 2¼ | 175 | 9 | 5 | 11¼ |
| 25 | 1 | 6 | 6¾ | 68 | 3 | 12 | 3 | 200 | 10 | 12 | 6 |
| 26 | 1 | 7 | 7½ | 69 | 3 | 13 | 3¾ | 250 | 13 | 5 | 7½ |
| 27 | 1 | 8 | 8¼ | 70 | 3 | 14 | 4½ | 300 | 15 | 18 | 9 |
| 28 | 1 | 9 | 9 | 71 | 3 | 15 | 5¼ | 365 | 19 | 7 | 9¾ |
| 29 | 1 | 10 | 9¾ | 72 | 3 | 16 | 6 | 400 | 21 | 5 | 0 |
| 30 | 1 | 11 | 10½ | 73 | 3 | 17 | 6¾ | 500 | 26 | 11 | 3 |
| 31 | 1 | 12 | 11¼ | 74 | 3 | 18 | 7½ | 600 | 31 | 17 | 6 |
| 32 | 1 | 14 | 0 | 75 | 3 | 19 | 8¼ | 700 | 37 | 3 | 9 |
| 33 | 1 | 15 | 0¾ | 76 | 4 | 0 | 9 | 750 | 39 | 16 | 10½ |
| 34 | 1 | 16 | 1½ | 77 | 4 | 1 | 9¾ | 800 | 42 | 10 | 0 |
| 35 | 1 | 17 | 2¼ | 78 | 4 | 2 | 10½ | 900 | 47 | 16 | 3 |
| 36 | 1 | 18 | 3 | 79 | 4 | 3 | 11¼ | 1000 | 53 | 2 | 6 |
| 37 | 1 | 19 | 3¾ | 80 | 4 | 5 | 0 | 1250 | 66 | 8 | 1½ |
| 38 | 2 | 0 | 4½ | 81 | 4 | 6 | 0¾ | 1500 | 79 | 13 | 9 |
| 39 | 2 | 1 | 5¼ | 82 | 4 | 7 | 1½ | 1750 | 92 | 19 | 4½ |
| 40 | 2 | 2 | 6 | 83 | 4 | 8 | 2¼ | 2000 | 106 | 5 | 0 |
| 41 | 2 | 3 | 6¾ | 84 | 4 | 9 | 3 | 2240 | 119 | 0 | 0 |
| 42 | 2 | 4 | 7½ | 85 | 4 | 10 | 3¾ | 3000 | 159 | 7 | 6 |
| 43 | 2 | 5 | 8¼ | 86 | 4 | 11 | 4½ | 5000 | 265 | 12 | 6 |

## 1s. 0½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 0½ | 44 | 2 | 5 | 10 | 87 | 4 | 10 | 7½ |
| 2 | 0 | 2 | 1 | 45 | 2 | 6 | 10½ | 88 | 4 | 11 | 8 |
| 3 | 0 | 3 | 1½ | 46 | 2 | 7 | 11 | 89 | 4 | 12 | 8½ |
| 4 | 0 | 4 | 2 | 47 | 2 | 8 | 11½ | 90 | 4 | 13 | 9 |
| 5 | 0 | 5 | 2½ | 48 | 2 | 10 | 0 | 91 | 4 | 14 | 9½ |
| 6 | 0 | 6 | 3 | 49 | 2 | 11 | 0½ | 92 | 4 | 15 | 10 |
| 7 | 0 | 7 | 3½ | 50 | 2 | 12 | 1 | 93 | 4 | 16 | 10½ |
| 8 | 0 | 8 | 4 | 51 | 2 | 13 | 1½ | 94 | 4 | 17 | 11 |
| 9 | 0 | 9 | 4½ | 52 | 2 | 14 | 2 | 95 | 4 | 18 | 11½ |
| 10 | 0 | 10 | 5 | 53 | 2 | 15 | 2½ | 96 | 5 | 0 | 0 |
| 11 | 0 | 11 | 5½ | 54 | 2 | 16 | 3 | 97 | 5 | 1 | 0½ |
| 12 | 0 | 12 | 6 | 55 | 2 | 17 | 3½ | 98 | 5 | 2 | 1 |
| 13 | 0 | 13 | 6½ | 56 | 2 | 18 | 4 | 99 | 5 | 3 | 1½ |
| 14 | 0 | 14 | 7 | 57 | 2 | 19 | 4½ | 100 | 5 | 4 | 2 |
| 15 | 0 | 15 | 7½ | 58 | 3 | 0 | 5 | 108 | 5 | 12 | 6 |
| 16 | 0 | 16 | 8 | 59 | 3 | 1 | 5½ | 110 | 5 | 14 | 7 |
| 17 | 0 | 17 | 8½ | 60 | 3 | 2 | 6 | 112 | 5 | 16 | 8 |
| 18 | 0 | 18 | 9 | 61 | 3 | 3 | 6½ | 120 | 6 | 5 | 0 |
| 19 | 0 | 19 | 9½ | 62 | 3 | 4 | 7 | 130 | 6 | 15 | 5 |
| 20 | 1 | 0 | 10 | 63 | 3 | 5 | 7½ | 132 | 6 | 17 | 6 |
| 21 | 1 | 1 | 10½ | 64 | 3 | 6 | 8 | 140 | 7 | 5 | 10 |
| 22 | 1 | 2 | 11 | 65 | 3 | 7 | 8½ | 144 | 7 | 10 | 0 |
| 23 | 1 | 3 | 11½ | 66 | 3 | 8 | 9 | 150 | 7 | 16 | 3 |
| 24 | 1 | 5 | 0 | 67 | 3 | 9 | 9½ | 175 | 9 | 2 | 3½ |
| 25 | 1 | 6 | 0½ | 68 | 3 | 10 | 10 | 200 | 10 | 8 | 4 |
| 26 | 1 | 7 | 1 | 69 | 3 | 11 | 10½ | 250 | 13 | 0 | 5 |
| 27 | 1 | 8 | 1½ | 70 | 3 | 12 | 11 | 300 | 15 | 12 | 6 |
| 28 | 1 | 9 | 2 | 71 | 3 | 13 | 11½ | 365 | 19 | 0 | 2½ |
| 29 | 1 | 10 | 2½ | 72 | 3 | 15 | 0 | 400 | 20 | 16 | 8 |
| 30 | 1 | 11 | 3 | 73 | 3 | 16 | 0½ | 500 | 26 | 0 | 10 |
| 31 | 1 | 12 | 3½ | 74 | 3 | 17 | 1 | 600 | 31 | 5 | 0 |
| 32 | 1 | 13 | 4 | 75 | 3 | 18 | 1½ | 700 | 36 | 9 | 2 |
| 33 | 1 | 14 | 4½ | 76 | 3 | 19 | 2 | 750 | 39 | 1 | 3 |
| 34 | 1 | 15 | 5 | 77 | 4 | 0 | 2½ | 800 | 41 | 13 | 4 |
| 35 | 1 | 16 | 5½ | 78 | 4 | 1 | 3 | 900 | 46 | 17 | 6 |
| 36 | 1 | 17 | 6 | 79 | 4 | 2 | 3½ | 1000 | 52 | 1 | 8 |
| 37 | 1 | 18 | 6½ | 80 | 4 | 3 | 4 | 1250 | 65 | 2 | 1 |
| 38 | 1 | 19 | 7 | 81 | 4 | 4 | 4½ | 1500 | 78 | 2 | 6 |
| 39 | 2 | 0 | 7½ | 82 | 4 | 5 | 5 | 1750 | 91 | 2 | 11 |
| 40 | 2 | 1 | 8 | 83 | 4 | 6 | 5½ | 2000 | 104 | 3 | 4 |
| 41 | 2 | 2 | 8½ | 84 | 4 | 7 | 6 | 2240 | 116 | 13 | 4 |
| 42 | 2 | 3 | 9 | 85 | 4 | 8 | 6½ | 3000 | 156 | 5 | 0 |
| 43 | 2 | 4 | 9½ | 86 | 4 | 9 | 7 | 5000 | 260 | 8 | 4 |

## 1s. 1d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 1 | 44 | 2 | 7 | 8 | 87 | 4 | 14 | 3 |
| 2 | 0 | 2 | 2 | 45 | 2 | 8 | 9 | 88 | 4 | 15 | 4 |
| 3 | 0 | 3 | 3 | 46 | 2 | 9 | 10 | 89 | 4 | 16 | 5 |
| 4 | 0 | 4 | 4 | 47 | 2 | 10 | 11 | 90 | 4 | 17 | 6 |
| 5 | 0 | 5 | 5 | 48 | 2 | 12 | 0 | 91 | 4 | 18 | 7 |
| 6 | 0 | 6 | 6 | 49 | 2 | 13 | 1 | 92 | 4 | 19 | 8 |
| 7 | 0 | 7 | 7 | 50 | 2 | 14 | 2 | 93 | 5 | 0 | 9 |
| 8 | 0 | 8 | 8 | 51 | 2 | 15 | 3 | 94 | 5 | 1 | 10 |
| 9 | 0 | 9 | 9 | 52 | 2 | 16 | 4 | 95 | 5 | 2 | 11 |
| 10 | 0 | 10 | 10 | 53 | 2 | 17 | 5 | 96 | 5 | 4 | 0 |
| 11 | 0 | 11 | 11 | 54 | 2 | 18 | 6 | 97 | 5 | 5 | 1 |
| 12 | 0 | 13 | 0 | 55 | 2 | 19 | 7 | 98 | 5 | 6 | 2 |
| 13 | 0 | 14 | 1 | 56 | 3 | 0 | 8 | 99 | 5 | 7 | 3 |
| 14 | 0 | 15 | 2 | 57 | 3 | 1 | 9 | 100 | 5 | 8 | 4 |
| 15 | 0 | 16 | 3 | 58 | 3 | 2 | 10 | 108 | 5 | 17 | 0 |
| 16 | 0 | 17 | 4 | 59 | 3 | 3 | 11 | 110 | 5 | 19 | 2 |
| 17 | 0 | 18 | 5 | 60 | 3 | 5 | 0 | 112 | 6 | 1 | 4 |
| 18 | 0 | 19 | 6 | 61 | 3 | 6 | 1 | 120 | 6 | 10 | 0 |
| 19 | 1 | 0 | 7 | 62 | 3 | 7 | 2 | 130 | 7 | 0 | 10 |
| 20 | 1 | 1 | 8 | 63 | 3 | 8 | 3 | 132 | 7 | 3 | 0 |
| 21 | 1 | 2 | 9 | 64 | 3 | 9 | 4 | 140 | 7 | 11 | 8 |
| 22 | 1 | 3 | 10 | 65 | 3 | 10 | 5 | 144 | 7 | 16 | 0 |
| 23 | 1 | 4 | 11 | 66 | 3 | 11 | 6 | 150 | 8 | 2 | 6 |
| 24 | 1 | 6 | 0 | 67 | 3 | 12 | 7 | 175 | 9 | 9 | 7 |
| 25 | 1 | 7 | 1 | 68 | 3 | 13 | 8 | 200 | 10 | 16 | 8 |
| 26 | 1 | 8 | 2 | 69 | 3 | 14 | 9 | 250 | 13 | 10 | 10 |
| 27 | 1 | 9 | 3 | 70 | 3 | 15 | 10 | 300 | 16 | 5 | 0 |
| 28 | 1 | 10 | 4 | 71 | 3 | 16 | 11 | 365 | 19 | 15 | 5 |
| 29 | 1 | 11 | 5 | 72 | 3 | 18 | 0 | 400 | 21 | 13 | 4 |
| 30 | 1 | 12 | 6 | 73 | 3 | 19 | 1 | 500 | 27 | 1 | 8 |
| 31 | 1 | 13 | 7 | 74 | 4 | 0 | 2 | 600 | 32 | 10 | 0 |
| 32 | 1 | 14 | 8 | 75 | 4 | 1 | 3 | 700 | 37 | 18 | 4 |
| 33 | 1 | 15 | 9 | 76 | 4 | 2 | 4 | 750 | 40 | 12 | 6 |
| 34 | 1 | 16 | 10 | 77 | 4 | 3 | 5 | 800 | 43 | 6 | 8 |
| 35 | 1 | 17 | 11 | 78 | 4 | 4 | 6 | 900 | 48 | 15 | 0 |
| 36 | 1 | 19 | 0 | 79 | 4 | 5 | 7 | 1000 | 54 | 3 | 4 |
| 37 | 2 | 0 | 1 | 80 | 4 | 6 | 8 | 1250 | 67 | 14 | 2 |
| 38 | 2 | 1 | 2 | 81 | 4 | 7 | 9 | 1500 | 81 | 5 | 0 |
| 39 | 2 | 2 | 3 | 82 | 4 | 8 | 10 | 1750 | 94 | 15 | 10 |
| 40 | 2 | 3 | 4 | 83 | 4 | 9 | 11 | 2000 | 108 | 6 | 8 |
| 41 | 2 | 4 | 5 | 84 | 4 | 11 | 0 | 2240 | 121 | 6 | 8 |
| 42 | 2 | 5 | 6 | 85 | 4 | 12 | 1 | 3000 | 162 | 10 | 0 |
| 43 | 2 | 6 | 7 | 86 | 4 | 13 | 2 | 5000 | 270 | 16 | 8 |

## 1s. 1½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 1½ | 44 | 2 | 8 | 7 | 87 | 4 | 16 | 0½ |
| 2 | 0 | 2 | 2½ | 45 | 2 | 9 | 8½ | 88 | 4 | 17 | 2 |
| 3 | 0 | 3 | 3½ | 46 | 2 | 10 | 9½ | 89 | 4 | 18 | 3½ |
| 4 | 0 | 4 | 5 | 47 | 2 | 11 | 10½ | 90 | 4 | 19 | 4½ |
| 5 | 0 | 5 | 6½ | 48 | 2 | 13 | 0 | 91 | 5 | 0 | 5½ |
| 6 | 0 | 6 | 7½ | 49 | 2 | 14 | 1½ | 92 | 5 | 1 | 7 |
| 7 | 0 | 7 | 8½ | 50 | 2 | 15 | 2½ | 93 | 5 | 2 | 8½ |
| 8 | 0 | 8 | 10 | 51 | 2 | 16 | 3½ | 94 | 5 | 3 | 9½ |
| 9 | 0 | 9 | 11½ | 52 | 2 | 17 | 5 | 95 | 5 | 4 | 10½ |
| 10 | 0 | 11 | 0½ | 53 | 2 | 18 | 6½ | 96 | 5 | 6 | 0 |
| 11 | 0 | 12 | 1½ | 54 | 2 | 19 | 7½ | 97 | 5 | 7 | 1½ |
| 12 | 0 | 13 | 3 | 55 | 3 | 0 | 8½ | 98 | 5 | 8 | 2½ |
| 13 | 0 | 14 | 4½ | 56 | 3 | 1 | 10 | 99 | 5 | 9 | 3½ |
| 14 | 0 | 15 | 5½ | 57 | 3 | 2 | 11½ | 100 | 5 | 10 | 5 |
| 15 | 0 | 16 | 6½ | 58 | 3 | 4 | 0½ | 108 | 5 | 19 | 3 |
| 16 | 0 | 17 | 8 | 59 | 3 | 5 | 1½ | 110 | 6 | 1 | 5½ |
| 17 | 0 | 18 | 9½ | 60 | 3 | 6 | 3 | 112 | 6 | 3 | 8 |
| 18 | 0 | 19 | 10½ | 61 | 3 | 7 | 4½ | 120 | 6 | 12 | 6 |
| 19 | 1 | 0 | 11½ | 62 | 3 | 8 | 5½ | 130 | 7 | 3 | 6½ |
| 20 | 1 | 2 | 1 | 63 | 3 | 9 | 6½ | 132 | 7 | 5 | 9 |
| 21 | 1 | 3 | 2½ | 64 | 3 | 10 | 8 | 140 | 7 | 14 | 7 |
| 22 | 1 | 4 | 3½ | 65 | 3 | 11 | 9½ | 144 | 7 | 19 | 0 |
| 23 | 1 | 5 | 4½ | 66 | 3 | 12 | 10½ | 150 | 8 | 5 | 7½ |
| 24 | 1 | 6 | 6 | 67 | 3 | 13 | 11½ | 175 | 9 | 13 | 2½ |
| 25 | 1 | 7 | 7½ | 68 | 3 | 15 | 1 | 200 | 11 | 0 | 10 |
| 26 | 1 | 8 | 8½ | 69 | 3 | 16 | 2½ | 250 | 13 | 16 | 0½ |
| 27 | 1 | 9 | 9½ | 70 | 3 | 17 | 3½ | 300 | 16 | 11 | 3 |
| 28 | 1 | 10 | 11 | 71 | 3 | 18 | 4½ | 365 | 20 | 3 | 0½ |
| 29 | 1 | 12 | 0½ | 72 | 3 | 19 | 6 | 400 | 22 | 1 | 8 |
| 30 | 1 | 13 | 1½ | 73 | 4 | 0 | 7½ | 500 | 27 | 12 | 1 |
| 31 | 1 | 14 | 2½ | 74 | 4 | 1 | 8½ | 600 | 33 | 2 | 6 |
| 32 | 1 | 15 | 4 | 75 | 4 | 2 | 9½ | 700 | 38 | 12 | 11 |
| 33 | 1 | 16 | 5½ | 76 | 4 | 3 | 11 | 750 | 41 | 8 | 1½ |
| 34 | 1 | 17 | 6½ | 77 | 4 | 5 | 0½ | 800 | 44 | 3 | 4 |
| 35 | 1 | 18 | 7½ | 78 | 4 | 6 | 1½ | 900 | 49 | 13 | 9 |
| 36 | 1 | 19 | 9 | 79 | 4 | 7 | 2½ | 1000 | 55 | 4 | 2 |
| 37 | 2 | 0 | 10½ | 80 | 4 | 8 | 4 | 1250 | 69 | 0 | 2½ |
| 38 | 2 | 1 | 11½ | 81 | 4 | 9 | 5½ | 1500 | 82 | 16 | 3 |
| 39 | 2 | 3 | 0½ | 82 | 4 | 10 | 6½ | 1750 | 96 | 12 | 3½ |
| 40 | 2 | 4 | 2 | 83 | 4 | 11 | 7½ | 2000 | 110 | 8 | 4 |
| 41 | 2 | 5 | 3½ | 84 | 4 | 12 | 9 | 2240 | 123 | 13 | 4 |
| 42 | 2 | 6 | 4½ | 85 | 4 | 13 | 10½ | 3000 | 165 | 12 | 6 |
| 43 | 2 | 7 | 5½ | 86 | 4 | 14 | 11½ | 5000 | 276 | 0 | 10 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
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| 2 | 0 | 2 | 3½ | 45 | 2 | 11 | 6½ | 88 | 5 | 0 | 10 |
| 3 | 0 | 3 | 5½ | 46 | 2 | 12 | 8½ | 89 | 5 | 1 | 11½ |
| 4 | 0 | 4 | 7 | 47 | 2 | 13 | 10½ | 90 | 5 | 3 | 1½ |
| 5 | 0 | 5 | 8½ | 48 | 2 | 15 | 0 | 91 | 5 | 4 | 3½ |
| 6 | 0 | 6 | 10½ | 49 | 2 | 16 | 1½ | 92 | 5 | 5 | 5 |
| 7 | 0 | 8 | 0½ | 50 | 2 | 17 | 3½ | 93 | 5 | 6 | 6½ |
| 8 | 0 | 9 | 2 | 51 | 2 | 18 | 5½ | 94 | 5 | 7 | 8½ |
| 9 | 0 | 10 | 3½ | 52 | 2 | 19 | 7 | 95 | 5 | 8 | 10½ |
| 10 | 0 | 11 | 5½ | 53 | 3 | 0 | 8½ | 96 | 5 | 10 | 0 |
| 11 | 0 | 12 | 7½ | 54 | 3 | 1 | 10½ | 97 | 5 | 11 | 1½ |
| 12 | 0 | 13 | 9 | 55 | 3 | 3 | 0½ | 98 | 5 | 12 | 3½ |
| 13 | 0 | 14 | 10½ | 56 | 3 | 4 | 2 | 99 | 5 | 13 | 5½ |
| 14 | 0 | 16 | 0½ | 57 | 3 | 5 | 3½ | 100 | 5 | 14 | 7 |
| 15 | 0 | 17 | 2½ | 58 | 3 | 6 | 5½ | 108 | 6 | 3 | 9 |
| 16 | 0 | 18 | 4 | 59 | 3 | 7 | 7½ | 110 | 6 | 6 | 0½ |
| 17 | 0 | 19 | 5½ | 60 | 3 | 8 | 9 | 112 | 6 | 8 | 4 |
| 18 | 1 | 0 | 7½ | 61 | 3 | 9 | 10½ | 120 | 6 | 17 | 6 |
| 19 | 1 | 1 | 9½ | 62 | 3 | 11 | 0½ | 130 | 7 | 8 | 11½ |
| 20 | 1 | 2 | 11 | 63 | 3 | 12 | 2½ | 132 | 7 | 11 | 3 |
| 21 | 1 | 4 | 0½ | 64 | 3 | 13 | 4 | 140 | 8 | 0 | 5 |
| 22 | 1 | 5 | 2½ | 65 | 3 | 14 | 5½ | 144 | 8 | 5 | 0 |
| 23 | 1 | 6 | 4½ | 66 | 3 | 15 | 7½ | 150 | 8 | 11 | 10½ |
| 24 | 1 | 7 | 6 | 67 | 3 | 16 | 9½ | 175 | 10 | 0 | 6½ |
| 25 | 1 | 8 | 7½ | 68 | 3 | 17 | 11 | 200 | 11 | 9 | 2 |
| 26 | 1 | 9 | 9½ | 69 | 3 | 19 | 0½ | 250 | 14 | 6 | 5½ |
| 27 | 1 | 10 | 11½ | 70 | 4 | 0 | 2½ | 300 | 17 | 3 | 9 |
| 28 | 1 | 12 | 1 | 71 | 4 | 1 | 4½ | 365 | 20 | 18 | 2½ |
| 29 | 1 | 13 | 2½ | 72 | 4 | 2 | 6 | 400 | 22 | 18 | 4 |
| 30 | 1 | 14 | 4½ | 73 | 4 | 3 | 7½ | 500 | 28 | 12 | 11 |
| 31 | 1 | 15 | 6½ | 74 | 4 | 4 | 9½ | 600 | 34 | 7 | 6 |
| 32 | 1 | 16 | 8 | 75 | 4 | 5 | 11½ | 700 | 40 | 2 | 1 |
| 33 | 1 | 17 | 9½ | 76 | 4 | 7 | 1 | 750 | 42 | 19 | 4½ |
| 34 | 1 | 18 | 11½ | 77 | 4 | 8 | 2½ | 800 | 45 | 16 | 8 |
| 35 | 2 | 0 | 1½ | 78 | 4 | 9 | 4½ | 900 | 51 | 11 | 3 |
| 36 | 2 | 1 | 3 | 79 | 4 | 10 | 6½ | 1000 | 57 | 5 | 10 |
| 37 | 2 | 2 | 4½ | 80 | 4 | 11 | 8 | 1250 | 71 | 12 | 3½ |
| 38 | 2 | 3 | 6½ | 81 | 4 | 12 | 9½ | 1500 | 85 | 18 | 9 |
| 39 | 2 | 4 | 8½ | 82 | 4 | 13 | 11½ | 1750 | 100 | 5 | 2½ |
| 40 | 2 | 5 | 10 | 83 | 4 | 15 | 1½ | 2000 | 114 | 11 | 8 |
| 41 | 2 | 6 | 11½ | 84 | 4 | 16 | 3 | 2240 | 128 | 6 | 8 |
| 42 | 2 | 8 | 1½ | 85 | 4 | 17 | 4½ | 3000 | 171 | 17 | 6 |
| 43 | 2 | 9 | 3½ | 86 | 4 | 18 | 6½ | 5000 | 286 | 9 | 2 |

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| 2 | 0 | 2 | 3 | 45 | 2 | 10 | 7½ | 88 | 4 | 19 | 0 |
| 3 | 0 | 3 | 4½ | 46 | 2 | 11 | 9 | 89 | 5 | 0 | 1½ |
| 4 | 0 | 4 | 6 | 47 | 2 | 12 | 10½ | 90 | 5 | 1 | 3 |
| 5 | 0 | 5 | 7½ | 48 | 2 | 14 | 0 | 91 | 5 | 2 | 4½ |
| 6 | 0 | 6 | 9 | 49 | 2 | 15 | 1½ | 92 | 5 | 3 | 6 |
| 7 | 0 | 7 | 10½ | 50 | 2 | 16 | 3 | 93 | 5 | 4 | 7½ |
| 8 | 0 | 9 | 0 | 51 | 2 | 17 | 4½ | 94 | 5 | 5 | 9 |
| 9 | 0 | 10 | 1½ | 52 | 2 | 18 | 6 | 95 | 5 | 6 | 10½ |
| 10 | 0 | 11 | 3 | 53 | 2 | 19 | 7½ | 96 | 5 | 8 | 0 |
| 11 | 0 | 12 | 4½ | 54 | 3 | 0 | 9 | 97 | 5 | 9 | 1½ |
| 12 | 0 | 13 | 6 | 55 | 3 | 1 | 10½ | 98 | 5 | 10 | 3 |
| 13 | 0 | 14 | 7½ | 56 | 3 | 3 | 0 | 99 | 5 | 11 | 4½ |
| 14 | 0 | 15 | 9 | 57 | 3 | 4 | 1½ | 100 | 5 | 12 | 6 |
| 15 | 0 | 16 | 10½ | 58 | 3 | 5 | 3 | 108 | 6 | 1 | 6 |
| 16 | 0 | 18 | 0 | 59 | 3 | 6 | 4½ | 110 | 6 | 3 | 9 |
| 17 | 0 | 19 | 1½ | 60 | 3 | 7 | 6 | 112 | 6 | 6 | 0 |
| 18 | 1 | 0 | 3 | 61 | 3 | 8 | 7½ | 120 | 6 | 15 | 0 |
| 19 | 1 | 1 | 4½ | 62 | 3 | 9 | 9 | 130 | 7 | 6 | 3 |
| 20 | 1 | 2 | 6 | 63 | 3 | 10 | 10½ | 132 | 7 | 8 | 6 |
| 21 | 1 | 3 | 7½ | 64 | 3 | 12 | 0 | 140 | 7 | 17 | 6 |
| 22 | 1 | 4 | 9 | 65 | 3 | 13 | 1½ | 144 | 8 | 2 | 0 |
| 23 | 1 | 5 | 10½ | 66 | 3 | 14 | 3 | 150 | 8 | 8 | 9 |
| 24 | 1 | 7 | 0 | 67 | 3 | 15 | 4½ | 175 | 9 | 16 | 10½ |
| 25 | 1 | 8 | 1½ | 68 | 3 | 16 | 6 | 200 | 11 | 5 | 0 |
| 26 | 1 | 9 | 3 | 69 | 3 | 17 | 7½ | 250 | 14 | 1 | 3 |
| 27 | 1 | 10 | 4½ | 70 | 3 | 18 | 9 | 300 | 16 | 17 | 6 |
| 28 | 1 | 11 | 6 | 71 | 3 | 19 | 10½ | 365 | 20 | 10 | 7½ |
| 29 | 1 | 12 | 7½ | 72 | 4 | 1 | 0 | 400 | 22 | 10 | 0 |
| 30 | 1 | 13 | 9 | 73 | 4 | 2 | 1½ | 500 | 28 | 2 | 6 |
| 31 | 1 | 14 | 10½ | 74 | 4 | 3 | 3 | 600 | 33 | 15 | 0 |
| 32 | 1 | 16 | 0 | 75 | 4 | 4 | 4½ | 700 | 39 | 7 | 6 |
| 33 | 1 | 17 | 1½ | 76 | 4 | 5 | 6 | 750 | 42 | 3 | 9 |
| 34 | 1 | 18 | 3 | 77 | 4 | 6 | 7½ | 800 | 45 | 0 | 0 |
| 35 | 1 | 19 | 4½ | 78 | 4 | 7 | 9 | 900 | 50 | 12 | 6 |
| 36 | 2 | 0 | 6 | 79 | 4 | 8 | 10½ | 1000 | 56 | 5 | 0 |
| 37 | 2 | 1 | 7½ | 80 | 4 | 10 | 0 | 1250 | 70 | 6 | 3 |
| 38 | 2 | 2 | 9 | 81 | 4 | 11 | 1½ | 1500 | 84 | 7 | 6 |
| 39 | 2 | 3 | 10½ | 82 | 4 | 12 | 3 | 1750 | 98 | 8 | 9 |
| 40 | 2 | 5 | 0 | 83 | 4 | 13 | 4½ | 2000 | 112 | 10 | 0 |
| 41 | 2 | 6 | 1½ | 84 | 4 | 14 | 6 | 2240 | 126 | 0 | 0 |
| 42 | 2 | 7 | 3 | 85 | 4 | 15 | 7½ | 3000 | 168 | 15 | 0 |
| 43 | 2 | 8 | 4½ | 86 | 4 | 16 | 9 | 5000 | 281 | 5 | 0 |

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| 2 | 0 | 2 | 4 | 45 | 2 | 12 | 6 | 88 | 5 | 2 | 8 |
| 3 | 0 | 3 | 6 | 46 | 2 | 13 | 8 | 89 | 5 | 3 | 10 |
| 4 | 0 | 4 | 8 | 47 | 2 | 14 | 10 | 90 | 5 | 5 | 0 |
| 5 | 0 | 5 | 10 | 48 | 2 | 16 | 0 | 91 | 5 | 6 | 2 |
| 6 | 0 | 7 | 0 | 49 | 2 | 17 | 2 | 92 | 5 | 7 | 4 |
| 7 | 0 | 8 | 2 | 50 | 2 | 18 | 4 | 93 | 5 | 8 | 6 |
| 8 | 0 | 9 | 4 | 51 | 2 | 19 | 6 | 94 | 5 | 9 | 8 |
| 9 | 0 | 10 | 6 | 52 | 3 | 0 | 8 | 95 | 5 | 10 | 10 |
| 10 | 0 | 11 | 8 | 53 | 3 | 1 | 10 | 96 | 5 | 12 | 0 |
| 11 | 0 | 12 | 10 | 54 | 3 | 3 | 0 | 97 | 5 | 13 | 2 |
| 12 | 0 | 14 | 0 | 55 | 3 | 4 | 2 | 98 | 5 | 14 | 4 |
| 13 | 0 | 15 | 2 | 56 | 3 | 5 | 4 | 99 | 5 | 15 | 6 |
| 14 | 0 | 16 | 4 | 57 | 3 | 6 | 6 | 100 | 5 | 16 | 8 |
| 15 | 0 | 17 | 6 | 58 | 3 | 7 | 8 | 108 | 6 | 6 | 0 |
| 16 | 0 | 18 | 8 | 59 | 3 | 8 | 10 | 110 | 6 | 8 | 4 |
| 17 | 0 | 19 | 10 | 60 | 3 | 10 | 0 | 112 | 6 | 10 | 8 |
| 18 | 1 | 1 | 0 | 61 | 3 | 11 | 2 | 120 | 7 | 0 | 0 |
| 19 | 1 | 2 | 2 | 62 | 3 | 12 | 4 | 130 | 7 | 11 | 8 |
| 20 | 1 | 3 | 4 | 63 | 3 | 13 | 6 | 132 | 7 | 14 | 0 |
| 21 | 1 | 4 | 6 | 64 | 3 | 14 | 8 | 140 | 8 | 3 | 4 |
| 22 | 1 | 5 | 8 | 65 | 3 | 15 | 10 | 144 | 8 | 8 | 0 |
| 23 | 1 | 6 | 10 | 66 | 3 | 17 | 0 | 150 | 8 | 15 | 0 |
| 24 | 1 | 8 | 0 | 67 | 3 | 18 | 2 | 175 | 10 | 4 | 2 |
| 25 | 1 | 9 | 2 | 68 | 3 | 19 | 4 | 200 | 11 | 13 | 4 |
| 26 | 1 | 10 | 4 | 69 | 4 | 0 | 6 | 250 | 14 | 11 | 8 |
| 27 | 1 | 11 | 6 | 70 | 4 | 1 | 8 | 300 | 17 | 10 | 0 |
| 28 | 1 | 12 | 8 | 71 | 4 | 2 | 10 | 365 | 21 | 5 | 10 |
| 29 | 1 | 13 | 10 | 72 | 4 | 4 | 0 | 400 | 23 | 6 | 8 |
| 30 | 1 | 15 | 0 | 73 | 4 | 5 | 2 | 500 | 29 | 3 | 4 |
| 31 | 1 | 16 | 2 | 74 | 4 | 6 | 4 | 600 | 35 | 0 | 0 |
| 32 | 1 | 17 | 4 | 75 | 4 | 7 | 6 | 700 | 40 | 16 | 8 |
| 33 | 1 | 18 | 6 | 76 | 4 | 8 | 8 | 750 | 43 | 15 | 0 |
| 34 | 1 | 19 | 8 | 77 | 4 | 9 | 10 | 800 | 46 | 13 | 4 |
| 35 | 2 | 0 | 10 | 78 | 4 | 11 | 0 | 900 | 52 | 10 | 0 |
| 36 | 2 | 2 | 0 | 79 | 4 | 12 | 2 | 1000 | 58 | 6 | 8 |
| 37 | 2 | 3 | 2 | 80 | 4 | 13 | 4 | 1250 | 72 | 18 | 4 |
| 38 | 2 | 4 | 4 | 81 | 4 | 14 | 6 | 1500 | 87 | 10 | 0 |
| 39 | 2 | 5 | 6 | 82 | 4 | 15 | 8 | 1750 | 102 | 1 | 8 |
| 40 | 2 | 6 | 8 | 83 | 4 | 16 | 10 | 2000 | 116 | 13 | 4 |
| 41 | 2 | 7 | 10 | 84 | 4 | 18 | 0 | 2240 | 130 | 18 | 4 |
| 42 | 2 | 9 | 0 | 85 | 4 | 19 | 2 | 3000 | 175 | 0 | 0 |
| 43 | 2 | 10 | 2 | 86 | 5 | 0 | 4 | 5000 | 291 | 13 | 4 |

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| 2 | 0 | 2 | 4½ | 45 | 2 | 13 | 5½ | 88 | 5 | 4 | 6 |
| 3 | 0 | 3 | 6½ | 46 | 2 | 14 | 7½ | 89 | 5 | 5 | 8½ |
| 4 | 0 | 4 | 9 | 47 | 2 | 15 | 9½ | 90 | 5 | 6 | 10½ |
| 5 | 0 | 5 | 11½ | 48 | 2 | 17 | 0 | 91 | 5 | 8 | 0½ |
| 6 | 0 | 7 | 1½ | 49 | 2 | 18 | 2½ | 92 | 5 | 9 | 3 |
| 7 | 0 | 8 | 3½ | 50 | 2 | 19 | 4½ | 93 | 5 | 10 | 5½ |
| 8 | 0 | 9 | 6 | 51 | 3 | 0 | 6½ | 94 | 5 | 11 | 7½ |
| 9 | 0 | 10 | 8½ | 52 | 3 | 1 | 9 | 95 | 5 | 12 | 9½ |
| 10 | 0 | 11 | 10½ | 53 | 3 | 2 | 11½ | 96 | 5 | 14 | 0 |
| 11 | 0 | 13 | 0½ | 54 | 3 | 4 | 1½ | 97 | 5 | 15 | 2½ |
| 12 | 0 | 14 | 3 | 55 | 3 | 5 | 3½ | 98 | 5 | 16 | 4½ |
| 13 | 0 | 15 | 5½ | 56 | 3 | 6 | 6 | 99 | 5 | 17 | 6½ |
| 14 | 0 | 16 | 7½ | 57 | 3 | 7 | 8½ | 100 | 5 | 18 | 9 |
| 15 | 0 | 17 | 9½ | 58 | 3 | 8 | 10½ | 108 | 6 | 8 | 3 |
| 16 | 0 | 19 | 0 | 59 | 3 | 10 | 0½ | 110 | 6 | 10 | 7½ |
| 17 | 1 | 0 | 2½ | 60 | 3 | 11 | 3 | 112 | 6 | 13 | 0 |
| 18 | 1 | 1 | 4½ | 61 | 3 | 12 | 5½ | 120 | 7 | 2 | 6 |
| 19 | 1 | 2 | 6½ | 62 | 3 | 13 | 7½ | 130 | 7 | 14 | 4½ |
| 20 | 1 | 3 | 9 | 63 | 3 | 14 | 9½ | 132 | 7 | 16 | 9 |
| 21 | 1 | 4 | 11½ | 64 | 3 | 16 | 0 | 140 | 8 | 6 | 3 |
| 22 | 1 | 6 | 1½ | 65 | 3 | 17 | 2½ | 144 | 8 | 11 | 0 |
| 23 | 1 | 7 | 3½ | 66 | 3 | 18 | 4½ | 150 | 8 | 18 | 1½ |
| 24 | 1 | 8 | 6 | 67 | 3 | 19 | 6½ | 175 | 10 | 7 | 9½ |
| 25 | 1 | 9 | 8½ | 68 | 4 | 0 | 9 | 200 | 11 | 17 | 6 |
| 26 | 1 | 10 | 10½ | 69 | 4 | 1 | 11½ | 250 | 14 | 16 | 10½ |
| 27 | 1 | 12 | 0½ | 70 | 4 | 3 | 1½ | 300 | 17 | 16 | 3 |
| 28 | 1 | 13 | 3 | 71 | 4 | 4 | 3½ | 365 | 21 | 13 | 5½ |
| 29 | 1 | 14 | 5½ | 72 | 4 | 5 | 6 | 400 | 23 | 15 | 0 |
| 30 | 1 | 15 | 7½ | 73 | 4 | 6 | 8½ | 500 | 29 | 13 | 9 |
| 31 | 1 | 16 | 9½ | 74 | 4 | 7 | 10½ | 600 | 35 | 12 | 6 |
| 32 | 1 | 18 | 0 | 75 | 4 | 9 | 0½ | 700 | 41 | 11 | 3 |
| 33 | 1 | 19 | 2½ | 76 | 4 | 10 | 3 | 750 | 44 | 10 | 7½ |
| 34 | 2 | 0 | 4½ | 77 | 4 | 11 | 5½ | 800 | 47 | 10 | 0 |
| 35 | 2 | 1 | 6½ | 78 | 4 | 12 | 7½ | 900 | 53 | 8 | 9 |
| 36 | 2 | 2 | 9 | 79 | 4 | 13 | 9½ | 1000 | 59 | 7 | 6 |
| 37 | 2 | 3 | 11½ | 80 | 4 | 15 | 0 | 1250 | 74 | 4 | 4½ |
| 38 | 2 | 5 | 1½ | 81 | 4 | 16 | 2½ | 1500 | 89 | 1 | 3 |
| 39 | 2 | 6 | 3½ | 82 | 4 | 17 | 4½ | 1750 | 103 | 18 | 1½ |
| 40 | 2 | 7 | 6 | 83 | 4 | 18 | 6½ | 2000 | 118 | 15 | 0 |
| 41 | 2 | 8 | 8½ | 84 | 4 | 19 | 9 | 2240 | 133 | 0 | 0 |
| 42 | 2 | 9 | 10½ | 85 | 5 | 0 | 11½ | 3000 | 178 | 2 | 6 |
| 43 | 2 | 11 | 0½ | 86 | 5 | 2 | 1½ | 5000 | 296 | 17 | 6 |

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| 2 | 0 | 2 | 5¼ | 45 | 2 | 15 | 3¼ | 88 | 5 | 8 | 2 |
| 3 | 0 | 3 | 8¼ | 46 | 2 | 16 | 6¼ | 89 | 5 | 9 | 4¼ |
| 4 | 0 | 4 | 11 | 47 | 2 | 17 | 9¼ | 90 | 5 | 10 | 7¼ |
| 5 | 0 | 6 | 1¾ | 48 | 2 | 19 | 0 | 91 | 5 | 11 | 10¼ |
| 6 | 0 | 7 | 4¼ | 49 | 3 | 0 | 2¾ | 92 | 5 | 13 | 1 |
| 7 | 0 | 8 | 7¼ | 50 | 3 | 1 | 5¼ | 93 | 5 | 14 | 3¾ |
| 8 | 0 | 9 | 10 | 51 | 3 | 2 | 8¼ | 94 | 5 | 15 | 6¼ |
| 9 | 0 | 11 | 0¾ | 52 | 3 | 3 | 11 | 95 | 5 | 16 | 9¼ |
| 10 | 0 | 12 | 3¼ | 53 | 3 | 5 | 1¾ | 96 | 5 | 18 | 0 |
| 11 | 0 | 13 | 6¼ | 54 | 3 | 6 | 4¼ | 97 | 5 | 19 | 2¾ |
| 12 | 0 | 14 | 9 | 55 | 3 | 7 | 7¼ | 98 | 6 | 0 | 5¼ |
| 13 | 0 | 15 | 11¾ | 56 | 3 | 8 | 10 | 99 | 6 | 1 | 8¼ |
| 14 | 0 | 17 | 2¼ | 57 | 3 | 10 | 0¾ | 100 | 6 | 2 | 11 |
| 15 | 0 | 18 | 5¼ | 58 | 3 | 11 | 3¼ | 108 | 6 | 12 | 9 |
| 16 | 0 | 19 | 8 | 59 | 3 | 12 | 6¼ | 110 | 6 | 15 | 2¼ |
| 17 | 1 | 0 | 10¾ | 60 | 3 | 13 | 9 | 112 | 6 | 17 | 8 |
| 18 | 1 | 2 | 1¼ | 61 | 3 | 14 | 11¾ | 120 | 7 | 7 | 6 |
| 19 | 1 | 3 | 4¼ | 62 | 3 | 16 | 2¼ | 130 | 7 | 19 | 9¼ |
| 20 | 1 | 4 | 7 | 63 | 3 | 17 | 5¼ | 132 | 8 | 2 | 3 |
| 21 | 1 | 5 | 9¾ | 64 | 3 | 18 | 8 | 140 | 8 | 12 | 1 |
| 22 | 1 | 7 | 0¼ | 65 | 3 | 19 | 10¾ | 144 | 8 | 17 | 0 |
| 23 | 1 | 8 | 3¼ | 66 | 4 | 1 | 1¼ | 150 | 9 | 4 | 4¼ |
| 24 | 1 | 9 | 6 | 67 | 4 | 2 | 4¼ | 175 | 10 | 15 | 1¾ |
| 25 | 1 | 10 | 8¾ | 68 | 4 | 3 | 7 | 200 | 12 | 5 | 10 |
| 26 | 1 | 11 | 11¼ | 69 | 4 | 4 | 9¾ | 250 | 15 | 7 | 3¼ |
| 27 | 1 | 13 | 2¼ | 70 | 4 | 6 | 0¾ | 300 | 18 | 8 | 9 |
| 28 | 1 | 14 | 5 | 71 | 4 | 7 | 3¾ | 365 | 22 | 8 | 7¾ |
| 29 | 1 | 15 | 7¾ | 72 | 4 | 8 | 6 | 400 | 24 | 11 | 8 |
| 30 | 1 | 16 | 10¼ | 73 | 4 | 9 | 8¾ | 500 | 30 | 14 | 7 |
| 31 | 1 | 18 | 1¼ | 74 | 4 | 10 | 11¼ | 600 | 36 | 17 | 6 |
| 32 | 1 | 19 | 4 | 75 | 4 | 12 | 2¼ | 700 | 43 | 0 | 5 |
| 33 | 2 | 0 | 6¾ | 76 | 4 | 13 | 5 | 750 | 46 | 1 | 10¾ |
| 34 | 2 | 1 | 9¼ | 77 | 4 | 14 | 7¾ | 800 | 49 | 3 | 4 |
| 35 | 2 | 3 | 0¼ | 78 | 4 | 15 | 10¼ | 900 | 55 | 6 | 3 |
| 36 | 2 | 4 | 3 | 79 | 4 | 17 | 1¼ | 1000 | 61 | 9 | 2 |
| 37 | 2 | 5 | 5¾ | 80 | 4 | 18 | 4 | 1250 | 76 | 16 | 5¾ |
| 38 | 2 | 6 | 8¼ | 81 | 4 | 19 | 6¾ | 1500 | 92 | 3 | 9 |
| 39 | 2 | 7 | 11¼ | 82 | 5 | 0 | 9¼ | 1750 | 107 | 11 | 0¾ |
| 40 | 2 | 9 | 2 | 83 | 5 | 2 | 0¼ | 2000 | 122 | 18 | 4 |
| 41 | 2 | 10 | 4¾ | 84 | 5 | 3 | 3 | 2240 | 137 | 13 | 4 |
| 42 | 2 | 11 | 7¼ | 85 | 5 | 4 | 5¾ | 3000 | 184 | 7 | 6 |
| 43 | 2 | 12 | 10¼ | 86 | 5 | 5 | 8¼ | 5000 | 307 | 5 | 10 |

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| 1 | 0 | 1 | 2½ | 44 | 2 | 13 | 2 | 87 | 5 | 5 | 1½ |
| 2 | 0 | 2 | 5 | 45 | 2 | 14 | 4½ | 88 | 5 | 6 | 4 |
| 3 | 0 | 3 | 7½ | 46 | 2 | 15 | 7 | 89 | 5 | 7 | 6½ |
| 4 | 0 | 4 | 10 | 47 | 2 | 16 | 9½ | 90 | 5 | 8 | 9 |
| 5 | 0 | 6 | 0½ | 48 | 2 | 18 | 0 | 91 | 5 | 9 | 11½ |
| 6 | 0 | 7 | 3 | 49 | 2 | 19 | 2½ | 92 | 5 | 11 | 2 |
| 7 | 0 | 8 | 5½ | 50 | 3 | 0 | 5 | 93 | 5 | 12 | 4½ |
| 8 | 0 | 9 | 8 | 51 | 3 | 1 | 7½ | 94 | 5 | 13 | 7 |
| 9 | 0 | 10 | 10½ | 52 | 3 | 2 | 10 | 95 | 5 | 14 | 9½ |
| 10 | 0 | 12 | 1 | 53 | 3 | 4 | 0½ | 96 | 5 | 16 | 0 |
| 11 | 0 | 13 | 3½ | 54 | 3 | 5 | 3 | 97 | 5 | 17 | 2½ |
| 12 | 0 | 14 | 6 | 55 | 3 | 6 | 5½ | 98 | 5 | 18 | 5 |
| 13 | 0 | 15 | 8½ | 56 | 3 | 7 | 8 | 99 | 5 | 19 | 7½ |
| 14 | 0 | 16 | 11 | 57 | 3 | 8 | 10½ | 100 | 6 | 0 | 10 |
| 15 | 0 | 18 | 1½ | 58 | 3 | 10 | 1 | 108 | 6 | 10 | 6 |
| 16 | 0 | 19 | 4 | 59 | 3 | 11 | 3½ | 110 | 6 | 12 | 11 |
| 17 | 1 | 0 | 6½ | 60 | 3 | 12 | 6 | 112 | 6 | 15 | 4 |
| 18 | 1 | 1 | 9 | 61 | 3 | 13 | 8½ | 120 | 7 | 5 | 0 |
| 19 | 1 | 2 | 11½ | 62 | 3 | 14 | 11 | 130 | 7 | 17 | 1 |
| 20 | 1 | 4 | 2 | 63 | 3 | 16 | 1½ | 132 | 7 | 19 | 6 |
| 21 | 1 | 5 | 4½ | 64 | 3 | 17 | 4 | 140 | 8 | 9 | 2 |
| 22 | 1 | 6 | 7 | 65 | 3 | 18 | 6½ | 144 | 8 | 14 | 0 |
| 23 | 1 | 7 | 9½ | 66 | 3 | 19 | 9 | 150 | 9 | 1 | 3 |
| 24 | 1 | 9 | 0 | 67 | 4 | 0 | 11½ | 175 | 10 | 11 | 5½ |
| 25 | 1 | 10 | 2½ | 68 | 4 | 2 | 2 | 200 | 12 | 1 | 8 |
| 26 | 1 | 11 | 5 | 69 | 4 | 3 | 4½ | 250 | 15 | 2 | 1 |
| 27 | 1 | 12 | 7½ | 70 | 4 | 4 | 7 | 300 | 18 | 2 | 6 |
| 28 | 1 | 13 | 10 | 71 | 4 | 5 | 9½ | 365 | 22 | 1 | 0½ |
| 29 | 1 | 15 | 0½ | 72 | 4 | 7 | 0 | 400 | 24 | 3 | 4 |
| 30 | 1 | 16 | 3 | 73 | 4 | 8 | 2½ | 500 | 30 | 4 | 2 |
| 31 | 1 | 17 | 5½ | 74 | 4 | 9 | 5 | 600 | 36 | 5 | 0 |
| 32 | 1 | 18 | 8 | 75 | 4 | 10 | 7½ | 700 | 42 | 5 | 10 |
| 33 | 1 | 19 | 10½ | 76 | 4 | 11 | 10 | 750 | 45 | 6 | 3 |
| 34 | 2 | 1 | 1 | 77 | 4 | 13 | 0½ | 800 | 48 | 6 | 8 |
| 35 | 2 | 2 | 3½ | 78 | 4 | 14 | 3 | 900 | 54 | 7 | 6 |
| 36 | 2 | 3 | 6 | 79 | 4 | 15 | 5½ | 1000 | 60 | 8 | 4 |
| 37 | 2 | 4 | 8½ | 80 | 4 | 16 | 8 | 1250 | 75 | 10 | 5 |
| 38 | 2 | 5 | 11 | 81 | 4 | 17 | 10½ | 1500 | 90 | 12 | 6 |
| 39 | 2 | 7 | 1½ | 82 | 4 | 19 | 1 | 1750 | 105 | 14 | 7 |
| 40 | 2 | 8 | 4 | 83 | 5 | 0 | 3½ | 2000 | 120 | 16 | 8 |
| 41 | 2 | 9 | 6½ | 84 | 5 | 1 | 6 | 2240 | 135 | 6 | 8 |
| 42 | 2 | 10 | 9 | 85 | 5 | 2 | 8½ | 3000 | 181 | 5 | 0 |
| 43 | 2 | 11 | 11½ | 86 | 5 | 3 | 11 | 5000 | 302 | 1 | 8 |

## 1s. 3d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 3 | 44 | 2 | 15 | 0 | 87 | 5 | 8 | 9 |
| 2 | 0 | 2 | 6 | 45 | 2 | 16 | 3 | 88 | 5 | 10 | 0 |
| 3 | 0 | 3 | 9 | 46 | 2 | 17 | 6 | 89 | 5 | 11 | 3 |
| 4 | 0 | 5 | 0 | 47 | 2 | 18 | 9 | 90 | 5 | 12 | 6 |
| 5 | 0 | 6 | 3 | 48 | 3 | 0 | 0 | 91 | 5 | 13 | 9 |
| 6 | 0 | 7 | 6 | 49 | 3 | 1 | 3 | 92 | 5 | 15 | 0 |
| 7 | 0 | 8 | 9 | 50 | 3 | 2 | 6 | 93 | 5 | 16 | 3 |
| 8 | 0 | 10 | 0 | 51 | 3 | 3 | 9 | 94 | 5 | 17 | 6 |
| 9 | 0 | 11 | 3 | 52 | 3 | 5 | 0 | 95 | 5 | 18 | 9 |
| 10 | 0 | 12 | 6 | 53 | 3 | 6 | 3 | 96 | 6 | 0 | 0 |
| 11 | 0 | 13 | 9 | 54 | 3 | 7 | 6 | 97 | 6 | 1 | 3 |
| 12 | 0 | 15 | 0 | 55 | 3 | 8 | 9 | 98 | 6 | 2 | 6 |
| 13 | 0 | 16 | 3 | 56 | 3 | 10 | 0 | 99 | 6 | 3 | 9 |
| 14 | 0 | 17 | 6 | 57 | 3 | 11 | 3 | 100 | 6 | 5 | 0 |
| 15 | 0 | 18 | 9 | 58 | 3 | 12 | 6 | 108 | 6 | 15 | 0 |
| 16 | 1 | 0 | 0 | 59 | 3 | 13 | 9 | 110 | 6 | 17 | 6 |
| 17 | 1 | 1 | 3 | 60 | 3 | 15 | 0 | 112 | 7 | 0 | 0 |
| 18 | 1 | 2 | 6 | 61 | 3 | 16 | 3 | 120 | 7 | 10 | 0 |
| 19 | 1 | 3 | 9 | 62 | 3 | 17 | 6 | 130 | 8 | 2 | 6 |
| 20 | 1 | 5 | 0 | 63 | 3 | 18 | 9 | 132 | 8 | 5 | 0 |
| 21 | 1 | 6 | 3 | 64 | 4 | 0 | 0 | 140 | 8 | 15 | 0 |
| 22 | 1 | 7 | 6 | 65 | 4 | 1 | 3 | 144 | 9 | 0 | 0 |
| 23 | 1 | 8 | 9 | 66 | 4 | 2 | 6 | 150 | 9 | 7 | 6 |
| 24 | 1 | 10 | 0 | 67 | 4 | 3 | 9 | 175 | 10 | 18 | 9 |
| 25 | 1 | 11 | 3 | 68 | 4 | 5 | 0 | 200 | 12 | 10 | 0 |
| 26 | 1 | 12 | 6 | 69 | 4 | 6 | 3 | 250 | 15 | 12 | 6 |
| 27 | 1 | 13 | 9 | 70 | 4 | 7 | 6 | 300 | 18 | 15 | 0 |
| 28 | 1 | 15 | 0 | 71 | 4 | 8 | 9 | 365 | 22 | 16 | 3 |
| 29 | 1 | 16 | 3 | 72 | 4 | 10 | 0 | 400 | 25 | 0 | 0 |
| 30 | 1 | 17 | 6 | 73 | 4 | 11 | 3 | 500 | 31 | 5 | 0 |
| 31 | 1 | 18 | 9 | 74 | 4 | 12 | 6 | 600 | 37 | 10 | 0 |
| 32 | 2 | 0 | 0 | 75 | 4 | 13 | 9 | 700 | 43 | 15 | 0 |
| 33 | 2 | 1 | 3 | 76 | 4 | 15 | 0 | 750 | 46 | 17 | 6 |
| 34 | 2 | 2 | 6 | 77 | 4 | 16 | 3 | 800 | 50 | 0 | 0 |
| 35 | 2 | 3 | 9 | 78 | 4 | 17 | 6 | 900 | 56 | 5 | 0 |
| 36 | 2 | 5 | 0 | 79 | 4 | 18 | 9 | 1000 | 62 | 10 | 0 |
| 37 | 2 | 6 | 3 | 80 | 5 | 0 | 0 | 1250 | 78 | 2 | 6 |
| 38 | 2 | 7 | 6 | 81 | 5 | 1 | 3 | 1500 | 93 | 15 | 0 |
| 39 | 2 | 8 | 9 | 82 | 5 | 2 | 6 | 1750 | 109 | 7 | 6 |
| 40 | 2 | 10 | 0 | 83 | 5 | 3 | 9 | 2000 | 125 | 0 | 0 |
| 41 | 2 | 11 | 3 | 84 | 5 | 5 | 0 | 2240 | 140 | 0 | 0 |
| 42 | 2 | 12 | 6 | 85 | 5 | 6 | 3 | 3000 | 187 | 10 | 0 |
| 43 | 2 | 13 | 9 | 86 | 5 | 7 | 6 | 5000 | 312 | 10 | 0 |

## 1s. 3½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 3½ | 44 | 2 | 15 | 11 | 87 | 5 | 10 | 6½ |
| 2 | 0 | 2 | 6½ | 45 | 2 | 17 | 2½ | 88 | 5 | 11 | 10 |
| 3 | 0 | 3 | 9½ | 46 | 2 | 18 | 5½ | 89 | 5 | 13 | 1½ |
| 4 | 0 | 5 | 1 | 47 | 2 | 19 | 8½ | 90 | 5 | 14 | 4½ |
| 5 | 0 | 6 | 4½ | 48 | 3 | 1 | 0 | 91 | 5 | 15 | 7½ |
| 6 | 0 | 7 | 7½ | 49 | 3 | 2 | 3½ | 92 | 5 | 16 | 11 |
| 7 | 0 | 8 | 10½ | 50 | 3 | 3 | 6½ | 93 | 5 | 18 | 2½ |
| 8 | 0 | 10 | 2 | 51 | 3 | 4 | 9½ | 94 | 5 | 19 | 5½ |
| 9 | 0 | 11 | 5½ | 52 | 3 | 6 | 1 | 95 | 6 | 0 | 8½ |
| 10 | 0 | 12 | 8½ | 53 | 3 | 7 | 4½ | 96 | 6 | 2 | 0 |
| 11 | 0 | 13 | 11½ | 54 | 3 | 8 | 7½ | 97 | 6 | 3 | 3½ |
| 12 | 0 | 15 | 3 | 55 | 3 | 9 | 10½ | 98 | 6 | 4 | 6½ |
| 13 | 0 | 16 | 6½ | 56 | 3 | 11 | 2 | 99 | 6 | 5 | 9½ |
| 14 | 0 | 17 | 9½ | 57 | 3 | 12 | 5½ | 100 | 6 | 7 | 1 |
| 15 | 0 | 19 | 0½ | 58 | 3 | 13 | 8½ | 108 | 6 | 17 | 3 |
| 16 | 1 | 0 | 4 | 59 | 3 | 14 | 11½ | 110 | 6 | 19 | 9½ |
| 17 | 1 | 1 | 7½ | 60 | 3 | 16 | 3 | 112 | 7 | 2 | 4 |
| 18 | 1 | 2 | 10½ | 61 | 3 | 17 | 6½ | 120 | 7 | 12 | 6 |
| 19 | 1 | 4 | 1½ | 62 | 3 | 18 | 9½ | 130 | 8 | 5 | 2½ |
| 20 | 1 | 5 | 5 | 63 | 4 | 0 | 0½ | 132 | 8 | 7 | 9 |
| 21 | 1 | 6 | 8½ | 64 | 4 | 1 | 4 | 140 | 8 | 17 | 11 |
| 22 | 1 | 7 | 11½ | 65 | 4 | 2 | 7½ | 144 | 9 | 3 | 0 |
| 23 | 1 | 9 | 2½ | 66 | 4 | 3 | 10½ | 150 | 9 | 10 | 7½ |
| 24 | 1 | 10 | 6 | 67 | 4 | 5 | 1½ | 175 | 11 | 2 | 4½ |
| 25 | 1 | 11 | 9½ | 68 | 4 | 6 | 5 | 200 | 12 | 14 | 2 |
| 26 | 1 | 13 | 0½ | 69 | 4 | 7 | 8½ | 250 | 15 | 17 | 8½ |
| 27 | 1 | 14 | 3½ | 70 | 4 | 8 | 11½ | 300 | 19 | 1 | 3 |
| 28 | 1 | 15 | 7 | 71 | 4 | 10 | 2½ | 365 | 23 | 3 | 10½ |
| 29 | 1 | 16 | 10½ | 72 | 4 | 11 | 6 | 400 | 25 | 8 | 4 |
| 30 | 1 | 18 | 1½ | 73 | 4 | 12 | 9½ | 500 | 31 | 15 | 5 |
| 31 | 1 | 19 | 4½ | 74 | 4 | 14 | 0½ | 600 | 38 | 2 | 6 |
| 32 | 2 | 0 | 8 | 75 | 4 | 15 | 3½ | 700 | 44 | 9 | 7 |
| 33 | 2 | 1 | 11½ | 76 | 4 | 16 | 7 | 750 | 47 | 13 | 1½ |
| 34 | 2 | 3 | 2½ | 77 | 4 | 17 | 10½ | 800 | 50 | 16 | 8 |
| 35 | 2 | 4 | 5½ | 78 | 4 | 19 | 1½ | 900 | 57 | 3 | 9 |
| 36 | 2 | 5 | 9 | 79 | 5 | 0 | 4½ | 1000 | 63 | 10 | 10 |
| 37 | 2 | 7 | 0½ | 80 | 5 | 1 | 8 | 1250 | 79 | 8 | 6½ |
| 38 | 2 | 8 | 3½ | 81 | 5 | 2 | 11½ | 1500 | 95 | 6 | 3 |
| 39 | 2 | 9 | 6½ | 82 | 5 | 4 | 2½ | 1750 | 111 | 3 | 11½ |
| 40 | 2 | 10 | 10 | 83 | 5 | 5 | 5½ | 2000 | 127 | 1 | 8 |
| 41 | 2 | 12 | 1½ | 84 | 5 | 6 | 9 | 2240 | 142 | 6 | 8 |
| 42 | 2 | 13 | 4½ | 85 | 5 | 8 | 0½ | 3000 | 190 | 12 | 6 |
| 43 | 2 | 14 | 7½ | 86 | 5 | 9 | 3½ | 5000 | 317 | 14 | 2 |

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| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 3½ | 44 | 2 | 17 | 9 | 87 | 5 | 14 | 2½ |
| 2 | 0 | 2 | 7½ | 45 | 2 | 19 | 0½ | 88 | 5 | 15 | 6 |
| 3 | 0 | 3 | 11½ | 46 | 3 | 0 | 4½ | 89 | 5 | 16 | 9½ |
| 4 | 0 | 5 | 3 | 47 | 3 | 1 | 8½ | 90 | 5 | 18 | 1½ |
| 5 | 0 | 6 | 6½ | 48 | 3 | 3 | 0 | 91 | 5 | 19 | 5½ |
| 6 | 0 | 7 | 10½ | 49 | 3 | 4 | 3½ | 92 | 6 | 0 | 9 |
| 7 | 0 | 9 | 2½ | 50 | 3 | 5 | 7½ | 93 | 6 | 2 | 0½ |
| 8 | 0 | 10 | 6 | 51 | 3 | 6 | 11½ | 94 | 6 | 3 | 4½ |
| 9 | 0 | 11 | 9½ | 52 | 3 | 8 | 3 | 95 | 6 | 4 | 8½ |
| 10 | 0 | 13 | 1½ | 53 | 3 | 9 | 6½ | 96 | 6 | 6 | 0 |
| 11 | 0 | 14 | 5½ | 54 | 3 | 10 | 10½ | 97 | 6 | 7 | 3½ |
| 12 | 0 | 15 | 9 | 55 | 3 | 12 | 2½ | 98 | 6 | 8 | 7½ |
| 13 | 0 | 17 | 0½ | 56 | 3 | 13 | 6 | 99 | 6 | 9 | 11½ |
| 14 | 0 | 18 | 4½ | 57 | 3 | 14 | 9½ | 100 | 6 | 11 | 3 |
| 15 | 0 | 19 | 8½ | 58 | 3 | 16 | 1½ | 108 | 7 | 1 | 9 |
| 16 | 1 | 1 | 0 | 59 | 3 | 17 | 5½ | 110 | 7 | 4 | 4½ |
| 17 | 1 | 2 | 3½ | 60 | 3 | 18 | 9 | 112 | 7 | 7 | 0 |
| 18 | 1 | 3 | 7½ | 61 | 4 | 0 | 0½ | 120 | 7 | 17 | 6 |
| 19 | 1 | 4 | 11½ | 62 | 4 | 1 | 4½ | 130 | 8 | 10 | 7½ |
| 20 | 1 | 6 | 3 | 63 | 4 | 2 | 8½ | 132 | 8 | 13 | 3 |
| 21 | 1 | 7 | 6½ | 64 | 4 | 4 | 0 | 140 | 9 | 3 | 9 |
| 22 | 1 | 8 | 10½ | 65 | 4 | 5 | 3½ | 144 | 9 | 9 | 0 |
| 23 | 1 | 10 | 2½ | 66 | 4 | 6 | 7½ | 150 | 9 | 16 | 10½ |
| 24 | 1 | 11 | 6 | 67 | 4 | 7 | 11½ | 175 | 11 | 9 | 8½ |
| 25 | 1 | 12 | 9½ | 68 | 4 | 9 | 3 | 200 | 13 | 2 | 6 |
| 26 | 1 | 14 | 1½ | 69 | 4 | 10 | 6½ | 250 | 16 | 8 | 1½ |
| 27 | 1 | 15 | 5½ | 70 | 4 | 11 | 10½ | 300 | 19 | 13 | 9 |
| 28 | 1 | 16 | 9 | 71 | 4 | 13 | 2½ | 365 | 23 | 19 | 0½ |
| 29 | 1 | 18 | 0½ | 72 | 4 | 14 | 6 | 400 | 26 | 5 | 0 |
| 30 | 1 | 19 | 4½ | 73 | 4 | 15 | 9½ | 500 | 32 | 16 | 3 |
| 31 | 2 | 0 | 8½ | 74 | 4 | 17 | 1½ | 600 | 39 | 7 | 6 |
| 32 | 2 | 2 | 0 | 75 | 4 | 18 | 5½ | 700 | 45 | 18 | 9 |
| 33 | 2 | 3 | 3½ | 76 | 4 | 19 | 9 | 750 | 49 | 4 | 4½ |
| 34 | 2 | 4 | 7½ | 77 | 5 | 1 | 0½ | 800 | 52 | 10 | 0 |
| 35 | 2 | 5 | 11½ | 78 | 5 | 2 | 4½ | 900 | 59 | 1 | 3 |
| 36 | 2 | 7 | 3 | 79 | 5 | 3 | 8½ | 1000 | 65 | 12 | 6 |
| 37 | 2 | 8 | 6½ | 80 | 5 | 5 | 0 | 1250 | 82 | 0 | 7½ |
| 38 | 2 | 9 | 10½ | 81 | 5 | 6 | 3½ | 1500 | 98 | 8 | 9 |
| 39 | 2 | 11 | 2½ | 82 | 5 | 7 | 7½ | 1750 | 114 | 16 | 10½ |
| 40 | 2 | 12 | 6 | 83 | 5 | 8 | 11½ | 2000 | 131 | 5 | 0 |
| 41 | 2 | 13 | 9½ | 84 | 5 | 10 | 3 | 2240 | 147 | 0 | 0 |
| 42 | 2 | 15 | 1½ | 85 | 5 | 11 | 6½ | 3000 | 196 | 17 | 6 |
| 43 | 2 | 16 | 5½ | 86 | 5 | 12 | 10½ | 5000 | 328 | 2 | 6 |

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| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 3½ | 44 | 2 | 16 | 10 | 87 | 5 | 12 | 4½ |
| 2 | 0 | 2 | 7 | 45 | 2 | 18 | 1½ | 88 | 5 | 13 | 8 |
| 3 | 0 | 3 | 10½ | 46 | 2 | 19 | 5 | 89 | 5 | 14 | 11½ |
| 4 | 0 | 5 | 2 | 47 | 3 | 0 | 8½ | 90 | 5 | 16 | 3 |
| 5 | 0 | 6 | 5½ | 48 | 3 | 2 | 0 | 91 | 5 | 17 | 6½ |
| 6 | 0 | 7 | 9 | 49 | 3 | 3 | 3½ | 92 | 5 | 18 | 10 |
| 7 | 0 | 9 | 0½ | 50 | 3 | 4 | 7 | 93 | 6 | 0 | 1½ |
| 8 | 0 | 10 | 4 | 51 | 3 | 5 | 10½ | 94 | 6 | 1 | 5 |
| 9 | 0 | 11 | 7½ | 52 | 3 | 7 | 2 | 95 | 6 | 2 | 8½ |
| 10 | 0 | 12 | 11 | 53 | 3 | 8 | 5½ | 96 | 6 | 4 | 0 |
| 11 | 0 | 14 | 2½ | 54 | 3 | 9 | 9 | 97 | 6 | 5 | 3½ |
| 12 | 0 | 15 | 6 | 55 | 3 | 11 | 0½ | 98 | 6 | 6 | 7 |
| 13 | 0 | 16 | 9½ | 56 | 3 | 12 | 4 | 99 | 6 | 7 | 10½ |
| 14 | 0 | 18 | 1 | 57 | 3 | 13 | 7½ | 100 | 6 | 9 | 2 |
| 15 | 0 | 19 | 4½ | 58 | 3 | 14 | 11 | 108 | 6 | 19 | 6 |
| 16 | 1 | 0 | 8 | 59 | 3 | 16 | 2½ | 110 | 7 | 2 | 1 |
| 17 | 1 | 1 | 11½ | 60 | 3 | 17 | 6 | 112 | 7 | 4 | 8 |
| 18 | 1 | 3 | 3 | 61 | 3 | 18 | 9½ | 120 | 7 | 15 | 0 |
| 19 | 1 | 4 | 6½ | 62 | 4 | 0 | 1 | 130 | 8 | 7 | 11 |
| 20 | 1 | 5 | 10 | 63 | 4 | 1 | 4½ | 132 | 8 | 10 | 6 |
| 21 | 1 | 7 | 1½ | 64 | 4 | 2 | 8 | 140 | 9 | 0 | 10 |
| 22 | 1 | 8 | 5 | 65 | 4 | 3 | 11½ | 144 | 9 | 6 | 0 |
| 23 | 1 | 9 | 8½ | 66 | 4 | 5 | 3 | 150 | 9 | 13 | 9 |
| 24 | 1 | 11 | 0 | 67 | 4 | 6 | 6½ | 175 | 11 | 6 | 0½ |
| 25 | 1 | 12 | 3½ | 68 | 4 | 7 | 10 | 200 | 12 | 18 | 4 |
| 26 | 1 | 13 | 7 | 69 | 4 | 9 | 1½ | 250 | 16 | 2 | 11 |
| 27 | 1 | 14 | 10½ | 70 | 4 | 10 | 5 | 300 | 19 | 7 | 6 |
| 28 | 1 | 16 | 2 | 71 | 4 | 11 | 8½ | 365 | 23 | 11 | 5½ |
| 29 | 1 | 17 | 5½ | 72 | 4 | 13 | 0 | 400 | 25 | 16 | 8 |
| 30 | 1 | 18 | 9 | 73 | 4 | 14 | 3½ | 500 | 32 | 5 | 10 |
| 31 | 2 | 0 | 0½ | 74 | 4 | 15 | 7 | 600 | 38 | 15 | 0 |
| 32 | 2 | 1 | 4 | 75 | 4 | 16 | 10½ | 700 | 45 | 4 | 2 |
| 33 | 2 | 2 | 7½ | 76 | 4 | 18 | 2 | 750 | 48 | 8 | 9 |
| 34 | 2 | 3 | 11 | 77 | 4 | 19 | 5½ | 800 | 51 | 13 | 4 |
| 35 | 2 | 5 | 2½ | 78 | 5 | 0 | 9 | 900 | 58 | 2 | 6 |
| 36 | 2 | 6 | 6 | 79 | 5 | 2 | 0½ | 1000 | 64 | 11 | 8 |
| 37 | 2 | 7 | 9½ | 80 | 5 | 3 | 4 | 1250 | 80 | 14 | 7 |
| 38 | 2 | 9 | 1 | 81 | 5 | 4 | 7½ | 1500 | 96 | 17 | 6 |
| 39 | 2 | 10 | 4½ | 82 | 5 | 5 | 11 | 1750 | 113 | 0 | 5 |
| 40 | 2 | 11 | 8 | 83 | 5 | 7 | 2½ | 2000 | 129 | 3 | 4 |
| 41 | 2 | 12 | 11½ | 84 | 5 | 8 | 6 | 2240 | 144 | 13 | 4 |
| 42 | 2 | 14 | 3 | 85 | 5 | 9 | 9½ | 3000 | 193 | 15 | 0 |
| 43 | 2 | 15 | 6½ | 86 | 5 | 11 | 1 | 5000 | 322 | 18 | 4 |

## 1s. 4d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 4 | 44 | 2 | 18 | 8 | 87 | 5 | 16 | 0 |
| 2 | 0 | 2 | 8 | 45 | 3 | 0 | 0 | 88 | 5 | 17 | 4 |
| 3 | 0 | 4 | 0 | 46 | 3 | 1 | 4 | 89 | 5 | 18 | 8 |
| 4 | 0 | 5 | 4 | 47 | 3 | 2 | 8 | 90 | 6 | 0 | 0 |
| 5 | 0 | 6 | 8 | 48 | 3 | 4 | 0 | 91 | 6 | 1 | 4 |
| 6 | 0 | 8 | 0 | 49 | 3 | 5 | 4 | 92 | 6 | 2 | 8 |
| 7 | 0 | 9 | 4 | 50 | 3 | 6 | 8 | 93 | 6 | 4 | 0 |
| 8 | 0 | 10 | 8 | 51 | 3 | 8 | 0 | 94 | 6 | 5 | 4 |
| 9 | 0 | 12 | 0 | 52 | 3 | 9 | 4 | 95 | 6 | 6 | 8 |
| 10 | 0 | 13 | 4 | 53 | 3 | 10 | 8 | 96 | 6 | 8 | 0 |
| 11 | 0 | 14 | 8 | 54 | 3 | 12 | 0 | 97 | 6 | 9 | 4 |
| 12 | 0 | 16 | 0 | 55 | 3 | 13 | 4 | 98 | 6 | 10 | 8 |
| 13 | 0 | 17 | 4 | 56 | 3 | 14 | 8 | 99 | 6 | 12 | 0 |
| 14 | 0 | 18 | 8 | 57 | 3 | 16 | 0 | 100 | 6 | 13 | 4 |
| 15 | 1 | 0 | 0 | 58 | 3 | 17 | 4 | 108 | 7 | 4 | 0 |
| 16 | 1 | 1 | 4 | 59 | 3 | 18 | 8 | 110 | 7 | 6 | 8 |
| 17 | 1 | 2 | 8 | 60 | 4 | 0 | 0 | 112 | 7 | 9 | 4 |
| 18 | 1 | 4 | 0 | 61 | 4 | 1 | 4 | 120 | 8 | 0 | 0 |
| 19 | 1 | 5 | 4 | 62 | 4 | 2 | 8 | 130 | 8 | 13 | 4 |
| 20 | 1 | 6 | 8 | 63 | 4 | 4 | 0 | 132 | 8 | 16 | 0 |
| 21 | 1 | 8 | 0 | 64 | 4 | 5 | 4 | 140 | 9 | 6 | 8 |
| 22 | 1 | 9 | 4 | 65 | 4 | 6 | 8 | 144 | 9 | 12 | 0 |
| 23 | 1 | 10 | 8 | 66 | 4 | 8 | 0 | 150 | 10 | 0 | 0 |
| 24 | 1 | 12 | 0 | 67 | 4 | 9 | 4 | 175 | 11 | 13 | 4 |
| 25 | 1 | 13 | 4 | 68 | 4 | 10 | 8 | 200 | 13 | 6 | 8 |
| 26 | 1 | 14 | 8 | 69 | 4 | 12 | 0 | 250 | 16 | 13 | 4 |
| 27 | 1 | 16 | 0 | 70 | 4 | 13 | 4 | 300 | 20 | 0 | 0 |
| 28 | 1 | 17 | 4 | 71 | 4 | 14 | 8 | 365 | 24 | 6 | 8 |
| 29 | 1 | 18 | 8 | 72 | 4 | 16 | 0 | 400 | 26 | 13 | 4 |
| 30 | 2 | 0 | 0 | 73 | 4 | 17 | 4 | 500 | 33 | 6 | 8 |
| 31 | 2 | 1 | 4 | 74 | 4 | 18 | 8 | 600 | 40 | 0 | 0 |
| 32 | 2 | 2 | 8 | 75 | 5 | 0 | 0 | 700 | 46 | 13 | 4 |
| 33 | 2 | 4 | 0 | 76 | 5 | 1 | 4 | 750 | 50 | 0 | 0 |
| 34 | 2 | 5 | 4 | 77 | 5 | 2 | 8 | 800 | 53 | 6 | 8 |
| 35 | 2 | 6 | 8 | 78 | 5 | 4 | 0 | 900 | 60 | 0 | 0 |
| 36 | 2 | 8 | 0 | 79 | 5 | 5 | 4 | 1000 | 66 | 13 | 4 |
| 37 | 2 | 9 | 4 | 80 | 5 | 6 | 8 | 1250 | 83 | 6 | 8 |
| 38 | 2 | 10 | 8 | 81 | 5 | 8 | 0 | 1500 | 100 | 0 | 0 |
| 39 | 2 | 12 | 0 | 82 | 5 | 9 | 4 | 1750 | 116 | 13 | 4 |
| 40 | 2 | 13 | 4 | 83 | 5 | 10 | 8 | 2000 | 133 | 6 | 8 |
| 41 | 2 | 14 | 8 | 84 | 5 | 12 | 0 | 2240 | 149 | 6 | 8 |
| 42 | 2 | 16 | 0 | 85 | 5 | 13 | 4 | 3000 | 200 | 0 | 0 |
| 43 | 2 | 17 | 4 | 86 | 5 | 14 | 8 | 5000 | 333 | 6 | 8 |

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 4½ | 44 | 2 | 19 | 7 | 87 | 5 | 17 | 9½ |
| 2 | 0 | 2 | 8½ | 45 | 3 | 0 | 11½ | 88 | 5 | 19 | 2 |
| 3 | 0 | 4 | 0½ | 46 | 3 | 2 | 3½ | 89 | 6 | 0 | 6½ |
| 4 | 0 | 5 | 5 | 47 | 3 | 3 | 7½ | 90 | 6 | 1 | 10½ |
| 5 | 0 | 6 | 9½ | 48 | 3 | 5 | 0 | 91 | 6 | 3 | 2½ |
| 6 | 0 | 8 | 1½ | 49 | 3 | 6 | 4½ | 92 | 6 | 4 | 7 |
| 7 | 0 | 9 | 5½ | 50 | 3 | 7 | 8½ | 93 | 6 | 5 | 11½ |
| 8 | 0 | 10 | 10 | 51 | 3 | 9 | 0½ | 94 | 6 | 7 | 3½ |
| 9 | 0 | 12 | 2½ | 52 | 3 | 10 | 5 | 95 | 6 | 8 | 7½ |
| 10 | 0 | 13 | 6½ | 53 | 3 | 11 | 9½ | 96 | 6 | 10 | 0 |
| 11 | 0 | 14 | 10½ | 54 | 3 | 13 | 1½ | 97 | 6 | 11 | 4½ |
| 12 | 0 | 16 | 3 | 55 | 3 | 14 | 5½ | 98 | 6 | 12 | 8½ |
| 13 | 0 | 17 | 7½ | 56 | 3 | 15 | 10 | 99 | 6 | 14 | 0½ |
| 14 | 0 | 18 | 11½ | 57 | 3 | 17 | 2½ | 100 | 6 | 15 | 5 |
| 15 | 1 | 0 | 3½ | 58 | 3 | 18 | 6½ | 108 | 7 | 6 | 3 |
| 16 | 1 | 1 | 8 | 59 | 3 | 19 | 10½ | 110 | 7 | 8 | 11½ |
| 17 | 1 | 3 | 0½ | 60 | 4 | 1 | 3 | 112 | 7 | 11 | 8 |
| 18 | 1 | 4 | 4½ | 61 | 4 | 2 | 7½ | 120 | 8 | 2 | 6 |
| 19 | 1 | 5 | 8½ | 62 | 4 | 3 | 11½ | 130 | 8 | 16 | 0½ |
| 20 | 1 | 7 | 1 | 63 | 4 | 5 | 3½ | 132 | 8 | 18 | 9 |
| 21 | 1 | 8 | 5½ | 64 | 4 | 6 | 8 | 140 | 9 | 9 | 7 |
| 22 | 1 | 9 | 9½ | 65 | 4 | 8 | 0½ | 144 | 9 | 15 | 0 |
| 23 | 1 | 11 | 1½ | 66 | 4 | 9 | 4½ | 150 | 10 | 3 | 1½ |
| 24 | 1 | 12 | 6 | 67 | 4 | 10 | 8½ | 175 | 11 | 16 | 11½ |
| 25 | 1 | 13 | 10½ | 68 | 4 | 12 | 1 | 200 | 13 | 10 | 10 |
| 26 | 1 | 15 | 2½ | 69 | 4 | 13 | 5½ | 250 | 16 | 18 | 6½ |
| 27 | 1 | 16 | 6½ | 70 | 4 | 14 | 9½ | 300 | 20 | 6 | 3 |
| 28 | 1 | 17 | 11 | 71 | 4 | 16 | 1½ | 365 | 24 | 14 | 3½ |
| 29 | 1 | 19 | 3½ | 72 | 4 | 17 | 6 | 400 | 27 | 1 | 8 |
| 30 | 2 | 0 | 7½ | 73 | 4 | 18 | 10½ | 500 | 33 | 17 | 1 |
| 31 | 2 | 1 | 11½ | 74 | 5 | 0 | 2½ | 600 | 40 | 12 | 6 |
| 32 | 2 | 3 | 4 | 75 | 5 | 1 | 6½ | 700 | 47 | 7 | 11 |
| 33 | 2 | 4 | 8½ | 76 | 5 | 2 | 11 | 750 | 50 | 15 | 7½ |
| 34 | 2 | 6 | 0½ | 77 | 5 | 4 | 3½ | 800 | 54 | 3 | 4 |
| 35 | 2 | 7 | 4½ | 78 | 5 | 5 | 7½ | 900 | 60 | 18 | 9 |
| 36 | 2 | 8 | 9 | 79 | 5 | 6 | 11½ | 1000 | 67 | 14 | 2 |
| 37 | 2 | 10 | 1½ | 80 | 5 | 8 | 4 | 1250 | 84 | 12 | 8½ |
| 38 | 2 | 11 | 5½ | 81 | 5 | 9 | 8½ | 1500 | 101 | 11 | 3 |
| 39 | 2 | 12 | 9½ | 82 | 5 | 11 | 0½ | 1750 | 118 | 9 | 9½ |
| 40 | 2 | 14 | 2 | 83 | 5 | 12 | 4½ | 2000 | 135 | 8 | 4 |
| 41 | 2 | 15 | 6½ | 84 | 5 | 13 | 9 | 2240 | 151 | 13 | 4 |
| 42 | 2 | 16 | 10½ | 85 | 5 | 15 | 1½ | 3000 | 203 | 2 | 6 |
| 43 | 2 | 18 | 2½ | 86 | 5 | 16 | 5½ | 5000 | 338 | 10 | 10 |

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 4¾ | 44 | 3 | 1 | 5 | 87 | 6 | 1 | 5½ |
| 2 | 0 | 2 | 9½ | 45 | 3 | 2 | 9¾ | 88 | 6 | 2 | 10 |
| 3 | 0 | 4 | 2¼ | 46 | 3 | 4 | 2¾ | 89 | 6 | 4 | 2¾ |
| 4 | 0 | 5 | 7 | 47 | 3 | 5 | 7¼ | 90 | 6 | 5 | 7¼ |
| 5 | 0 | 6 | 11¾ | 48 | 3 | 7 | 0 | 91 | 6 | 7 | 0¼ |
| 6 | 0 | 8 | 4¼ | 49 | 3 | 8 | 4¾ | 92 | 6 | 8 | 5 |
| 7 | 0 | 9 | 9¼ | 50 | 3 | 9 | 9¼ | 93 | 6 | 9 | 9¾ |
| 8 | 0 | 11 | 2 | 51 | 3 | 11 | 2¼ | 94 | 6 | 11 | 2¾ |
| 9 | 0 | 12 | 6¾ | 52 | 3 | 12 | 7 | 95 | 6 | 12 | 7¼ |
| 10 | 0 | 13 | 11¼ | 53 | 3 | 13 | 11¾ | 96 | 6 | 14 | 0 |
| 11 | 0 | 15 | 4¼ | 54 | 3 | 15 | 4¾ | 97 | 6 | 15 | 4¾ |
| 12 | 0 | 16 | 9 | 55 | 3 | 16 | 9¼ | 98 | 6 | 16 | 9¼ |
| 13 | 0 | 18 | 1¾ | 56 | 3 | 18 | 2 | 99 | 6 | 18 | 2¾ |
| 14 | 0 | 19 | 6¼ | 57 | 3 | 19 | 6¾ | 100 | 6 | 19 | 7 |
| 15 | 1 | 0 | 11¼ | 58 | 4 | 0 | 11¾ | 108 | 7 | 10 | 9 |
| 16 | 1 | 2 | 4 | 59 | 4 | 2 | 4¼ | 110 | 7 | 13 | 6¼ |
| 17 | 1 | 3 | 8¾ | 60 | 4 | 3 | 9 | 112 | 7 | 16 | 4 |
| 18 | 1 | 5 | 1¼ | 61 | 4 | 5 | 1¾ | 120 | 8 | 7 | 6 |
| 19 | 1 | 6 | 6¼ | 62 | 4 | 6 | 6¾ | 130 | 9 | 1 | 5½ |
| 20 | 1 | 7 | 11 | 63 | 4 | 7 | 11¼ | 132 | 9 | 4 | 3 |
| 21 | 1 | 9 | 3¾ | 64 | 4 | 9 | 4 | 140 | 9 | 15 | 5 |
| 22 | 1 | 10 | 8¼ | 65 | 4 | 10 | 8¾ | 144 | 10 | 1 | 0 |
| 23 | 1 | 12 | 1¼ | 66 | 4 | 12 | 1¾ | 150 | 10 | 9 | 4¼ |
| 24 | 1 | 13 | 6 | 67 | 4 | 13 | 6¼ | 175 | 12 | 4 | 3¾ |
| 25 | 1 | 14 | 10¾ | 68 | 4 | 14 | 11 | 200 | 13 | 19 | 2 |
| 26 | 1 | 16 | 3¼ | 69 | 4 | 16 | 3¾ | 250 | 17 | 8 | 11½ |
| 27 | 1 | 17 | 8¼ | 70 | 4 | 17 | 8¼ | 300 | 20 | 18 | 9 |
| 28 | 1 | 19 | 1 | 71 | 4 | 19 | 1¾ | 365 | 25 | 9 | 5¾ |
| 29 | 2 | 0 | 5¾ | 72 | 5 | 0 | 6 | 400 | 27 | 18 | 4 |
| 30 | 2 | 1 | 10½ | 73 | 5 | 1 | 10¾ | 500 | 34 | 17 | 11 |
| 31 | 2 | 3 | 3¼ | 74 | 5 | 3 | 3¼ | 600 | 41 | 17 | 6 |
| 32 | 2 | 4 | 8 | 75 | 5 | 4 | 8¼ | 700 | 48 | 17 | 1 |
| 33 | 2 | 6 | 0¾ | 76 | 5 | 6 | 1 | 750 | 52 | 6 | 10½ |
| 34 | 2 | 7 | 5¼ | 77 | 5 | 7 | 5¾ | 800 | 55 | 16 | 8 |
| 35 | 2 | 8 | 10¼ | 78 | 5 | 8 | 10¼ | 900 | 62 | 16 | 3 |
| 36 | 2 | 10 | 3 | 79 | 5 | 10 | 3¼ | 1000 | 69 | 15 | 10 |
| 37 | 2 | 11 | 7¾ | 80 | 5 | 11 | 8 | 1250 | 87 | 4 | 9½ |
| 38 | 2 | 13 | 0¼ | 81 | 5 | 13 | 0¾ | 1500 | 104 | 13 | 9 |
| 39 | 2 | 14 | 5¼ | 82 | 5 | 14 | 5¼ | 1750 | 122 | 2 | 8¾ |
| 40 | 2 | 15 | 10 | 83 | 5 | 15 | 10¼ | 2000 | 139 | 11 | 8 |
| 41 | 2 | 17 | 2¾ | 84 | 5 | 17 | 3 | 2240 | 156 | 6 | 8 |
| 42 | 2 | 18 | 7¼ | 85 | 5 | 18 | 7¾ | 3000 | 209 | 7 | 6 |
| 43 | 3 | 0 | 0¼ | 86 | 6 | 0 | 0¾ | 5000 | 348 | 19 | 2 |

## 1s. 4½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 4½ | 44 | 3 | 0 | 6 | 87 | 5 | 19 | 7½ |
| 2 | 0 | 2 | 9 | 45 | 3 | 1 | 10½ | 88 | 6 | 1 | 0 |
| 3 | 0 | 4 | 1½ | 46 | 3 | 3 | 3 | 89 | 6 | 2 | 4½ |
| 4 | 0 | 5 | 6 | 47 | 3 | 4 | 7½ | 90 | 6 | 3 | 9 |
| 5 | 0 | 6 | 10½ | 48 | 3 | 6 | 0 | 91 | 6 | 5 | 1½ |
| 6 | 0 | 8 | 3 | 49 | 3 | 7 | 4½ | 92 | 6 | 6 | 6 |
| 7 | 0 | 9 | 7½ | 50 | 3 | 8 | 9 | 93 | 6 | 7 | 10½ |
| 8 | 0 | 11 | 0 | 51 | 3 | 10 | 1½ | 94 | 6 | 9 | 3 |
| 9 | 0 | 12 | 4½ | 52 | 3 | 11 | 6 | 95 | 6 | 10 | 7½ |
| 10 | 0 | 13 | 9 | 53 | 3 | 12 | 10½ | 96 | 6 | 12 | 0 |
| 11 | 0 | 15 | 1½ | 54 | 3 | 14 | 3 | 97 | 6 | 13 | 4½ |
| 12 | 0 | 16 | 6 | 55 | 3 | 15 | 7½ | 98 | 6 | 14 | 9 |
| 13 | 0 | 17 | 10½ | 56 | 3 | 17 | 0 | 99 | 6 | 16 | 1½ |
| 14 | 0 | 19 | 3 | 57 | 3 | 18 | 4½ | 100 | 6 | 17 | 6 |
| 15 | 1 | 0 | 7½ | 58 | 3 | 19 | 9 | 108 | 7 | 8 | 6 |
| 16 | 1 | 2 | 0 | 59 | 4 | 1 | 1½ | 110 | 7 | 11 | 3 |
| 17 | 1 | 3 | 4½ | 60 | 4 | 2 | 6 | 112 | 7 | 14 | 0 |
| 18 | 1 | 4 | 9 | 61 | 4 | 3 | 10½ | 120 | 8 | 5 | 0 |
| 19 | 1 | 6 | 1½ | 62 | 4 | 5 | 3 | 130 | 8 | 18 | 9 |
| 20 | 1 | 7 | 6 | 63 | 4 | 6 | 7½ | 132 | 9 | 1 | 6 |
| 21 | 1 | 8 | 10½ | 64 | 4 | 8 | 0 | 140 | 9 | 12 | 6 |
| 22 | 1 | 10 | 3 | 65 | 4 | 9 | 4½ | 144 | 9 | 18 | 0 |
| 23 | 1 | 11 | 7½ | 66 | 4 | 10 | 9 | 150 | 10 | 6 | 3 |
| 24 | 1 | 13 | 0 | 67 | 4 | 12 | 1½ | 175 | 12 | 0 | 7½ |
| 25 | 1 | 14 | 4½ | 68 | 4 | 13 | 6 | 200 | 13 | 15 | 0 |
| 26 | 1 | 15 | 9 | 69 | 4 | 14 | 10½ | 250 | 17 | 3 | 9 |
| 27 | 1 | 17 | 1½ | 70 | 4 | 16 | 3 | 300 | 20 | 12 | 6 |
| 28 | 1 | 18 | 6 | 71 | 4 | 17 | 7½ | 365 | 25 | 1 | 10½ |
| 29 | 1 | 19 | 10½ | 72 | 4 | 19 | 0 | 400 | 27 | 10 | 0 |
| 30 | 2 | 1 | 3 | 73 | 5 | 0 | 4½ | 500 | 34 | 7 | 6 |
| 31 | 2 | 2 | 7½ | 74 | 5 | 1 | 9 | 600 | 41 | 5 | 0 |
| 32 | 2 | 4 | 0 | 75 | 5 | 3 | 1½ | 700 | 48 | 2 | 6 |
| 33 | 2 | 5 | 4½ | 76 | 5 | 4 | 6 | 750 | 51 | 11 | 3 |
| 34 | 2 | 6 | 9 | 77 | 5 | 5 | 10½ | 800 | 55 | 0 | 0 |
| 35 | 2 | 8 | 1½ | 78 | 5 | 7 | 3 | 900 | 61 | 17 | 6 |
| 36 | 2 | 9 | 6 | 79 | 5 | 8 | 7½ | 1000 | 68 | 15 | 0 |
| 37 | 2 | 10 | 10½ | 80 | 5 | 10 | 0 | 1250 | 85 | 18 | 9 |
| 38 | 2 | 12 | 3 | 81 | 5 | 11 | 4½ | 1500 | 103 | 2 | 6 |
| 39 | 2 | 13 | 7½ | 82 | 5 | 12 | 9 | 1750 | 120 | 6 | 3 |
| 40 | 2 | 15 | 0 | 83 | 5 | 14 | 1½ | 2000 | 137 | 10 | 0 |
| 41 | 2 | 16 | 4½ | 84 | 5 | 15 | 6 | 2240 | 154 | 0 | 0 |
| 42 | 2 | 17 | 9 | 85 | 5 | 16 | 10½ | 3000 | 206 | 5 | 0 |
| 43 | 2 | 19 | 1½ | 86 | 5 | 18 | 3 | 5000 | 343 | 15 | 0 |

## 1s. 5d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 5 | 44 | 3 | 2 | 4 | 87 | 6 | 3 | 3 |
| 2 | 0 | 2 | 10 | 45 | 3 | 3 | 9 | 88 | 6 | 4 | 8 |
| 3 | 0 | 4 | 3 | 46 | 3 | 5 | 2 | 89 | 6 | 6 | 1 |
| 4 | 0 | 5 | 8 | 47 | 3 | 6 | 7 | 90 | 6 | 7 | 6 |
| 5 | 0 | 7 | 1 | 48 | 3 | 8 | 0 | 91 | 6 | 8 | 11 |
| 6 | 0 | 8 | 6 | 49 | 3 | 9 | 5 | 92 | 6 | 10 | 4 |
| 7 | 0 | 9 | 11 | 50 | 3 | 10 | 10 | 93 | 6 | 11 | 9 |
| 8 | 0 | 11 | 4 | 51 | 3 | 12 | 3 | 94 | 6 | 13 | 2 |
| 9 | 0 | 12 | 9 | 52 | 3 | 13 | 8 | 95 | 6 | 14 | 7 |
| 10 | 0 | 14 | 2 | 53 | 3 | 15 | 1 | 96 | 6 | 16 | 0 |
| 11 | 0 | 15 | 7 | 54 | 3 | 16 | 6 | 97 | 6 | 17 | 5 |
| 12 | 0 | 17 | 0 | 55 | 3 | 17 | 11 | 98 | 6 | 18 | 10 |
| 13 | 0 | 18 | 5 | 56 | 3 | 19 | 4 | 99 | 7 | 0 | 3 |
| 14 | 0 | 19 | 10 | 57 | 4 | 0 | 9 | 100 | 7 | 1 | 8 |
| 15 | 1 | 1 | 3 | 58 | 4 | 2 | 2 | 108 | 7 | 13 | 0 |
| 16 | 1 | 2 | 8 | 59 | 4 | 3 | 7 | 110 | 7 | 15 | 10 |
| 17 | 1 | 4 | 1 | 60 | 4 | 5 | 0 | 112 | 7 | 18 | 8 |
| 18 | 1 | 5 | 6 | 61 | 4 | 6 | 5 | 120 | 8 | 10 | 0 |
| 19 | 1 | 6 | 11 | 62 | 4 | 7 | 10 | 130 | 9 | 4 | 2 |
| 20 | 1 | 8 | 4 | 63 | 4 | 9 | 3 | 132 | 9 | 7 | 0 |
| 21 | 1 | 9 | 9 | 64 | 4 | 10 | 8 | 140 | 9 | 18 | 4 |
| 22 | 1 | 11 | 2 | 65 | 4 | 12 | 1 | 144 | 10 | 4 | 0 |
| 23 | 1 | 12 | 7 | 66 | 4 | 13 | 6 | 150 | 10 | 12 | 6 |
| 24 | 1 | 14 | 0 | 67 | 4 | 14 | 11 | 175 | 12 | 7 | 11 |
| 25 | 1 | 15 | 5 | 68 | 4 | 16 | 4 | 200 | 14 | 3 | 4 |
| 26 | 1 | 16 | 10 | 69 | 4 | 17 | 9 | 250 | 17 | 14 | 2 |
| 27 | 1 | 18 | 3 | 70 | 4 | 19 | 2 | 300 | 21 | 5 | 0 |
| 28 | 1 | 19 | 8 | 71 | 5 | 0 | 7 | 365 | 25 | 17 | 1 |
| 29 | 2 | 1 | 1 | 72 | 5 | 2 | 0 | 400 | 28 | 6 | 8 |
| 30 | 2 | 2 | 6 | 73 | 5 | 3 | 5 | 500 | 35 | 8 | 4 |
| 31 | 2 | 3 | 11 | 74 | 5 | 4 | 10 | 600 | 42 | 10 | 0 |
| 32 | 2 | 5 | 4 | 75 | 5 | 6 | 3 | 700 | 49 | 11 | 8 |
| 33 | 2 | 6 | 9 | 76 | 5 | 7 | 8 | 750 | 53 | 2 | 6 |
| 34 | 2 | 8 | 2 | 77 | 5 | 9 | 1 | 800 | 56 | 13 | 4 |
| 35 | 2 | 9 | 7 | 78 | 5 | 10 | 6 | 900 | 63 | 15 | 0 |
| 36 | 2 | 11 | 0 | 79 | 5 | 11 | 11 | 1000 | 70 | 16 | 8 |
| 37 | 2 | 12 | 5 | 80 | 5 | 13 | 4 | 1250 | 88 | 10 | 10 |
| 38 | 2 | 13 | 10 | 81 | 5 | 14 | 9 | 1500 | 106 | 5 | 0 |
| 39 | 2 | 15 | 3 | 82 | 5 | 16 | 2 | 1750 | 123 | 19 | 2 |
| 40 | 2 | 16 | 8 | 83 | 5 | 17 | 7 | 2000 | 141 | 13 | 4 |
| 41 | 2 | 18 | 1 | 84 | 5 | 19 | 0 | 2240 | 158 | 13 | 4 |
| 42 | 2 | 19 | 6 | 85 | 6 | 0 | 5 | 3000 | 212 | 10 | 0 |
| 43 | 3 | 0 | 11 | 86 | 6 | 1 | 10 | 5000 | 354 | 3 | 4 |

## 1s. 5½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 5½ | 44 | 3 | 3 | 3 | 87 | 6 | 5 | 0½ |
| 2 | 0 | 2 | 10½ | 45 | 3 | 4 | 8½ | 88 | 6 | 6 | 6 |
| 3 | 0 | 4 | 3½ | 46 | 3 | 6 | 1½ | 89 | 6 | 7 | 11½ |
| 4 | 0 | 5 | 9 | 47 | 3 | 7 | 6½ | 90 | 6 | 9 | 4½ |
| 5 | 0 | 7 | 2½ | 48 | 3 | 9 | 0 | 91 | 6 | 10 | 9½ |
| 6 | 0 | 8 | 7½ | 49 | 3 | 10 | 5½ | 92 | 6 | 12 | 3 |
| 7 | 0 | 10 | 0½ | 50 | 3 | 11 | 10½ | 93 | 6 | 13 | 8½ |
| 8 | 0 | 11 | 6 | 51 | 3 | 13 | 3½ | 94 | 6 | 15 | 1½ |
| 9 | 0 | 12 | 11½ | 52 | 3 | 14 | 9 | 95 | 6 | 16 | 6½ |
| 10 | 0 | 14 | 4½ | 53 | 3 | 16 | 2½ | 96 | 6 | 18 | 0 |
| 11 | 0 | 15 | 9½ | 54 | 3 | 17 | 7½ | 97 | 6 | 19 | 5½ |
| 12 | 0 | 17 | 3 | 55 | 3 | 19 | 0½ | 98 | 7 | 0 | 10½ |
| 13 | 0 | 18 | 8½ | 56 | 4 | 0 | 6 | 99 | 7 | 2 | 3½ |
| 14 | 1 | 0 | 1½ | 57 | 4 | 1 | 11½ | 100 | 7 | 3 | 9 |
| 15 | 1 | 1 | 6½ | 58 | 4 | 3 | 4½ | 108 | 7 | 15 | 3 |
| 16 | 1 | 3 | 0 | 59 | 4 | 4 | 9½ | 110 | 7 | 18 | 1½ |
| 17 | 1 | 4 | 5½ | 60 | 4 | 6 | 3 | 112 | 8 | 1 | 0 |
| 18 | 1 | 5 | 10½ | 61 | 4 | 7 | 8½ | 120 | 8 | 12 | 6 |
| 19 | 1 | 7 | 3½ | 62 | 4 | 9 | 1½ | 130 | 9 | 6 | 10½ |
| 20 | 1 | 8 | 9 | 63 | 4 | 10 | 6½ | 132 | 9 | 9 | 9 |
| 21 | 1 | 10 | 2½ | 64 | 4 | 12 | 0 | 140 | 10 | 1 | 3 |
| 22 | 1 | 11 | 7½ | 65 | 4 | 13 | 5½ | 144 | 10 | 7 | 0 |
| 23 | 1 | 13 | 0½ | 66 | 4 | 14 | 10½ | 150 | 10 | 15 | 7½ |
| 24 | 1 | 14 | 6 | 67 | 4 | 16 | 3½ | 175 | 12 | 11 | 6½ |
| 25 | 1 | 15 | 11½ | 68 | 4 | 17 | 9 | 200 | 14 | 7 | 6 |
| 26 | 1 | 17 | 4½ | 69 | 4 | 19 | 2½ | 250 | 17 | 19 | 4½ |
| 27 | 1 | 18 | 9½ | 70 | 5 | 0 | 7½ | 300 | 21 | 11 | 3 |
| 28 | 2 | 0 | 3 | 71 | 5 | 2 | 0½ | 365 | 26 | 4 | 8½ |
| 29 | 2 | 1 | 8½ | 72 | 5 | 3 | 6 | 400 | 28 | 15 | 0 |
| 30 | 2 | 3 | 1½ | 73 | 5 | 4 | 11½ | 500 | 35 | 18 | 9 |
| 31 | 2 | 4 | 6½ | 74 | 5 | 6 | 4½ | 600 | 43 | 2 | 6 |
| 32 | 2 | 6 | 0 | 75 | 5 | 7 | 9½ | 700 | 50 | 6 | 3 |
| 33 | 2 | 7 | 5½ | 76 | 5 | 9 | 3 | 750 | 53 | 18 | 1½ |
| 34 | 2 | 8 | 10½ | 77 | 5 | 10 | 8½ | 800 | 57 | 10 | 0 |
| 35 | 2 | 10 | 3½ | 78 | 5 | 12 | 1½ | 900 | 64 | 13 | 9 |
| 36 | 2 | 11 | 9 | 79 | 5 | 13 | 6½ | 1000 | 71 | 17 | 6 |
| 37 | 2 | 13 | 2½ | 80 | 5 | 15 | 0 | 1250 | 89 | 16 | 10½ |
| 38 | 2 | 14 | 7½ | 81 | 5 | 16 | 5½ | 1500 | 107 | 16 | 3 |
| 39 | 2 | 16 | 0½ | 82 | 5 | 17 | 10½ | 1750 | 125 | 15 | 7½ |
| 40 | 2 | 17 | 6 | 83 | 5 | 19 | 3½ | 2000 | 143 | 15 | 0 |
| 41 | 2 | 18 | 11½ | 84 | 6 | 0 | 9 | 2240 | 161 | 0 | 0 |
| 42 | 3 | 0 | 4½ | 85 | 6 | 2 | 2½ | 3000 | 215 | 12 | 6 |
| 43 | 3 | 1 | 9½ | 86 | 6 | 3 | 7½ | 5000 | 359 | 7 | 6 |

## 1s. 5¾d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 5¾ | 44 | 3 | 5 | 1 | 87 | 6 | 8 | 8¼ |
| 2 | 0 | 2 | 11¼ | 45 | 3 | 6 | 6¾ | 88 | 6 | 10 | 2 |
| 3 | 0 | 4 | 5¼ | 46 | 3 | 8 | 0¾ | 89 | 6 | 11 | 7¾ |
| 4 | 0 | 5 | 11 | 47 | 3 | 9 | 6¼ | 90 | 6 | 13 | 1¼ |
| 5 | 0 | 7 | 4¾ | 48 | 3 | 11 | 0 | 91 | 6 | 14 | 7¼ |
| 6 | 0 | 8 | 10¼ | 49 | 3 | 12 | 5¾ | 92 | 6 | 16 | 1 |
| 7 | 0 | 10 | 4¼ | 50 | 3 | 13 | 11¼ | 93 | 6 | 17 | 6¾ |
| 8 | 0 | 11 | 10 | 51 | 3 | 15 | 5¼ | 94 | 6 | 19 | 0¾ |
| 9 | 0 | 13 | 3¾ | 52 | 3 | 16 | 11 | 95 | 7 | 0 | 6¼ |
| 10 | 0 | 14 | 9¼ | 53 | 3 | 18 | 4¾ | 96 | 7 | 2 | 0 |
| 11 | 0 | 16 | 3¼ | 54 | 3 | 19 | 10¼ | 97 | 7 | 3 | 5¾ |
| 12 | 0 | 17 | 9 | 55 | 4 | 1 | 4¼ | 98 | 7 | 4 | 11¼ |
| 13 | 0 | 19 | 2¾ | 56 | 4 | 2 | 10 | 99 | 7 | 6 | 5¼ |
| 14 | 1 | 0 | 8¼ | 57 | 4 | 4 | 3¾ | 100 | 7 | 7 | 11 |
| 15 | 1 | 2 | 2¼ | 58 | 4 | 5 | 9¼ | 108 | 7 | 19 | 9 |
| 16 | 1 | 3 | 8 | 59 | 4 | 7 | 3¼ | 110 | 8 | 2 | 8¼ |
| 17 | 1 | 5 | 1¾ | 60 | 4 | 8 | 9 | 112 | 8 | 5 | 8 |
| 18 | 1 | 6 | 7¼ | 61 | 4 | 10 | 2¾ | 120 | 8 | 17 | 6 |
| 19 | 1 | 8 | 1¼ | 62 | 4 | 11 | 8¼ | 130 | 9 | 12 | 3¾ |
| 20 | 1 | 9 | 7 | 63 | 4 | 13 | 2¼ | 132 | 9 | 15 | 3 |
| 21 | 1 | 11 | 0¾ | 64 | 4 | 14 | 8 | 140 | 10 | 7 | 1 |
| 22 | 1 | 12 | 6¼ | 65 | 4 | 16 | 1¾ | 144 | 10 | 13 | 0 |
| 23 | 1 | 14 | 0¼ | 66 | 4 | 17 | 7¼ | 150 | 11 | 1 | 10½ |
| 24 | 1 | 15 | 6 | 67 | 4 | 19 | 1¼ | 175 | 12 | 18 | 10½ |
| 25 | 1 | 16 | 11¾ | 68 | 5 | 0 | 7 | 200 | 14 | 15 | 10 |
| 26 | 1 | 18 | 5¼ | 69 | 5 | 2 | 0¾ | 250 | 18 | 9 | 9¼ |
| 27 | 1 | 19 | 11¼ | 70 | 5 | 3 | 6¾ | 300 | 22 | 3 | 9 |
| 28 | 2 | 1 | 5 | 71 | 5 | 5 | 0¾ | 365 | 26 | 19 | 10¾ |
| 29 | 2 | 2 | 10¾ | 72 | 5 | 6 | 6 | 400 | 29 | 11 | 8 |
| 30 | 2 | 4 | 4¼ | 73 | 5 | 7 | 11¾ | 500 | 36 | 19 | 7 |
| 31 | 2 | 5 | 10¼ | 74 | 5 | 9 | 5¼ | 600 | 44 | 7 | 6 |
| 32 | 2 | 7 | 4 | 75 | 5 | 10 | 11¼ | 700 | 51 | 15 | 5 |
| 33 | 2 | 8 | 9¾ | 76 | 5 | 12 | 5 | 750 | 55 | 9 | 4¼ |
| 34 | 2 | 10 | 3¼ | 77 | 5 | 13 | 10¾ | 800 | 59 | 3 | 4 |
| 35 | 2 | 11 | 9¼ | 78 | 5 | 15 | 4¾ | 900 | 66 | 11 | 3 |
| 36 | 2 | 13 | 3 | 79 | 5 | 16 | 10¼ | 1000 | 73 | 19 | 2 |
| 37 | 2 | 14 | 8¾ | 80 | 5 | 18 | 4 | 1250 | 92 | 8 | 11¼ |
| 38 | 2 | 16 | 2¼ | 81 | 5 | 19 | 9¾ | 1500 | 110 | 18 | 9 |
| 39 | 2 | 17 | 8¼ | 82 | 6 | 1 | 3¾ | 1750 | 129 | 8 | 6¼ |
| 40 | 2 | 19 | 2 | 83 | 6 | 2 | 9¼ | 2000 | 147 | 18 | 4 |
| 41 | 3 | 0 | 7¾ | 84 | 6 | 4 | 3 | 2240 | 165 | 13 | 4 |
| 42 | 3 | 2 | 1¼ | 85 | 6 | 5 | 8¾ | 3000 | 221 | 17 | 6 |
| 43 | 3 | 3 | 7¼ | 86 | 6 | 7 | 2¾ | 5000 | 369 | 15 | 10 |

## 1s. 5½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 5½ | 44 | 3 | 4 | 2 | 87 | 6 | 6 | 10½ |
| 2 | 0 | 2 | 11 | 45 | 3 | 5 | 7½ | 88 | 6 | 8 | 4 |
| 3 | 0 | 4 | 4½ | 46 | 3 | 7 | 1 | 89 | 6 | 9 | 9½ |
| 4 | 0 | 5 | 10 | 47 | 3 | 8 | 6½ | 90 | 6 | 11 | 3 |
| 5 | 0 | 7 | 3½ | 48 | 3 | 10 | 0 | 91 | 6 | 12 | 8½ |
| 6 | 0 | 8 | 9 | 49 | 3 | 11 | 5½ | 92 | 6 | 14 | 2 |
| 7 | 0 | 10 | 2½ | 50 | 3 | 12 | 11 | 93 | 6 | 15 | 7½ |
| 8 | 0 | 11 | 8 | 51 | 3 | 14 | 4½ | 94 | 6 | 17 | 1 |
| 9 | 0 | 13 | 1½ | 52 | 3 | 15 | 10 | 95 | 6 | 18 | 6½ |
| 10 | 0 | 14 | 7 | 53 | 3 | 17 | 3½ | 96 | 7 | 0 | 0 |
| 11 | 0 | 16 | 0½ | 54 | 3 | 18 | 9 | 97 | 7 | 1 | 5½ |
| 12 | 0 | 17 | 6 | 55 | 4 | 0 | 2½ | 98 | 7 | 2 | 11 |
| 13 | 0 | 18 | 11½ | 56 | 4 | 1 | 8 | 99 | 7 | 4 | 4½ |
| 14 | 1 | 0 | 5 | 57 | 4 | 3 | 1½ | 100 | 7 | 5 | 10 |
| 15 | 1 | 1 | 10½ | 58 | 4 | 4 | 7 | 108 | 7 | 17 | 6 |
| 16 | 1 | 3 | 4 | 59 | 4 | 6 | 0½ | 110 | 8 | 0 | 5 |
| 17 | 1 | 4 | 9½ | 60 | 4 | 7 | 6 | 112 | 8 | 3 | 4 |
| 18 | 1 | 6 | 3 | 61 | 4 | 8 | 11½ | 120 | 8 | 15 | 0 |
| 19 | 1 | 7 | 8½ | 62 | 4 | 10 | 5 | 130 | 9 | 9 | 7 |
| 20 | 1 | 9 | 2 | 63 | 4 | 11 | 10½ | 132 | 9 | 12 | 6 |
| 21 | 1 | 10 | 7½ | 64 | 4 | 13 | 4 | 140 | 10 | 4 | 2 |
| 22 | 1 | 12 | 1 | 65 | 4 | 14 | 9½ | 144 | 10 | 10 | 0 |
| 23 | 1 | 13 | 6½ | 66 | 4 | 16 | 3 | 150 | 10 | 18 | 9 |
| 24 | 1 | 15 | 0 | 67 | 4 | 17 | 8½ | 175 | 12 | 15 | 2½ |
| 25 | 1 | 16 | 5½ | 68 | 4 | 19 | 2 | 200 | 14 | 11 | 8 |
| 26 | 1 | 17 | 11 | 69 | 5 | 0 | 7½ | 250 | 18 | 4 | 7 |
| 27 | 1 | 19 | 4½ | 70 | 5 | 2 | 1 | 300 | 21 | 17 | 6 |
| 28 | 2 | 0 | 10 | 71 | 5 | 3 | 6½ | 365 | 26 | 12 | 3½ |
| 29 | 2 | 2 | 3½ | 72 | 5 | 5 | 0 | 400 | 29 | 3 | 4 |
| 30 | 2 | 3 | 9 | 73 | 5 | 6 | 5½ | 500 | 36 | 9 | 2 |
| 31 | 2 | 5 | 2½ | 74 | 5 | 7 | 11 | 600 | 43 | 15 | 0 |
| 32 | 2 | 6 | 8 | 75 | 5 | 9 | 4½ | 700 | 51 | 0 | 10 |
| 33 | 2 | 8 | 1½ | 76 | 5 | 10 | 10 | 750 | 54 | 13 | 9 |
| 34 | 2 | 9 | 7 | 77 | 5 | 12 | 3½ | 800 | 58 | 6 | 8 |
| 35 | 2 | 11 | 0½ | 78 | 5 | 13 | 9 | 900 | 65 | 12 | 6 |
| 36 | 2 | 12 | 6 | 79 | 5 | 15 | 2½ | 1000 | 72 | 18 | 4 |
| 37 | 2 | 13 | 11½ | 80 | 5 | 16 | 8 | 1250 | 91 | 2 | 11 |
| 38 | 2 | 15 | 5 | 81 | 5 | 18 | 1½ | 1500 | 109 | 7 | 6 |
| 39 | 2 | 16 | 10½ | 82 | 5 | 19 | 7 | 1750 | 127 | 12 | 1 |
| 40 | 2 | 18 | 4 | 83 | 6 | 1 | 0½ | 2000 | 145 | 16 | 8 |
| 41 | 2 | 19 | 9½ | 84 | 6 | 2 | 6 | 2240 | 163 | 6 | 8 |
| 42 | 3 | 1 | 3 | 85 | 6 | 3 | 11½ | 3000 | 218 | 15 | 0 |
| 43 | 3 | 2 | 8½ | 86 | 6 | 5 | 5 | 5000 | 364 | 11 | 8 |

## 1s. 6d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 6 | 44 | 3 | 6 | 0 | 87 | 6 | 10 | 6 |
| 2 | 0 | 3 | 0 | 45 | 3 | 7 | 6 | 88 | 6 | 12 | 0 |
| 3 | 0 | 4 | 6 | 46 | 3 | 9 | 0 | 89 | 6 | 13 | 6 |
| 4 | 0 | 6 | 0 | 47 | 3 | 10 | 6 | 90 | 6 | 15 | 0 |
| 5 | 0 | 7 | 6 | 48 | 3 | 12 | 0 | 91 | 6 | 16 | 6 |
| 6 | 0 | 9 | 0 | 49 | 3 | 13 | 6 | 92 | 6 | 18 | 0 |
| 7 | 0 | 10 | 6 | 50 | 3 | 15 | 0 | 93 | 6 | 19 | 6 |
| 8 | 0 | 12 | 0 | 51 | 3 | 16 | 6 | 94 | 7 | 1 | 0 |
| 9 | 0 | 13 | 6 | 52 | 3 | 18 | 0 | 95 | 7 | 2 | 6 |
| 10 | 0 | 15 | 0 | 53 | 3 | 19 | 6 | 96 | 7 | 4 | 0 |
| 11 | 0 | 16 | 6 | 54 | 4 | 1 | 0 | 97 | 7 | 5 | 6 |
| 12 | 0 | 18 | 0 | 55 | 4 | 2 | 6 | 98 | 7 | 7 | 0 |
| 13 | 0 | 19 | 6 | 56 | 4 | 4 | 0 | 99 | 7 | 8 | 6 |
| 14 | 1 | 1 | 0 | 57 | 4 | 5 | 6 | 100 | 7 | 10 | 0 |
| 15 | 1 | 2 | 6 | 58 | 4 | 7 | 0 | 108 | 8 | 2 | 0 |
| 16 | 1 | 4 | 0 | 59 | 4 | 8 | 6 | 110 | 8 | 5 | 0 |
| 17 | 1 | 5 | 6 | 60 | 4 | 10 | 0 | 112 | 8 | 8 | 0 |
| 18 | 1 | 7 | 0 | 61 | 4 | 11 | 6 | 120 | 9 | 0 | 0 |
| 19 | 1 | 8 | 6 | 62 | 4 | 13 | 0 | 130 | 9 | 15 | 0 |
| 20 | 1 | 10 | 0 | 63 | 4 | 14 | 6 | 132 | 9 | 18 | 0 |
| 21 | 1 | 11 | 6 | 64 | 4 | 16 | 0 | 140 | 10 | 10 | 0 |
| 22 | 1 | 13 | 0 | 65 | 4 | 17 | 6 | 144 | 10 | 16 | 0 |
| 23 | 1 | 14 | 6 | 66 | 4 | 19 | 0 | 150 | 11 | 5 | 0 |
| 24 | 1 | 16 | 0 | 67 | 5 | 0 | 6 | 175 | 13 | 2 | 6 |
| 25 | 1 | 17 | 6 | 68 | 5 | 2 | 0 | 200 | 15 | 0 | 0 |
| 26 | 1 | 19 | 0 | 69 | 5 | 3 | 6 | 250 | 18 | 15 | 0 |
| 27 | 2 | 0 | 6 | 70 | 5 | 5 | 0 | 300 | 22 | 10 | 0 |
| 28 | 2 | 2 | 0 | 71 | 5 | 6 | 6 | 365 | 27 | 7 | 6 |
| 29 | 2 | 3 | 6 | 72 | 5 | 8 | 0 | 400 | 30 | 0 | 0 |
| 30 | 2 | 5 | 0 | 73 | 5 | 9 | 6 | 500 | 37 | 10 | 0 |
| 31 | 2 | 6 | 6 | 74 | 5 | 11 | 0 | 600 | 45 | 0 | 0 |
| 32 | 2 | 8 | 0 | 75 | 5 | 12 | 6 | 700 | 52 | 10 | 0 |
| 33 | 2 | 9 | 6 | 76 | 5 | 14 | 0 | 750 | 56 | 5 | 0 |
| 34 | 2 | 11 | 0 | 77 | 5 | 15 | 6 | 800 | 60 | 0 | 0 |
| 35 | 2 | 12 | 6 | 78 | 5 | 17 | 0 | 900 | 67 | 10 | 0 |
| 36 | 2 | 14 | 0 | 79 | 5 | 18 | 6 | 1000 | 75 | 0 | 0 |
| 37 | 2 | 15 | 6 | 80 | 6 | 0 | 0 | 1250 | 93 | 15 | 0 |
| 38 | 2 | 17 | 0 | 81 | 6 | 1 | 6 | 1500 | 112 | 10 | 0 |
| 39 | 2 | 18 | 6 | 82 | 6 | 3 | 0 | 1750 | 131 | 5 | 0 |
| 40 | 3 | 0 | 0 | 83 | 6 | 4 | 6 | 2000 | 150 | 0 | 0 |
| 41 | 3 | 1 | 6 | 84 | 6 | 6 | 0 | 2240 | 168 | 0 | 0 |
| 42 | 3 | 3 | 0 | 85 | 6 | 7 | 6 | 3000 | 225 | 0 | 0 |
| 43 | 3 | 4 | 6 | 86 | 6 | 9 | 0 | 5000 | 375 | 0 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 6½ | 44 | 3 | 6 | 11 | 87 | 6 | 12 | 3½ |
| 2 | 0 | 3 | 0½ | 45 | 3 | 8 | 5½ | 88 | 6 | 13 | 10 |
| 3 | 0 | 4 | 6½ | 46 | 3 | 9 | 11½ | 89 | 6 | 15 | 4½ |
| 4 | 0 | 6 | 1 | 47 | 3 | 11 | 5½ | 90 | 6 | 16 | 10½ |
| 5 | 0 | 7 | 7½ | 48 | 3 | 13 | 0 | 91 | 6 | 18 | 4½ |
| 6 | 0 | 9 | 1½ | 49 | 3 | 14 | 6½ | 92 | 6 | 19 | 11 |
| 7 | 0 | 10 | 7½ | 50 | 3 | 16 | 0½ | 93 | 7 | 1 | 5½ |
| 8 | 0 | 12 | 2 | 51 | 3 | 17 | 6½ | 94 | 7 | 2 | 11½ |
| 9 | 0 | 13 | 8½ | 52 | 3 | 19 | 1 | 95 | 7 | 4 | 5½ |
| 10 | 0 | 15 | 2½ | 53 | 4 | 0 | 7½ | 96 | 7 | 6 | 0 |
| 11 | 0 | 16 | 8½ | 54 | 4 | 2 | 1½ | 97 | 7 | 7 | 6½ |
| 12 | 0 | 18 | 3 | 55 | 4 | 3 | 7½ | 98 | 7 | 9 | 0½ |
| 13 | 0 | 19 | 9½ | 56 | 4 | 5 | 2 | 99 | 7 | 10 | 6½ |
| 14 | 1 | 1 | 3½ | 57 | 4 | 6 | 8½ | 100 | 7 | 12 | 1 |
| 15 | 1 | 2 | 9½ | 58 | 4 | 8 | 2½ | 108 | 8 | 4 | 3 |
| 16 | 1 | 4 | 4 | 59 | 4 | 9 | 8½ | 110 | 8 | 7 | 3½ |
| 17 | 1 | 5 | 10½ | 60 | 4 | 11 | 3 | 112 | 8 | 10 | 4 |
| 18 | 1 | 7 | 4½ | 61 | 4 | 12 | 9½ | 120 | 9 | 2 | 6 |
| 19 | 1 | 8 | 10½ | 62 | 4 | 14 | 3½ | 130 | 9 | 17 | 8½ |
| 20 | 1 | 10 | 5 | 63 | 4 | 15 | 9½ | 132 | 10 | 0 | 9 |
| 21 | 1 | 11 | 11½ | 64 | 4 | 17 | 4 | 140 | 10 | 12 | 11 |
| 22 | 1 | 13 | 5½ | 65 | 4 | 18 | 10½ | 144 | 10 | 19 | 0 |
| 23 | 1 | 14 | 11½ | 66 | 5 | 0 | 4½ | 150 | 11 | 8 | 1½ |
| 24 | 1 | 16 | 6 | 67 | 5 | 1 | 10½ | 175 | 13 | 6 | 1½ |
| 25 | 1 | 18 | 0½ | 68 | 5 | 3 | 5 | 200 | 15 | 4 | 2 |
| 26 | 1 | 19 | 6½ | 69 | 5 | 4 | 11½ | 250 | 19 | 0 | 2½ |
| 27 | 2 | 1 | 0½ | 70 | 5 | 6 | 5½ | 300 | 22 | 16 | 3 |
| 28 | 2 | 2 | 7 | 71 | 5 | 7 | 11½ | 365 | 27 | 15 | 1½ |
| 29 | 2 | 4 | 1½ | 72 | 5 | 9 | 6 | 400 | 30 | 8 | 4 |
| 30 | 2 | 5 | 7½ | 73 | 5 | 11 | 0½ | 500 | 38 | 0 | 5 |
| 31 | 2 | 7 | 1½ | 74 | 5 | 12 | 6½ | 600 | 45 | 12 | 6 |
| 32 | 2 | 8 | 8 | 75 | 5 | 14 | 0½ | 700 | 53 | 4 | 7 |
| 33 | 2 | 10 | 2½ | 76 | 5 | 15 | 7 | 750 | 57 | 0 | 7½ |
| 34 | 2 | 11 | 8½ | 77 | 5 | 17 | 1½ | 800 | 60 | 16 | 8 |
| 35 | 2 | 13 | 2½ | 78 | 5 | 18 | 7½ | 900 | 68 | 8 | 9 |
| 36 | 2 | 14 | 9 | 79 | 6 | 0 | 1½ | 1000 | 76 | 0 | 10 |
| 37 | 2 | 16 | 3½ | 80 | 6 | 1 | 8 | 1250 | 95 | 1 | 0½ |
| 38 | 2 | 17 | 9½ | 81 | 6 | 3 | 2½ | 1500 | 114 | 1 | 3 |
| 39 | 2 | 19 | 3½ | 82 | 6 | 4 | 8½ | 1750 | 133 | 1 | 5½ |
| 40 | 3 | 0 | 10 | 83 | 6 | 6 | 2½ | 2000 | 152 | 1 | 8 |
| 41 | 3 | 2 | 4½ | 84 | 6 | 7 | 9 | 2240 | 170 | 6 | 8 |
| 42 | 3 | 3 | 10½ | 85 | 6 | 9 | 3½ | 3000 | 228 | 2 | 6 |
| 43 | 3 | 5 | 4½ | 86 | 6 | 10 | 9½ | 5000 | 380 | 4 | 2 |

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| 2 | 0 | 3 | 1¼ | 45 | 3 | 10 | 3¾ | 88 | 6 | 17 | 6 |
| 3 | 0 | 4 | 8¼ | 46 | 3 | 11 | 10¼ | 89 | 6 | 19 | 0¾ |
| 4 | 0 | 6 | 3 | 47 | 3 | 13 | 5¼ | 90 | 7 | 0 | 7¼ |
| 5 | 0 | 7 | 9¾ | 48 | 3 | 15 | 0 | 91 | 7 | 2 | 2¼ |
| 6 | 0 | 9 | 4¼ | 49 | 3 | 16 | 6¾ | 92 | 7 | 3 | 9 |
| 7 | 0 | 10 | 11¼ | 50 | 3 | 18 | 1¾ | 93 | 7 | 5 | 3¾ |
| 8 | 0 | 12 | 6 | 51 | 3 | 19 | 8¼ | 94 | 7 | 6 | 10¼ |
| 9 | 0 | 14 | 0¾ | 52 | 4 | 1 | 3 | 95 | 7 | 8 | 5¼ |
| 10 | 0 | 15 | 7¼ | 53 | 4 | 2 | 9¾ | 96 | 7 | 10 | 0 |
| 11 | 0 | 17 | 2¼ | 54 | 4 | 4 | 4¼ | 97 | 7 | 11 | 6¾ |
| 12 | 0 | 18 | 9 | 55 | 4 | 5 | 11¼ | 98 | 7 | 13 | 1¼ |
| 13 | 1 | 0 | 3¾ | 56 | 4 | 7 | 6 | 99 | 7 | 14 | 8¼ |
| 14 | 1 | 1 | 10¾ | 57 | 4 | 9 | 0¾ | 100 | 7 | 16 | 3 |
| 15 | 1 | 3 | 5¼ | 58 | 4 | 10 | 7¼ | 108 | 8 | 8 | 9 |
| 16 | 1 | 5 | 0 | 59 | 4 | 12 | 2¼ | 110 | 8 | 11 | 10¼ |
| 17 | 1 | 6 | 6¾ | 60 | 4 | 13 | 9 | 112 | 8 | 15 | 0 |
| 18 | 1 | 8 | 1¼ | 61 | 4 | 15 | 3¾ | 120 | 9 | 7 | 6 |
| 19 | 1 | 9 | 8¼ | 62 | 4 | 16 | 10¼ | 130 | 10 | 8 | 1¼ |
| 20 | 1 | 11 | 3 | 63 | 4 | 18 | 5¼ | 132 | 10 | 6 | 3 |
| 21 | 1 | 12 | 9¾ | 64 | 5 | 0 | 0 | 140 | 10 | 18 | 9 |
| 22 | 1 | 14 | 4¼ | 65 | 5 | 1 | 6¾ | 144 | 11 | 5 | 0 |
| 23 | 1 | 15 | 11¼ | 66 | 5 | 3 | 1¼ | 150 | 11 | 14 | 4¼ |
| 24 | 1 | 17 | 6 | 67 | 5 | 4 | 8¼ | 175 | 13 | 13 | 5¼ |
| 25 | 1 | 19 | 0¾ | 68 | 5 | 6 | 3 | 200 | 15 | 12 | 6 |
| 26 | 2 | 0 | 7¾ | 69 | 5 | 7 | 9¾ | 250 | 19 | 10 | 7¼ |
| 27 | 2 | 2 | 2¼ | 70 | 5 | 9 | 4¼ | 300 | 23 | 8 | 9 |
| 28 | 2 | 3 | 9 | 71 | 5 | 10 | 11¼ | 365 | 28 | 10 | 3¾ |
| 29 | 2 | 5 | 3¾ | 72 | 5 | 12 | 6 | 400 | 31 | 5 | 0 |
| 30 | 2 | 6 | 10¼ | 73 | 5 | 14 | 0¾ | 500 | 39 | 1 | 3 |
| 31 | 2 | 8 | 5¼ | 74 | 5 | 15 | 7¼ | 600 | 46 | 17 | 6 |
| 32 | 2 | 10 | 0 | 75 | 5 | 17 | 2¼ | 700 | 54 | 13 | 9 |
| 33 | 2 | 11 | 6¾ | 76 | 5 | 18 | 9 | 750 | 58 | 11 | 10½ |
| 34 | 2 | 13 | 1¼ | 77 | 6 | 0 | 3¾ | 800 | 62 | 10 | 0 |
| 35 | 2 | 14 | 8¼ | 78 | 6 | 1 | 10½ | 900 | 70 | 6 | 3 |
| 36 | 2 | 16 | 3 | 79 | 6 | 3 | 5¼ | 1000 | 78 | 2 | 6 |
| 37 | 2 | 17 | 9¾ | 80 | 6 | 5 | 0 | 1250 | 97 | 13 | 1¼ |
| 38 | 2 | 19 | 4¼ | 81 | 6 | 6 | 6¾ | 1500 | 117 | 3 | 9 |
| 39 | 3 | 0 | 11¼ | 82 | 6 | 8 | 1¼ | 1750 | 136 | 14 | 4¼ |
| 40 | 3 | 2 | 6 | 83 | 6 | 9 | 8¼ | 2000 | 156 | 5 | 0 |
| 41 | 3 | 4 | 0¾ | 84 | 6 | 11 | 3 | 2240 | 175 | 0 | 0 |
| 42 | 3 | 5 | 7¼ | 85 | 6 | 12 | 9¾ | 3000 | 234 | 7 | 6 |
| 43 | 3 | 7 | 2¼ | 86 | 6 | 14 | 4¼ | 5000 | 390 | 12 | 6 |

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| 3 | 0 | 4 | 7½ | 46 | 3 | 10 | 11 | 89 | 6 | 17 | 2½ |
| 4 | 0 | 6 | 2 | 47 | 3 | 12 | 5½ | 90 | 6 | 18 | 9 |
| 5 | 0 | 7 | 8½ | 48 | 3 | 14 | 0 | 91 | 7 | 0 | 3½ |
| 6 | 0 | 9 | 3 | 49 | 3 | 15 | 6½ | 92 | 7 | 1 | 10 |
| 7 | 0 | 10 | 9½ | 50 | 3 | 17 | 1 | 93 | 7 | 3 | 4½ |
| 8 | 0 | 12 | 4 | 51 | 3 | 18 | 7½ | 94 | 7 | 4 | 11 |
| 9 | 0 | 13 | 10½ | 52 | 4 | 0 | 2 | 95 | 7 | 6 | 5½ |
| 10 | 0 | 15 | 5 | 53 | 4 | 1 | 8½ | 96 | 7 | 8 | 0 |
| 11 | 0 | 16 | 11½ | 54 | 4 | 3 | 3 | 97 | 7 | 9 | 6½ |
| 12 | 0 | 18 | 6 | 55 | 4 | 4 | 9½ | 98 | 7 | 11 | 1 |
| 13 | 1 | 0 | 0½ | 56 | 4 | 6 | 4 | 99 | 7 | 12 | 7½ |
| 14 | 1 | 1 | 7 | 57 | 4 | 7 | 10½ | 100 | 7 | 14 | 2 |
| 15 | 1 | 3 | 1½ | 58 | 4 | 9 | 5 | 108 | 8 | 6 | 6 |
| 16 | 1 | 4 | 8 | 59 | 4 | 10 | 11½ | 110 | 8 | 9 | 7 |
| 17 | 1 | 6 | 2½ | 60 | 4 | 12 | 6 | 112 | 8 | 12 | 8 |
| 18 | 1 | 7 | 9 | 61 | 4 | 14 | 0½ | 120 | 9 | 5 | 0 |
| 19 | 1 | 9 | 3½ | 62 | 4 | 15 | 7 | 130 | 10 | 0 | 5 |
| 20 | 1 | 10 | 10 | 63 | 4 | 17 | 1½ | 132 | 10 | 3 | 6 |
| 21 | 1 | 12 | 4½ | 64 | 4 | 18 | 8 | 140 | 10 | 15 | 10 |
| 22 | 1 | 13 | 11 | 65 | 5 | 0 | 2½ | 144 | 11 | 2 | 0 |
| 23 | 1 | 15 | 5½ | 66 | 5 | 1 | 9 | 150 | 11 | 11 | 3 |
| 24 | 1 | 17 | 0 | 67 | 5 | 3 | 3½ | 175 | 13 | 9 | 9½ |
| 25 | 1 | 18 | 6½ | 68 | 5 | 4 | 10 | 200 | 15 | 8 | 4 |
| 26 | 2 | 0 | 1 | 69 | 5 | 6 | 4½ | 250 | 19 | 5 | 5 |
| 27 | 2 | 1 | 7½ | 70 | 5 | 7 | 11 | 300 | 23 | 2 | 6 |
| 28 | 2 | 3 | 2 | 71 | 5 | 9 | 5½ | 365 | 28 | 2 | 8½ |
| 29 | 2 | 4 | 8½ | 72 | 5 | 11 | 0 | 400 | 30 | 16 | 8 |
| 30 | 2 | 6 | 3 | 73 | 5 | 12 | 6½ | 500 | 38 | 10 | 10 |
| 31 | 2 | 7 | 9½ | 74 | 5 | 14 | 1 | 600 | 46 | 5 | 0 |
| 32 | 2 | 9 | 4 | 75 | 5 | 15 | 7½ | 700 | 53 | 19 | 2 |
| 33 | 2 | 10 | 10½ | 76 | 5 | 17 | 2 | 750 | 57 | 16 | 3 |
| 34 | 2 | 12 | 5 | 77 | 5 | 18 | 8½ | 800 | 61 | 13 | 4 |
| 35 | 2 | 13 | 11½ | 78 | 6 | 0 | 3 | 900 | 69 | 7 | 6 |
| 36 | 2 | 15 | 6 | 79 | 6 | 1 | 9½ | 1000 | 77 | 1 | 8 |
| 37 | 2 | 17 | 0½ | 80 | 6 | 3 | 4 | 1250 | 96 | 7 | 1 |
| 38 | 2 | 18 | 7 | 81 | 6 | 4 | 10½ | 1500 | 115 | 12 | 6 |
| 39 | 3 | 0 | 1½ | 82 | 6 | 6 | 5 | 1750 | 134 | 17 | 11 |
| 40 | 3 | 1 | 8 | 83 | 6 | 7 | 11½ | 2000 | 154 | 3 | 4 |
| 41 | 3 | 3 | 2½ | 84 | 6 | 9 | 6 | 2240 | 172 | 13 | 4 |
| 42 | 3 | 4 | 9 | 85 | 6 | 11 | 0½ | 3000 | 231 | 5 | 0 |
| 43 | 3 | 6 | 3½ | 86 | 6 | 12 | 7 | 5000 | 385 | 8 | 4 |

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| 1 | 0 | 1 | 7 | 44 | 3 | 9 | 8 | 87 | 6 | 17 | 9 |
| 2 | 0 | 3 | 2 | 45 | 3 | 11 | 3 | 88 | 6 | 19 | 4 |
| 3 | 0 | 4 | 9 | 46 | 3 | 12 | 10 | 89 | 7 | 0 | 11 |
| 4 | 0 | 6 | 4 | 47 | 3 | 14 | 5 | 90 | 7 | 2 | 6 |
| 5 | 0 | 7 | 11 | 48 | 3 | 16 | 0 | 91 | 7 | 4 | 1 |
| 6 | 0 | 9 | 6 | 49 | 3 | 17 | 7 | 92 | 7 | 5 | 8 |
| 7 | 0 | 11 | 1 | 50 | 3 | 19 | 2 | 93 | 7 | 7 | 3 |
| 8 | 0 | 12 | 8 | 51 | 4 | 0 | 9 | 94 | 7 | 8 | 10 |
| 9 | 0 | 14 | 3 | 52 | 4 | 2 | 4 | 95 | 7 | 10 | 5 |
| 10 | 0 | 15 | 10 | 53 | 4 | 3 | 11 | 96 | 7 | 12 | 0 |
| 11 | 0 | 17 | 5 | 54 | 4 | 5 | 6 | 97 | 7 | 13 | 7 |
| 12 | 0 | 19 | 0 | 55 | 4 | 7 | 1 | 98 | 7 | 15 | 2 |
| 13 | 1 | 0 | 7 | 56 | 4 | 8 | 8 | 99 | 7 | 16 | 9 |
| 14 | 1 | 2 | 2 | 57 | 4 | 10 | 3 | 100 | 7 | 18 | 4 |
| 15 | 1 | 3 | 9 | 58 | 4 | 11 | 10 | 108 | 8 | 11 | 0 |
| 16 | 1 | 5 | 4 | 59 | 4 | 13 | 5 | 110 | 8 | 14 | 2 |
| 17 | 1 | 6 | 11 | 60 | 4 | 15 | 0 | 112 | 8 | 17 | 4 |
| 18 | 1 | 8 | 6 | 61 | 4 | 16 | 7 | 120 | 9 | 10 | 0 |
| 19 | 1 | 10 | 1 | 62 | 4 | 18 | 2 | 130 | 10 | 5 | 10 |
| 20 | 1 | 11 | 8 | 63 | 4 | 19 | 9 | 132 | 10 | 9 | 0 |
| 21 | 1 | 13 | 3 | 64 | 5 | 1 | 4 | 140 | 11 | 1 | 8 |
| 22 | 1 | 14 | 10 | 65 | 5 | 2 | 11 | 144 | 11 | 8 | 0 |
| 23 | 1 | 16 | 5 | 66 | 5 | 4 | 6 | 150 | 11 | 17 | 6 |
| 24 | 1 | 18 | 0 | 67 | 5 | 6 | 1 | 175 | 13 | 17 | 1 |
| 25 | 1 | 19 | 7 | 68 | 5 | 7 | 8 | 200 | 15 | 16 | 8 |
| 26 | 2 | 1 | 2 | 69 | 5 | 9 | 3 | 250 | 19 | 15 | 10 |
| 27 | 2 | 2 | 9 | 70 | 5 | 10 | 10 | 300 | 23 | 15 | 0 |
| 28 | 2 | 4 | 4 | 71 | 5 | 12 | 5 | 365 | 28 | 17 | 11 |
| 29 | 2 | 5 | 11 | 72 | 5 | 14 | 0 | 400 | 31 | 13 | 4 |
| 30 | 2 | 7 | 6 | 73 | 5 | 15 | 7 | 500 | 39 | 11 | 8 |
| 31 | 2 | 9 | 1 | 74 | 5 | 17 | 2 | 600 | 47 | 10 | 0 |
| 32 | 2 | 10 | 8 | 75 | 5 | 18 | 9 | 700 | 55 | 8 | 4 |
| 33 | 2 | 12 | 3 | 76 | 6 | 0 | 4 | 750 | 59 | 7 | 6 |
| 34 | 2 | 13 | 10 | 77 | 6 | 1 | 11 | 800 | 63 | 6 | 8 |
| 35 | 2 | 15 | 5 | 78 | 6 | 3 | 6 | 900 | 71 | 5 | 0 |
| 36 | 2 | 17 | 0 | 79 | 6 | 5 | 1 | 1000 | 79 | 3 | 4 |
| 37 | 2 | 18 | 7 | 80 | 6 | 6 | 8 | 1250 | 98 | 19 | 2 |
| 38 | 3 | 0 | 2 | 81 | 6 | 8 | 3 | 1500 | 118 | 15 | 0 |
| 39 | 3 | 1 | 9 | 82 | 6 | 9 | 10 | 1750 | 138 | 10 | 10 |
| 40 | 3 | 3 | 4 | 83 | 6 | 11 | 5 | 2000 | 158 | 6 | 8 |
| 41 | 3 | 4 | 11 | 84 | 6 | 13 | 0 | 2240 | 177 | 6 | 8 |
| 42 | 3 | 6 | 6 | 85 | 6 | 14 | 7 | 3000 | 237 | 10 | 0 |
| 43 | 3 | 8 | 1 | 86 | 6 | 16 | 2 | 5000 | 395 | 16 | 8 |

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| 1 | 0 | 1 | 7½ | 44 | 3 | 10 | 7 | 87 | 6 | 19 | 6½ |
| 2 | 0 | 3 | 2½ | 45 | 3 | 12 | 2½ | 88 | 7 | 1 | 2 |
| 3 | 0 | 4 | 9½ | 46 | 3 | 13 | 9½ | 89 | 7 | 2 | 9½ |
| 4 | 0 | 6 | 5 | 47 | 3 | 15 | 4½ | 90 | 7 | 4 | 4½ |
| 5 | 0 | 8 | 0½ | 48 | 3 | 17 | 0 | 91 | 7 | 5 | 11½ |
| 6 | 0 | 9 | 7½ | 49 | 3 | 18 | 7½ | 92 | 7 | 7 | 7½ |
| 7 | 0 | 11 | 2½ | 50 | 4 | 0 | 2½ | 93 | 7 | 9 | 2½ |
| 8 | 0 | 12 | 10 | 51 | 4 | 1 | 9½ | 94 | 7 | 10 | 9½ |
| 9 | 0 | 14 | 5½ | 52 | 4 | 3 | 5 | 95 | 7 | 12 | 4½ |
| 10 | 0 | 16 | 0½ | 53 | 4 | 5 | 0½ | 96 | 7 | 14 | 0 |
| 11 | 0 | 17 | 7½ | 54 | 4 | 6 | 7½ | 97 | 7 | 15 | 7½ |
| 12 | 0 | 19 | 3 | 55 | 4 | 8 | 2½ | 98 | 7 | 17 | 2½ |
| 13 | 1 | 0 | 10½ | 56 | 4 | 9 | 10 | 99 | 7 | 18 | 9½ |
| 14 | 1 | 2 | 5½ | 57 | 4 | 11 | 5½ | 100 | 8 | 0 | 5 |
| 15 | 1 | 4 | 0½ | 58 | 4 | 13 | 0½ | 108 | 8 | 13 | 3 |
| 16 | 1 | 5 | 8 | 59 | 4 | 14 | 7½ | 110 | 8 | 16 | 5½ |
| 17 | 1 | 7 | 3½ | 60 | 4 | 16 | 3 | 112 | 8 | 19 | 8 |
| 18 | 1 | 8 | 10½ | 61 | 4 | 17 | 10½ | 120 | 9 | 12 | 6 |
| 19 | 1 | 10 | 5½ | 62 | 4 | 19 | 5½ | 130 | 10 | 8 | 6½ |
| 20 | 1 | 12 | 1 | 63 | 5 | 1 | 0½ | 132 | 10 | 11 | 9 |
| 21 | 1 | 13 | 8½ | 64 | 5 | 2 | 8 | 140 | 11 | 4 | 7 |
| 22 | 1 | 15 | 3½ | 65 | 5 | 4 | 3½ | 144 | 11 | 11 | 0 |
| 23 | 1 | 16 | 10½ | 66 | 5 | 5 | 10½ | 150 | 12 | 0 | 7½ |
| 24 | 1 | 18 | 6 | 67 | 5 | 7 | 5½ | 175 | 14 | 0 | 8½ |
| 25 | 2 | 0 | 1½ | 68 | 5 | 9 | 1 | 200 | 16 | 0 | 10 |
| 26 | 2 | 1 | 8½ | 69 | 5 | 10 | 8½ | 250 | 20 | 1 | 0½ |
| 27 | 2 | 3 | 3½ | 70 | 5 | 12 | 3½ | 300 | 24 | 1 | 3 |
| 28 | 2 | 4 | 11 | 71 | 5 | 13 | 10½ | 365 | 29 | 5 | 6½ |
| 29 | 2 | 6 | 6½ | 72 | 5 | 15 | 6 | 400 | 32 | 1 | 8 |
| 30 | 2 | 8 | 1½ | 73 | 5 | 17 | 1½ | 500 | 40 | 2 | 1 |
| 31 | 2 | 9 | 8½ | 74 | 5 | 18 | 8½ | 600 | 48 | 2 | 6 |
| 32 | 2 | 11 | 4 | 75 | 6 | 0 | 3½ | 700 | 56 | 2 | 11 |
| 33 | 2 | 12 | 11½ | 76 | 6 | 1 | 11 | 750 | 60 | 3 | 1½ |
| 34 | 2 | 14 | 6½ | 77 | 6 | 3 | 6½ | 800 | 64 | 3 | 4 |
| 35 | 2 | 16 | 1½ | 78 | 6 | 5 | 1½ | 900 | 72 | 3 | 9 |
| 36 | 2 | 17 | 9 | 79 | 6 | 6 | 8½ | 1000 | 80 | 4 | 2 |
| 37 | 2 | 19 | 4½ | 80 | 6 | 8 | 4 | 1250 | 100 | 5 | 2½ |
| 38 | 3 | 0 | 11½ | 81 | 6 | 9 | 11½ | 1500 | 120 | 6 | 3 |
| 39 | 3 | 2 | 6½ | 82 | 6 | 11 | 6½ | 1750 | 140 | 7 | 3½ |
| 40 | 3 | 4 | 2 | 83 | 6 | 13 | 1½ | 2000 | 160 | 8 | 4 |
| 41 | 3 | 5 | 9½ | 84 | 6 | 14 | 9 | 2240 | 179 | 13 | 4 |
| 42 | 3 | 7 | 4½ | 85 | 6 | 16 | 4½ | 3000 | 240 | 12 | 6 |
| 43 | 3 | 8 | 11½ | 86 | 6 | 17 | 11½ | 5000 | 401 | 0 | 10 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 7¾ | 44 | 3 | 12 | 5 | 87 | 7 | 3 | 2½ |
| 2 | 0 | 3 | 3½ | 45 | 3 | 14 | 0½ | 88 | 7 | 4 | 10 |
| 3 | 0 | 4 | 11½ | 46 | 3 | 15 | 8½ | 89 | 7 | 6 | 5½ |
| 4 | 0 | 6 | 7 | 47 | 3 | 17 | 4½ | 90 | 7 | 8 | 1½ |
| 5 | 0 | 8 | 2½ | 48 | 3 | 19 | 0 | 91 | 7 | 9 | 9½ |
| 6 | 0 | 9 | 10½ | 49 | 4 | 0 | 7½ | 92 | 7 | 11 | 5 |
| 7 | 0 | 11 | 6½ | 50 | 4 | 2 | 3½ | 93 | 7 | 13 | 0½ |
| 8 | 0 | 13 | 2 | 51 | 4 | 3 | 11½ | 94 | 7 | 14 | 8½ |
| 9 | 0 | 14 | 9½ | 52 | 4 | 5 | 7 | 95 | 7 | 16 | 4½ |
| 10 | 0 | 16 | 5½ | 53 | 4 | 7 | 2½ | 96 | 7 | 18 | 0 |
| 11 | 0 | 18 | 1½ | 54 | 4 | 8 | 10½ | 97 | 7 | 19 | 7½ |
| 12 | 0 | 19 | 9 | 55 | 4 | 10 | 6½ | 98 | 8 | 1 | 3½ |
| 13 | 1 | 1 | 4½ | 56 | 4 | 12 | 2 | 99 | 8 | 2 | 11½ |
| 14 | 1 | 3 | 0½ | 57 | 4 | 13 | 9½ | 100 | 8 | 4 | 7 |
| 15 | 1 | 4 | 8½ | 58 | 4 | 15 | 5½ | 108 | 8 | 17 | 9 |
| 16 | 1 | 6 | 4 | 59 | 4 | 17 | 1½ | 110 | 9 | 1 | 0½ |
| 17 | 1 | 7 | 11½ | 60 | 4 | 18 | 9 | 112 | 9 | 4 | 4 |
| 18 | 1 | 9 | 7½ | 61 | 5 | 0 | 4½ | 120 | 9 | 17 | 6 |
| 19 | 1 | 11 | 3½ | 62 | 5 | 2 | 0½ | 130 | 10 | 13 | 11½ |
| 20 | 1 | 12 | 11 | 63 | 5 | 3 | 8½ | 132 | 10 | 17 | 3 |
| 21 | 1 | 14 | 6½ | 64 | 5 | 5 | 4 | 140 | 11 | 10 | 5 |
| 22 | 1 | 16 | 2½ | 65 | 5 | 6 | 11½ | 144 | 11 | 17 | 0 |
| 23 | 1 | 17 | 10½ | 66 | 5 | 8 | 7½ | 150 | 12 | 6 | 10½ |
| 24 | 1 | 19 | 6 | 67 | 5 | 10 | 3½ | 175 | 14 | 8 | 0½ |
| 25 | 2 | 1 | 1½ | 68 | 5 | 11 | 11 | 200 | 16 | 9 | 2 |
| 26 | 2 | 2 | 9½ | 69 | 5 | 13 | 6½ | 250 | 20 | 11 | 5½ |
| 27 | 2 | 4 | 5½ | 70 | 5 | 15 | 2½ | 300 | 24 | 13 | 9 |
| 28 | 2 | 6 | 1 | 71 | 5 | 16 | 10½ | 365 | 30 | 0 | 8½ |
| 29 | 2 | 7 | 8½ | 72 | 5 | 18 | 6 | 400 | 32 | 18 | 4 |
| 30 | 2 | 9 | 4½ | 73 | 6 | 0 | 1½ | 500 | 41 | 2 | 11 |
| 31 | 2 | 11 | 0½ | 74 | 6 | 1 | 9½ | 600 | 49 | 7 | 6 |
| 32 | 2 | 12 | 8 | 75 | 6 | 3 | 5½ | 700 | 57 | 12 | 1 |
| 33 | 2 | 14 | 3½ | 76 | 6 | 5 | 1 | 750 | 61 | 14 | 4½ |
| 34 | 2 | 15 | 11½ | 77 | 6 | 6 | 8½ | 800 | 65 | 16 | 8 |
| 35 | 2 | 17 | 7½ | 78 | 6 | 8 | 4½ | 900 | 74 | 1 | 3 |
| 36 | 2 | 19 | 3 | 79 | 6 | 10 | 0½ | 1000 | 82 | 5 | 10 |
| 37 | 3 | 0 | 10½ | 80 | 6 | 11 | 8 | 1250 | 102 | 17 | 3½ |
| 38 | 3 | 2 | 6½ | 81 | 6 | 13 | 3½ | 1500 | 123 | 8 | 9 |
| 39 | 3 | 4 | 2½ | 82 | 6 | 14 | 11½ | 1750 | 144 | 0 | 2½ |
| 40 | 3 | 5 | 10 | 83 | 6 | 16 | 7½ | 2000 | 164 | 11 | 8 |
| 41 | 3 | 7 | 5½ | 84 | 6 | 18 | 3 | 2240 | 184 | 6 | 8 |
| 42 | 3 | 9 | 1½ | 85 | 6 | 19 | 10½ | 3000 | 246 | 17 | 6 |
| 43 | 3 | 10 | 9½ | 86 | 7 | 1 | 6½ | 5000 | 411 | 9 | 2 |

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| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 7½ | 44 | 3 | 11 | 6 | 87 | 7 | 1 | 4½ |
| 2 | 0 | 3 | 3 | 45 | 3 | 13 | 1½ | 88 | 7 | 3 | 0 |
| 3 | 0 | 4 | 10½ | 46 | 3 | 14 | 9 | 89 | 7 | 4 | 7½ |
| 4 | 0 | 6 | 6 | 47 | 3 | 16 | 4½ | 90 | 7 | 6 | 3 |
| 5 | 0 | 8 | 1½ | 48 | 3 | 18 | 0 | 91 | 7 | 7 | 10½ |
| 6 | 0 | 9 | 9 | 49 | 3 | 19 | 7½ | 92 | 7 | 9 | 6 |
| 7 | 0 | 11 | 4½ | 50 | 4 | 1 | 3 | 93 | 7 | 11 | 1½ |
| 8 | 0 | 13 | 0 | 51 | 4 | 2 | 10½ | 94 | 7 | 12 | 9 |
| 9 | 0 | 14 | 7½ | 52 | 4 | 4 | 6 | 95 | 7 | 14 | 4½ |
| 10 | 0 | 16 | 3 | 53 | 4 | 6 | 1½ | 96 | 7 | 16 | 0 |
| 11 | 0 | 17 | 10½ | 54 | 4 | 7 | 9 | 97 | 7 | 17 | 7½ |
| 12 | 0 | 19 | 6 | 55 | 4 | 9 | 4½ | 98 | 7 | 19 | 3 |
| 13 | 1 | 1 | 1½ | 56 | 4 | 11 | 0 | 99 | 8 | 0 | 10½ |
| 14 | 1 | 2 | 9 | 57 | 4 | 12 | 7½ | 100 | 8 | 2 | 6 |
| 15 | 1 | 4 | 4½ | 58 | 4 | 14 | 3 | 108 | 8 | 15 | 6 |
| 16 | 1 | 6 | 0 | 59 | 4 | 15 | 10½ | 110 | 8 | 18 | 9 |
| 17 | 1 | 7 | 7½ | 60 | 4 | 17 | 6 | 112 | 9 | 2 | 0 |
| 18 | 1 | 9 | 3 | 61 | 4 | 19 | 1½ | 120 | 9 | 15 | 0 |
| 19 | 1 | 10 | 10½ | 62 | 5 | 0 | 9 | 130 | 10 | 11 | 3 |
| 20 | 1 | 12 | 6 | 63 | 5 | 2 | 4½ | 132 | 10 | 14 | 6 |
| 21 | 1 | 14 | 1½ | 64 | 5 | 4 | 0 | 140 | 11 | 7 | 6 |
| 22 | 1 | 15 | 9 | 65 | 5 | 5 | 7½ | 144 | 11 | 14 | 0 |
| 23 | 1 | 17 | 4½ | 66 | 5 | 7 | 3 | 150 | 12 | 3 | 9 |
| 24 | 1 | 19 | 0 | 67 | 5 | 8 | 10½ | 175 | 14 | 4 | 4½ |
| 25 | 2 | 0 | 7½ | 68 | 5 | 10 | 6 | 200 | 16 | 5 | 0 |
| 26 | 2 | 2 | 3 | 69 | 5 | 12 | 1½ | 250 | 20 | 6 | 3 |
| 27 | 2 | 3 | 10½ | 70 | 5 | 13 | 9 | 300 | 24 | 7 | 6 |
| 28 | 2 | 5 | 6 | 71 | 5 | 15 | 4½ | 365 | 29 | 13 | 1½ |
| 29 | 2 | 7 | 1½ | 72 | 5 | 17 | 0 | 400 | 32 | 10 | 0 |
| 30 | 2 | 8 | 9 | 73 | 5 | 18 | 7½ | 500 | 40 | 12 | 6 |
| 31 | 2 | 10 | 4½ | 74 | 6 | 0 | 3 | 600 | 48 | 15 | 0 |
| 32 | 2 | 12 | 0 | 75 | 6 | 1 | 10½ | 700 | 56 | 17 | 6 |
| 33 | 2 | 13 | 7½ | 76 | 6 | 3 | 6 | 750 | 60 | 18 | 9 |
| 34 | 2 | 15 | 3 | 77 | 6 | 5 | 1½ | 800 | 65 | 0 | 0 |
| 35 | 2 | 16 | 10½ | 78 | 6 | 6 | 9 | 900 | 73 | 2 | 6 |
| 36 | 2 | 18 | 6 | 79 | 6 | 8 | 4½ | 1000 | 81 | 5 | 0 |
| 37 | 3 | 0 | 1½ | 80 | 6 | 10 | 0 | 1250 | 101 | 11 | 3 |
| 38 | 3 | 1 | 9 | 81 | 6 | 11 | 7½ | 1500 | 121 | 17 | 6 |
| 39 | 3 | 3 | 4½ | 82 | 6 | 13 | 3 | 1750 | 142 | 3 | 9 |
| 40 | 3 | 5 | 0 | 83 | 6 | 14 | 10½ | 2000 | 162 | 10 | 0 |
| 41 | 3 | 6 | 7½ | 84 | 6 | 16 | 6 | 2240 | 182 | 0 | 0 |
| 42 | 3 | 8 | 3 | 85 | 6 | 18 | 1½ | 3000 | 243 | 15 | 0 |
| 43 | 3 | 9 | 10½ | 86 | 6 | 19 | 9 | 5000 | 406 | 5 | 0 |

## 1s. 8d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 8 | 44 | 3 | 13 | 4 | 87 | 7 | 5 | 0 |
| 2 | 0 | 3 | 4 | 45 | 3 | 15 | 0 | 88 | 7 | 6 | 8 |
| 3 | 0 | 5 | 0 | 46 | 3 | 16 | 8 | 89 | 7 | 8 | 4 |
| 4 | 0 | 6 | 8 | 47 | 3 | 18 | 4 | 90 | 7 | 10 | 0 |
| 5 | 0 | 8 | 4 | 48 | 4 | 0 | 0 | 91 | 7 | 11 | 8 |
| 6 | 0 | 10 | 0 | 49 | 4 | 1 | 8 | 92 | 7 | 13 | 4 |
| 7 | 0 | 11 | 8 | 50 | 4 | 3 | 4 | 93 | 7 | 15 | 0 |
| 8 | 0 | 13 | 4 | 51 | 4 | 5 | 0 | 94 | 7 | 16 | 8 |
| 9 | 0 | 15 | 0 | 52 | 4 | 6 | 8 | 95 | 7 | 18 | 4 |
| 10 | 0 | 16 | 8 | 53 | 4 | 8 | 4 | 96 | 8 | 0 | 0 |
| 11 | 0 | 18 | 4 | 54 | 4 | 10 | 0 | 97 | 8 | 1 | 8 |
| 12 | 1 | 0 | 0 | 55 | 4 | 11 | 8 | 98 | 8 | 3 | 4 |
| 13 | 1 | 1 | 8 | 56 | 4 | 13 | 4 | 99 | 8 | 5 | 0 |
| 14 | 1 | 3 | 4 | 57 | 4 | 15 | 0 | 100 | 8 | 6 | 8 |
| 15 | 1 | 5 | 0 | 58 | 4 | 16 | 8 | 108 | 8 | 9 | 0 |
| 16 | 1 | 6 | 8 | 59 | 4 | 18 | 4 | 110 | 9 | 3 | 4 |
| 17 | 1 | 8 | 4 | 60 | 5 | 0 | 0 | 112 | 9 | 6 | 8 |
| 18 | 1 | 10 | 0 | 61 | 5 | 1 | 8 | 120 | 10 | 0 | 0 |
| 19 | 1 | 11 | 8 | 62 | 5 | 3 | 4 | 130 | 10 | 16 | 8 |
| 20 | 1 | 13 | 4 | 63 | 5 | 5 | 0 | 132 | 11 | 0 | 0 |
| 21 | 1 | 15 | 0 | 64 | 5 | 6 | 8 | 140 | 11 | 13 | 4 |
| 22 | 1 | 16 | 8 | 65 | 5 | 8 | 4 | 144 | 12 | 0 | 0 |
| 23 | 1 | 18 | 4 | 66 | 5 | 10 | 0 | 150 | 12 | 10 | 0 |
| 24 | 2 | 0 | 0 | 67 | 5 | 11 | 8 | 175 | 14 | 11 | 8 |
| 25 | 2 | 1 | 8 | 68 | 5 | 13 | 4 | 200 | 16 | 13 | 4 |
| 26 | 2 | 3 | 4 | 69 | 5 | 15 | 0 | 250 | 20 | 16 | 8 |
| 27 | 2 | 5 | 0 | 70 | 5 | 16 | 8 | 300 | 25 | 0 | 0 |
| 28 | 2 | 6 | 8 | 71 | 5 | 18 | 4 | 365 | 30 | 8 | 4 |
| 29 | 2 | 8 | 4 | 72 | 6 | 0 | 0 | 400 | 33 | 6 | 8 |
| 30 | 2 | 10 | 0 | 73 | 6 | 1 | 8 | 500 | 41 | 13 | 4 |
| 31 | 2 | 11 | 8 | 74 | 6 | 3 | 4 | 600 | 50 | 0 | 0 |
| 32 | 2 | 13 | 4 | 75 | 6 | 5 | 0 | 700 | 58 | 6 | 8 |
| 33 | 2 | 15 | 0 | 76 | 6 | 6 | 8 | 750 | 62 | 10 | 0 |
| 34 | 2 | 16 | 8 | 77 | 6 | 8 | 4 | 800 | 66 | 13 | 4 |
| 35 | 2 | 18 | 4 | 78 | 6 | 10 | 0 | 900 | 75 | 0 | 0 |
| 36 | 3 | 0 | 0 | 79 | 6 | 11 | 8 | 1000 | 83 | 6 | 8 |
| 37 | 3 | 1 | 8 | 80 | 6 | 13 | 4 | 1250 | 104 | 3 | 4 |
| 38 | 3 | 3 | 4 | 81 | 6 | 15 | 0 | 1500 | 125 | 0 | 0 |
| 39 | 3 | 5 | 0 | 82 | 6 | 16 | 8 | 1750 | 145 | 16 | 8 |
| 40 | 3 | 6 | 8 | 83 | 6 | 18 | 4 | 2000 | 166 | 13 | 4 |
| 41 | 3 | 8 | 4 | 84 | 7 | 0 | 0 | 2240 | 186 | 13 | 4 |
| 42 | 3 | 10 | 0 | 85 | 7 | 1 | 8 | 3000 | 250 | 0 | 0 |
| 43 | 3 | 11 | 8 | 86 | 7 | 3 | 4 | 5000 | 416 | 13 | 4 |

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| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 8½ | 44 | 3 | 14 | 3 | 87 | 7 | 6 | 9½ |
| 2 | 0 | 3 | 4½ | 45 | 3 | 15 | 11½ | 88 | 7 | 8 | 6 |
| 3 | 0 | 5 | 0½ | 46 | 3 | 17 | 7½ | 89 | 7 | 10 | 2½ |
| 4 | 0 | 6 | 9 | 47 | 3 | 19 | 3½ | 90 | 7 | 11 | 10½ |
| 5 | 0 | 8 | 5½ | 48 | 4 | 1 | 0 | 91 | 7 | 13 | 6½ |
| 6 | 0 | 10 | 1½ | 49 | 4 | 2 | 8½ | 92 | 7 | 15 | 3 |
| 7 | 0 | 11 | 9½ | 50 | 4 | 4 | 4½ | 93 | 7 | 16 | 11½ |
| 8 | 0 | 13 | 6 | 51 | 4 | 6 | 0½ | 94 | 7 | 18 | 7½ |
| 9 | 0 | 15 | 2½ | 52 | 4 | 7 | 9 | 95 | 8 | 0 | 3½ |
| 10 | 0 | 16 | 10½ | 53 | 4 | 9 | 5½ | 96 | 8 | 2 | 0 |
| 11 | 0 | 18 | 6½ | 54 | 4 | 11 | 1½ | 97 | 8 | 3 | 8½ |
| 12 | 1 | 0 | 3 | 55 | 4 | 12 | 9½ | 98 | 8 | 5 | 4½ |
| 13 | 1 | 1 | 11½ | 56 | 4 | 14 | 6 | 99 | 8 | 7 | 0½ |
| 14 | 1 | 3 | 7½ | 57 | 4 | 16 | 2½ | 100 | 8 | 8 | 9 |
| 15 | 1 | 5 | 3½ | 58 | 4 | 17 | 10½ | 108 | 9 | 2 | 3 |
| 16 | 1 | 7 | 0 | 59 | 4 | 19 | 6½ | 110 | 9 | 5 | 7½ |
| 17 | 1 | 8 | 8½ | 60 | 5 | 1 | 3 | 112 | 9 | 9 | 0 |
| 18 | 1 | 10 | 4½ | 61 | 5 | 2 | 11½ | 120 | 10 | 2 | 6 |
| 19 | 1 | 12 | 0½ | 62 | 5 | 4 | 7½ | 130 | 10 | 19 | 4½ |
| 20 | 1 | 13 | 9 | 63 | 5 | 6 | 3½ | 132 | 11 | 2 | 9 |
| 21 | 1 | 15 | 5½ | 64 | 5 | 8 | 0 | 140 | 11 | 16 | 3 |
| 22 | 1 | 17 | 1½ | 65 | 5 | 9 | 8½ | 144 | 12 | 3 | 0 |
| 23 | 1 | 18 | 9½ | 66 | 5 | 11 | 4½ | 150 | 12 | 13 | 1½ |
| 24 | 2 | 0 | 6 | 67 | 5 | 13 | 0½ | 175 | 14 | 15 | 3½ |
| 25 | 2 | 2 | 2½ | 68 | 5 | 14 | 9 | 200 | 16 | 17 | 6 |
| 26 | 2 | 3 | 10½ | 69 | 5 | 16 | 5½ | 250 | 21 | 1 | 10½ |
| 27 | 2 | 5 | 6½ | 70 | 5 | 18 | 1½ | 300 | 25 | 6 | 3 |
| 28 | 2 | 7 | 3 | 71 | 5 | 19 | 9½ | 365 | 30 | 15 | 11½ |
| 29 | 2 | 8 | 11½ | 72 | 6 | 1 | 6 | 400 | 33 | 15 | 0 |
| 30 | 2 | 10 | 7½ | 73 | 6 | 3 | 2½ | 500 | 42 | 3 | 9 |
| 31 | 2 | 12 | 3½ | 74 | 6 | 4 | 10½ | 600 | 50 | 12 | 6 |
| 32 | 2 | 14 | 0 | 75 | 6 | 6 | 6½ | 700 | 59 | 1 | 3 |
| 33 | 2 | 15 | 8½ | 76 | 6 | 8 | 3 | 750 | 63 | 5 | 7½ |
| 34 | 2 | 17 | 4½ | 77 | 6 | 9 | 11½ | 800 | 67 | 10 | 0 |
| 35 | 2 | 19 | 0½ | 78 | 6 | 11 | 7½ | 900 | 75 | 18 | 9 |
| 36 | 3 | 0 | 9 | 79 | 6 | 13 | 3½ | 1000 | 84 | 7 | 6 |
| 37 | 3 | 2 | 5½ | 80 | 6 | 15 | 0 | 1250 | 105 | 9 | 4½ |
| 38 | 3 | 4 | 1½ | 81 | 6 | 16 | 8½ | 1500 | 126 | 11 | 3 |
| 39 | 3 | 5 | 9½ | 82 | 6 | 18 | 4½ | 1750 | 147 | 13 | 1½ |
| 40 | 3 | 7 | 6 | 83 | 7 | 0 | 0½ | 2000 | 168 | 15 | 0 |
| 41 | 3 | 9 | 2½ | 84 | 7 | 1 | 9 | 2240 | 189 | 0 | 0 |
| 42 | 3 | 10 | 10½ | 85 | 7 | 3 | 5½ | 3000 | 253 | 2 | 6 |
| 43 | 3 | 12 | 6½ | 86 | 7 | 5 | 1½ | 5000 | 421 | 17 | 6 |

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| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 8¾ | 44 | 3 | 16 | 1 | 87 | 7 | 10 | 5¼ |
| 2 | 0 | 3 | 5¼ | 45 | 3 | 17 | 9¾ | 88 | 7 | 12 | 2 |
| 3 | 0 | 5 | 2¼ | 46 | 3 | 19 | 6¼ | 89 | 7 | 13 | 10¾ |
| 4 | 0 | 6 | 11 | 47 | 4 | 1 | 3¼ | 90 | 7 | 15 | 7¾ |
| 5 | 0 | 8 | 7¾ | 48 | 4 | 3 | 0 | 91 | 7 | 17 | 4¼ |
| 6 | 0 | 10 | 4¼ | 49 | 4 | 4 | 8¾ | 92 | 7 | 19 | 1 |
| 7 | 0 | 12 | 1¼ | 50 | 4 | 6 | 5¼ | 93 | 8 | 0 | 9¾ |
| 8 | 0 | 13 | 10 | 51 | 4 | 8 | 2¼ | 94 | 8 | 2 | 6¼ |
| 9 | 0 | 15 | 6¾ | 52 | 4 | 9 | 11 | 95 | 8 | 4 | 3¼ |
| 10 | 0 | 17 | 3¼ | 53 | 4 | 11 | 7¾ | 96 | 8 | 6 | 0 |
| 11 | 0 | 19 | 0¼ | 54 | 4 | 13 | 4¼ | 97 | 8 | 7 | 8¾ |
| 12 | 1 | 0 | 9 | 55 | 4 | 15 | 1¼ | 98 | 8 | 9 | 5¼ |
| 13 | 1 | 2 | 5¾ | 56 | 4 | 16 | 10 | 99 | 8 | 11 | 2¼ |
| 14 | 1 | 4 | 2¼ | 57 | 4 | 18 | 6¾ | 100 | 8 | 12 | 11 |
| 15 | 1 | 5 | 11¼ | 58 | 5 | 0 | 3¼ | 108 | 9 | 6 | 9 |
| 16 | 1 | 7 | 8 | 59 | 5 | 2 | 0¼ | 110 | 9 | 10 | 2¼ |
| 17 | 1 | 9 | 4¾ | 60 | 5 | 3 | 9 | 112 | 9 | 13 | 8 |
| 18 | 1 | 11 | 1¼ | 61 | 5 | 5 | 5¾ | 120 | 10 | 7 | 6 |
| 19 | 1 | 12 | 10¼ | 62 | 5 | 7 | 2¼ | 130 | 11 | 4 | 9¼ |
| 20 | 1 | 14 | 7 | 63 | 5 | 8 | 11¼ | 132 | 11 | 8 | 3 |
| 21 | 1 | 16 | 3¾ | 64 | 5 | 10 | 8 | 140 | 12 | 2 | 1 |
| 22 | 1 | 18 | 0¼ | 65 | 5 | 12 | 4¾ | 144 | 12 | 9 | 0 |
| 23 | 1 | 19 | 9¼ | 66 | 5 | 14 | 1¼ | 150 | 12 | 19 | 4¼ |
| 24 | 2 | 1 | 6 | 67 | 5 | 15 | 10¼ | 175 | 15 | 2 | 7½ |
| 25 | 2 | 3 | 2¾ | 68 | 5 | 17 | 7 | 200 | 17 | 5 | 10 |
| 26 | 2 | 4 | 11¼ | 69 | 5 | 19 | 3¾ | 250 | 21 | 12 | 3¾ |
| 27 | 2 | 6 | 8¼ | 70 | 6 | 1 | 0¼ | 300 | 25 | 18 | 9 |
| 28 | 2 | 8 | 5 | 71 | 6 | 2 | 9¼ | 365 | 31 | 11 | 1¾ |
| 29 | 2 | 10 | 1¾ | 72 | 6 | 4 | 6 | 400 | 34 | 11 | 8 |
| 30 | 2 | 11 | 10¼ | 73 | 6 | 6 | 2¾ | 500 | 43 | 4 | 7 |
| 31 | 2 | 13 | 7¼ | 74 | 6 | 7 | 11¼ | 600 | 51 | 17 | 6 |
| 32 | 2 | 15 | 4 | 75 | 6 | 9 | 8¼ | 700 | 60 | 10 | 5 |
| 33 | 2 | 17 | 0¾ | 76 | 6 | 11 | 5 | 750 | 64 | 18 | 10½ |
| 34 | 2 | 18 | 9¾ | 77 | 6 | 13 | 1¾ | 800 | 69 | 3 | 4 |
| 35 | 3 | 0 | 6¼ | 78 | 6 | 14 | 10¼ | 900 | 77 | 16 | 3 |
| 36 | 3 | 2 | 3 | 79 | 6 | 16 | 7¼ | 1000 | 86 | 9 | 2 |
| 37 | 3 | 3 | 11¾ | 80 | 6 | 18 | 4 | 1250 | 108 | 1 | 5¼ |
| 38 | 3 | 5 | 8¾ | 81 | 7 | 0 | 0¾ | 1500 | 129 | 13 | 9 |
| 39 | 3 | 7 | 5¼ | 82 | 7 | 1 | 9¼ | 1750 | 151 | 6 | 0¾ |
| 40 | 3 | 9 | 2 | 83 | 7 | 3 | 6¼ | 2000 | 172 | 18 | 4 |
| 41 | 3 | 10 | 10¾ | 84 | 7 | 5 | 3 | 2240 | 193 | 13 | 4 |
| 42 | 3 | 12 | 7¼ | 85 | 7 | 6 | 11¾ | 3000 | 259 | 7 | 6 |
| 43 | 3 | 14 | 4¼ | 86 | 7 | 8 | 8¼ | 5000 | 432 | 5 | 10 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 8½ | 44 | 3 | 15 | 2 | 87 | 7 | 8 | 7½ |
| 2 | 0 | 3 | 5 | 45 | 3 | 16 | 10½ | 88 | 7 | 10 | 4 |
| 3 | 0 | 5 | 1½ | 46 | 3 | 18 | 7 | 89 | 7 | 12 | 0½ |
| 4 | 0 | 6 | 10 | 47 | 4 | 0 | 3½ | 90 | 7 | 13 | 9 |
| 5 | 0 | 8 | 6½ | 48 | 4 | 2 | 0 | 91 | 7 | 15 | 5½ |
| 6 | 0 | 10 | 3 | 49 | 4 | 3 | 8½ | 92 | 7 | 17 | 2 |
| 7 | 0 | 11 | 11½ | 50 | 4 | 5 | 5 | 93 | 7 | 18 | 10½ |
| 8 | 0 | 13 | 8 | 51 | 4 | 7 | 1½ | 94 | 8 | 0 | 7 |
| 9 | 0 | 15 | 4½ | 52 | 4 | 8 | 10 | 95 | 8 | 2 | 3½ |
| 10 | 0 | 17 | 1 | 53 | 4 | 10 | 6½ | 96 | 8 | 4 | 0 |
| 11 | 0 | 18 | 9½ | 54 | 4 | 12 | 3 | 97 | 8 | 5 | 8½ |
| 12 | 1 | 0 | 6 | 55 | 4 | 13 | 11½ | 98 | 8 | 7 | 5 |
| 13 | 1 | 2 | 2½ | 56 | 4 | 15 | 8 | 99 | 8 | 9 | 1½ |
| 14 | 1 | 3 | 11 | 57 | 4 | 17 | 4½ | 100 | 8 | 10 | 10 |
| 15 | 1 | 5 | 7½ | 58 | 4 | 19 | 1 | 108 | 9 | 4 | 6 |
| 16 | 1 | 7 | 4 | 59 | 5 | 0 | 9½ | 110 | 9 | 7 | 11 |
| 17 | 1 | 9 | 0½ | 60 | 5 | 2 | 6 | 112 | 9 | 11 | 4 |
| 18 | 1 | 10 | 9 | 61 | 5 | 4 | 2½ | 120 | 10 | 5 | 0 |
| 19 | 1 | 12 | 5½ | 62 | 5 | 5 | 11 | 130 | 11 | 2 | 1 |
| 20 | 1 | 14 | 2 | 63 | 5 | 7 | 7½ | 132 | 11 | 5 | 6 |
| 21 | 1 | 15 | 10½ | 64 | 5 | 9 | 4 | 140 | 11 | 19 | 2 |
| 22 | 1 | 17 | 7 | 65 | 5 | 11 | 0½ | 144 | 12 | 6 | 0 |
| 23 | 1 | 19 | 3½ | 66 | 5 | 12 | 9 | 150 | 12 | 16 | 3 |
| 24 | 2 | 1 | 0 | 67 | 5 | 14 | 5½ | 175 | 14 | 18 | 11½ |
| 25 | 2 | 2 | 8½ | 68 | 5 | 16 | 2 | 200 | 17 | 1 | 8 |
| 26 | 2 | 4 | 5 | 69 | 5 | 17 | 10½ | 250 | 21 | 7 | 1 |
| 27 | 2 | 6 | 1½ | 70 | 5 | 19 | 7 | 300 | 25 | 12 | 6 |
| 28 | 2 | 7 | 10 | 71 | 6 | 1 | 3½ | 365 | 31 | 3 | 6½ |
| 29 | 2 | 9 | 6½ | 72 | 6 | 3 | 0 | 400 | 34 | 3 | 4 |
| 30 | 2 | 11 | 3 | 73 | 6 | 4 | 8½ | 500 | 42 | 14 | 2 |
| 31 | 2 | 12 | 11½ | 74 | 6 | 6 | 5 | 600 | 51 | 5 | 0 |
| 32 | 2 | 14 | 8 | 75 | 6 | 8 | 1½ | 700 | 59 | 15 | 10 |
| 33 | 2 | 16 | 4½ | 76 | 6 | 9 | 10 | 750 | 64 | 1 | 3 |
| 34 | 2 | 18 | 1 | 77 | 6 | 11 | 6½ | 800 | 68 | 6 | 8 |
| 35 | 2 | 19 | 9½ | 78 | 6 | 13 | 3 | 900 | 76 | 17 | 6 |
| 36 | 3 | 1 | 6 | 79 | 6 | 14 | 11½ | 1000 | 85 | 8 | 4 |
| 37 | 3 | 3 | 2½ | 80 | 6 | 16 | 8 | 1250 | 106 | 15 | 5 |
| 38 | 3 | 4 | 11 | 81 | 6 | 18 | 4½ | 1500 | 128 | 2 | 6 |
| 39 | 3 | 6 | 7½ | 82 | 7 | 0 | 1 | 1750 | 149 | 9 | 7 |
| 40 | 3 | 8 | 4 | 83 | 7 | 1 | 9½ | 2000 | 170 | 16 | 8 |
| 41 | 3 | 10 | 0½ | 84 | 7 | 3 | 6 | 2240 | 191 | 6 | 8 |
| 42 | 3 | 11 | 9 | 85 | 7 | 5 | 2½ | 3000 | 256 | 5 | 0 |
| 43 | 3 | 13 | 5½ | 86 | 7 | 6 | 11 | 5000 | 427 | 1 | 8 |

## 1s. 9d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 9 | 44 | 3 | 17 | 0 | 87 | 7 | 12 | 3 |
| 2 | 0 | 3 | 6 | 45 | 3 | 18 | 9 | 88 | 7 | 14 | 0 |
| 3 | 0 | 5 | 3 | 46 | 4 | 0 | 6 | 89 | 7 | 15 | 9 |
| 4 | 0 | 7 | 0 | 47 | 4 | 2 | 3 | 90 | 7 | 17 | 6 |
| 5 | 0 | 8 | 9 | 48 | 4 | 4 | 0 | 91 | 7 | 19 | 3 |
| 6 | 0 | 10 | 6 | 49 | 4 | 5 | 9 | 92 | 8 | 1 | 0 |
| 7 | 0 | 12 | 3 | 50 | 4 | 7 | 6 | 93 | 8 | 2 | 9 |
| 8 | 0 | 14 | 0 | 51 | 4 | 9 | 3 | 94 | 8 | 4 | 6 |
| 9 | 0 | 15 | 9 | 52 | 4 | 11 | 0 | 95 | 8 | 6 | 3 |
| 10 | 0 | 17 | 6 | 53 | 4 | 12 | 9 | 96 | 8 | 8 | 0 |
| 11 | 0 | 19 | 3 | 54 | 4 | 14 | 6 | 97 | 8 | 9 | 9 |
| 12 | 1 | 1 | 0 | 55 | 4 | 16 | 3 | 98 | 8 | 11 | 6 |
| 13 | 1 | 2 | 9 | 56 | 4 | 18 | 0 | 99 | 8 | 13 | 3 |
| 14 | 1 | 4 | 6 | 57 | 4 | 19 | 9 | 100 | 8 | 15 | 0 |
| 15 | 1 | 6 | 3 | 58 | 5 | 1 | 6 | 108 | 9 | 9 | 0 |
| 16 | 1 | 8 | 0 | 59 | 5 | 3 | 3 | 110 | 9 | 12 | 6 |
| 17 | 1 | 9 | 9 | 60 | 5 | 5 | 0 | 112 | 9 | 16 | 0 |
| 18 | 1 | 11 | 6 | 61 | 5 | 6 | 9 | 120 | 10 | 10 | 0 |
| 19 | 1 | 13 | 3 | 62 | 5 | 8 | 6 | 130 | 11 | 7 | 6 |
| 20 | 1 | 15 | 0 | 63 | 5 | 10 | 3 | 132 | 11 | 11 | 0 |
| 21 | 1 | 16 | 9 | 64 | 5 | 12 | 0 | 140 | 12 | 5 | 0 |
| 22 | 1 | 18 | 6 | 65 | 5 | 13 | 9 | 144 | 12 | 12 | 0 |
| 23 | 2 | 0 | 3 | 66 | 5 | 15 | 6 | 150 | 13 | 2 | 6 |
| 24 | 2 | 2 | 0 | 67 | 5 | 17 | 3 | 175 | 15 | 6 | 3 |
| 25 | 2 | 3 | 9 | 68 | 5 | 19 | 0 | 200 | 17 | 10 | 0 |
| 26 | 2 | 5 | 6 | 69 | 6 | 0 | 9 | 250 | 21 | 17 | 6 |
| 27 | 2 | 7 | 3 | 70 | 6 | 2 | 6 | 300 | 26 | 5 | 0 |
| 28 | 2 | 9 | 0 | 71 | 6 | 4 | 3 | 365 | 31 | 18 | 9 |
| 29 | 2 | 10 | 9 | 72 | 6 | 6 | 0 | 400 | 35 | 0 | 0 |
| 30 | 2 | 12 | 6 | 73 | 6 | 7 | 9 | 500 | 43 | 15 | 0 |
| 31 | 2 | 14 | 3 | 74 | 6 | 9 | 6 | 600 | 52 | 10 | 0 |
| 32 | 2 | 16 | 0 | 75 | 6 | 11 | 3 | 700 | 61 | 5 | 0 |
| 33 | 2 | 17 | 9 | 76 | 6 | 13 | 0 | 750 | 65 | 12 | 6 |
| 34 | 2 | 19 | 6 | 77 | 6 | 14 | 9 | 800 | 70 | 0 | 0 |
| 35 | 3 | 1 | 3 | 78 | 6 | 16 | 6 | 900 | 78 | 15 | 0 |
| 36 | 3 | 3 | 0 | 79 | 6 | 18 | 3 | 1000 | 87 | 10 | 0 |
| 37 | 3 | 4 | 9 | 80 | 7 | 0 | 0 | 1250 | 109 | 7 | 6 |
| 38 | 3 | 6 | 6 | 81 | 7 | 1 | 9 | 1500 | 131 | 5 | 0 |
| 39 | 3 | 8 | 3 | 82 | 7 | 3 | 6 | 1750 | 153 | 2 | 6 |
| 40 | 3 | 10 | 0 | 83 | 7 | 5 | 3 | 2000 | 175 | 0 | 0 |
| 41 | 3 | 11 | 9 | 84 | 7 | 7 | 0 | 2240 | 196 | 0 | 0 |
| 42 | 3 | 13 | 6 | 85 | 7 | 8 | 9 | 3000 | 262 | 10 | 0 |
| 43 | 3 | 15 | 3 | 86 | 7 | 10 | 6 | 5000 | 437 | 10 | 0 |

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| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 9½ | 44 | 3 | 17 | 11 | 87 | 7 | 14 | 0½ |
| 2 | 0 | 3 | 6½ | 45 | 3 | 19 | 8½ | 88 | 7 | 15 | 10 |
| 3 | 0 | 5 | 3½ | 46 | 4 | 1 | 5½ | 89 | 7 | 17 | 7½ |
| 4 | 0 | 7 | 1 | 47 | 4 | 3 | 2½ | 90 | 7 | 19 | 4½ |
| 5 | 0 | 8 | 10½ | 48 | 4 | 5 | 0 | 91 | 8 | 1 | 1½ |
| 6 | 0 | 10 | 7½ | 49 | 4 | 6 | 9½ | 92 | 8 | 2 | 11 |
| 7 | 0 | 12 | 4½ | 50 | 4 | 8 | 6½ | 93 | 8 | 4 | 8½ |
| 8 | 0 | 14 | 2 | 51 | 4 | 10 | 3½ | 94 | 8 | 6 | 5½ |
| 9 | 0 | 15 | 11½ | 52 | 4 | 12 | 1 | 95 | 8 | 8 | 2½ |
| 10 | 0 | 17 | 8½ | 53 | 4 | 13 | 10½ | 96 | 8 | 10 | 0 |
| 11 | 0 | 19 | 5½ | 54 | 4 | 15 | 7½ | 97 | 8 | 11 | 9½ |
| 12 | 1 | 1 | 3 | 55 | 4 | 17 | 4½ | 98 | 8 | 13 | 6½ |
| 13 | 1 | 3 | 0½ | 56 | 4 | 19 | 2 | 99 | 8 | 15 | 3½ |
| 14 | 1 | 4 | 9½ | 57 | 5 | 0 | 11½ | 100 | 8 | 17 | 1 |
| 15 | 1 | 6 | 6½ | 58 | 5 | 2 | 8½ | 108 | 9 | 11 | 3 |
| 16 | 1 | 8 | 4 | 59 | 5 | 4 | 5½ | 110 | 9 | 14 | 9½ |
| 17 | 1 | 10 | 1½ | 60 | 5 | 6 | 3 | 112 | 9 | 18 | 4 |
| 18 | 1 | 11 | 10½ | 61 | 5 | 8 | 0½ | 120 | 10 | 12 | 6 |
| 19 | 1 | 13 | 7½ | 62 | 5 | 9 | 9½ | 130 | 11 | 10 | 2½ |
| 20 | 1 | 15 | 5 | 63 | 5 | 11 | 6½ | 132 | 11 | 13 | 9 |
| 21 | 1 | 17 | 2½ | 64 | 5 | 13 | 4 | 140 | 12 | 7 | 11 |
| 22 | 1 | 18 | 11½ | 65 | 5 | 15 | 1½ | 144 | 12 | 15 | 0 |
| 23 | 2 | 0 | 8½ | 66 | 5 | 16 | 10½ | 150 | 13 | 5 | 7½ |
| 24 | 2 | 2 | 6 | 67 | 5 | 18 | 7½ | 175 | 15 | 9 | 10½ |
| 25 | 2 | 4 | 3½ | 68 | 6 | 0 | 5 | 200 | 17 | 14 | 2 |
| 26 | 2 | 6 | 0½ | 69 | 6 | 2 | 2½ | 250 | 22 | 2 | 8½ |
| 27 | 2 | 7 | 9½ | 70 | 6 | 3 | 11½ | 300 | 26 | 11 | 3 |
| 28 | 2 | 9 | 7 | 71 | 6 | 5 | 8½ | 365 | 32 | 6 | 4½ |
| 29 | 2 | 11 | 4½ | 72 | 6 | 7 | 6 | 400 | 35 | 8 | 4 |
| 30 | 2 | 13 | 1½ | 73 | 6 | 9 | 3½ | 500 | 44 | 5 | 5 |
| 31 | 2 | 14 | 10½ | 74 | 6 | 11 | 0½ | 600 | 53 | 2 | 6 |
| 32 | 2 | 16 | 8 | 75 | 6 | 12 | 9½ | 700 | 61 | 19 | 7 |
| 33 | 2 | 18 | 5½ | 76 | 6 | 14 | 7 | 750 | 66 | 8 | 1½ |
| 34 | 3 | 0 | 2½ | 77 | 6 | 16 | 4½ | 800 | 70 | 16 | 8 |
| 35 | 3 | 1 | 11½ | 78 | 6 | 18 | 1½ | 900 | 79 | 13 | 9 |
| 36 | 3 | 3 | 9 | 79 | 6 | 19 | 10½ | 1000 | 88 | 10 | 10 |
| 37 | 3 | 5 | 6½ | 80 | 7 | 1 | 8 | 1250 | 110 | 13 | 6½ |
| 38 | 3 | 7 | 3½ | 81 | 7 | 3 | 5½ | 1500 | 132 | 16 | 3 |
| 39 | 3 | 9 | 0½ | 82 | 7 | 5 | 2½ | 1750 | 154 | 18 | 11½ |
| 40 | 3 | 10 | 10 | 83 | 7 | 6 | 11½ | 2000 | 177 | 1 | 8 |
| 41 | 3 | 12 | 7½ | 84 | 7 | 8 | 9 | 2240 | 198 | 6 | 8 |
| 42 | 3 | 14 | 4½ | 85 | 7 | 10 | 6½ | 3000 | 265 | 12 | 6 |
| 43 | 3 | 16 | 1½ | 86 | 7 | 12 | 3½ | 5000 | 442 | 14 | 2 |

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| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 9¾ | 44 | 3 | 19 | 9 | 87 | 7 | 17 | 8¾ |
| 2 | 0 | 3 | 7¾ | 45 | 4 | 1 | 6¾ | 88 | 7 | 19 | 6 |
| 3 | 0 | 5 | 5¾ | 46 | 4 | 3 | 4¾ | 89 | 8 | 1 | 3¾ |
| 4 | 0 | 7 | 3 | 47 | 4 | 5 | 2¾ | 90 | 8 | 3 | 1¾ |
| 5 | 0 | 9 | 0¾ | 48 | 4 | 7 | 0 | 91 | 8 | 4 | 11¾ |
| 6 | 0 | 10 | 10¾ | 49 | 4 | 8 | 9¾ | 92 | 8 | 6 | 9 |
| 7 | 0 | 12 | 8¾ | 50 | 4 | 10 | 7¾ | 93 | 8 | 8 | 6¾ |
| 8 | 0 | 14 | 6 | 51 | 4 | 12 | 5¾ | 94 | 8 | 10 | 4¾ |
| 9 | 0 | 16 | 3¾ | 52 | 4 | 14 | 3 | 95 | 8 | 12 | 2¾ |
| 10 | 0 | 18 | 1¾ | 53 | 4 | 16 | 0¾ | 96 | 8 | 14 | 0 |
| 11 | 0 | 19 | 11¾ | 54 | 4 | 17 | 10¾ | 97 | 8 | 15 | 9¾ |
| 12 | 1 | 1 | 9 | 55 | 4 | 19 | 8¾ | 98 | 8 | 17 | 7¾ |
| 13 | 1 | 3 | 6¾ | 56 | 5 | 1 | 6 | 99 | 8 | 19 | 5¾ |
| 14 | 1 | 5 | 4¾ | 57 | 5 | 3 | 3¾ | 100 | 9 | 1 | 3 |
| 15 | 1 | 7 | 2¾ | 58 | 5 | 5 | 1¾ | 108 | 9 | 15 | 9 |
| 16 | 1 | 9 | 0 | 59 | 5 | 6 | 11¾ | 110 | 9 | 19 | 4¾ |
| 17 | 1 | 10 | 9¾ | 60 | 5 | 8 | 9 | 112 | 10 | 3 | 0 |
| 18 | 1 | 12 | 7¾ | 61 | 5 | 10 | 6¾ | 120 | 10 | 17 | 6 |
| 19 | 1 | 14 | 5¾ | 62 | 5 | 12 | 4¾ | 130 | 11 | 15 | 7¾ |
| 20 | 1 | 16 | 3 | 63 | 5 | 14 | 2¾ | 132 | 11 | 19 | 3 |
| 21 | 1 | 18 | 0¾ | 64 | 5 | 16 | 0 | 140 | 12 | 13 | 9 |
| 22 | 1 | 19 | 10¾ | 65 | 5 | 17 | 9¾ | 144 | 13 | 1 | 0 |
| 23 | 2 | 1 | 8¾ | 66 | 5 | 19 | 7¾ | 150 | 13 | 11 | 10¾ |
| 24 | 2 | 3 | 6 | 67 | 6 | 1 | 5¾ | 175 | 15 | 17 | 2¾ |
| 25 | 2 | 5 | 3¾ | 68 | 6 | 3 | 3 | 200 | 18 | 2 | 6 |
| 26 | 2 | 7 | 1¾ | 69 | 6 | 5 | 0¾ | 250 | 22 | 13 | 1¾ |
| 27 | 2 | 8 | 11¾ | 70 | 6 | 6 | 10¾ | 300 | 27 | 3 | 9 |
| 28 | 2 | 10 | 9 | 71 | 6 | 8 | 8¾ | 365 | 33 | 1 | 6¾ |
| 29 | 2 | 12 | 6¾ | 72 | 6 | 10 | 6 | 400 | 36 | 5 | 0 |
| 30 | 2 | 14 | 4¾ | 73 | 6 | 12 | 3¾ | 500 | 45 | 6 | 3 |
| 31 | 2 | 16 | 2¾ | 74 | 6 | 14 | 1¾ | 600 | 54 | 7 | 6 |
| 32 | 2 | 18 | 0 | 75 | 6 | 15 | 11¾ | 700 | 63 | 8 | 9 |
| 33 | 2 | 19 | 9¾ | 76 | 6 | 17 | 9 | 750 | 67 | 19 | 4½ |
| 34 | 3 | 1 | 7¾ | 77 | 6 | 19 | 6¾ | 800 | 72 | 10 | 0 |
| 35 | 3 | 3 | 5¾ | 78 | 7 | 1 | 4¾ | 900 | 81 | 11 | 3 |
| 36 | 3 | 5 | 3 | 79 | 7 | 3 | 2¾ | 1000 | 90 | 12 | 6 |
| 37 | 3 | 7 | 0¾ | 80 | 7 | 5 | 0 | 1250 | 113 | 5 | 7½ |
| 38 | 3 | 8 | 10¾ | 81 | 7 | 6 | 9¾ | 1500 | 135 | 18 | 9 |
| 39 | 3 | 10 | 8¾ | 82 | 7 | 8 | 7¾ | 1750 | 158 | 11 | 10½ |
| 40 | 3 | 12 | 6 | 83 | 7 | 10 | 5¾ | 2000 | 181 | 5 | 0 |
| 41 | 3 | 14 | 3¾ | 84 | 7 | 12 | 3 | 2240 | 203 | 0 | 0 |
| 42 | 3 | 16 | 1¾ | 85 | 7 | 14 | 0¾ | 3000 | 271 | 17 | 6 |
| 43 | 3 | 17 | 11¾ | 86 | 7 | 15 | 10¾ | 5000 | 453 | 2 | 6 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 9½ | 44 | 3 | 18 | 10 | 87 | 7 | 15 | 10½ |
| 2 | 0 | 3 | 7 | 45 | 4 | 0 | 7½ | 88 | 7 | 17 | 8 |
| 3 | 0 | 5 | 4½ | 46 | 4 | 2 | 5 | 89 | 7 | 19 | 5½ |
| 4 | 0 | 7 | 2 | 47 | 4 | 4 | 2½ | 90 | 8 | 1 | 3 |
| 5 | 0 | 8 | 11½ | 48 | 4 | 6 | 0 | 91 | 8 | 3 | 0½ |
| 6 | 0 | 10 | 9 | 49 | 4 | 7 | 9½ | 92 | 8 | 4 | 10 |
| 7 | 0 | 12 | 6½ | 50 | 4 | 9 | 7 | 93 | 8 | 6 | 7½ |
| 8 | 0 | 14 | 4 | 51 | 4 | 11 | 4½ | 94 | 8 | 8 | 5 |
| 9 | 0 | 16 | 1½ | 52 | 4 | 13 | 2 | 95 | 8 | 10 | 2½ |
| 10 | 0 | 17 | 11 | 53 | 4 | 14 | 11½ | 96 | 8 | 12 | 0 |
| 11 | 0 | 19 | 8½ | 54 | 4 | 16 | 9 | 97 | 8 | 13 | 9½ |
| 12 | 1 | 1 | 6 | 55 | 4 | 18 | 6½ | 98 | 8 | 15 | 7 |
| 13 | 1 | 3 | 3½ | 56 | 5 | 0 | 4 | 99 | 8 | 17 | 4½ |
| 14 | 1 | 5 | 1 | 57 | 5 | 2 | 1½ | 100 | 8 | 19 | 2 |
| 15 | 1 | 6 | 10½ | 58 | 5 | 3 | 11 | 108 | 9 | 13 | 6 |
| 16 | 1 | 8 | 8 | 59 | 5 | 5 | 8½ | 110 | 9 | 17 | 1 |
| 17 | 1 | 10 | 5½ | 60 | 5 | 7 | 6 | 112 | 10 | 0 | 8 |
| 18 | 1 | 12 | 3 | 61 | 5 | 9 | 3½ | 120 | 10 | 15 | 0 |
| 19 | 1 | 14 | 0½ | 62 | 5 | 11 | 1 | 130 | 11 | 12 | 11 |
| 20 | 1 | 15 | 10 | 63 | 5 | 12 | 10½ | 132 | 11 | 16 | 6 |
| 21 | 1 | 17 | 7½ | 64 | 5 | 14 | 8 | 140 | 12 | 10 | 10 |
| 22 | 1 | 19 | 5 | 65 | 5 | 16 | 5½ | 144 | 12 | 18 | 0 |
| 23 | 2 | 1 | 2½ | 66 | 5 | 18 | 3 | 150 | 13 | 8 | 9 |
| 24 | 2 | 3 | 0 | 67 | 6 | 0 | 0½ | 175 | 15 | 13 | 6½ |
| 25 | 2 | 4 | 9½ | 68 | 6 | 1 | 10 | 200 | 17 | 18 | 4 |
| 26 | 2 | 6 | 7 | 69 | 6 | 3 | 7½ | 250 | 22 | 7 | 11 |
| 27 | 2 | 8 | 4½ | 70 | 6 | 5 | 5 | 300 | 26 | 17 | 6 |
| 28 | 2 | 10 | 2 | 71 | 6 | 7 | 2½ | 365 | 32 | 13 | 11½ |
| 29 | 2 | 11 | 11½ | 72 | 6 | 9 | 0 | 400 | 35 | 16 | 8 |
| 30 | 2 | 13 | 9 | 73 | 6 | 10 | 9½ | 500 | 44 | 15 | 10 |
| 31 | 2 | 15 | 6½ | 74 | 6 | 12 | 7 | 600 | 53 | 15 | 0 |
| 32 | 2 | 17 | 4 | 75 | 6 | 14 | 4½ | 700 | 62 | 14 | 2 |
| 33 | 2 | 19 | 1½ | 76 | 6 | 16 | 2 | 750 | 67 | 3 | 9 |
| 34 | 3 | 0 | 11 | 77 | 6 | 17 | 11½ | 800 | 71 | 13 | 4 |
| 35 | 3 | 2 | 8½ | 78 | 6 | 19 | 9 | 900 | 80 | 12 | 6 |
| 36 | 3 | 4 | 6 | 79 | 7 | 1 | 6½ | 1000 | 89 | 11 | 8 |
| 37 | 3 | 6 | 3½ | 80 | 7 | 3 | 4 | 1250 | 111 | 19 | 7 |
| 38 | 3 | 8 | 1 | 81 | 7 | 5 | 1½ | 1500 | 134 | 7 | 6 |
| 39 | 3 | 9 | 10½ | 82 | 7 | 6 | 11 | 1750 | 156 | 15 | 5 |
| 40 | 3 | 11 | 8 | 83 | 7 | 8 | 8½ | 2000 | 179 | 3 | 4 |
| 41 | 3 | 13 | 5½ | 84 | 7 | 10 | 6 | 2240 | 200 | 13 | 4 |
| 42 | 3 | 15 | 3 | 85 | 7 | 12 | 3½ | 3000 | 268 | 15 | 0 |
| 43 | 3 | 17 | 0½ | 86 | 7 | 14 | 1 | 5000 | 447 | 18 | 4 |

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| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 10 | 44 | 4 | 0 | 8 | 87 | 7 | 19 | 6 |
| 2 | 0 | 3 | 8 | 45 | 4 | 2 | 6 | 88 | 8 | 1 | 4 |
| 3 | 0 | 5 | 6 | 46 | 4 | 4 | 4 | 89 | 8 | 3 | 2 |
| 4 | 0 | 7 | 4 | 47 | 4 | 6 | 2 | 90 | 8 | 5 | 0 |
| 5 | 0 | 9 | 2 | 48 | 4 | 8 | 0 | 91 | 8 | 6 | 10 |
| 6 | 0 | 11 | 0 | 49 | 4 | 9 | 10 | 92 | 8 | 8 | 8 |
| 7 | 0 | 12 | 10 | 50 | 4 | 11 | 8 | 93 | 8 | 10 | 6 |
| 8 | 0 | 14 | 8 | 51 | 4 | 13 | 6 | 94 | 8 | 12 | 4 |
| 9 | 0 | 16 | 6 | 52 | 4 | 15 | 4 | 95 | 8 | 14 | 2 |
| 10 | 0 | 18 | 4 | 53 | 4 | 17 | 2 | 96 | 8 | 16 | 0 |
| 11 | 1 | 0 | 2 | 54 | 4 | 19 | 0 | 97 | 8 | 17 | 10 |
| 12 | 1 | 2 | 0 | 55 | 5 | 0 | 10 | 98 | 8 | 19 | 8 |
| 13 | 1 | 3 | 10 | 56 | 5 | 2 | 8 | 99 | 9 | 1 | 6 |
| 14 | 1 | 5 | 8 | 57 | 5 | 4 | 6 | 100 | 9 | 3 | 4 |
| 15 | 1 | 7 | 6 | 58 | 5 | 6 | 4 | 108 | 9 | 18 | 0 |
| 16 | 1 | 9 | 4 | 59 | 5 | 8 | 2 | 110 | 10 | 1 | 8 |
| 17 | 1 | 11 | 2 | 60 | 5 | 10 | 0 | 112 | 10 | 5 | 4 |
| 18 | 1 | 13 | 0 | 61 | 5 | 11 | 10 | 120 | 11 | 0 | 0 |
| 19 | 1 | 14 | 10 | 62 | 5 | 13 | 8 | 130 | 11 | 18 | 4 |
| 20 | 1 | 16 | 8 | 63 | 5 | 15 | 6 | 132 | 12 | 2 | 0 |
| 21 | 1 | 18 | 6 | 64 | 5 | 17 | 4 | 140 | 12 | 16 | 8 |
| 22 | 2 | 0 | 4 | 65 | 5 | 19 | 2 | 144 | 13 | 4 | 0 |
| 23 | 2 | 2 | 2 | 66 | 6 | 1 | 0 | 150 | 13 | 15 | 0 |
| 24 | 2 | 4 | 0 | 67 | 6 | 2 | 10 | 175 | 16 | 0 | 10 |
| 25 | 2 | 5 | 10 | 68 | 6 | 4 | 8 | 200 | 18 | 6 | 8 |
| 26 | 2 | 7 | 8 | 69 | 6 | 6 | 6 | 250 | 22 | 18 | 4 |
| 27 | 2 | 9 | 6 | 70 | 6 | 8 | 4 | 300 | 27 | 10 | 0 |
| 28 | 2 | 11 | 4 | 71 | 6 | 10 | 2 | 365 | 33 | 9 | 2 |
| 29 | 2 | 13 | 2 | 72 | 6 | 12 | 0 | 400 | 36 | 13 | 4 |
| 30 | 2 | 15 | 0 | 73 | 6 | 13 | 10 | 500 | 45 | 16 | 8 |
| 31 | 2 | 16 | 10 | 74 | 6 | 15 | 8 | 600 | 55 | 0 | 0 |
| 32 | 2 | 18 | 8 | 75 | 6 | 17 | 6 | 700 | 64 | 3 | 4 |
| 33 | 3 | 0 | 6 | 76 | 6 | 19 | 4 | 750 | 68 | 15 | 0 |
| 34 | 3 | 2 | 4 | 77 | 7 | 1 | 2 | 800 | 73 | 6 | 8 |
| 35 | 3 | 4 | 2 | 78 | 7 | 3 | 0 | 900 | 82 | 10 | 0 |
| 36 | 3 | 6 | 0 | 79 | 7 | 4 | 10 | 1000 | 91 | 13 | 4 |
| 37 | 3 | 7 | 10 | 80 | 7 | 6 | 8 | 1250 | 114 | 11 | 8 |
| 38 | 3 | 9 | 8 | 81 | 7 | 8 | 6 | 1500 | 137 | 10 | 0 |
| 39 | 3 | 11 | 6 | 82 | 7 | 10 | 4 | 1750 | 160 | 8 | 4 |
| 40 | 3 | 13 | 4 | 83 | 7 | 12 | 2 | 2000 | 183 | 6 | 8 |
| 41 | 3 | 15 | 2 | 84 | 7 | 14 | 0 | 2240 | 205 | 6 | 8 |
| 42 | 3 | 17 | 0 | 85 | 7 | 15 | 10 | 3000 | 275 | 0 | 0 |
| 43 | 3 | 18 | 10 | 86 | 7 | 17 | 8 | 5000 | 458 | 6 | 8 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 10½ | 44 | 4 | 1 | 7 | 87 | 8 | 1 | 3½ |
| 2 | 0 | 3 | 9 | 45 | 4 | 3 | 5½ | 88 | 8 | 3 | 2 |
| 3 | 0 | 5 | 7½ | 46 | 4 | 5 | 4 | 89 | 8 | 4 | 10½ |
| 4 | 0 | 7 | 6 | 47 | 4 | 6 | 2½ | 90 | 8 | 6 | 9 |
| 5 | 0 | 9 | 4½ | 48 | 4 | 8 | 1 | 91 | 8 | 8 | 7½ |
| 6 | 0 | 11 | 3 | 49 | 4 | 9 | 11½ | 92 | 8 | 10 | 6 |
| 7 | 0 | 13 | 1½ | 50 | 4 | 11 | 10 | 93 | 8 | 12 | 4½ |
| 8 | 0 | 15 | 0 | 51 | 4 | 13 | 8½ | 94 | 8 | 14 | 3 |
| 9 | 0 | 16 | 10½ | 52 | 4 | 15 | 7½ | 95 | 8 | 15 | 1½ |
| 10 | 0 | 18 | 9 | 53 | 4 | 17 | 6 | 96 | 8 | 17 | 0 |
| 11 | 1 | 0 | 7½ | 54 | 4 | 19 | 4½ | 97 | 8 | 18 | 10½ |
| 12 | 1 | 2 | 6 | 55 | 4 | 21 | 3 | 98 | 9 | 0 | 9 |
| 13 | 1 | 4 | 4½ | 56 | 4 | 23 | 1½ | 99 | 9 | 2 | 7½ |
| 14 | 1 | 6 | 3 | 57 | 4 | 25 | 0 | 100 | 9 | 4 | 6 |
| 15 | 1 | 8 | 1½ | 58 | 4 | 26 | 10½ | 101 | 9 | 6 | 4½ |
| 16 | 1 | 10 | 0 | 59 | 4 | 28 | 9 | 102 | 9 | 8 | 3 |
| 17 | 1 | 11 | 10½ | 60 | 4 | 30 | 7½ | 103 | 9 | 10 | 1½ |
| 18 | 1 | 13 | 9 | 61 | 4 | 32 | 6 | 104 | 9 | 12 | 0 |
| 19 | 1 | 15 | 7½ | 62 | 4 | 34 | 4½ | 105 | 9 | 13 | 10½ |
| 20 | 1 | 17 | 6 | 63 | 4 | 36 | 3 | 106 | 9 | 15 | 9 |
| 21 | 1 | 19 | 4½ | 64 | 4 | 38 | 1½ | 107 | 9 | 17 | 7½ |
| 22 | 2 | 1 | 3 | 65 | 4 | 40 | 0 | 108 | 9 | 19 | 6 |
| 23 | 2 | 3 | 1½ | 66 | 4 | 41 | 10½ | 109 | 9 | 21 | 4½ |
| 24 | 2 | 5 | 0 | 67 | 4 | 43 | 9 | 110 | 9 | 23 | 3 |
| 25 | 2 | 6 | 10½ | 68 | 4 | 45 | 7½ | 111 | 9 | 25 | 1½ |
| 26 | 2 | 8 | 9 | 69 | 4 | 47 | 6 | 112 | 9 | 26 | 10½ |
| 27 | 2 | 10 | 7½ | 70 | 4 | 49 | 4½ | 113 | 9 | 28 | 9 |
| 28 | 2 | 12 | 6 | 71 | 4 | 51 | 3 | 114 | 9 | 30 | 7½ |
| 29 | 2 | 14 | 4½ | 72 | 4 | 53 | 1½ | 115 | 9 | 32 | 6 |
| 30 | 2 | 16 | 3 | 73 | 4 | 54 | 10½ | 116 | 9 | 34 | 4½ |
| 31 | 2 | 18 | 1½ | 74 | 4 | 56 | 9 | 117 | 9 | 36 | 3 |
| 32 | 3 | 0 | 0 | 75 | 4 | 58 | 7½ | 118 | 9 | 37 | 10½ |
| 33 | 3 | 1 | 10½ | 76 | 4 | 60 | 6 | 119 | 9 | 39 | 9 |
| 34 | 3 | 3 | 9 | 77 | 4 | 62 | 4½ | 120 | 9 | 41 | 7½ |
| 35 | 3 | 5 | 7½ | 78 | 4 | 64 | 3 | 121 | 9 | 43 | 6 |
| 36 | 3 | 7 | 6 | 79 | 4 | 66 | 1½ | 122 | 9 | 45 | 4½ |
| 37 | 3 | 9 | 4½ | 80 | 4 | 67 | 10 | 123 | 9 | 47 | 3 |
| 38 | 3 | 11 | 3 | 81 | 4 | 69 | 9 | 124 | 9 | 49 | 1½ |
| 39 | 3 | 13 | 1½ | 82 | 4 | 71 | 7½ | 125 | 9 | 50 | 10½ |
| 40 | 3 | 15 | 0 | 83 | 4 | 73 | 6 | 126 | 9 | 52 | 9 |
| 41 | 3 | 16 | 10½ | 84 | 4 | 75 | 4½ | 127 | 9 | 54 | 7½ |
| 42 | 3 | 18 | 9 | 85 | 4 | 77 | 3 | 128 | 9 | 56 | 6 |
| 43 | 3 | 20 | 7½ | 86 | 4 | 78 | 11½ | 129 | 9 | 58 | 4½ |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 10¾ | 44 | 4 | 3 | 5 | 87 | 8 | 4 | 11½ |
| 2 | 0 | 3 | 9½ | 45 | 4 | 5 | 3½ | 88 | 8 | 6 | 10 |
| 3 | 0 | 5 | 8¼ | 46 | 4 | 7 | 2½ | 89 | 8 | 8 | 8¾ |
| 4 | 0 | 7 | 7 | 47 | 4 | 9 | 1½ | 90 | 8 | 10 | 7½ |
| 5 | 0 | 9 | 5¾ | 48 | 4 | 11 | 0 | 91 | 8 | 12 | 6¼ |
| 6 | 0 | 11 | 4½ | 49 | 4 | 12 | 10¾ | 92 | 8 | 14 | 5 |
| 7 | 0 | 13 | 3¼ | 50 | 4 | 14 | 9½ | 93 | 8 | 15 | 3¾ |
| 8 | 0 | 15 | 2 | 51 | 4 | 16 | 8¼ | 94 | 8 | 17 | 2½ |
| 9 | 0 | 17 | 0¾ | 52 | 4 | 18 | 7 | 95 | 9 | 0 | 1¼ |
| 10 | 0 | 18 | 11¾ | 53 | 5 | 0 | 5¾ | 96 | 9 | 2 | 0 |
| 11 | 1 | 0 | 10¼ | 54 | 5 | 2 | 4½ | 97 | 9 | 3 | 10¾ |
| 12 | 1 | 2 | 9 | 55 | 5 | 4 | 3¼ | 98 | 9 | 5 | 9¼ |
| 13 | 1 | 4 | 7¾ | 56 | 5 | 6 | 2 | 99 | 9 | 7 | 8¼ |
| 14 | 1 | 6 | 6¾ | 57 | 5 | 8 | 0¾ | 100 | 9 | 9 | 7 |
| 15 | 1 | 8 | 5¼ | 58 | 5 | 9 | 11¼ | 101 | 9 | 10 | 8 | 6¼ |
| 16 | 1 | 10 | 4 | 59 | 5 | 11 | 10¼ | 110 | 10 | 8 | 6¼ |
| 17 | 1 | 12 | 2¾ | 60 | 5 | 13 | 9 | 112 | 10 | 12 | 4 |
| 18 | 1 | 14 | 1¾ | 61 | 5 | 15 | 7¾ | 120 | 11 | 7 | 6 |
| 19 | 1 | 16 | 0¼ | 62 | 5 | 17 | 6¼ | 130 | 12 | 6 | 5¼ |
| 20 | 1 | 17 | 11 | 63 | 5 | 19 | 5¼ | 132 | 12 | 10 | 3 |
| 21 | 1 | 19 | 9¾ | 64 | 6 | 1 | 4 | 140 | 13 | 5 | 5 |
| 22 | 2 | 1 | 8¾ | 65 | 6 | 3 | 2¾ | 144 | 13 | 13 | 0 |
| 23 | 2 | 3 | 7¼ | 66 | 6 | 5 | 1¼ | 150 | 14 | 4 | 4¼ |
| 24 | 2 | 5 | 6 | 67 | 6 | 7 | 0¼ | 175 | 16 | 11 | 9¼ |
| 25 | 2 | 7 | 4¾ | 68 | 6 | 8 | 11 | 200 | 18 | 19 | 2 |
| 26 | 2 | 9 | 3¾ | 69 | 6 | 10 | 9¾ | 250 | 23 | 13 | 11¾ |
| 27 | 2 | 11 | 2¼ | 70 | 6 | 12 | 8¾ | 300 | 28 | 8 | 9 |
| 28 | 2 | 13 | 1 | 71 | 6 | 14 | 7¼ | 365 | 34 | 11 | 11¾ |
| 29 | 2 | 14 | 11¾ | 72 | 6 | 16 | 6 | 400 | 37 | 18 | 4 |
| 30 | 2 | 16 | 10¼ | 73 | 6 | 18 | 4¾ | 500 | 47 | 7 | 11 |
| 31 | 2 | 18 | 9¼ | 74 | 7 | 0 | 3¾ | 600 | 56 | 17 | 6 |
| 32 | 3 | 0 | 8 | 75 | 7 | 2 | 2¼ | 700 | 66 | 7 | 1 |
| 33 | 3 | 2 | 6¾ | 76 | 7 | 4 | 1 | 750 | 71 | 1 | 10¼ |
| 34 | 3 | 4 | 5¾ | 77 | 7 | 5 | 11¾ | 800 | 75 | 16 | 8 |
| 35 | 3 | 6 | 4¼ | 78 | 7 | 7 | 10¼ | 900 | 85 | 6 | 3 |
| 36 | 3 | 8 | 3 | 79 | 7 | 9 | 9¼ | 1000 | 94 | 15 | 10 |
| 37 | 3 | 10 | 1¾ | 80 | 7 | 11 | 8 | 1250 | 118 | 9 | 9¼ |
| 38 | 3 | 12 | 0¼ | 81 | 7 | 13 | 6¾ | 1500 | 142 | 3 | 9 |
| 39 | 3 | 13 | 11¼ | 82 | 7 | 15 | 5¼ | 1750 | 165 | 17 | 8¼ |
| 40 | 3 | 15 | 10 | 83 | 7 | 17 | 4¼ | 2000 | 189 | 11 | 8 |
| 41 | 3 | 17 | 8¾ | 84 | 7 | 19 | 3 | 2240 | 212 | 6 | 8 |
| 42 | 3 | 19 | 7¼ | 85 | 8 | 1 | 1¾ | 3000 | 284 | 7 | 6 |
| 43 | 4 | 1 | 6¼ | 86 | 8 | 3 | 0¼ | 5000 | 473 | 19 | 2 |

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| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 10½ | 44 | 4 | 2 | 6 | 87 | 8 | 3 | 1½ |
| 2 | 0 | 3 | 9 | 45 | 4 | 4 | 4½ | 88 | 8 | 5 | 0 |
| 3 | 0 | 5 | 7½ | 46 | 4 | 6 | 3 | 89 | 8 | 6 | 10½ |
| 4 | 0 | 7 | 6 | 47 | 4 | 8 | 1½ | 90 | 8 | 8 | 9 |
| 5 | 0 | 9 | 4½ | 48 | 4 | 10 | 0 | 91 | 8 | 10 | 7½ |
| 6 | 0 | 11 | 3 | 49 | 4 | 11 | 10½ | 92 | 8 | 12 | 6 |
| 7 | 0 | 13 | 1½ | 50 | 4 | 13 | 9 | 93 | 8 | 14 | 4½ |
| 8 | 0 | 15 | 0 | 51 | 4 | 15 | 7½ | 94 | 8 | 16 | 3 |
| 9 | 0 | 16 | 10½ | 52 | 4 | 17 | 6 | 95 | 8 | 18 | 1½ |
| 10 | 0 | 18 | 9 | 53 | 4 | 19 | 4½ | 96 | 9 | 0 | 0 |
| 11 | 1 | 0 | 7½ | 54 | 5 | 1 | 3 | 97 | 9 | 1 | 10½ |
| 12 | 1 | 2 | 6 | 55 | 5 | 3 | 1½ | 98 | 9 | 3 | 9 |
| 13 | 1 | 4 | 4½ | 56 | 5 | 5 | 0 | 99 | 9 | 5 | 7½ |
| 14 | 1 | 6 | 3 | 57 | 5 | 6 | 10½ | 100 | 9 | 7 | 6 |
| 15 | 1 | 8 | 1½ | 58 | 5 | 8 | 9 | 108 | 10 | 2 | 6 |
| 16 | 1 | 10 | 0 | 59 | 5 | 10 | 7½ | 110 | 10 | 6 | 3 |
| 17 | 1 | 11 | 10½ | 60 | 5 | 12 | 6 | 112 | 10 | 10 | 0 |
| 18 | 1 | 13 | 9 | 61 | 5 | 14 | 4½ | 120 | 11 | 5 | 0 |
| 19 | 1 | 15 | 7½ | 62 | 5 | 16 | 3 | 130 | 12 | 3 | 9 |
| 20 | 1 | 17 | 6 | 63 | 5 | 18 | 1½ | 132 | 12 | 7 | 6 |
| 21 | 1 | 19 | 4½ | 64 | 6 | 0 | 0 | 140 | 13 | 2 | 6 |
| 22 | 2 | 1 | 3 | 65 | 6 | 1 | 10½ | 144 | 13 | 10 | 0 |
| 23 | 2 | 3 | 1½ | 66 | 6 | 3 | 9 | 150 | 14 | 1 | 3 |
| 24 | 2 | 5 | 0 | 67 | 6 | 5 | 7½ | 175 | 16 | 8 | 1½ |
| 25 | 2 | 6 | 10½ | 68 | 6 | 7 | 6 | 200 | 18 | 15 | 0 |
| 26 | 2 | 8 | 9 | 69 | 6 | 9 | 4½ | 250 | 23 | 8 | 9 |
| 27 | 2 | 10 | 7½ | 70 | 6 | 11 | 3 | 300 | 28 | 2 | 6 |
| 28 | 2 | 12 | 6 | 71 | 6 | 13 | 1½ | 365 | 34 | 4 | 4½ |
| 29 | 2 | 14 | 4½ | 72 | 6 | 15 | 0 | 400 | 37 | 10 | 0 |
| 30 | 2 | 16 | 3 | 73 | 6 | 16 | 10½ | 500 | 46 | 17 | 6 |
| 31 | 2 | 18 | 1½ | 74 | 6 | 18 | 9 | 600 | 56 | 5 | 0 |
| 32 | 3 | 0 | 0 | 75 | 7 | 0 | 7½ | 700 | 65 | 12 | 6 |
| 33 | 3 | 1 | 10½ | 76 | 7 | 2 | 6 | 750 | 70 | 6 | 3 |
| 34 | 3 | 3 | 9 | 77 | 7 | 4 | 4½ | 800 | 75 | 0 | 0 |
| 35 | 3 | 5 | 7½ | 78 | 7 | 6 | 3 | 900 | 84 | 7 | 6 |
| 36 | 3 | 7 | 6 | 79 | 7 | 8 | 1½ | 1000 | 93 | 15 | 0 |
| 37 | 3 | 9 | 4½ | 80 | 7 | 10 | 0 | 1250 | 117 | 3 | 9 |
| 38 | 3 | 11 | 3 | 81 | 7 | 11 | 10½ | 1500 | 140 | 12 | 6 |
| 39 | 3 | 13 | 1½ | 82 | 7 | 13 | 9 | 1750 | 164 | 1 | 3 |
| 40 | 3 | 15 | 0 | 83 | 7 | 15 | 7½ | 2000 | 187 | 10 | 0 |
| 41 | 3 | 16 | 10½ | 84 | 7 | 17 | 6 | 2240 | 210 | 0 | 0 |
| 42 | 3 | 18 | 9 | 85 | 7 | 19 | 4½ | 3000 | 280 | 5 | 0 |
| 43 | 4 | 0 | 7½ | 86 | 8 | 1 | 3 | 5000 | 468 | 15 | 0 |

## 1s. 11d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 11 | 44 | 4 | 4 | 4 | 87 | 8 | 6 | 9 |
| 2 | 0 | 3 | 10 | 45 | 4 | 6 | 3 | 88 | 8 | 8 | 8 |
| 3 | 0 | 5 | 9 | 46 | 4 | 8 | 2 | 89 | 8 | 10 | 7 |
| 4 | 0 | 7 | 8 | 47 | 4 | 10 | 1 | 90 | 8 | 12 | 6 |
| 5 | 0 | 9 | 7 | 48 | 4 | 12 | 0 | 91 | 8 | 14 | 5 |
| 6 | 0 | 11 | 6 | 49 | 4 | 13 | 11 | 92 | 8 | 16 | 4 |
| 7 | 0 | 13 | 5 | 50 | 4 | 15 | 10 | 93 | 8 | 18 | 3 |
| 8 | 0 | 15 | 4 | 51 | 4 | 17 | 9 | 94 | 9 | 0 | 2 |
| 9 | 0 | 17 | 3 | 52 | 4 | 19 | 8 | 95 | 9 | 2 | 1 |
| 10 | 0 | 19 | 2 | 53 | 5 | 1 | 7 | 96 | 9 | 4 | 0 |
| 11 | 1 | 1 | 1 | 54 | 5 | 3 | 6 | 97 | 9 | 5 | 11 |
| 12 | 1 | 3 | 0 | 55 | 5 | 5 | 5 | 98 | 9 | 7 | 10 |
| 13 | 1 | 4 | 11 | 56 | 5 | 7 | 4 | 99 | 9 | 9 | 9 |
| 14 | 1 | 6 | 10 | 57 | 5 | 9 | 3 | 100 | 9 | 11 | 8 |
| 15 | 1 | 8 | 9 | 58 | 5 | 11 | 2 | 108 | 10 | 7 | 0 |
| 16 | 1 | 10 | 8 | 59 | 5 | 13 | 1 | 110 | 10 | 10 | 10 |
| 17 | 1 | 12 | 7 | 60 | 5 | 15 | 0 | 112 | 10 | 14 | 8 |
| 18 | 1 | 14 | 6 | 61 | 5 | 16 | 11 | 120 | 11 | 10 | 0 |
| 19 | 1 | 16 | 5 | 62 | 5 | 18 | 10 | 130 | 12 | 9 | 2 |
| 20 | 1 | 18 | 4 | 63 | 6 | 0 | 9 | 132 | 12 | 13 | 0 |
| 21 | 2 | 0 | 3 | 64 | 6 | 2 | 8 | 140 | 13 | 8 | 4 |
| 22 | 2 | 2 | 2 | 65 | 6 | 4 | 7 | 144 | 13 | 16 | 0 |
| 23 | 2 | 4 | 1 | 66 | 6 | 6 | 6 | 150 | 14 | 7 | 6 |
| 24 | 2 | 6 | 0 | 67 | 6 | 8 | 5 | 175 | 16 | 15 | 5 |
| 25 | 2 | 7 | 11 | 68 | 6 | 10 | 4 | 200 | 19 | 3 | 4 |
| 26 | 2 | 9 | 10 | 69 | 6 | 12 | 3 | 250 | 23 | 19 | 2 |
| 27 | 2 | 11 | 9 | 70 | 6 | 14 | 2 | 300 | 28 | 15 | 0 |
| 28 | 2 | 13 | 8 | 71 | 6 | 16 | 1 | 365 | 34 | 19 | 7 |
| 29 | 2 | 15 | 7 | 72 | 6 | 18 | 0 | 400 | 38 | 6 | 8 |
| 30 | 2 | 17 | 6 | 73 | 6 | 19 | 11 | 500 | 47 | 18 | 4 |
| 31 | 2 | 19 | 5 | 74 | 7 | 1 | 10 | 600 | 57 | 10 | 0 |
| 32 | 3 | 1 | 4 | 75 | 7 | 3 | 9 | 700 | 67 | 1 | 8 |
| 33 | 3 | 3 | 3 | 76 | 7 | 5 | 8 | 750 | 71 | 17 | 6 |
| 34 | 3 | 5 | 2 | 77 | 7 | 7 | 7 | 800 | 76 | 13 | 4 |
| 35 | 3 | 7 | 1 | 78 | 7 | 9 | 6 | 900 | 86 | 5 | 0 |
| 36 | 3 | 9 | 0 | 79 | 7 | 11 | 5 | 1000 | 95 | 16 | 8 |
| 37 | 3 | 10 | 11 | 80 | 7 | 13 | 4 | 1250 | 119 | 15 | 10 |
| 38 | 3 | 12 | 10 | 81 | 7 | 15 | 3 | 1500 | 143 | 15 | 0 |
| 39 | 3 | 14 | 9 | 82 | 7 | 17 | 2 | 1750 | 167 | 14 | 2 |
| 40 | 3 | 16 | 8 | 83 | 7 | 19 | 1 | 2000 | 191 | 13 | 4 |
| 41 | 3 | 18 | 7 | 84 | 8 | 1 | 0 | 2240 | 214 | 13 | 4 |
| 42 | 4 | 0 | 6 | 85 | 8 | 2 | 11 | 3000 | 287 | 10 | 0 |
| 43 | 4 | 2 | 5 | 86 | 8 | 4 | 10 | 5000 | 479 | 3 | 4 |

## 1s. 11½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 11½ | 44 | 4 | 5 | 3 | 87 | 8 | 8 | 6½ |
| 2 | 0 | 3 | 10½ | 45 | 4 | 7 | 2½ | 88 | 8 | 10 | 6 |
| 3 | 0 | 5 | 9½ | 46 | 4 | 9 | 1½ | 89 | 8 | 12 | 5½ |
| 4 | 0 | 7 | 9 | 47 | 4 | 11 | 0½ | 90 | 8 | 14 | 4½ |
| 5 | 0 | 9 | 8½ | 48 | 4 | 13 | 0 | 91 | 8 | 16 | 3½ |
| 6 | 0 | 11 | 7½ | 49 | 4 | 14 | 11½ | 92 | 8 | 18 | 3 |
| 7 | 0 | 13 | 6½ | 50 | 4 | 16 | 10½ | 93 | 9 | 0 | 2½ |
| 8 | 0 | 15 | 6 | 51 | 4 | 18 | 9½ | 94 | 9 | 2 | 1½ |
| 9 | 0 | 17 | 5½ | 52 | 5 | 0 | 9 | 95 | 9 | 4 | 0½ |
| 10 | 0 | 19 | 4½ | 53 | 5 | 2 | 8½ | 96 | 9 | 6 | 0 |
| 11 | 1 | 1 | 3½ | 54 | 5 | 4 | 7½ | 97 | 9 | 7 | 11½ |
| 12 | 1 | 3 | 3 | 55 | 5 | 6 | 6½ | 98 | 9 | 9 | 10½ |
| 13 | 1 | 5 | 2½ | 56 | 5 | 8 | 6 | 99 | 9 | 11 | 9½ |
| 14 | 1 | 7 | 1½ | 57 | 5 | 10 | 5½ | 100 | 9 | 13 | 9 |
| 15 | 1 | 9 | 0½ | 58 | 5 | 12 | 4½ | 108 | 10 | 9 | 3 |
| 16 | 1 | 11 | 0 | 59 | 5 | 14 | 3½ | 110 | 10 | 13 | 1½ |
| 17 | 1 | 12 | 11½ | 60 | 5 | 16 | 3 | 112 | 10 | 17 | 0 |
| 18 | 1 | 14 | 10½ | 61 | 5 | 18 | 2½ | 120 | 11 | 12 | 6 |
| 19 | 1 | 16 | 9½ | 62 | 6 | 0 | 1½ | 130 | 12 | 11 | 10½ |
| 20 | 1 | 18 | 9 | 63 | 6 | 2 | 0½ | 132 | 12 | 15 | 9 |
| 21 | 2 | 0 | 8½ | 64 | 6 | 4 | 0 | 140 | 13 | 11 | 3 |
| 22 | 2 | 2 | 7½ | 65 | 6 | 5 | 11½ | 144 | 13 | 19 | 0 |
| 23 | 2 | 4 | 6½ | 66 | 6 | 7 | 10½ | 150 | 14 | 10 | 7½ |
| 24 | 2 | 6 | 6 | 67 | 6 | 9 | 9½ | 175 | 16 | 19 | 0½ |
| 25 | 2 | 8 | 5½ | 68 | 6 | 11 | 9 | 200 | 19 | 7 | 6 |
| 26 | 2 | 10 | 4½ | 69 | 6 | 13 | 8½ | 250 | 24 | 4 | 4½ |
| 27 | 2 | 12 | 3½ | 70 | 6 | 15 | 7½ | 300 | 29 | 1 | 3 |
| 28 | 2 | 14 | 3 | 71 | 6 | 17 | 6½ | 365 | 35 | 7 | 2½ |
| 29 | 2 | 16 | 2½ | 72 | 6 | 19 | 6 | 400 | 38 | 15 | 0 |
| 30 | 2 | 18 | 1½ | 73 | 7 | 1 | 5½ | 500 | 48 | 8 | 9 |
| 31 | 3 | 0 | 0½ | 74 | 7 | 3 | 4½ | 600 | 58 | 2 | 6 |
| 32 | 3 | 2 | 0 | 75 | 7 | 5 | 3½ | 700 | 67 | 16 | 3 |
| 33 | 3 | 3 | 11½ | 76 | 7 | 7 | 3 | 750 | 72 | 13 | 1½ |
| 34 | 3 | 5 | 10½ | 77 | 7 | 9 | 2½ | 800 | 77 | 10 | 0 |
| 35 | 3 | 7 | 9½ | 78 | 7 | 11 | 1½ | 900 | 87 | 3 | 9 |
| 36 | 3 | 9 | 9 | 79 | 7 | 13 | 0½ | 1000 | 96 | 17 | 6 |
| 37 | 3 | 11 | 8½ | 80 | 7 | 15 | 0 | 1250 | 121 | 1 | 10½ |
| 38 | 3 | 13 | 7½ | 81 | 7 | 16 | 11½ | 1500 | 145 | 6 | 3 |
| 39 | 3 | 15 | 6½ | 82 | 7 | 18 | 10½ | 1750 | 169 | 10 | 7½ |
| 40 | 3 | 17 | 6 | 83 | 8 | 0 | 9½ | 2000 | 193 | 15 | 0 |
| 41 | 3 | 19 | 5½ | 84 | 8 | 2 | 9 | 2240 | 217 | 0 | 0 |
| 42 | 4 | 1 | 4½ | 85 | 8 | 4 | 8½ | 3000 | 290 | 12 | 6 |
| 43 | 4 | 3 | 3½ | 86 | 8 | 6 | 7½ | 5000 | 484 | 7 | 6 |

## 1s. 11¾d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 11¾ | 44 | 4 | 7 | 1 | 87 | 8 | 12 | 2¼ |
| 2 | 0 | 3 | 11½ | 45 | 4 | 9 | 0¾ | 88 | 8 | 14 | 2 |
| 3 | 0 | 5 | 11¼ | 46 | 4 | 11 | 0¼ | 89 | 8 | 16 | 1¾ |
| 4 | 0 | 7 | 11 | 47 | 4 | 13 | 0 | 90 | 8 | 18 | 1½ |
| 5 | 0 | 9 | 10¾ | 48 | 4 | 15 | 0 | 91 | 9 | 0 | 1¼ |
| 6 | 0 | 11 | 10½ | 49 | 4 | 16 | 11¾ | 92 | 9 | 2 | 1 |
| 7 | 0 | 13 | 10¼ | 50 | 4 | 18 | 11½ | 93 | 9 | 4 | 0¾ |
| 8 | 0 | 15 | 10 | 51 | 5 | 0 | 11¼ | 94 | 9 | 6 | 0½ |
| 9 | 0 | 17 | 9¾ | 52 | 5 | 2 | 11 | 95 | 9 | 8 | 0¼ |
| 10 | 0 | 19 | 9½ | 53 | 5 | 4 | 10¾ | 96 | 9 | 10 | 0 |
| 11 | 1 | 1 | 9¼ | 54 | 5 | 6 | 10½ | 97 | 9 | 11 | 11¾ |
| 12 | 1 | 3 | 9 | 55 | 5 | 8 | 10¼ | 98 | 9 | 13 | 11½ |
| 13 | 1 | 5 | 8¾ | 56 | 5 | 10 | 10 | 99 | 9 | 15 | 11¼ |
| 14 | 1 | 7 | 8½ | 57 | 5 | 12 | 9¾ | 100 | 9 | 17 | 11 |
| 15 | 1 | 9 | 8¼ | 58 | 5 | 14 | 9½ | 108 | 10 | 13 | 9 |
| 16 | 1 | 11 | 8 | 59 | 5 | 16 | 9¼ | 110 | 10 | 17 | 8¾ |
| 17 | 1 | 13 | 7¾ | 60 | 5 | 18 | 9 | 112 | 11 | 1 | 8 |
| 18 | 1 | 15 | 7½ | 61 | 6 | 0 | 8¾ | 120 | 11 | 17 | 6 |
| 19 | 1 | 17 | 7¼ | 62 | 6 | 2 | 8½ | 130 | 12 | 17 | 3¾ |
| 20 | 1 | 19 | 7 | 63 | 6 | 4 | 8¼ | 132 | 13 | 1 | 3 |
| 21 | 2 | 1 | 6¾ | 64 | 6 | 6 | 8 | 140 | 13 | 17 | 1 |
| 22 | 2 | 3 | 6½ | 65 | 6 | 8 | 7¾ | 144 | 14 | 5 | 0 |
| 23 | 2 | 5 | 6¼ | 66 | 6 | 10 | 7½ | 150 | 14 | 16 | 10½ |
| 24 | 2 | 7 | 6 | 67 | 6 | 12 | 7¼ | 175 | 17 | 6 | 4½ |
| 25 | 2 | 9 | 5¾ | 68 | 6 | 14 | 7 | 200 | 19 | 15 | 10 |
| 26 | 2 | 11 | 5½ | 69 | 6 | 16 | 6¾ | 250 | 24 | 14 | 9½ |
| 27 | 2 | 13 | 5¼ | 70 | 6 | 18 | 6½ | 300 | 29 | 13 | 9 |
| 28 | 2 | 15 | 5 | 71 | 7 | 0 | 6¼ | 365 | 36 | 2 | 4¾ |
| 29 | 2 | 17 | 4¾ | 72 | 7 | 2 | 6 | 400 | 39 | 11 | 8 |
| 30 | 2 | 19 | 4½ | 73 | 7 | 4 | 5¾ | 500 | 49 | 9 | 7 |
| 31 | 3 | 1 | 4¼ | 74 | 7 | 6 | 5½ | 600 | 59 | 7 | 6 |
| 32 | 3 | 3 | 4 | 75 | 7 | 8 | 5¼ | 700 | 69 | 5 | 5 |
| 33 | 3 | 5 | 3¾ | 76 | 7 | 10 | 5 | 750 | 74 | 4 | 4½ |
| 34 | 3 | 7 | 3½ | 77 | 7 | 12 | 4¾ | 800 | 79 | 3 | 4 |
| 35 | 3 | 9 | 3¼ | 78 | 7 | 14 | 4½ | 900 | 89 | 1 | 3 |
| 36 | 3 | 11 | 3 | 79 | 7 | 16 | 4¼ | 1000 | 98 | 19 | 2 |
| 37 | 3 | 13 | 2¾ | 80 | 7 | 18 | 4 | 1250 | 123 | 13 | 11¼ |
| 38 | 3 | 15 | 2½ | 81 | 8 | 0 | 3¾ | 1500 | 148 | 8 | 9 |
| 39 | 3 | 17 | 2¼ | 82 | 8 | 2 | 3½ | 1750 | 173 | 3 | 6¾ |
| 40 | 3 | 19 | 2 | 83 | 8 | 4 | 3¼ | 2000 | 197 | 18 | 4 |
| 41 | 4 | 1 | 1¾ | 84 | 8 | 6 | 3 | 2240 | 221 | 13 | 4 |
| 42 | 4 | 3 | 1½ | 85 | 8 | 8 | 2¾ | 3000 | 296 | 17 | 6 |
| 43 | 4 | 5 | 1¼ | 86 | 8 | 10 | 2½ | 5000 | 494 | 15 | 10 |

## 1s. 11½d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 11½ | 44 | 4 | 6 | 2 | 87 | 8 | 10 | 4½ |
| 2 | 0 | 3 | 11 | 45 | 4 | 8 | 1½ | 88 | 8 | 12 | 4 |
| 3 | 0 | 5 | 10½ | 46 | 4 | 10 | 1 | 89 | 8 | 14 | 3½ |
| 4 | 0 | 7 | 10 | 47 | 4 | 12 | 0½ | 90 | 8 | 16 | 3 |
| 5 | 0 | 9 | 9½ | 48 | 4 | 14 | 0 | 91 | 8 | 18 | 2½ |
| 6 | 0 | 11 | 9 | 49 | 4 | 15 | 11½ | 92 | 9 | 0 | 2 |
| 7 | 0 | 13 | 8½ | 50 | 4 | 17 | 11 | 93 | 9 | 2 | 1½ |
| 8 | 0 | 15 | 8 | 51 | 4 | 19 | 10½ | 94 | 9 | 4 | 1 |
| 9 | 0 | 17 | 7½ | 52 | 5 | 1 | 10 | 95 | 9 | 6 | 0½ |
| 10 | 0 | 19 | 7 | 53 | 5 | 3 | 9½ | 96 | 9 | 8 | 0 |
| 11 | 1 | 1 | 6½ | 54 | 5 | 5 | 9 | 97 | 9 | 9 | 11½ |
| 12 | 1 | 3 | 6 | 55 | 5 | 7 | 8½ | 98 | 9 | 11 | 11 |
| 13 | 1 | 5 | 5½ | 56 | 5 | 9 | 8 | 99 | 9 | 13 | 10½ |
| 14 | 1 | 7 | 5 | 57 | 5 | 11 | 7½ | 100 | 9 | 15 | 10 |
| 15 | 1 | 9 | 4½ | 58 | 5 | 13 | 7 | 108 | 10 | 11 | 6 |
| 16 | 1 | 11 | 4 | 59 | 5 | 15 | 6½ | 110 | 10 | 15 | 5 |
| 17 | 1 | 13 | 3½ | 60 | 5 | 17 | 6 | 112 | 10 | 19 | 4 |
| 18 | 1 | 15 | 3 | 61 | 5 | 19 | 5½ | 120 | 11 | 15 | 0 |
| 19 | 1 | 17 | 2½ | 62 | 6 | 1 | 5 | 130 | 12 | 14 | 7 |
| 20 | 1 | 19 | 2 | 63 | 6 | 3 | 4½ | 132 | 12 | 18 | 6 |
| 21 | 2 | 1 | 1½ | 64 | 6 | 5 | 4 | 140 | 13 | 14 | 2 |
| 22 | 2 | 3 | 1 | 65 | 6 | 7 | 3½ | 144 | 14 | 2 | 0 |
| 23 | 2 | 5 | 0½ | 66 | 6 | 9 | 3 | 150 | 14 | 13 | 9 |
| 24 | 2 | 7 | 0 | 67 | 6 | 11 | 2½ | 175 | 17 | 2 | 8½ |
| 25 | 2 | 8 | 11½ | 68 | 6 | 13 | 2 | 200 | 19 | 11 | 8 |
| 26 | 2 | 10 | 11 | 69 | 6 | 15 | 1½ | 250 | 24 | 9 | 7 |
| 27 | 2 | 12 | 10½ | 70 | 6 | 17 | 1 | 300 | 29 | 7 | 6 |
| 28 | 2 | 14 | 10 | 71 | 6 | 19 | 0½ | 365 | 35 | 14 | 9½ |
| 29 | 2 | 16 | 9½ | 72 | 7 | 1 | 0 | 400 | 39 | 3 | 4 |
| 30 | 2 | 18 | 9 | 73 | 7 | 2 | 11½ | 500 | 48 | 19 | 2 |
| 31 | 3 | 0 | 8½ | 74 | 7 | 4 | 11 | 600 | 58 | 15 | 0 |
| 32 | 3 | 2 | 8 | 75 | 7 | 6 | 10½ | 700 | 68 | 10 | 10 |
| 33 | 3 | 4 | 7½ | 76 | 7 | 8 | 10 | 750 | 73 | 8 | 9 |
| 34 | 3 | 6 | 7 | 77 | 7 | 10 | 9½ | 800 | 78 | 6 | 8 |
| 35 | 3 | 8 | 6½ | 78 | 7 | 12 | 9 | 900 | 88 | 2 | 6 |
| 36 | 3 | 10 | 6 | 79 | 7 | 14 | 8½ | 1000 | 97 | 18 | 4 |
| 37 | 3 | 12 | 5½ | 80 | 7 | 16 | 8 | 1250 | 122 | 7 | 11 |
| 38 | 3 | 14 | 5 | 81 | 7 | 18 | 7½ | 1500 | 146 | 17 | 6 |
| 39 | 3 | 16 | 4½ | 82 | 8 | 0 | 7 | 1750 | 171 | 7 | 1 |
| 40 | 3 | 18 | 4 | 83 | 8 | 2 | 6½ | 2000 | 195 | 16 | 8 |
| 41 | 4 | 0 | 3½ | 84 | 8 | 4 | 6 | 2240 | 219 | 6 | 8 |
| 42 | 4 | 2 | 3 | 85 | 8 | 6 | 5½ | 3000 | 293 | 15 | 0 |
| 43 | 4 | 4 | 2½ | 86 | 8 | 8 | 5 | 5000 | 489 | 11 | 8 |

## 2s.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 0 | 44 | 4 | 8 | 0 | 87 | 8 | 14 | 0 |
| 2 | 0 | 4 | 0 | 45 | 4 | 10 | 0 | 88 | 8 | 16 | 0 |
| 3 | 0 | 6 | 0 | 46 | 4 | 12 | 0 | 89 | 8 | 18 | 0 |
| 4 | 0 | 8 | 0 | 47 | 4 | 14 | 0 | 90 | 9 | 0 | 0 |
| 5 | 0 | 10 | 0 | 48 | 4 | 16 | 0 | 91 | 9 | 2 | 0 |
| 6 | 0 | 12 | 0 | 49 | 4 | 18 | 0 | 92 | 9 | 4 | 0 |
| 7 | 0 | 14 | 0 | 50 | 5 | 0 | 0 | 93 | 9 | 6 | 0 |
| 8 | 0 | 16 | 0 | 51 | 5 | 2 | 0 | 94 | 9 | 8 | 0 |
| 9 | 0 | 18 | 0 | 52 | 5 | 4 | 0 | 95 | 9 | 10 | 0 |
| 10 | 1 | 0 | 0 | 53 | 5 | 6 | 0 | 96 | 9 | 12 | 0 |
| 11 | 1 | 2 | 0 | 54 | 5 | 8 | 0 | 97 | 9 | 14 | 0 |
| 12 | 1 | 4 | 0 | 55 | 5 | 10 | 0 | 98 | 9 | 16 | 0 |
| 13 | 1 | 6 | 0 | 56 | 5 | 12 | 0 | 99 | 9 | 18 | 0 |
| 14 | 1 | 8 | 0 | 57 | 5 | 14 | 0 | 100 | 10 | 0 | 0 |
| 15 | 1 | 10 | 0 | 58 | 5 | 16 | 0 | 108 | 10 | 16 | 0 |
| 16 | 1 | 12 | 0 | 59 | 5 | 18 | 0 | 110 | 11 | 0 | 0 |
| 17 | 1 | 14 | 0 | 60 | 6 | 0 | 0 | 112 | 11 | 4 | 0 |
| 18 | 1 | 16 | 0 | 61 | 6 | 2 | 0 | 120 | 12 | 0 | 0 |
| 19 | 1 | 18 | 0 | 62 | 6 | 4 | 0 | 130 | 13 | 0 | 0 |
| 20 | 2 | 0 | 0 | 63 | 6 | 6 | 0 | 132 | 13 | 4 | 0 |
| 21 | 2 | 2 | 0 | 64 | 6 | 8 | 0 | 140 | 14 | 0 | 0 |
| 22 | 2 | 4 | 0 | 65 | 6 | 10 | 0 | 144 | 14 | 8 | 0 |
| 23 | 2 | 6 | 0 | 66 | 6 | 12 | 0 | 150 | 15 | 0 | 0 |
| 24 | 2 | 8 | 0 | 67 | 6 | 14 | 0 | 175 | 17 | 10 | 0 |
| 25 | 2 | 10 | 0 | 68 | 6 | 16 | 0 | 200 | 20 | 0 | 0 |
| 26 | 2 | 12 | 0 | 69 | 6 | 18 | 0 | 250 | 25 | 0 | 0 |
| 27 | 2 | 14 | 0 | 70 | 7 | 0 | 0 | 300 | 30 | 0 | 0 |
| 28 | 2 | 16 | 0 | 71 | 7 | 2 | 0 | 365 | 36 | 10 | 0 |
| 29 | 2 | 18 | 0 | 72 | 7 | 4 | 0 | 400 | 40 | 0 | 0 |
| 30 | 3 | 0 | 0 | 73 | 7 | 6 | 0 | 500 | 50 | 0 | 0 |
| 31 | 3 | 2 | 0 | 74 | 7 | 8 | 0 | 600 | 60 | 0 | 0 |
| 32 | 3 | 4 | 0 | 75 | 7 | 10 | 0 | 700 | 70 | 0 | 0 |
| 33 | 3 | 6 | 0 | 76 | 7 | 12 | 0 | 750 | 75 | 0 | 0 |
| 34 | 3 | 8 | 0 | 77 | 7 | 14 | 0 | 800 | 80 | 0 | 0 |
| 35 | 3 | 10 | 0 | 78 | 7 | 16 | 0 | 900 | 90 | 0 | 0 |
| 36 | 3 | 12 | 0 | 79 | 7 | 18 | 0 | 1000 | 100 | 0 | 0 |
| 37 | 3 | 14 | 0 | 80 | 8 | 0 | 0 | 1250 | 125 | 0 | 0 |
| 38 | 3 | 16 | 0 | 81 | 8 | 2 | 0 | 1500 | 150 | 0 | 0 |
| 39 | 3 | 18 | 0 | 82 | 8 | 4 | 0 | 1750 | 175 | 0 | 0 |
| 40 | 4 | 0 | 0 | 83 | 8 | 6 | 0 | 2000 | 200 | 0 | 0 |
| 41 | 4 | 2 | 0 | 84 | 8 | 8 | 0 | 2240 | 224 | 0 | 0 |
| 42 | 4 | 4 | 0 | 85 | 8 | 10 | 0 | 3000 | 300 | 0 | 0 |
| 43 | 4 | 6 | 0 | 86 | 8 | 12 | 0 | 5000 | 500 | 0 | 0 |

## 2s. 1d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 1 | 44 | 4 | 11 | 8 | 87 | 9 | 1 | 3 |
| 2 | 0 | 4 | 2 | 45 | 4 | 13 | 9 | 88 | 9 | 3 | 4 |
| 3 | 0 | 6 | 3 | 46 | 4 | 15 | 10 | 89 | 9 | 5 | 5 |
| 4 | 0 | 8 | 4 | 47 | 4 | 17 | 11 | 90 | 9 | 7 | 6 |
| 5 | 0 | 10 | 5 | 48 | 5 | 0 | 0 | 91 | 9 | 9 | 7 |
| 6 | 0 | 12 | 6 | 49 | 5 | 2 | 1 | 92 | 9 | 11 | 8 |
| 7 | 0 | 14 | 7 | 50 | 5 | 4 | 2 | 93 | 9 | 13 | 9 |
| 8 | 0 | 16 | 8 | 51 | 5 | 6 | 3 | 94 | 9 | 15 | 10 |
| 9 | 0 | 18 | 9 | 52 | 5 | 8 | 4 | 95 | 9 | 17 | 11 |
| 10 | 1 | 0 | 10 | 53 | 5 | 10 | 5 | 96 | 10 | 0 | 0 |
| 11 | 1 | 2 | 11 | 54 | 5 | 12 | 6 | 97 | 10 | 2 | 1 |
| 12 | 1 | 5 | 0 | 55 | 5 | 14 | 7 | 98 | 10 | 4 | 2 |
| 13 | 1 | 7 | 1 | 56 | 5 | 16 | 8 | 99 | 10 | 6 | 3 |
| 14 | 1 | 9 | 2 | 57 | 5 | 18 | 9 | 100 | 10 | 8 | 4 |
| 15 | 1 | 11 | 3 | 58 | 6 | 0 | 10 | 108 | 11 | 5 | 0 |
| 16 | 1 | 13 | 4 | 59 | 6 | 2 | 11 | 110 | 11 | 9 | 2 |
| 17 | 1 | 15 | 5 | 60 | 6 | 5 | 0 | 112 | 11 | 13 | 4 |
| 18 | 1 | 17 | 6 | 61 | 6 | 7 | 1 | 120 | 12 | 10 | 0 |
| 19 | 1 | 19 | 7 | 62 | 6 | 9 | 2 | 130 | 13 | 10 | 10 |
| 20 | 2 | 1 | 8 | 63 | 6 | 11 | 3 | 132 | 13 | 15 | 0 |
| 21 | 2 | 3 | 9 | 64 | 6 | 13 | 4 | 140 | 14 | 11 | 8 |
| 22 | 2 | 5 | 10 | 65 | 6 | 15 | 5 | 144 | 15 | 0 | 0 |
| 23 | 2 | 7 | 11 | 66 | 6 | 17 | 6 | 150 | 15 | 12 | 6 |
| 24 | 2 | 10 | 0 | 67 | 6 | 19 | 7 | 175 | 18 | 4 | 7 |
| 25 | 2 | 12 | 1 | 68 | 7 | 1 | 8 | 200 | 20 | 16 | 8 |
| 26 | 2 | 14 | 2 | 69 | 7 | 3 | 9 | 250 | 26 | 0 | 10 |
| 27 | 2 | 16 | 3 | 70 | 7 | 5 | 10 | 300 | 31 | 5 | 0 |
| 28 | 2 | 18 | 4 | 71 | 7 | 7 | 11 | 365 | 38 | 0 | 5 |
| 29 | 3 | 0 | 5 | 72 | 7 | 10 | 0 | 400 | 41 | 13 | 4 |
| 30 | 3 | 2 | 6 | 73 | 7 | 12 | 1 | 500 | 52 | 1 | 8 |
| 31 | 3 | 4 | 7 | 74 | 7 | 14 | 2 | 600 | 62 | 10 | 0 |
| 32 | 3 | 6 | 8 | 75 | 7 | 16 | 3 | 700 | 72 | 18 | 4 |
| 33 | 3 | 8 | 9 | 76 | 7 | 18 | 4 | 750 | 78 | 2 | 6 |
| 34 | 3 | 10 | 10 | 77 | 8 | 0 | 5 | 800 | 83 | 6 | 8 |
| 35 | 3 | 12 | 11 | 78 | 8 | 2 | 6 | 900 | 93 | 15 | 0 |
| 36 | 3 | 15 | 0 | 79 | 8 | 4 | 7 | 1000 | 104 | 3 | 4 |
| 37 | 3 | 17 | 1 | 80 | 8 | 6 | 8 | 1250 | 130 | 4 | 2 |
| 38 | 3 | 19 | 2 | 81 | 8 | 8 | 9 | 1500 | 156 | 5 | 0 |
| 39 | 4 | 1 | 3 | 82 | 8 | 10 | 10 | 1750 | 182 | 5 | 10 |
| 40 | 4 | 3 | 4 | 83 | 8 | 12 | 11 | 2000 | 208 | 6 | 8 |
| 41 | 4 | 5 | 5 | 84 | 8 | 15 | 0 | 2240 | 233 | 6 | 8 |
| 42 | 4 | 7 | 6 | 85 | 8 | 17 | 1 | 3000 | 312 | 10 | 0 |
| 43 | 4 | 9 | 7 | 86 | 8 | 19 | 2 | 5000 | 520 | 16 | 8 |

## 2s. 2d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 2 | 44 | 4 | 15 | 4 | 87 | 9 | 8 | 6 |
| 2 | 0 | 4 | 4 | 45 | 4 | 17 | 6 | 88 | 9 | 10 | 8 |
| 3 | 0 | 6 | 6 | 46 | 4 | 19 | 8 | 89 | 9 | 12 | 10 |
| 4 | 0 | 8 | 8 | 47 | 5 | 1 | 10 | 90 | 9 | 15 | 0 |
| 5 | 0 | 10 | 10 | 48 | 5 | 4 | 0 | 91 | 9 | 17 | 2 |
| 6 | 0 | 13 | 0 | 49 | 5 | 6 | 2 | 92 | 9 | 19 | 4 |
| 7 | 0 | 15 | 2 | 50 | 5 | 8 | 4 | 93 | 10 | 1 | 6 |
| 8 | 0 | 17 | 4 | 51 | 5 | 10 | 6 | 94 | 10 | 3 | 8 |
| 9 | 0 | 19 | 6 | 52 | 5 | 12 | 8 | 95 | 10 | 5 | 10 |
| 10 | 1 | 1 | 8 | 53 | 5 | 14 | 10 | 96 | 10 | 8 | 0 |
| 11 | 1 | 3 | 10 | 54 | 5 | 17 | 0 | 97 | 10 | 10 | 2 |
| 12 | 1 | 6 | 0 | 55 | 5 | 19 | 2 | 98 | 10 | 12 | 4 |
| 13 | 1 | 8 | 2 | 56 | 6 | 1 | 4 | 99 | 10 | 14 | 6 |
| 14 | 1 | 10 | 4 | 57 | 6 | 3 | 6 | 100 | 10 | 16 | 8 |
| 15 | 1 | 12 | 6 | 58 | 6 | 5 | 8 | 108 | 11 | 14 | 0 |
| 16 | 1 | 14 | 8 | 59 | 6 | 7 | 10 | 110 | 11 | 18 | 4 |
| 17 | 1 | 16 | 10 | 60 | 6 | 10 | 0 | 112 | 12 | 2 | 8 |
| 18 | 1 | 19 | 0 | 61 | 6 | 12 | 2 | 120 | 13 | 0 | 0 |
| 19 | 2 | 1 | 2 | 62 | 6 | 14 | 4 | 130 | 14 | 1 | 8 |
| 20 | 2 | 3 | 4 | 63 | 6 | 16 | 6 | 132 | 14 | 6 | 0 |
| 21 | 2 | 5 | 6 | 64 | 6 | 18 | 8 | 140 | 15 | 3 | 4 |
| 22 | 2 | 7 | 8 | 65 | 7 | 0 | 10 | 144 | 15 | 12 | 0 |
| 23 | 2 | 9 | 10 | 66 | 7 | 3 | 0 | 150 | 16 | 5 | 0 |
| 24 | 2 | 12 | 0 | 67 | 7 | 5 | 2 | 175 | 18 | 19 | 2 |
| 25 | 2 | 14 | 2 | 68 | 7 | 7 | 4 | 200 | 21 | 13 | 4 |
| 26 | 2 | 16 | 4 | 69 | 7 | 9 | 6 | 250 | 27 | 1 | 8 |
| 27 | 2 | 18 | 6 | 70 | 7 | 11 | 8 | 300 | 32 | 10 | 0 |
| 28 | 3 | 0 | 8 | 71 | 7 | 13 | 10 | 365 | 39 | 10 | 10 |
| 29 | 3 | 2 | 10 | 72 | 7 | 16 | 0 | 400 | 43 | 6 | 8 |
| 30 | 3 | 5 | 0 | 73 | 7 | 18 | 2 | 500 | 54 | 3 | 4 |
| 31 | 3 | 7 | 2 | 74 | 8 | 0 | 4 | 600 | 65 | 0 | 0 |
| 32 | 3 | 9 | 4 | 75 | 8 | 2 | 6 | 700 | 75 | 16 | 8 |
| 33 | 3 | 11 | 6 | 76 | 8 | 4 | 8 | 750 | 81 | 5 | 0 |
| 34 | 3 | 13 | 8 | 77 | 8 | 6 | 10 | 800 | 86 | 13 | 4 |
| 35 | 3 | 15 | 10 | 78 | 8 | 9 | 0 | 900 | 97 | 10 | 0 |
| 36 | 3 | 18 | 0 | 79 | 8 | 11 | 2 | 1000 | 108 | 6 | 8 |
| 37 | 4 | 0 | 2 | 80 | 8 | 13 | 4 | 1250 | 135 | 8 | 4 |
| 38 | 4 | 2 | 4 | 81 | 8 | 15 | 6 | 1500 | 162 | 10 | 0 |
| 39 | 4 | 4 | 6 | 82 | 8 | 17 | 8 | 1750 | 189 | 11 | 8 |
| 40 | 4 | 6 | 8 | 83 | 8 | 19 | 10 | 2000 | 216 | 13 | 4 |
| 41 | 4 | 8 | 10 | 84 | 9 | 2 | 0 | 2240 | 242 | 13 | 4 |
| 42 | 4 | 11 | 0 | 85 | 9 | 4 | 2 | 3000 | 325 | 0 | 0 |
| 43 | 4 | 13 | 2 | 86 | 9 | 6 | 4 | 5000 | 541 | 13 | 4 |

## 2s. 3d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 3 | 44 | 4 | 19 | 0 | 87 | 9 | 15 | 9 |
| 2 | 0 | 4 | 6 | 45 | 5 | 1 | 3 | 88 | 9 | 18 | 0 |
| 3 | 0 | 6 | 9 | 46 | 5 | 3 | 6 | 89 | 10 | 0 | 3 |
| 4 | 0 | 9 | 0 | 47 | 5 | 5 | 9 | 90 | 10 | 2 | 6 |
| 5 | 0 | 11 | 3 | 48 | 5 | 8 | 0 | 91 | 10 | 4 | 9 |
| 6 | 0 | 13 | 6 | 49 | 5 | 10 | 3 | 92 | 10 | 7 | 0 |
| 7 | 0 | 15 | 9 | 50 | 5 | 12 | 6 | 93 | 10 | 9 | 3 |
| 8 | 0 | 18 | 0 | 51 | 5 | 14 | 9 | 94 | 10 | 11 | 6 |
| 9 | 1 | 0 | 3 | 52 | 5 | 17 | 0 | 95 | 10 | 13 | 9 |
| 10 | 1 | 2 | 6 | 53 | 5 | 19 | 3 | 96 | 10 | 16 | 0 |
| 11 | 1 | 4 | 9 | 54 | 6 | 1 | 6 | 97 | 10 | 18 | 3 |
| 12 | 1 | 7 | 0 | 55 | 6 | 3 | 9 | 98 | 11 | 0 | 6 |
| 13 | 1 | 9 | 3 | 56 | 6 | 6 | 0 | 99 | 11 | 2 | 9 |
| 14 | 1 | 11 | 6 | 57 | 6 | 8 | 3 | 100 | 11 | 5 | 0 |
| 15 | 1 | 13 | 9 | 58 | 6 | 10 | 6 | 108 | 12 | 3 | 0 |
| 16 | 1 | 16 | 0 | 59 | 6 | 12 | 9 | 110 | 12 | 7 | 6 |
| 17 | 1 | 18 | 3 | 60 | 6 | 15 | 0 | 112 | 12 | 12 | 0 |
| 18 | 2 | 0 | 6 | 61 | 6 | 17 | 3 | 120 | 13 | 10 | 0 |
| 19 | 2 | 2 | 9 | 62 | 6 | 19 | 6 | 130 | 14 | 12 | 6 |
| 20 | 2 | 5 | 0 | 63 | 7 | 1 | 9 | 132 | 14 | 17 | 0 |
| 21 | 2 | 7 | 3 | 64 | 7 | 4 | 0 | 140 | 15 | 15 | 0 |
| 22 | 2 | 9 | 6 | 65 | 7 | 6 | 3 | 144 | 16 | 4 | 0 |
| 23 | 2 | 11 | 9 | 66 | 7 | 8 | 6 | 150 | 16 | 17 | 6 |
| 24 | 2 | 14 | 0 | 67 | 7 | 10 | 9 | 175 | 19 | 13 | 9 |
| 25 | 2 | 16 | 3 | 68 | 7 | 13 | 0 | 200 | 22 | 10 | 0 |
| 26 | 2 | 18 | 6 | 69 | 7 | 15 | 3 | 250 | 28 | 2 | 6 |
| 27 | 3 | 0 | 9 | 70 | 7 | 17 | 6 | 300 | 33 | 15 | 0 |
| 28 | 3 | 3 | 0 | 71 | 7 | 19 | 9 | 365 | 41 | 1 | 3 |
| 29 | 3 | 5 | 3 | 72 | 8 | 2 | 0 | 400 | 45 | 0 | 0 |
| 30 | 3 | 7 | 6 | 73 | 8 | 4 | 3 | 500 | 56 | 5 | 0 |
| 31 | 3 | 9 | 9 | 74 | 8 | 6 | 6 | 600 | 67 | 10 | 0 |
| 32 | 3 | 12 | 0 | 75 | 8 | 8 | 9 | 700 | 78 | 15 | 0 |
| 33 | 3 | 14 | 3 | 76 | 8 | 11 | 0 | 750 | 84 | 7 | 6 |
| 34 | 3 | 16 | 6 | 77 | 8 | 13 | 3 | 800 | 90 | 0 | 0 |
| 35 | 3 | 18 | 9 | 78 | 8 | 15 | 6 | 900 | 101 | 5 | 0 |
| 36 | 4 | 1 | 0 | 79 | 8 | 17 | 9 | 1000 | 112 | 10 | 0 |
| 37 | 4 | 3 | 3 | 80 | 9 | 0 | 0 | 1250 | 140 | 12 | 6 |
| 38 | 4 | 5 | 6 | 81 | 9 | 2 | 3 | 1500 | 168 | 15 | 0 |
| 39 | 4 | 7 | 9 | 82 | 9 | 4 | 6 | 1750 | 196 | 17 | 6 |
| 40 | 4 | 10 | 0 | 83 | 9 | 6 | 9 | 2000 | 225 | 0 | 0 |
| 41 | 4 | 12 | 3 | 84 | 9 | 9 | 0 | 2240 | 252 | 0 | 0 |
| 42 | 4 | 14 | 6 | 85 | 9 | 11 | 3 | 3000 | 337 | 10 | 0 |
| 43 | 4 | 16 | 9 | 86 | 9 | 13 | 6 | 5000 | 562 | 10 | 0 |

## 2s. 4d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 4 | 44 | 5 | 2 | 8 | 87 | 10 | 3 | 0 |
| 2 | 0 | 4 | 8 | 45 | 5 | 5 | 0 | 88 | 10 | 5 | 4 |
| 3 | 0 | 7 | 0 | 46 | 5 | 7 | 4 | 89 | 10 | 7 | 8 |
| 4 | 0 | 9 | 4 | 47 | 5 | 9 | 8 | 90 | 10 | 10 | 0 |
| 5 | 0 | 11 | 8 | 48 | 5 | 12 | 0 | 91 | 10 | 12 | 4 |
| 6 | 0 | 14 | 0 | 49 | 5 | 14 | 4 | 92 | 10 | 14 | 8 |
| 7 | 0 | 16 | 4 | 50 | 5 | 16 | 8 | 93 | 10 | 17 | 0 |
| 8 | 0 | 18 | 8 | 51 | 5 | 19 | 0 | 94 | 10 | 19 | 4 |
| 9 | 1 | 1 | 0 | 52 | 6 | 1 | 4 | 95 | 11 | 1 | 8 |
| 10 | 1 | 3 | 4 | 53 | 6 | 3 | 8 | 96 | 11 | 4 | 0 |
| 11 | 1 | 5 | 8 | 54 | 6 | 6 | 0 | 97 | 11 | 6 | 4 |
| 12 | 1 | 8 | 0 | 55 | 6 | 8 | 4 | 98 | 11 | 8 | 8 |
| 13 | 1 | 10 | 4 | 56 | 6 | 10 | 8 | 99 | 11 | 11 | 0 |
| 14 | 1 | 12 | 8 | 57 | 6 | 13 | 0 | 100 | 11 | 13 | 4 |
| 15 | 1 | 15 | 0 | 58 | 6 | 15 | 4 | 108 | 12 | 12 | 0 |
| 16 | 1 | 17 | 4 | 59 | 6 | 17 | 8 | 110 | 12 | 16 | 8 |
| 17 | 1 | 19 | 8 | 60 | 7 | 0 | 0 | 112 | 13 | 1 | 4 |
| 18 | 2 | 2 | 0 | 61 | 7 | 2 | 4 | 120 | 14 | 0 | 0 |
| 19 | 2 | 4 | 4 | 62 | 7 | 4 | 8 | 130 | 15 | 3 | 4 |
| 20 | 2 | 6 | 8 | 63 | 7 | 7 | 0 | 132 | 15 | 8 | 0 |
| 21 | 2 | 9 | 0 | 64 | 7 | 9 | 4 | 140 | 16 | 6 | 8 |
| 22 | 2 | 11 | 4 | 65 | 7 | 11 | 8 | 144 | 16 | 16 | 0 |
| 23 | 2 | 13 | 8 | 66 | 7 | 14 | 0 | 150 | 17 | 10 | 0 |
| 24 | 2 | 16 | 0 | 67 | 7 | 16 | 4 | 175 | 20 | 8 | 4 |
| 25 | 2 | 18 | 4 | 68 | 7 | 18 | 8 | 200 | 23 | 6 | 8 |
| 26 | 3 | 0 | 8 | 69 | 8 | 1 | 0 | 250 | 29 | 3 | 4 |
| 27 | 3 | 3 | 0 | 70 | 8 | 3 | 4 | 300 | 35 | 0 | 0 |
| 28 | 3 | 5 | 4 | 71 | 8 | 5 | 8 | 365 | 42 | 11 | 8 |
| 29 | 3 | 7 | 8 | 72 | 8 | 8 | 0 | 400 | 46 | 13 | 4 |
| 30 | 3 | 10 | 0 | 73 | 8 | 10 | 4 | 500 | 58 | 6 | 8 |
| 31 | 3 | 12 | 4 | 74 | 8 | 12 | 8 | 600 | 70 | 0 | 0 |
| 32 | 3 | 14 | 8 | 75 | 8 | 15 | 0 | 700 | 81 | 13 | 4 |
| 33 | 3 | 17 | 0 | 76 | 8 | 17 | 4 | 750 | 87 | 10 | 0 |
| 34 | 3 | 19 | 4 | 77 | 8 | 19 | 8 | 800 | 93 | 6 | 8 |
| 35 | 4 | 1 | 8 | 78 | 9 | 2 | 0 | 900 | 105 | 0 | 0 |
| 36 | 4 | 4 | 0 | 79 | 9 | 4 | 4 | 1000 | 116 | 13 | 4 |
| 37 | 4 | 6 | 4 | 80 | 9 | 6 | 8 | 1250 | 145 | 16 | 8 |
| 38 | 4 | 8 | 8 | 81 | 9 | 9 | 0 | 1500 | 175 | 0 | 0 |
| 39 | 4 | 11 | 0 | 82 | 9 | 11 | 4 | 1750 | 204 | 3 | 4 |
| 40 | 4 | 13 | 4 | 83 | 9 | 13 | 8 | 2000 | 233 | 6 | 8 |
| 41 | 4 | 15 | 8 | 84 | 9 | 16 | 0 | 2240 | 261 | 6 | 8 |
| 42 | 4 | 18 | 0 | 85 | 9 | 18 | 4 | 3000 | 350 | 0 | 0 |
| 43 | 5 | 0 | 4 | 86 | 10 | 0 | 8 | 5000 | 583 | 6 | 8 |

## 2s. 5d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 5 | 44 | 5 | 6 | 4 | 87 | 10 | 10 | 3 |
| 2 | 0 | 4 | 10 | 45 | 5 | 8 | 9 | 88 | 10 | 12 | 8 |
| 3 | 0 | 7 | 3 | 46 | 5 | 11 | 2 | 89 | 10 | 15 | 1 |
| 4 | 0 | 9 | 8 | 47 | 5 | 13 | 7 | 90 | 10 | 17 | 6 |
| 5 | 0 | 12 | 1 | 48 | 5 | 16 | 0 | 91 | 10 | 19 | 11 |
| 6 | 0 | 14 | 6 | 49 | 5 | 18 | 5 | 92 | 11 | 2 | 4 |
| 7 | 0 | 16 | 11 | 50 | 6 | 0 | 10 | 93 | 11 | 4 | 9 |
| 8 | 0 | 19 | 4 | 51 | 6 | 3 | 3 | 94 | 11 | 7 | 2 |
| 9 | 1 | 1 | 9 | 52 | 6 | 5 | 8 | 95 | 11 | 9 | 7 |
| 10 | 1 | 4 | 2 | 53 | 6 | 8 | 1 | 96 | 11 | 12 | 0 |
| 11 | 1 | 6 | 7 | 54 | 6 | 10 | 6 | 97 | 11 | 14 | 5 |
| 12 | 1 | 9 | 0 | 55 | 6 | 12 | 11 | 98 | 11 | 16 | 10 |
| 13 | 1 | 11 | 5 | 56 | 6 | 15 | 4 | 99 | 11 | 19 | 3 |
| 14 | 1 | 13 | 10 | 57 | 6 | 17 | 9 | 100 | 12 | 1 | 8 |
| 15 | 1 | 16 | 3 | 58 | 7 | 0 | 2 | 108 | 13 | 1 | 0 |
| 16 | 1 | 18 | 8 | 59 | 7 | 2 | 7 | 110 | 13 | 5 | 10 |
| 17 | 2 | 1 | 1 | 60 | 7 | 5 | 0 | 112 | 13 | 10 | 8 |
| 18 | 2 | 3 | 6 | 61 | 7 | 7 | 5 | 120 | 14 | 10 | 0 |
| 19 | 2 | 5 | 11 | 62 | 7 | 9 | 10 | 130 | 15 | 14 | 2 |
| 20 | 2 | 8 | 4 | 63 | 7 | 12 | 3 | 132 | 15 | 19 | 0 |
| 21 | 2 | 10 | 9 | 64 | 7 | 14 | 8 | 140 | 16 | 18 | 4 |
| 22 | 2 | 13 | 2 | 65 | 7 | 17 | 1 | 144 | 17 | 8 | 0 |
| 23 | 2 | 15 | 7 | 66 | 7 | 19 | 6 | 150 | 18 | 2 | 6 |
| 24 | 2 | 18 | 0 | 67 | 8 | 1 | 11 | 175 | 21 | 2 | 11 |
| 25 | 3 | 0 | 5 | 68 | 8 | 4 | 4 | 200 | 24 | 3 | 4 |
| 26 | 3 | 2 | 10 | 69 | 8 | 6 | 9 | 250 | 30 | 4 | 2 |
| 27 | 3 | 5 | 3 | 70 | 8 | 9 | 2 | 300 | 36 | 5 | 0 |
| 28 | 3 | 7 | 8 | 71 | 8 | 11 | 7 | 365 | 44 | 2 | 1 |
| 29 | 3 | 10 | 1 | 72 | 8 | 14 | 0 | 400 | 48 | 6 | 8 |
| 30 | 3 | 12 | 6 | 73 | 8 | 16 | 5 | 500 | 60 | 8 | 4 |
| 31 | 3 | 14 | 11 | 74 | 8 | 18 | 10 | 600 | 72 | 10 | 0 |
| 32 | 3 | 17 | 4 | 75 | 9 | 1 | 3 | 700 | 84 | 11 | 8 |
| 33 | 3 | 19 | 9 | 76 | 9 | 3 | 8 | 750 | 90 | 12 | 6 |
| 34 | 4 | 2 | 2 | 77 | 9 | 6 | 1 | 800 | 96 | 13 | 4 |
| 35 | 4 | 4 | 7 | 78 | 9 | 8 | 6 | 900 | 108 | 15 | 0 |
| 36 | 4 | 7 | 0 | 79 | 9 | 10 | 11 | 1000 | 120 | 16 | 8 |
| 37 | 4 | 9 | 5 | 80 | 9 | 13 | 4 | 1250 | 151 | 0 | 10 |
| 38 | 4 | 11 | 10 | 81 | 9 | 15 | 9 | 1500 | 181 | 5 | 0 |
| 39 | 4 | 14 | 3 | 82 | 9 | 18 | 2 | 1750 | 211 | 9 | 2 |
| 40 | 4 | 16 | 8 | 83 | 10 | 0 | 7 | 2000 | 241 | 13 | 4 |
| 41 | 4 | 19 | 1 | 84 | 10 | 3 | 0 | 2240 | 270 | 13 | 4 |
| 42 | 5 | 1 | 6 | 85 | 10 | 5 | 5 | 3000 | 362 | 10 | 0 |
| 43 | 5 | 3 | 11 | 86 | 10 | 7 | 10 | 5000 | 604 | 3 | 4 |

## 2s. 7d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 7 | 44 | 5 | 13 | 8 | 87 | 11 | 4 | 9 |
| 2 | 0 | 5 | 2 | 45 | 5 | 16 | 3 | 88 | 11 | 7 | 4 |
| 3 | 0 | 7 | 9 | 46 | 5 | 18 | 10 | 89 | 11 | 9 | 11 |
| 4 | 0 | 10 | 4 | 47 | 6 | 1 | 5 | 90 | 11 | 12 | 6 |
| 5 | 0 | 12 | 11 | 48 | 6 | 4 | 0 | 91 | 11 | 15 | 1 |
| 6 | 0 | 15 | 6 | 49 | 6 | 6 | 7 | 92 | 11 | 17 | 8 |
| 7 | 0 | 18 | 1 | 50 | 6 | 9 | 2 | 93 | 12 | 0 | 3 |
| 8 | 1 | 0 | 8 | 51 | 6 | 11 | 9 | 94 | 12 | 2 | 10 |
| 9 | 1 | 3 | 3 | 52 | 6 | 14 | 4 | 95 | 12 | 5 | 5 |
| 10 | 1 | 5 | 10 | 53 | 6 | 16 | 11 | 96 | 12 | 8 | 0 |
| 11 | 1 | 8 | 5 | 54 | 6 | 19 | 6 | 97 | 12 | 10 | 7 |
| 12 | 1 | 11 | 0 | 55 | 7 | 2 | 1 | 98 | 12 | 13 | 2 |
| 13 | 1 | 13 | 7 | 56 | 7 | 4 | 8 | 99 | 12 | 15 | 9 |
| 14 | 1 | 16 | 2 | 57 | 7 | 7 | 3 | 100 | 12 | 18 | 4 |
| 15 | 1 | 18 | 9 | 58 | 7 | 9 | 10 | 108 | 13 | 19 | 0 |
| 16 | 2 | 1 | 4 | 59 | 7 | 12 | 5 | 110 | 14 | 4 | 2 |
| 17 | 2 | 3 | 11 | 60 | 7 | 15 | 0 | 112 | 14 | 9 | 4 |
| 18 | 2 | 6 | 6 | 61 | 7 | 17 | 7 | 120 | 15 | 10 | 0 |
| 19 | 2 | 9 | 1 | 62 | 8 | 0 | 2 | 130 | 16 | 15 | 10 |
| 20 | 2 | 11 | 8 | 63 | 8 | 2 | 9 | 132 | 17 | 1 | 0 |
| 21 | 2 | 14 | 3 | 64 | 8 | 5 | 4 | 140 | 18 | 1 | 8 |
| 22 | 2 | 16 | 10 | 65 | 8 | 7 | 11 | 144 | 18 | 12 | 0 |
| 23 | 2 | 19 | 5 | 66 | 8 | 10 | 6 | 150 | 19 | 7 | 6 |
| 24 | 3 | 2 | 0 | 67 | 8 | 13 | 1 | 175 | 22 | 12 | 1 |
| 25 | 3 | 4 | 7 | 68 | 8 | 15 | 8 | 200 | 25 | 16 | 8 |
| 26 | 3 | 7 | 2 | 69 | 8 | 18 | 3 | 250 | 32 | 5 | 10 |
| 27 | 3 | 9 | 9 | 70 | 9 | 0 | 10 | 300 | 38 | 15 | 0 |
| 28 | 3 | 12 | 4 | 71 | 9 | 3 | 5 | 365 | 47 | 2 | 11 |
| 29 | 3 | 14 | 11 | 72 | 9 | 6 | 0 | 400 | 51 | 13 | 4 |
| 30 | 3 | 17 | 6 | 73 | 9 | 8 | 7 | 500 | 64 | 11 | 8 |
| 31 | 4 | 0 | 1 | 74 | 9 | 11 | 2 | 600 | 77 | 10 | 0 |
| 32 | 4 | 2 | 8 | 75 | 9 | 13 | 9 | 700 | 90 | 8 | 4 |
| 33 | 4 | 5 | 3 | 76 | 9 | 16 | 4 | 750 | 96 | 17 | 6 |
| 34 | 4 | 7 | 10 | 77 | 9 | 18 | 11 | 800 | 103 | 6 | 8 |
| 35 | 4 | 10 | 5 | 78 | 10 | 1 | 6 | 900 | 116 | 5 | 0 |
| 36 | 4 | 13 | 0 | 79 | 10 | 4 | 1 | 1000 | 129 | 3 | 4 |
| 37 | 4 | 15 | 7 | 80 | 10 | 6 | 8 | 1250 | 161 | 9 | 2 |
| 38 | 4 | 18 | 2 | 81 | 10 | 9 | 3 | 1500 | 193 | 15 | 0 |
| 39 | 5 | 0 | 9 | 82 | 10 | 11 | 10 | 1750 | 226 | 0 | 10 |
| 40 | 5 | 3 | 4 | 83 | 10 | 14 | 5 | 2000 | 258 | 6 | 8 |
| 41 | 5 | 5 | 11 | 84 | 10 | 17 | 0 | 2240 | 289 | 6 | 8 |
| 42 | 5 | 8 | 6 | 85 | 10 | 19 | 7 | 3000 | 387 | 10 | 0 |
| 43 | 5 | 11 | 1 | 86 | 11 | 2 | 2 | 5000 | 645 | 16 | 8 |

## 2s. 6d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 6 | 44 | 5 | 10 | 0 | 87 | 10 | 17 | 6 |
| 2 | 0 | 5 | 0 | 45 | 5 | 12 | 6 | 88 | 11 | 0 | 0 |
| 3 | 0 | 7 | 6 | 46 | 5 | 15 | 0 | 89 | 11 | 2 | 6 |
| 4 | 0 | 10 | 0 | 47 | 5 | 17 | 6 | 90 | 11 | 5 | 0 |
| 5 | 0 | 12 | 6 | 48 | 6 | 0 | 0 | 91 | 11 | 7 | 6 |
| 6 | 0 | 15 | 0 | 49 | 6 | 2 | 6 | 92 | 11 | 10 | 0 |
| 7 | 0 | 17 | 6 | 50 | 6 | 5 | 0 | 93 | 11 | 12 | 6 |
| 8 | 1 | 0 | 0 | 51 | 6 | 7 | 6 | 94 | 11 | 15 | 0 |
| 9 | 1 | 2 | 6 | 52 | 6 | 10 | 0 | 95 | 11 | 17 | 6 |
| 10 | 1 | 5 | 0 | 53 | 6 | 12 | 6 | 96 | 12 | 0 | 0 |
| 11 | 1 | 7 | 6 | 54 | 6 | 15 | 0 | 97 | 12 | 2 | 6 |
| 12 | 1 | 10 | 0 | 55 | 6 | 17 | 6 | 98 | 12 | 5 | 0 |
| 13 | 1 | 12 | 6 | 56 | 7 | 0 | 0 | 99 | 12 | 7 | 6 |
| 14 | 1 | 15 | 0 | 57 | 7 | 2 | 6 | 100 | 12 | 10 | 0 |
| 15 | 1 | 17 | 6 | 58 | 7 | 5 | 0 | 108 | 13 | 10 | 0 |
| 16 | 2 | 0 | 0 | 59 | 7 | 7 | 6 | 110 | 13 | 15 | 0 |
| 17 | 2 | 2 | 6 | 60 | 7 | 10 | 0 | 112 | 14 | 0 | 0 |
| 18 | 2 | 5 | 0 | 61 | 7 | 12 | 6 | 120 | 15 | 0 | 0 |
| 19 | 2 | 7 | 6 | 62 | 7 | 15 | 0 | 130 | 16 | 5 | 0 |
| 20 | 2 | 10 | 0 | 63 | 7 | 17 | 6 | 132 | 16 | 10 | 0 |
| 21 | 2 | 12 | 6 | 64 | 8 | 0 | 0 | 140 | 17 | 10 | 0 |
| 22 | 2 | 15 | 0 | 65 | 8 | 2 | 6 | 144 | 18 | 0 | 0 |
| 23 | 2 | 17 | 6 | 66 | 8 | 5 | 0 | 150 | 18 | 15 | 0 |
| 24 | 3 | 0 | 0 | 67 | 8 | 7 | 6 | 175 | 21 | 17 | 6 |
| 25 | 3 | 2 | 6 | 68 | 8 | 10 | 0 | 200 | 25 | 0 | 0 |
| 26 | 3 | 5 | 0 | 69 | 8 | 12 | 6 | 250 | 31 | 5 | 0 |
| 27 | 3 | 7 | 6 | 70 | 8 | 15 | 0 | 300 | 37 | 10 | 0 |
| 28 | 3 | 10 | 0 | 71 | 8 | 17 | 6 | 365 | 45 | 12 | 6 |
| 29 | 3 | 12 | 6 | 72 | 9 | 0 | 0 | 400 | 50 | 0 | 0 |
| 30 | 3 | 15 | 0 | 73 | 9 | 2 | 6 | 500 | 62 | 10 | 0 |
| 31 | 3 | 17 | 6 | 74 | 9 | 5 | 0 | 600 | 75 | 0 | 0 |
| 32 | 4 | 0 | 0 | 75 | 9 | 7 | 6 | 700 | 87 | 10 | 0 |
| 33 | 4 | 2 | 6 | 76 | 9 | 10 | 0 | 750 | 93 | 15 | 0 |
| 34 | 4 | 5 | 0 | 77 | 9 | 12 | 6 | 800 | 100 | 0 | 0 |
| 35 | 4 | 7 | 6 | 78 | 9 | 15 | 0 | 900 | 112 | 10 | 0 |
| 36 | 4 | 10 | 0 | 79 | 9 | 17 | 6 | 1000 | 125 | 0 | 0 |
| 37 | 4 | 12 | 6 | 80 | 10 | 0 | 0 | 1250 | 156 | 5 | 0 |
| 38 | 4 | 15 | 0 | 81 | 10 | 2 | 6 | 1500 | 187 | 10 | 0 |
| 39 | 4 | 17 | 6 | 82 | 10 | 5 | 0 | 1750 | 218 | 15 | 0 |
| 40 | 5 | 0 | 0 | 83 | 10 | 7 | 6 | 2000 | 250 | 0 | 0 |
| 41 | 5 | 2 | 6 | 84 | 10 | 10 | 0 | 2240 | 280 | 0 | 0 |
| 42 | 5 | 5 | 0 | 85 | 10 | 12 | 6 | 3000 | 375 | 0 | 0 |
| 43 | 5 | 7 | 6 | 86 | 10 | 15 | 0 | 5000 | 625 | 0 | 0 |

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 8 | 44 | 5 | 17 | 4 | 87 | 11 | 12 | 0 |
| 2 | 0 | 5 | 4 | 45 | 6 | 0 | 0 | 88 | 11 | 14 | 8 |
| 3 | 0 | 8 | 0 | 46 | 6 | 2 | 8 | 89 | 11 | 17 | 4 |
| 4 | 0 | 10 | 8 | 47 | 6 | 5 | 4 | 90 | 12 | 0 | 0 |
| 5 | 0 | 13 | 4 | 48 | 6 | 8 | 0 | 91 | 12 | 2 | 8 |
| 6 | 0 | 16 | 0 | 49 | 6 | 10 | 8 | 92 | 12 | 5 | 4 |
| 7 | 0 | 18 | 8 | 50 | 6 | 13 | 4 | 93 | 12 | 8 | 0 |
| 8 | 1 | 1 | 4 | 51 | 6 | 16 | 0 | 94 | 12 | 10 | 8 |
| 9 | 1 | 4 | 0 | 52 | 6 | 18 | 8 | 95 | 12 | 13 | 4 |
| 10 | 1 | 6 | 8 | 53 | 7 | 1 | 4 | 96 | 12 | 16 | 0 |
| 11 | 1 | 9 | 4 | 54 | 7 | 4 | 0 | 97 | 12 | 18 | 8 |
| 12 | 1 | 12 | 0 | 55 | 7 | 6 | 8 | 98 | 13 | 1 | 4 |
| 13 | 1 | 14 | 8 | 56 | 7 | 9 | 4 | 99 | 13 | 4 | 0 |
| 14 | 1 | 17 | 4 | 57 | 7 | 12 | 0 | 100 | 13 | 6 | 8 |
| 15 | 2 | 0 | 0 | 58 | 7 | 14 | 8 | 108 | 14 | 8 | 0 |
| 16 | 2 | 2 | 8 | 59 | 7 | 17 | 4 | 110 | 14 | 13 | 4 |
| 17 | 2 | 5 | 4 | 60 | 8 | 0 | 0 | 112 | 14 | 18 | 8 |
| 18 | 2 | 8 | 0 | 61 | 8 | 2 | 8 | 120 | 16 | 0 | 0 |
| 19 | 2 | 10 | 8 | 62 | 8 | 5 | 4 | 130 | 17 | 6 | 8 |
| 20 | 2 | 13 | 4 | 63 | 8 | 8 | 0 | 132 | 17 | 12 | 0 |
| 21 | 2 | 16 | 0 | 64 | 8 | 10 | 8 | 140 | 18 | 13 | 4 |
| 22 | 2 | 18 | 8 | 65 | 8 | 13 | 4 | 144 | 19 | 4 | 0 |
| 23 | 3 | 1 | 4 | 66 | 8 | 16 | 0 | 150 | 20 | 0 | 0 |
| 24 | 3 | 4 | 0 | 67 | 8 | 18 | 8 | 175 | 23 | 6 | 8 |
| 25 | 3 | 6 | 8 | 68 | 9 | 1 | 4 | 200 | 26 | 13 | 4 |
| 26 | 3 | 9 | 4 | 69 | 9 | 4 | 0 | 250 | 33 | 6 | 8 |
| 27 | 3 | 12 | 0 | 70 | 9 | 6 | 8 | 300 | 40 | 0 | 0 |
| 28 | 3 | 14 | 8 | 71 | 9 | 9 | 4 | 365 | 48 | 13 | 4 |
| 29 | 3 | 17 | 4 | 72 | 9 | 12 | 0 | 400 | 53 | 6 | 8 |
| 30 | 4 | 0 | 0 | 73 | 9 | 14 | 8 | 500 | 66 | 13 | 4 |
| 31 | 4 | 2 | 8 | 74 | 9 | 17 | 4 | 600 | 80 | 0 | 0 |
| 32 | 4 | 5 | 4 | 75 | 10 | 0 | 0 | 700 | 93 | 6 | 8 |
| 33 | 4 | 8 | 0 | 76 | 10 | 2 | 8 | 750 | 100 | 0 | 0 |
| 34 | 4 | 10 | 8 | 77 | 10 | 5 | 4 | 800 | 106 | 13 | 4 |
| 35 | 4 | 13 | 4 | 78 | 10 | 8 | 0 | 900 | 120 | 0 | 0 |
| 36 | 4 | 16 | 0 | 79 | 10 | 10 | 8 | 1000 | 133 | 6 | 8 |
| 37 | 4 | 18 | 8 | 80 | 10 | 13 | 4 | 1250 | 166 | 13 | 4 |
| 38 | 5 | 1 | 4 | 81 | 10 | 16 | 0 | 1500 | 200 | 0 | 0 |
| 39 | 5 | 4 | 0 | 82 | 10 | 18 | 8 | 1750 | 233 | 6 | 8 |
| 40 | 5 | 6 | 8 | 83 | 11 | 1 | 4 | 2000 | 266 | 13 | 4 |
| 41 | 5 | 9 | 4 | 84 | 11 | 4 | 0 | 2240 | 298 | 13 | 4 |
| 42 | 5 | 12 | 0 | 85 | 11 | 6 | 8 | 3000 | 400 | 0 | 0 |
| 43 | 5 | 14 | 8 | 86 | 11 | 9 | 4 | 5000 | 666 | 13 | 4 |

## 2s. 9d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 9 | 44 | 6 | 1 | 0 | 87 | 11 | 19 | 3 |
| 2 | 0 | 5 | 6 | 45 | 6 | 3 | 9 | 88 | 12 | 2 | 0 |
| 3 | 0 | 8 | 3 | 46 | 6 | 6 | 6 | 89 | 12 | 4 | 9 |
| 4 | 0 | 11 | 0 | 47 | 6 | 9 | 3 | 90 | 12 | 7 | 6 |
| 5 | 0 | 13 | 9 | 48 | 6 | 12 | 0 | 91 | 12 | 10 | 3 |
| 6 | 0 | 16 | 6 | 49 | 6 | 14 | 9 | 92 | 12 | 13 | 0 |
| 7 | 0 | 19 | 3 | 50 | 6 | 17 | 6 | 93 | 12 | 15 | 9 |
| 8 | 1 | 2 | 0 | 51 | 7 | 0 | 3 | 94 | 12 | 18 | 6 |
| 9 | 1 | 4 | 9 | 52 | 7 | 3 | 0 | 95 | 13 | 1 | 3 |
| 10 | 1 | 7 | 6 | 53 | 7 | 5 | 9 | 96 | 13 | 4 | 0 |
| 11 | 1 | 10 | 3 | 54 | 7 | 8 | 6 | 97 | 13 | 6 | 9 |
| 12 | 1 | 13 | 0 | 55 | 7 | 11 | 3 | 98 | 13 | 9 | 6 |
| 13 | 1 | 15 | 9 | 56 | 7 | 14 | 0 | 99 | 13 | 12 | 3 |
| 14 | 1 | 18 | 6 | 57 | 7 | 16 | 9 | 100 | 13 | 15 | 0 |
| 15 | 2 | 1 | 3 | 58 | 7 | 19 | 6 | 108 | 14 | 17 | 0 |
| 16 | 2 | 4 | 0 | 59 | 8 | 2 | 3 | 110 | 15 | 2 | 6 |
| 17 | 2 | 6 | 9 | 60 | 8 | 5 | 0 | 112 | 15 | 8 | 0 |
| 18 | 2 | 9 | 6 | 61 | 8 | 7 | 9 | 120 | 16 | 10 | 0 |
| 19 | 2 | 12 | 3 | 62 | 8 | 10 | 6 | 130 | 17 | 17 | 6 |
| 20 | 2 | 15 | 0 | 63 | 8 | 13 | 3 | 132 | 18 | 3 | 0 |
| 21 | 2 | 17 | 9 | 64 | 8 | 16 | 0 | 140 | 19 | 5 | 0 |
| 22 | 3 | 0 | 6 | 65 | 8 | 18 | 9 | 144 | 19 | 16 | 0 |
| 23 | 3 | 3 | 3 | 66 | 9 | 1 | 6 | 150 | 20 | 12 | 6 |
| 24 | 3 | 6 | 0 | 67 | 9 | 4 | 3 | 175 | 24 | 1 | 3 |
| 25 | 3 | 8 | 9 | 68 | 9 | 7 | 0 | 200 | 27 | 10 | 0 |
| 26 | 3 | 11 | 6 | 69 | 9 | 9 | 9 | 250 | 34 | 7 | 6 |
| 27 | 3 | 14 | 3 | 70 | 9 | 12 | 6 | 300 | 41 | 5 | 0 |
| 28 | 3 | 17 | 0 | 71 | 9 | 15 | 3 | 365 | 50 | 3 | 9 |
| 29 | 3 | 19 | 9 | 72 | 9 | 18 | 0 | 400 | 55 | 0 | 0 |
| 30 | 4 | 2 | 6 | 73 | 10 | 0 | 9 | 500 | 68 | 15 | 0 |
| 31 | 4 | 5 | 3 | 74 | 10 | 3 | 6 | 600 | 82 | 10 | 0 |
| 32 | 4 | 8 | 0 | 75 | 10 | 6 | 3 | 700 | 96 | 5 | 0 |
| 33 | 4 | 10 | 9 | 76 | 10 | 9 | 0 | 750 | 103 | 2 | 6 |
| 34 | 4 | 13 | 6 | 77 | 10 | 11 | 9 | 800 | 110 | 0 | 0 |
| 35 | 4 | 16 | 3 | 78 | 10 | 14 | 6 | 900 | 123 | 15 | 0 |
| 36 | 4 | 19 | 0 | 79 | 10 | 17 | 3 | 1000 | 137 | 10 | 0 |
| 37 | 5 | 1 | 9 | 80 | 11 | 0 | 0 | 1250 | 171 | 17 | 6 |
| 38 | 5 | 4 | 6 | 81 | 11 | 2 | 9 | 1500 | 206 | 5 | 0 |
| 39 | 5 | 7 | 3 | 82 | 11 | 5 | 6 | 1750 | 240 | 12 | 6 |
| 40 | 5 | 10 | 0 | 83 | 11 | 8 | 3 | 2000 | 275 | 0 | 0 |
| 41 | 5 | 12 | 9 | 84 | 11 | 11 | 0 | 2240 | 308 | 0 | 0 |
| 42 | 5 | 15 | 6 | 85 | 11 | 13 | 9 | 3000 | 412 | 10 | 0 |
| 43 | 5 | 18 | 3 | 86 | 11 | 16 | 6 | 5000 | 687 | 10 | 0 |

## 2s. 11d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 11 | 44 | 6 | 8 | 4 | 87 | 12 | 13 | 9 |
| 2 | 0 | 5 | 10 | 45 | 6 | 11 | 3 | 88 | 12 | 16 | 8 |
| 3 | 0 | 8 | 9 | 46 | 6 | 14 | 2 | 89 | 12 | 19 | 7 |
| 4 | 0 | 11 | 8 | 47 | 6 | 17 | 1 | 90 | 13 | 2 | 6 |
| 5 | 0 | 14 | 7 | 48 | 7 | 0 | 0 | 91 | 13 | 5 | 5 |
| 6 | 0 | 17 | 6 | 49 | 7 | 2 | 11 | 92 | 13 | 8 | 4 |
| 7 | 1 | 0 | 5 | 50 | 7 | 5 | 10 | 93 | 13 | 11 | 3 |
| 8 | 1 | 3 | 4 | 51 | 7 | 8 | 9 | 94 | 13 | 14 | 2 |
| 9 | 1 | 6 | 3 | 52 | 7 | 11 | 8 | 95 | 13 | 17 | 1 |
| 10 | 1 | 9 | 2 | 53 | 7 | 14 | 7 | 96 | 14 | 0 | 0 |
| 11 | 1 | 12 | 1 | 54 | 7 | 17 | 6 | 97 | 14 | 2 | 11 |
| 12 | 1 | 15 | 0 | 55 | 8 | 0 | 5 | 98 | 14 | 5 | 10 |
| 13 | 1 | 17 | 11 | 56 | 8 | 3 | 4 | 99 | 14 | 8 | 9 |
| 14 | 2 | 0 | 10 | 57 | 8 | 6 | 3 | 100 | 14 | 11 | 8 |
| 15 | 2 | 3 | 9 | 58 | 8 | 9 | 2 | 108 | 15 | 15 | 0 |
| 16 | 2 | 6 | 8 | 59 | 8 | 12 | 1 | 110 | 16 | 0 | 10 |
| 17 | 2 | 9 | 7 | 60 | 8 | 15 | 0 | 112 | 16 | 6 | 8 |
| 18 | 2 | 12 | 6 | 61 | 8 | 17 | 11 | 120 | 17 | 10 | 0 |
| 19 | 2 | 15 | 5 | 62 | 9 | 0 | 10 | 130 | 18 | 19 | 2 |
| 20 | 2 | 18 | 4 | 63 | 9 | 3 | 9 | 132 | 19 | 5 | 0 |
| 21 | 3 | 1 | 3 | 64 | 9 | 6 | 8 | 140 | 20 | 8 | 4 |
| 22 | 3 | 4 | 2 | 65 | 9 | 9 | 7 | 144 | 21 | 0 | 0 |
| 23 | 3 | 7 | 1 | 66 | 9 | 12 | 6 | 150 | 21 | 17 | 6 |
| 24 | 3 | 10 | 0 | 67 | 9 | 15 | 5 | 175 | 25 | 10 | 5 |
| 25 | 3 | 12 | 11 | 68 | 9 | 18 | 4 | 200 | 29 | 3 | 4 |
| 26 | 3 | 15 | 10 | 69 | 10 | 1 | 3 | 250 | 36 | 9 | 2 |
| 27 | 3 | 18 | 9 | 70 | 10 | 4 | 2 | 300 | 43 | 15 | 0 |
| 28 | 4 | 1 | 8 | 71 | 10 | 7 | 1 | 365 | 53 | 4 | 7 |
| 29 | 4 | 4 | 7 | 72 | 10 | 10 | 0 | 400 | 58 | 6 | 8 |
| 30 | 4 | 7 | 6 | 73 | 10 | 12 | 11 | 500 | 72 | 18 | 4 |
| 31 | 4 | 10 | 5 | 74 | 10 | 15 | 10 | 600 | 87 | 10 | 0 |
| 32 | 4 | 13 | 4 | 75 | 10 | 18 | 9 | 700 | 102 | 1 | 8 |
| 33 | 4 | 16 | 3 | 76 | 11 | 1 | 8 | 750 | 109 | 7 | 6 |
| 34 | 4 | 19 | 2 | 77 | 11 | 4 | 7 | 800 | 116 | 13 | 4 |
| 35 | 5 | 2 | 1 | 78 | 11 | 7 | 6 | 900 | 131 | 5 | 0 |
| 36 | 5 | 5 | 0 | 79 | 11 | 10 | 5 | 1000 | 145 | 16 | 8 |
| 37 | 5 | 7 | 11 | 80 | 11 | 13 | 4 | 1250 | 182 | 5 | 10 |
| 38 | 5 | 10 | 10 | 81 | 11 | 16 | 3 | 1500 | 218 | 15 | 0 |
| 39 | 5 | 13 | 9 | 82 | 11 | 19 | 2 | 1750 | 255 | 4 | 2 |
| 40 | 5 | 16 | 8 | 83 | 12 | 2 | 1 | 2000 | 291 | 13 | 4 |
| 41 | 5 | 19 | 7 | 84 | 12 | 5 | 0 | 2240 | 326 | 13 | 4 |
| 42 | 6 | 2 | 6 | 85 | 12 | 7 | 11 | 3000 | 437 | 10 | 0 |
| 43 | 6 | 5 | 5 | 86 | 12 | 10 | 10 | 5000 | 729 | 8 | 4 |

## 2s. 10d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 10 | 44 | 6 | 4 | 8 | 87 | 12 | 6 | 6 |
| 2 | 0 | 5 | 8 | 45 | 6 | 7 | 6 | 88 | 12 | 9 | 4 |
| 3 | 0 | 8 | 6 | 46 | 6 | 10 | 4 | 89 | 12 | 12 | 2 |
| 4 | 0 | 11 | 4 | 47 | 6 | 13 | 2 | 90 | 12 | 15 | 0 |
| 5 | 0 | 14 | 2 | 48 | 6 | 16 | 0 | 91 | 12 | 17 | 10 |
| 6 | 0 | 17 | 0 | 49 | 6 | 18 | 10 | 92 | 13 | 0 | 8 |
| 7 | 0 | 19 | 10 | 50 | 7 | 1 | 8 | 93 | 13 | 3 | 6 |
| 8 | 1 | 2 | 8 | 51 | 7 | 4 | 6 | 94 | 13 | 6 | 4 |
| 9 | 1 | 5 | 6 | 52 | 7 | 7 | 4 | 95 | 13 | 9 | 2 |
| 10 | 1 | 8 | 4 | 53 | 7 | 10 | 2 | 96 | 13 | 12 | 0 |
| 11 | 1 | 11 | 2 | 54 | 7 | 13 | 0 | 97 | 13 | 14 | 10 |
| 12 | 1 | 14 | 0 | 55 | 7 | 15 | 10 | 98 | 13 | 17 | 8 |
| 13 | 1 | 16 | 10 | 56 | 7 | 18 | 8 | 99 | 14 | 0 | 6 |
| 14 | 1 | 19 | 8 | 57 | 8 | 1 | 6 | 100 | 14 | 3 | 4 |
| 15 | 2 | 2 | 6 | 58 | 8 | 4 | 4 | 108 | 15 | 6 | 0 |
| 16 | 2 | 5 | 4 | 59 | 8 | 7 | 2 | 110 | 15 | 11 | 8 |
| 17 | 2 | 8 | 2 | 60 | 8 | 10 | 0 | 112 | 15 | 17 | 4 |
| 18 | 2 | 11 | 0 | 61 | 8 | 12 | 10 | 120 | 17 | 0 | 0 |
| 19 | 2 | 13 | 10 | 62 | 8 | 15 | 8 | 130 | 18 | 8 | 4 |
| 20 | 2 | 16 | 8 | 63 | 8 | 18 | 6 | 132 | 18 | 14 | 0 |
| 21 | 2 | 19 | 6 | 64 | 9 | 1 | 4 | 140 | 19 | 16 | 8 |
| 22 | 3 | 2 | 4 | 65 | 9 | 4 | 2 | 144 | 20 | 8 | 0 |
| 23 | 3 | 5 | 2 | 66 | 9 | 7 | 0 | 150 | 21 | 5 | 0 |
| 24 | 3 | 8 | 0 | 67 | 9 | 9 | 10 | 175 | 24 | 15 | 10 |
| 25 | 3 | 10 | 10 | 68 | 9 | 12 | 8 | 200 | 28 | 6 | 8 |
| 26 | 3 | 13 | 8 | 69 | 9 | 15 | 6 | 250 | 35 | 8 | 4 |
| 27 | 3 | 16 | 6 | 70 | 9 | 18 | 4 | 300 | 42 | 10 | 0 |
| 28 | 3 | 19 | 4 | 71 | 10 | 1 | 2 | 365 | 51 | 14 | 2 |
| 29 | 4 | 2 | 2 | 72 | 10 | 4 | 0 | 400 | 56 | 13 | 4 |
| 30 | 4 | 5 | 0 | 73 | 10 | 6 | 10 | 500 | 70 | 16 | 8 |
| 31 | 4 | 7 | 10 | 74 | 10 | 9 | 8 | 600 | 85 | 0 | 0 |
| 32 | 4 | 10 | 8 | 75 | 10 | 12 | 6 | 700 | 99 | 3 | 4 |
| 33 | 4 | 13 | 6 | 76 | 10 | 15 | 4 | 750 | 106 | 5 | 0 |
| 34 | 4 | 16 | 4 | 77 | 10 | 18 | 2 | 800 | 113 | 6 | 8 |
| 35 | 4 | 19 | 2 | 78 | 11 | 1 | 0 | 900 | 127 | 10 | 0 |
| 36 | 5 | 2 | 0 | 79 | 11 | 3 | 10 | 1000 | 141 | 13 | 4 |
| 37 | 5 | 4 | 10 | 80 | 11 | 6 | 8 | 1250 | 177 | 1 | 8 |
| 38 | 5 | 7 | 8 | 81 | 11 | 9 | 6 | 1500 | 212 | 10 | 0 |
| 39 | 5 | 10 | 6 | 82 | 11 | 12 | 4 | 1750 | 247 | 18 | 4 |
| 40 | 5 | 13 | 4 | 83 | 11 | 15 | 2 | 2000 | 283 | 6 | 8 |
| 41 | 5 | 16 | 2 | 84 | 11 | 18 | 0 | 2240 | 317 | 6 | 8 |
| 42 | 5 | 19 | 0 | 85 | 12 | 0 | 10 | 3000 | 425 | 0 | 0 |
| 43 | 6 | 1 | 10 | 86 | 12 | 3 | 8 | 5000 | 708 | 6 | 8 |

## 3s.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 3 | 0 | 44 | 6 | 12 | 0 | 87 | 13 | 1 | 0 |
| 2 | 0 | 6 | 0 | 45 | 6 | 15 | 0 | 88 | 13 | 4 | 0 |
| 3 | 0 | 9 | 0 | 46 | 6 | 18 | 0 | 89 | 13 | 7 | 0 |
| 4 | 0 | 12 | 0 | 47 | 7 | 1 | 0 | 90 | 13 | 10 | 0 |
| 5 | 0 | 15 | 0 | 48 | 7 | 4 | 0 | 91 | 13 | 13 | 0 |
| 6 | 0 | 18 | 0 | 49 | 7 | 7 | 0 | 92 | 13 | 16 | 0 |
| 7 | 1 | 1 | 0 | 50 | 7 | 10 | 0 | 93 | 13 | 19 | 0 |
| 8 | 1 | 4 | 0 | 51 | 7 | 13 | 0 | 94 | 14 | 2 | 0 |
| 9 | 1 | 7 | 0 | 52 | 7 | 16 | 0 | 95 | 14 | 5 | 0 |
| 10 | 1 | 10 | 0 | 53 | 7 | 19 | 0 | 96 | 14 | 8 | 0 |
| 11 | 1 | 13 | 0 | 54 | 8 | 2 | 0 | 97 | 14 | 11 | 0 |
| 12 | 1 | 16 | 0 | 55 | 8 | 5 | 0 | 98 | 14 | 14 | 0 |
| 13 | 1 | 19 | 0 | 56 | 8 | 8 | 0 | 99 | 14 | 17 | 0 |
| 14 | 2 | 2 | 0 | 57 | 8 | 11 | 0 | 100 | 15 | 0 | 0 |
| 15 | 2 | 5 | 0 | 58 | 8 | 14 | 0 | 108 | 16 | 4 | 0 |
| 16 | 2 | 8 | 0 | 59 | 8 | 17 | 0 | 110 | 16 | 10 | 0 |
| 17 | 2 | 11 | 0 | 60 | 9 | 0 | 0 | 112 | 16 | 16 | 0 |
| 18 | 2 | 14 | 0 | 61 | 9 | 3 | 0 | 120 | 18 | 0 | 0 |
| 19 | 2 | 17 | 0 | 62 | 9 | 6 | 0 | 130 | 19 | 10 | 0 |
| 20 | 3 | 0 | 0 | 63 | 9 | 9 | 0 | 132 | 19 | 16 | 0 |
| 21 | 3 | 3 | 0 | 64 | 9 | 12 | 0 | 140 | 21 | 0 | 0 |
| 22 | 3 | 6 | 0 | 65 | 9 | 15 | 0 | 144 | 21 | 12 | 0 |
| 23 | 3 | 9 | 0 | 66 | 9 | 18 | 0 | 150 | 22 | 10 | 0 |
| 24 | 3 | 12 | 0 | 67 | 10 | 1 | 0 | 175 | 26 | 5 | 0 |
| 25 | 3 | 15 | 0 | 68 | 10 | 4 | 0 | 200 | 30 | 0 | 0 |
| 26 | 3 | 18 | 0 | 69 | 10 | 7 | 0 | 250 | 37 | 10 | 0 |
| 27 | 4 | 1 | 0 | 70 | 10 | 10 | 0 | 300 | 45 | 0 | 0 |
| 28 | 4 | 4 | 0 | 71 | 10 | 13 | 0 | 365 | 54 | 15 | 0 |
| 29 | 4 | 7 | 0 | 72 | 10 | 16 | 0 | 400 | 60 | 0 | 0 |
| 30 | 4 | 10 | 0 | 73 | 10 | 19 | 0 | 500 | 75 | 0 | 0 |
| 31 | 4 | 13 | 0 | 74 | 11 | 2 | 0 | 600 | 90 | 0 | 0 |
| 32 | 4 | 16 | 0 | 75 | 11 | 5 | 0 | 700 | 105 | 0 | 0 |
| 33 | 4 | 19 | 0 | 76 | 11 | 8 | 0 | 750 | 112 | 10 | 0 |
| 34 | 5 | 2 | 0 | 77 | 11 | 11 | 0 | 800 | 120 | 0 | 0 |
| 35 | 5 | 5 | 0 | 78 | 11 | 14 | 0 | 900 | 135 | 0 | 0 |
| 36 | 5 | 8 | 0 | 79 | 11 | 17 | 0 | 1000 | 150 | 0 | 0 |
| 37 | 5 | 11 | 0 | 80 | 12 | 0 | 0 | 1250 | 187 | 10 | 0 |
| 38 | 5 | 14 | 0 | 81 | 12 | 3 | 0 | 1500 | 225 | 0 | 0 |
| 39 | 5 | 17 | 0 | 82 | 12 | 6 | 0 | 1750 | 262 | 10 | 0 |
| 40 | 6 | 0 | 0 | 83 | 12 | 9 | 0 | 2000 | 300 | 0 | 0 |
| 41 | 6 | 3 | 0 | 84 | 12 | 12 | 0 | 2240 | 336 | 0 | 0 |
| 42 | 6 | 6 | 0 | 85 | 12 | 15 | 0 | 3000 | 450 | 0 | 0 |
| 43 | 6 | 9 | 0 | 86 | 12 | 18 | 0 | 5000 | 750 | 0 | 0 |

## 3s. 1d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 3 | 1 | 44 | 6 | 15 | 8 | 87 | 13 | 8 | 3 |
| 2 | 0 | 6 | 2 | 45 | 6 | 18 | 9 | 88 | 13 | 11 | 4 |
| 3 | 0 | 9 | 3 | 46 | 7 | 1 | 10 | 89 | 13 | 14 | 5 |
| 4 | 0 | 12 | 4 | 47 | 7 | 4 | 11 | 90 | 13 | 17 | 6 |
| 5 | 0 | 15 | 5 | 48 | 7 | 8 | 0 | 91 | 14 | 0 | 7 |
| 6 | 0 | 18 | 6 | 49 | 7 | 11 | 1 | 92 | 14 | 3 | 8 |
| 7 | 1 | 1 | 7 | 50 | 7 | 14 | 2 | 93 | 14 | 6 | 9 |
| 8 | 1 | 4 | 8 | 51 | 7 | 17 | 3 | 94 | 14 | 9 | 10 |
| 9 | 1 | 7 | 9 | 52 | 8 | 0 | 4 | 95 | 14 | 12 | 11 |
| 10 | 1 | 10 | 10 | 53 | 8 | 3 | 5 | 96 | 14 | 16 | 0 |
| 11 | 1 | 13 | 11 | 54 | 8 | 6 | 6 | 97 | 14 | 19 | 1 |
| 12 | 1 | 17 | 0 | 55 | 8 | 9 | 7 | 98 | 15 | 2 | 2 |
| 13 | 2 | 0 | 1 | 56 | 8 | 12 | 8 | 99 | 15 | 5 | 3 |
| 14 | 2 | 3 | 2 | 57 | 8 | 15 | 9 | 100 | 15 | 8 | 4 |
| 15 | 2 | 6 | 3 | 58 | 8 | 18 | 10 | 108 | 16 | 13 | 0 |
| 16 | 2 | 9 | 4 | 59 | 9 | 1 | 11 | 110 | 16 | 19 | 2 |
| 17 | 2 | 12 | 5 | 60 | 9 | 5 | 0 | 112 | 17 | 5 | 4 |
| 18 | 2 | 15 | 6 | 61 | 9 | 8 | 1 | 120 | 18 | 10 | 0 |
| 19 | 2 | 18 | 7 | 62 | 9 | 11 | 2 | 130 | 20 | 0 | 10 |
| 20 | 3 | 1 | 8 | 63 | 9 | 14 | 3 | 132 | 20 | 7 | 0 |
| 21 | 3 | 4 | 9 | 64 | 9 | 17 | 4 | 140 | 21 | 11 | 8 |
| 22 | 3 | 7 | 10 | 65 | 10 | 0 | 5 | 144 | 22 | 4 | 0 |
| 23 | 3 | 10 | 11 | 66 | 10 | 3 | 6 | 150 | 23 | 2 | 6 |
| 24 | 3 | 14 | 0 | 67 | 10 | 6 | 7 | 175 | 26 | 19 | 7 |
| 25 | 3 | 17 | 1 | 68 | 10 | 9 | 8 | 200 | 30 | 16 | 8 |
| 26 | 4 | 0 | 2 | 69 | 10 | 12 | 9 | 250 | 38 | 10 | 10 |
| 27 | 4 | 3 | 3 | 70 | 10 | 15 | 10 | 300 | 46 | 5 | 0 |
| 28 | 4 | 6 | 4 | 71 | 10 | 18 | 11 | 365 | 56 | 5 | 5 |
| 29 | 4 | 9 | 5 | 72 | 11 | 2 | 0 | 400 | 61 | 13 | 4 |
| 30 | 4 | 12 | 6 | 73 | 11 | 5 | 1 | 500 | 77 | 1 | 8 |
| 31 | 4 | 15 | 7 | 74 | 11 | 8 | 2 | 600 | 92 | 10 | 0 |
| 32 | 4 | 18 | 8 | 75 | 11 | 11 | 3 | 700 | 107 | 18 | 4 |
| 33 | 5 | 1 | 9 | 76 | 11 | 14 | 4 | 750 | 115 | 12 | 6 |
| 34 | 5 | 4 | 10 | 77 | 11 | 17 | 5 | 800 | 123 | 6 | 8 |
| 35 | 5 | 7 | 11 | 78 | 12 | 0 | 6 | 900 | 138 | 15 | 0 |
| 36 | 5 | 11 | 0 | 79 | 12 | 3 | 7 | 1000 | 154 | 3 | 4 |
| 37 | 5 | 14 | 1 | 80 | 12 | 6 | 8 | 1250 | 192 | 14 | 2 |
| 38 | 5 | 17 | 2 | 81 | 12 | 9 | 9 | 1500 | 231 | 5 | 0 |
| 39 | 6 | 0 | 3 | 82 | 12 | 12 | 10 | 1750 | 269 | 15 | 10 |
| 40 | 6 | 3 | 4 | 83 | 12 | 15 | 11 | 2000 | 308 | 6 | 8 |
| 41 | 6 | 6 | 5 | 84 | 12 | 19 | 0 | 2240 | 345 | 6 | 8 |
| 42 | 6 | 9 | 6 | 85 | 13 | 2 | 1 | 3000 | 462 | 10 | 0 |
| 43 | 6 | 12 | 7 | 86 | 13 | 5 | 2 | 5000 | 770 | 16 | 8 |

## 3s. 3d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 3 | 3 | 44 | 7 | 3 | 0 | 87 | 14 | 2 | 9 |
| 2 | 0 | 6 | 6 | 45 | 7 | 6 | 3 | 88 | 14 | 6 | 0 |
| 3 | 0 | 9 | 9 | 46 | 7 | 9 | 6 | 89 | 14 | 9 | 3 |
| 4 | 0 | 13 | 0 | 47 | 7 | 12 | 9 | 90 | 14 | 12 | 6 |
| 5 | 0 | 16 | 3 | 48 | 7 | 16 | 0 | 91 | 14 | 15 | 9 |
| 6 | 0 | 19 | 6 | 49 | 7 | 19 | 3 | 92 | 14 | 19 | 0 |
| 7 | 1 | 2 | 9 | 50 | 8 | 2 | 6 | 93 | 15 | 2 | 3 |
| 8 | 1 | 6 | 0 | 51 | 8 | 5 | 9 | 94 | 15 | 5 | 6 |
| 9 | 1 | 9 | 3 | 52 | 8 | 9 | 0 | 95 | 15 | 8 | 9 |
| 10 | 1 | 12 | 6 | 53 | 8 | 12 | 3 | 96 | 15 | 12 | 0 |
| 11 | 1 | 15 | 9 | 54 | 8 | 15 | 6 | 97 | 15 | 15 | 3 |
| 12 | 1 | 19 | 0 | 55 | 8 | 18 | 9 | 98 | 15 | 18 | 6 |
| 13 | 2 | 2 | 3 | 56 | 9 | 2 | 0 | 99 | 16 | 1 | 9 |
| 14 | 2 | 5 | 6 | 57 | 9 | 5 | 3 | 100 | 16 | 5 | 0 |
| 15 | 2 | 8 | 9 | 58 | 9 | 8 | 6 | 108 | 17 | 11 | 0 |
| 16 | 2 | 12 | 0 | 59 | 9 | 11 | 9 | 110 | 17 | 17 | 6 |
| 17 | 2 | 15 | 3 | 60 | 9 | 15 | 0 | 112 | 18 | 4 | 0 |
| 18 | 2 | 18 | 6 | 61 | 9 | 18 | 3 | 120 | 19 | 10 | 0 |
| 19 | 3 | 1 | 9 | 62 | 10 | 1 | 6 | 130 | 21 | 2 | 6 |
| 20 | 3 | 5 | 0 | 63 | 10 | 4 | 9 | 132 | 21 | 9 | 0 |
| 21 | 3 | 8 | 3 | 64 | 10 | 8 | 0 | 140 | 22 | 15 | 0 |
| 22 | 3 | 11 | 6 | 65 | 10 | 11 | 3 | 144 | 23 | 8 | 0 |
| 23 | 3 | 14 | 9 | 66 | 10 | 14 | 6 | 150 | 24 | 7 | 6 |
| 24 | 3 | 18 | 0 | 67 | 10 | 17 | 9 | 175 | 28 | 8 | 9 |
| 25 | 4 | 1 | 3 | 68 | 11 | 1 | 0 | 200 | 32 | 10 | 0 |
| 26 | 4 | 4 | 6 | 69 | 11 | 4 | 3 | 250 | 40 | 12 | 6 |
| 27 | 4 | 7 | 9 | 70 | 11 | 7 | 6 | 300 | 48 | 15 | 0 |
| 28 | 4 | 11 | 0 | 71 | 11 | 10 | 9 | 365 | 59 | 6 | 3 |
| 29 | 4 | 14 | 3 | 72 | 11 | 14 | 0 | 400 | 65 | 0 | 0 |
| 30 | 4 | 17 | 6 | 73 | 11 | 17 | 3 | 500 | 81 | 5 | 0 |
| 31 | 5 | 0 | 9 | 74 | 12 | 0 | 6 | 600 | 97 | 10 | 0 |
| 32 | 5 | 4 | 0 | 75 | 12 | 3 | 9 | 700 | 113 | 15 | 0 |
| 33 | 5 | 7 | 3 | 76 | 12 | 7 | 0 | 750 | 121 | 17 | 6 |
| 34 | 5 | 10 | 6 | 77 | 12 | 10 | 3 | 800 | 130 | 0 | 0 |
| 35 | 5 | 13 | 9 | 78 | 12 | 13 | 6 | 900 | 146 | 5 | 0 |
| 36 | 5 | 17 | 0 | 79 | 12 | 16 | 9 | 1000 | 162 | 10 | 0 |
| 37 | 6 | 0 | 3 | 80 | 13 | 0 | 0 | 1250 | 203 | 2 | 6 |
| 38 | 6 | 3 | 6 | 81 | 13 | 3 | 3 | 1500 | 243 | 15 | 0 |
| 39 | 6 | 6 | 9 | 82 | 13 | 6 | 6 | 1750 | 284 | 7 | 6 |
| 40 | 6 | 10 | 0 | 83 | 13 | 9 | 9 | 2000 | 325 | 0 | 0 |
| 41 | 6 | 13 | 3 | 84 | 13 | 13 | 0 | 2240 | 364 | 0 | 0 |
| 42 | 6 | 16 | 6 | 85 | 13 | 16 | 3 | 3000 | 487 | 10 | 0 |
| 43 | 6 | 19 | 9 | 86 | 13 | 19 | 6 | 5000 | 812 | 10 | 0 |

## 3s. 2d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 3 | 2 | 44 | 6 | 19 | 4 | 87 | 13 | 15 | 6 |
| 2 | 0 | 6 | 4 | 45 | 7 | 2 | 6 | 88 | 13 | 18 | 8 |
| 3 | 0 | 9 | 6 | 46 | 7 | 5 | 8 | 89 | 14 | 1 | 10 |
| 4 | 0 | 12 | 8 | 47 | 7 | 8 | 10 | 90 | 14 | 5 | 0 |
| 5 | 0 | 15 | 10 | 48 | 7 | 12 | 0 | 91 | 14 | 8 | 2 |
| 6 | 0 | 19 | 0 | 49 | 7 | 15 | 2 | 92 | 14 | 11 | 4 |
| 7 | 1 | 2 | 2 | 50 | 7 | 18 | 4 | 93 | 14 | 14 | 6 |
| 8 | 1 | 5 | 4 | 51 | 8 | 1 | 6 | 94 | 14 | 17 | 8 |
| 9 | 1 | 8 | 6 | 52 | 8 | 4 | 8 | 95 | 15 | 0 | 10 |
| 10 | 1 | 11 | 8 | 53 | 8 | 7 | 10 | 96 | 15 | 4 | 0 |
| 11 | 1 | 14 | 10 | 54 | 8 | 11 | 0 | 97 | 15 | 7 | 2 |
| 12 | 1 | 18 | 0 | 55 | 8 | 14 | 2 | 98 | 15 | 10 | 4 |
| 13 | 2 | 1 | 2 | 56 | 8 | 17 | 4 | 99 | 15 | 13 | 6 |
| 14 | 2 | 4 | 4 | 57 | 9 | 0 | 6 | 100 | 15 | 16 | 8 |
| 15 | 2 | 7 | 6 | 58 | 9 | 3 | 8 | 108 | 17 | 2 | 0 |
| 16 | 2 | 10 | 8 | 59 | 9 | 6 | 10 | 110 | 17 | 8 | 4 |
| 17 | 2 | 13 | 10 | 60 | 9 | 10 | 0 | 112 | 17 | 14 | 8 |
| 18 | 2 | 17 | 0 | 61 | 9 | 13 | 2 | 120 | 19 | 0 | 0 |
| 19 | 3 | 0 | 2 | 62 | 9 | 16 | 4 | 130 | 20 | 11 | 8 |
| 20 | 3 | 3 | 4 | 63 | 9 | 19 | 6 | 132 | 20 | 18 | 0 |
| 21 | 3 | 6 | 6 | 64 | 10 | 2 | 8 | 140 | 22 | 3 | 4 |
| 22 | 3 | 9 | 8 | 65 | 10 | 5 | 10 | 144 | 22 | 16 | 0 |
| 23 | 3 | 12 | 10 | 66 | 10 | 9 | 0 | 150 | 23 | 15 | 0 |
| 24 | 3 | 16 | 0 | 67 | 10 | 12 | 2 | 175 | 27 | 14 | 2 |
| 25 | 3 | 19 | 2 | 68 | 10 | 15 | 4 | 200 | 31 | 13 | 4 |
| 26 | 4 | 2 | 4 | 69 | 10 | 18 | 6 | 250 | 39 | 11 | 8 |
| 27 | 4 | 5 | 6 | 70 | 11 | 1 | 8 | 300 | 47 | 10 | 0 |
| 28 | 4 | 8 | 8 | 71 | 11 | 4 | 10 | 365 | 57 | 15 | 10 |
| 29 | 4 | 11 | 10 | 72 | 11 | 8 | 0 | 400 | 63 | 6 | 8 |
| 30 | 4 | 15 | 0 | 73 | 11 | 11 | 2 | 500 | 79 | 3 | 4 |
| 31 | 4 | 18 | 2 | 74 | 11 | 14 | 4 | 600 | 95 | 0 | 0 |
| 32 | 5 | 1 | 4 | 75 | 11 | 17 | 6 | 700 | 110 | 16 | 8 |
| 33 | 5 | 4 | 6 | 76 | 12 | 0 | 8 | 750 | 118 | 15 | 0 |
| 34 | 5 | 7 | 8 | 77 | 12 | 3 | 10 | 800 | 126 | 13 | 4 |
| 35 | 5 | 10 | 10 | 78 | 12 | 7 | 0 | 900 | 142 | 10 | 0 |
| 36 | 5 | 14 | 0 | 79 | 12 | 10 | 2 | 1000 | 158 | 6 | 8 |
| 37 | 5 | 17 | 2 | 80 | 12 | 13 | 4 | 1250 | 197 | 18 | 4 |
| 38 | 6 | 0 | 4 | 81 | 12 | 16 | 6 | 1500 | 237 | 10 | 0 |
| 39 | 6 | 3 | 6 | 82 | 12 | 19 | 8 | 1750 | 277 | 1 | 8 |
| 40 | 6 | 6 | 8 | 83 | 13 | 2 | 10 | 2000 | 316 | 13 | 4 |
| 41 | 6 | 9 | 10 | 84 | 13 | 6 | 0 | 2240 | 354 | 13 | 4 |
| 42 | 6 | 13 | 0 | 85 | 13 | 9 | 2 | 3000 | 475 | 0 | 0 |
| 43 | 6 | 16 | 2 | 86 | 13 | 12 | 4 | 5000 | 791 | 13 | 4 |

## 3s. 4d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 3 | 4 | 44 | 7 | 6 | 8 | 87 | 14 | 10 | 0 |
| 2 | 0 | 6 | 8 | 45 | 7 | 10 | 0 | 88 | 14 | 13 | 4 |
| 3 | 0 | 10 | 0 | 46 | 7 | 13 | 4 | 89 | 14 | 16 | 8 |
| 4 | 0 | 13 | 4 | 47 | 7 | 16 | 8 | 90 | 15 | 0 | 0 |
| 5 | 0 | 16 | 8 | 48 | 8 | 0 | 0 | 91 | 15 | 3 | 4 |
| 6 | 1 | 0 | 0 | 49 | 8 | 3 | 4 | 92 | 15 | 6 | 8 |
| 7 | 1 | 3 | 4 | 50 | 8 | 6 | 8 | 93 | 15 | 10 | 0 |
| 8 | 1 | 6 | 8 | 51 | 8 | 10 | 0 | 94 | 15 | 13 | 4 |
| 9 | 1 | 10 | 0 | 52 | 8 | 13 | 4 | 95 | 15 | 16 | 8 |
| 10 | 1 | 13 | 4 | 53 | 8 | 16 | 8 | 96 | 16 | 0 | 0 |
| 11 | 1 | 16 | 8 | 54 | 9 | 0 | 0 | 97 | 16 | 3 | 4 |
| 12 | 2 | 0 | 0 | 55 | 9 | 3 | 4 | 98 | 16 | 6 | 8 |
| 13 | 2 | 3 | 4 | 56 | 9 | 6 | 8 | 99 | 16 | 10 | 0 |
| 14 | 2 | 6 | 8 | 57 | 9 | 10 | 0 | 100 | 16 | 13 | 4 |
| 15 | 2 | 10 | 0 | 58 | 9 | 13 | 4 | 108 | 18 | 0 | 0 |
| 16 | 2 | 13 | 4 | 59 | 9 | 16 | 8 | 110 | 18 | 6 | 8 |
| 17 | 2 | 16 | 8 | 60 | 10 | 0 | 0 | 112 | 18 | 13 | 4 |
| 18 | 3 | 0 | 0 | 61 | 10 | 3 | 4 | 120 | 20 | 0 | 0 |
| 19 | 3 | 3 | 4 | 62 | 10 | 6 | 8 | 130 | 21 | 13 | 4 |
| 20 | 3 | 6 | 8 | 63 | 10 | 10 | 0 | 132 | 22 | 0 | 0 |
| 21 | 3 | 10 | 0 | 64 | 10 | 13 | 4 | 140 | 23 | 6 | 8 |
| 22 | 3 | 13 | 4 | 65 | 10 | 16 | 8 | 144 | 24 | 0 | 0 |
| 23 | 3 | 16 | 8 | 66 | 11 | 0 | 0 | 150 | 25 | 0 | 0 |
| 24 | 4 | 0 | 0 | 67 | 11 | 3 | 4 | 175 | 29 | 3 | 4 |
| 25 | 4 | 3 | 4 | 68 | 11 | 6 | 8 | 200 | 33 | 6 | 8 |
| 26 | 4 | 6 | 8 | 69 | 11 | 10 | 0 | 250 | 41 | 13 | 4 |
| 27 | 4 | 10 | 0 | 70 | 11 | 13 | 4 | 300 | 50 | 0 | 0 |
| 28 | 4 | 13 | 4 | 71 | 11 | 16 | 8 | 365 | 60 | 16 | 8 |
| 29 | 4 | 16 | 8 | 72 | 12 | 0 | 0 | 400 | 66 | 13 | 4 |
| 30 | 5 | 0 | 0 | 73 | 12 | 3 | 4 | 500 | 83 | 6 | 8 |
| 31 | 5 | 3 | 4 | 74 | 12 | 6 | 8 | 600 | 100 | 0 | 0 |
| 32 | 5 | 6 | 8 | 75 | 12 | 10 | 0 | 700 | 116 | 13 | 4 |
| 33 | 5 | 10 | 0 | 76 | 12 | 13 | 4 | 750 | 125 | 0 | 0 |
| 34 | 5 | 13 | 4 | 77 | 12 | 16 | 8 | 800 | 133 | 6 | 8 |
| 35 | 5 | 16 | 8 | 78 | 13 | 0 | 0 | 900 | 150 | 0 | 0 |
| 36 | 6 | 0 | 0 | 79 | 13 | 3 | 4 | 1000 | 166 | 13 | 4 |
| 37 | 6 | 3 | 4 | 80 | 13 | 6 | 8 | 1250 | 208 | 6 | 8 |
| 38 | 6 | 6 | 8 | 81 | 13 | 10 | 0 | 1500 | 250 | 0 | 0 |
| 39 | 6 | 10 | 0 | 82 | 13 | 13 | 4 | 1750 | 291 | 13 | 4 |
| 40 | 6 | 13 | 4 | 83 | 13 | 16 | 8 | 2000 | 333 | 6 | 8 |
| 41 | 6 | 16 | 8 | 84 | 14 | 0 | 0 | 2240 | 373 | 6 | 8 |
| 42 | 7 | 0 | 0 | 85 | 14 | 3 | 4 | 3000 | 500 | 0 | 0 |
| 43 | 7 | 3 | 4 | 86 | 14 | 6 | 8 | 5000 | 833 | 6 | 8 |

## 3s. 5d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 3 | 5 | 44 | 7 | 10 | 4 | 87 | 14 | 17 | 3 |
| 2 | 0 | 6 | 10 | 45 | 7 | 18 | 9 | 88 | 15 | 0 | 8 |
| 3 | 0 | 10 | 3 | 46 | 7 | 17 | 2 | 89 | 15 | 4 | 1 |
| 4 | 0 | 13 | 8 | 47 | 8 | 0 | 7 | 90 | 15 | 7 | 6 |
| 5 | 0 | 17 | 1 | 48 | 8 | 4 | 0 | 91 | 15 | 10 | 11 |
| 6 | 1 | 0 | 6 | 49 | 8 | 7 | 5 | 92 | 15 | 14 | 4 |
| 7 | 1 | 3 | 11 | 50 | 8 | 10 | 10 | 93 | 15 | 17 | 9 |
| 8 | 1 | 7 | 4 | 51 | 8 | 14 | 3 | 94 | 16 | 1 | 2 |
| 9 | 1 | 10 | 9 | 52 | 8 | 17 | 8 | 95 | 16 | 4 | 7 |
| 10 | 1 | 14 | 2 | 53 | 9 | 1 | 1 | 96 | 16 | 8 | 0 |
| 11 | 1 | 17 | 7 | 54 | 9 | 4 | 6 | 97 | 16 | 11 | 5 |
| 12 | 2 | 1 | 0 | 55 | 9 | 7 | 11 | 98 | 16 | 14 | 10 |
| 13 | 2 | 4 | 5 | 56 | 9 | 11 | 4 | 99 | 16 | 18 | 3 |
| 14 | 2 | 7 | 10 | 57 | 9 | 14 | 9 | 100 | 17 | 1 | 8 |
| 15 | 2 | 11 | 3 | 58 | 9 | 18 | 2 | 108 | 18 | 9 | 0 |
| 16 | 2 | 14 | 8 | 59 | 10 | 1 | 7 | 110 | 18 | 15 | 10 |
| 17 | 2 | 18 | 1 | 60 | 10 | 5 | 0 | 112 | 19 | 2 | 8 |
| 18 | 3 | 1 | 6 | 61 | 10 | 8 | 5 | 120 | 20 | 10 | 0 |
| 19 | 3 | 4 | 11 | 62 | 10 | 11 | 10 | 130 | 22 | 4 | 2 |
| 20 | 3 | 8 | 4 | 63 | 10 | 15 | 3 | 132 | 22 | 11 | 0 |
| 21 | 3 | 11 | 9 | 64 | 10 | 18 | 8 | 140 | 23 | 18 | 4 |
| 22 | 3 | 15 | 2 | 65 | 11 | 2 | 1 | 144 | 24 | 12 | 0 |
| 23 | 3 | 18 | 7 | 66 | 11 | 5 | 6 | 150 | 25 | 12 | 6 |
| 24 | 4 | 2 | 0 | 67 | 11 | 8 | 11 | 175 | 29 | 17 | 11 |
| 25 | 4 | 5 | 5 | 68 | 11 | 12 | 4 | 200 | 34 | 3 | 4 |
| 26 | 4 | 8 | 10 | 69 | 11 | 15 | 9 | 250 | 42 | 14 | 2 |
| 27 | 4 | 12 | 3 | 70 | 11 | 19 | 2 | 300 | 51 | 5 | 0 |
| 28 | 4 | 15 | 8 | 71 | 12 | 2 | 7 | 365 | 62 | 7 | 1 |
| 29 | 4 | 19 | 1 | 72 | 12 | 6 | 0 | 400 | 68 | 6 | 8 |
| 30 | 5 | 2 | 6 | 73 | 12 | 9 | 5 | 500 | 85 | 8 | 4 |
| 31 | 5 | 5 | 11 | 74 | 12 | 12 | 10 | 600 | 102 | 10 | 0 |
| 32 | 5 | 9 | 4 | 75 | 12 | 16 | 3 | 700 | 119 | 11 | 8 |
| 33 | 5 | 12 | 9 | 76 | 12 | 19 | 8 | 750 | 128 | 2 | 6 |
| 34 | 5 | 16 | 2 | 77 | 13 | 3 | 1 | 800 | 136 | 13 | 4 |
| 35 | 5 | 19 | 7 | 78 | 13 | 6 | 6 | 900 | 153 | 15 | 0 |
| 36 | 6 | 3 | 0 | 79 | 13 | 9 | 11 | 1000 | 170 | 16 | 8 |
| 37 | 6 | 6 | 5 | 80 | 13 | 13 | 4 | 1250 | 213 | 10 | 10 |
| 38 | 6 | 9 | 10 | 81 | 13 | 16 | 9 | 1500 | 256 | 5 | 0 |
| 39 | 6 | 13 | 3 | 82 | 14 | 0 | 2 | 1750 | 298 | 19 | 2 |
| 40 | 6 | 16 | 8 | 83 | 14 | 3 | 7 | 2000 | 341 | 13 | 4 |
| 41 | 7 | 0 | 1 | 84 | 14 | 7 | 0 | 2240 | 382 | 13 | 4 |
| 42 | 7 | 3 | 6 | 85 | 14 | 10 | 5 | 3000 | 512 | 10 | 0 |
| 43 | 7 | 6 | 11 | 86 | 14 | 13 | 10 | 5000 | 854 | 3 | 4 |

## 3s. 6d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 3 | 6 | 44 | 7 | 14 | 0 | 87 | 15 | 4 | 6 |
| 2 | 0 | 7 | 0 | 45 | 7 | 17 | 6 | 88 | 15 | 8 | 0 |
| 3 | 0 | 10 | 6 | 46 | 8 | 1 | 0 | 89 | 15 | 11 | 6 |
| 4 | 0 | 14 | 0 | 47 | 8 | 4 | 6 | 90 | 15 | 15 | 0 |
| 5 | 0 | 17 | 6 | 48 | 8 | 8 | 0 | 91 | 15 | 18 | 6 |
| 6 | 1 | 1 | 0 | 49 | 8 | 11 | 6 | 92 | 16 | 2 | 0 |
| 7 | 1 | 4 | 6 | 50 | 8 | 15 | 0 | 93 | 16 | 5 | 6 |
| 8 | 1 | 8 | 0 | 51 | 8 | 18 | 6 | 94 | 16 | 9 | 0 |
| 9 | 1 | 11 | 6 | 52 | 9 | 2 | 0 | 95 | 16 | 12 | 6 |
| 10 | 1 | 15 | 0 | 53 | 9 | 5 | 6 | 96 | 16 | 16 | 0 |
| 11 | 1 | 18 | 6 | 54 | 9 | 9 | 0 | 97 | 16 | 19 | 6 |
| 12 | 2 | 2 | 0 | 55 | 9 | 12 | 6 | 98 | 17 | 3 | 0 |
| 13 | 2 | 5 | 6 | 56 | 9 | 16 | 0 | 99 | 17 | 6 | 6 |
| 14 | 2 | 9 | 0 | 57 | 9 | 19 | 6 | 100 | 17 | 10 | 0 |
| 15 | 2 | 12 | 6 | 58 | 10 | 3 | 0 | 108 | 18 | 18 | 0 |
| 16 | 2 | 16 | 0 | 59 | 10 | 6 | 6 | 110 | 19 | 5 | 0 |
| 17 | 2 | 19 | 6 | 60 | 10 | 10 | 0 | 112 | 19 | 12 | 0 |
| 18 | 3 | 3 | 0 | 61 | 10 | 13 | 6 | 120 | 21 | 0 | 0 |
| 19 | 3 | 6 | 6 | 62 | 10 | 17 | 0 | 130 | 22 | 15 | 0 |
| 20 | 3 | 10 | 0 | 63 | 11 | 0 | 6 | 132 | 23 | 2 | 0 |
| 21 | 3 | 13 | 6 | 64 | 11 | 4 | 0 | 140 | 24 | 10 | 0 |
| 22 | 3 | 17 | 0 | 65 | 11 | 7 | 6 | 144 | 25 | 4 | 0 |
| 23 | 4 | 0 | 6 | 66 | 11 | 11 | 0 | 150 | 26 | 5 | 0 |
| 24 | 4 | 4 | 0 | 67 | 11 | 14 | 6 | 175 | 30 | 12 | 6 |
| 25 | 4 | 7 | 6 | 68 | 11 | 18 | 0 | 200 | 35 | 0 | 0 |
| 26 | 4 | 11 | 0 | 69 | 12 | 1 | 6 | 250 | 43 | 15 | 0 |
| 27 | 4 | 14 | 6 | 70 | 12 | 5 | 0 | 300 | 52 | 10 | 0 |
| 28 | 4 | 18 | 0 | 71 | 12 | 8 | 6 | 365 | 63 | 17 | 6 |
| 29 | 5 | 1 | 6 | 72 | 12 | 12 | 0 | 400 | 70 | 0 | 0 |
| 30 | 5 | 5 | 0 | 73 | 12 | 15 | 6 | 500 | 87 | 10 | 0 |
| 31 | 5 | 8 | 6 | 74 | 12 | 19 | 0 | 600 | 105 | 0 | 0 |
| 32 | 5 | 12 | 0 | 75 | 13 | 2 | 6 | 700 | 122 | 10 | 0 |
| 33 | 5 | 15 | 6 | 76 | 13 | 6 | 0 | 750 | 131 | 5 | 0 |
| 34 | 5 | 19 | 0 | 77 | 13 | 9 | 6 | 800 | 140 | 0 | 0 |
| 35 | 6 | 2 | 6 | 78 | 13 | 13 | 0 | 900 | 157 | 10 | 0 |
| 36 | 6 | 6 | 0 | 79 | 13 | 16 | 6 | 1000 | 175 | 0 | 0 |
| 37 | 6 | 9 | 6 | 80 | 14 | 0 | 0 | 1250 | 218 | 15 | 0 |
| 38 | 6 | 13 | 0 | 81 | 14 | 3 | 6 | 1500 | 262 | 10 | 0 |
| 39 | 6 | 16 | 6 | 82 | 14 | 7 | 0 | 1750 | 306 | 5 | 0 |
| 40 | 7 | 0 | 0 | 83 | 14 | 10 | 6 | 2000 | 350 | 0 | 0 |
| 41 | 7 | 3 | 6 | 84 | 14 | 14 | 0 | 2240 | 392 | 0 | 0 |
| 42 | 7 | 7 | 0 | 85 | 14 | 17 | 6 | 3000 | 525 | 0 | 0 |
| 43 | 7 | 10 | 6 | 86 | 15 | 1 | 0 | 5000 | 875 | 0 | 0 |

## 3s. 8d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 3 | 8 | 44 | 8 | 1 | 4 | 87 | 15 | 19 | 0 |
| 2 | 0 | 7 | 4 | 45 | 8 | 5 | 0 | 88 | 16 | 2 | 8 |
| 3 | 0 | 11 | 0 | 46 | 8 | 8 | 8 | 89 | 16 | 6 | 4 |
| 4 | 0 | 14 | 8 | 47 | 8 | 12 | 4 | 90 | 16 | 10 | 0 |
| 5 | 0 | 18 | 4 | 48 | 8 | 16 | 0 | 91 | 16 | 13 | 8 |
| 6 | 1 | 2 | 0 | 49 | 8 | 19 | 8 | 92 | 16 | 17 | 4 |
| 7 | 1 | 5 | 8 | 50 | 9 | 3 | 4 | 93 | 17 | 1 | 0 |
| 8 | 1 | 9 | 4 | 51 | 9 | 7 | 0 | 94 | 17 | 4 | 8 |
| 9 | 1 | 13 | 0 | 52 | 9 | 10 | 8 | 95 | 17 | 8 | 4 |
| 10 | 1 | 16 | 8 | 53 | 9 | 14 | 4 | 96 | 17 | 12 | 0 |
| 11 | 2 | 0 | 4 | 54 | 9 | 18 | 0 | 97 | 17 | 15 | 8 |
| 12 | 2 | 4 | 0 | 55 | 10 | 1 | 8 | 98 | 17 | 19 | 4 |
| 13 | 2 | 7 | 8 | 56 | 10 | 5 | 4 | 99 | 18 | 3 | 0 |
| 14 | 2 | 11 | 4 | 57 | 10 | 9 | 0 | 100 | 18 | 6 | 8 |
| 15 | 2 | 15 | 0 | 58 | 10 | 12 | 8 | 108 | 19 | 16 | 0 |
| 16 | 2 | 18 | 8 | 59 | 10 | 16 | 4 | 110 | 20 | 3 | 4 |
| 17 | 3 | 2 | 4 | 60 | 11 | 0 | 0 | 112 | 20 | 10 | 8 |
| 18 | 3 | 6 | 0 | 61 | 11 | 3 | 8 | 120 | 22 | 0 | 0 |
| 19 | 3 | 9 | 8 | 62 | 11 | 7 | 4 | 130 | 23 | 16 | 8 |
| 20 | 3 | 13 | 4 | 63 | 11 | 11 | 0 | 132 | 24 | 4 | 0 |
| 21 | 3 | 17 | 0 | 64 | 11 | 14 | 8 | 140 | 25 | 13 | 4 |
| 22 | 4 | 0 | 8 | 65 | 11 | 18 | 4 | 144 | 26 | 8 | 0 |
| 23 | 4 | 4 | 4 | 66 | 12 | 2 | 0 | 150 | 27 | 10 | 0 |
| 24 | 4 | 8 | 0 | 67 | 12 | 5 | 8 | 175 | 32 | 1 | 8 |
| 25 | 4 | 11 | 8 | 68 | 12 | 9 | 4 | 200 | 36 | 13 | 4 |
| 26 | 4 | 15 | 4 | 69 | 12 | 13 | 0 | 250 | 45 | 16 | 8 |
| 27 | 4 | 19 | 0 | 70 | 12 | 16 | 8 | 300 | 55 | 0 | 0 |
| 28 | 5 | 2 | 8 | 71 | 13 | 0 | 4 | 365 | 66 | 18 | 4 |
| 29 | 5 | 6 | 4 | 72 | 13 | 4 | 0 | 400 | 73 | 6 | 8 |
| 30 | 5 | 10 | 0 | 73 | 13 | 7 | 8 | 500 | 91 | 13 | 4 |
| 31 | 5 | 13 | 8 | 74 | 13 | 11 | 4 | 600 | 110 | 0 | 0 |
| 32 | 5 | 17 | 4 | 75 | 13 | 15 | 0 | 700 | 128 | 6 | 8 |
| 33 | 6 | 1 | 0 | 76 | 13 | 18 | 8 | 750 | 137 | 10 | 0 |
| 34 | 6 | 4 | 8 | 77 | 14 | 2 | 4 | 800 | 146 | 13 | 4 |
| 35 | 6 | 8 | 4 | 78 | 14 | 6 | 0 | 900 | 165 | 0 | 0 |
| 36 | 6 | 12 | 0 | 79 | 14 | 9 | 8 | 1000 | 183 | 6 | 8 |
| 37 | 6 | 15 | 8 | 80 | 14 | 13 | 4 | 1250 | 229 | 3 | 4 |
| 38 | 6 | 19 | 4 | 81 | 14 | 17 | 0 | 1500 | 275 | 0 | 0 |
| 39 | 7 | 3 | 0 | 82 | 15 | 0 | 8 | 1750 | 320 | 16 | 8 |
| 40 | 7 | 6 | 8 | 83 | 15 | 4 | 4 | 2000 | 366 | 13 | 4 |
| 41 | 7 | 10 | 4 | 84 | 15 | 8 | 0 | 2240 | 410 | 13 | 4 |
| 42 | 7 | 14 | 0 | 85 | 15 | 11 | 8 | 3000 | 550 | 0 | 0 |
| 43 | 7 | 17 | 8 | 86 | 15 | 15 | 4 | 5000 | 916 | 13 | 4 |

## 3s. 9d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 3 | 9 | 44 | 8 | 5 | 0 | 87 | 16 | 6 | 3 |
| 2 | 0 | 7 | 6 | 45 | 8 | 8 | 9 | 88 | 16 | 10 | 0 |
| 3 | 0 | 11 | 3 | 46 | 8 | 12 | 6 | 89 | 16 | 13 | 9 |
| 4 | 0 | 15 | 0 | 47 | 8 | 16 | 3 | 90 | 16 | 17 | 6 |
| 5 | 0 | 18 | 9 | 48 | 9 | 0 | 0 | 91 | 17 | 1 | 3 |
| 6 | 1 | 2 | 6 | 49 | 9 | 3 | 9 | 92 | 17 | 5 | 0 |
| 7 | 1 | 6 | 3 | 50 | 9 | 7 | 6 | 93 | 17 | 8 | 9 |
| 8 | 1 | 10 | 0 | 51 | 9 | 11 | 3 | 94 | 17 | 12 | 6 |
| 9 | 1 | 13 | 9 | 52 | 9 | 15 | 0 | 95 | 17 | 16 | 3 |
| 10 | 1 | 17 | 6 | 53 | 9 | 18 | 9 | 96 | 18 | 0 | 0 |
| 11 | 2 | 1 | 3 | 54 | 10 | 2 | 6 | 97 | 18 | 3 | 9 |
| 12 | 2 | 5 | 0 | 55 | 10 | 6 | 3 | 98 | 18 | 7 | 6 |
| 13 | 2 | 8 | 9 | 56 | 10 | 10 | 0 | 99 | 18 | 11 | 3 |
| 14 | 2 | 12 | 6 | 57 | 10 | 13 | 9 | 100 | 18 | 15 | 0 |
| 15 | 2 | 16 | 3 | 58 | 10 | 17 | 6 | 108 | 20 | 5 | 0 |
| 16 | 3 | 0 | 0 | 59 | 11 | 1 | 3 | 110 | 20 | 12 | 6 |
| 17 | 3 | 3 | 9 | 60 | 11 | 5 | 0 | 112 | 21 | 0 | 0 |
| 18 | 3 | 7 | 6 | 61 | 11 | 8 | 9 | 120 | 22 | 10 | 0 |
| 19 | 3 | 11 | 3 | 62 | 11 | 12 | 6 | 130 | 24 | 7 | 6 |
| 20 | 3 | 15 | 0 | 63 | 11 | 16 | 3 | 132 | 24 | 15 | 0 |
| 21 | 3 | 18 | 9 | 64 | 12 | 0 | 0 | 140 | 26 | 5 | 0 |
| 22 | 4 | 2 | 6 | 65 | 12 | 3 | 9 | 144 | 27 | 0 | 0 |
| 23 | 4 | 6 | 3 | 66 | 12 | 7 | 6 | 150 | 28 | 2 | 6 |
| 24 | 4 | 10 | 0 | 67 | 12 | 11 | 3 | 175 | 32 | 16 | 3 |
| 25 | 4 | 13 | 9 | 68 | 12 | 15 | 0 | 200 | 37 | 10 | 0 |
| 26 | 4 | 17 | 6 | 69 | 12 | 18 | 9 | 250 | 46 | 17 | 6 |
| 27 | 5 | 1 | 3 | 70 | 13 | 2 | 6 | 300 | 56 | 5 | 0 |
| 28 | 5 | 5 | 0 | 71 | 13 | 6 | 3 | 365 | 68 | 8 | 9 |
| 29 | 5 | 8 | 9 | 72 | 13 | 10 | 0 | 400 | 75 | 0 | 0 |
| 30 | 5 | 12 | 6 | 73 | 13 | 13 | 9 | 500 | 93 | 15 | 0 |
| 31 | 5 | 16 | 3 | 74 | 13 | 17 | 6 | 600 | 112 | 10 | 0 |
| 32 | 6 | 0 | 0 | 75 | 14 | 1 | 3 | 700 | 131 | 5 | 0 |
| 33 | 6 | 3 | 9 | 76 | 14 | 5 | 0 | 750 | 140 | 12 | 6 |
| 34 | 6 | 7 | 6 | 77 | 14 | 8 | 9 | 800 | 150 | 0 | 0 |
| 35 | 6 | 11 | 3 | 78 | 14 | 12 | 6 | 900 | 168 | 15 | 0 |
| 36 | 6 | 15 | 0 | 79 | 14 | 16 | 3 | 1000 | 187 | 10 | 0 |
| 37 | 6 | 18 | 9 | 80 | 15 | 0 | 0 | 1250 | 234 | 7 | 6 |
| 38 | 7 | 2 | 6 | 81 | 15 | 3 | 9 | 1500 | 281 | 5 | 0 |
| 39 | 7 | 6 | 3 | 82 | 15 | 7 | 6 | 1750 | 328 | 2 | 6 |
| 40 | 7 | 10 | 0 | 83 | 15 | 11 | 3 | 2000 | 375 | 0 | 0 |
| 41 | 7 | 13 | 9 | 84 | 15 | 15 | 0 | 2240 | 420 | 0 | 0 |
| 42 | 7 | 17 | 6 | 85 | 15 | 18 | 9 | 3000 | 562 | 10 | 0 |
| 43 | 8 | 1 | 3 | 86 | 16 | 2 | 6 | 5000 | 937 | 10 | 0 |

## 3s. 11d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 3 | 11 | 44 | 8 | 12 | 4 | 87 | 17 | 0 | 9 |
| 2 | 0 | 7 | 10 | 45 | 8 | 16 | 3 | 88 | 17 | 4 | 8 |
| 3 | 0 | 11 | 9 | 46 | 9 | 0 | 2 | 89 | 17 | 8 | 7 |
| 4 | 0 | 15 | 8 | 47 | 9 | 4 | 1 | 90 | 17 | 12 | 6 |
| 5 | 0 | 19 | 7 | 48 | 9 | 8 | 0 | 91 | 17 | 16 | 5 |
| 6 | 1 | 3 | 6 | 49 | 9 | 11 | 11 | 92 | 18 | 0 | 4 |
| 7 | 1 | 7 | 5 | 50 | 9 | 15 | 10 | 93 | 18 | 4 | 3 |
| 8 | 1 | 11 | 4 | 51 | 9 | 19 | 9 | 94 | 18 | 8 | 2 |
| 9 | 1 | 15 | 3 | 52 | 10 | 3 | 8 | 95 | 18 | 12 | 1 |
| 10 | 1 | 19 | 2 | 53 | 10 | 7 | 7 | 96 | 18 | 16 | 0 |
| 11 | 2 | 3 | 1 | 54 | 10 | 11 | 6 | 97 | 18 | 19 | 11 |
| 12 | 2 | 7 | 0 | 55 | 10 | 15 | 5 | 98 | 19 | 3 | 10 |
| 13 | 2 | 10 | 11 | 56 | 10 | 19 | 4 | 99 | 19 | 7 | 9 |
| 14 | 2 | 14 | 10 | 57 | 11 | 3 | 3 | 100 | 19 | 11 | 8 |
| 15 | 2 | 18 | 9 | 58 | 11 | 7 | 2 | 108 | 21 | 3 | 0 |
| 16 | 3 | 2 | 8 | 59 | 11 | 11 | 1 | 110 | 21 | 10 | 10 |
| 17 | 3 | 6 | 7 | 60 | 11 | 15 | 0 | 112 | 21 | 18 | 8 |
| 18 | 3 | 10 | 6 | 61 | 11 | 18 | 11 | 120 | 23 | 10 | 0 |
| 19 | 3 | 14 | 5 | 62 | 12 | 2 | 10 | 130 | 25 | 9 | 2 |
| 20 | 3 | 18 | 4 | 63 | 12 | 6 | 9 | 132 | 25 | 17 | 0 |
| 21 | 4 | 2 | 3 | 64 | 12 | 10 | 8 | 140 | 27 | 8 | 4 |
| 22 | 4 | 6 | 2 | 65 | 12 | 14 | 7 | 144 | 28 | 4 | 0 |
| 23 | 4 | 10 | 1 | 66 | 12 | 18 | 6 | 150 | 29 | 7 | 6 |
| 24 | 4 | 14 | 0 | 67 | 13 | 2 | 5 | 175 | 34 | 5 | 5 |
| 25 | 4 | 17 | 11 | 68 | 13 | 6 | 4 | 200 | 39 | 3 | 4 |
| 26 | 5 | 1 | 10 | 69 | 13 | 10 | 3 | 250 | 48 | 19 | 2 |
| 27 | 5 | 5 | 9 | 70 | 13 | 14 | 2 | 300 | 58 | 15 | 0 |
| 28 | 5 | 9 | 8 | 71 | 13 | 18 | 1 | 365 | 71 | 9 | 7 |
| 29 | 5 | 13 | 7 | 72 | 14 | 2 | 0 | 400 | 78 | 6 | 8 |
| 30 | 5 | 17 | 6 | 73 | 14 | 5 | 11 | 500 | 97 | 18 | 4 |
| 31 | 6 | 1 | 5 | 74 | 14 | 9 | 10 | 600 | 117 | 10 | 0 |
| 32 | 6 | 5 | 4 | 75 | 14 | 13 | 9 | 700 | 137 | 1 | 8 |
| 33 | 6 | 9 | 3 | 76 | 14 | 17 | 8 | 750 | 146 | 17 | 6 |
| 34 | 6 | 13 | 2 | 77 | 15 | 1 | 7 | 800 | 156 | 13 | 4 |
| 35 | 6 | 17 | 1 | 78 | 15 | 5 | 6 | 900 | 176 | 5 | 0 |
| 36 | 7 | 1 | 0 | 79 | 15 | 9 | 5 | 1000 | 195 | 16 | 8 |
| 37 | 7 | 4 | 11 | 80 | 15 | 13 | 4 | 1250 | 244 | 15 | 10 |
| 38 | 7 | 8 | 10 | 81 | 15 | 17 | 3 | 1500 | 293 | 15 | 0 |
| 39 | 7 | 12 | 9 | 82 | 16 | 1 | 2 | 1750 | 342 | 14 | 2 |
| 40 | 7 | 16 | 8 | 83 | 16 | 5 | 1 | 2000 | 391 | 13 | 4 |
| 41 | 8 | 0 | 7 | 84 | 16 | 9 | 0 | 2240 | 438 | 13 | 4 |
| 42 | 8 | 4 | 6 | 85 | 16 | 12 | 11 | 3000 | 587 | 10 | 0 |
| 43 | 8 | 8 | 5 | 86 | 16 | 16 | 10 | 5000 | 979 | 8 | 4 |

## 3s. 10d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 3 | 10 | 44 | 8 | 8 | 8 | 87 | 16 | 13 | 6 |
| 2 | 0 | 7 | 8 | 45 | 8 | 12 | 6 | 88 | 16 | 17 | 4 |
| 3 | 0 | 11 | 6 | 46 | 8 | 16 | 4 | 89 | 17 | 1 | 2 |
| 4 | 0 | 15 | 4 | 47 | 9 | 0 | 2 | 90 | 17 | 5 | 0 |
| 5 | 0 | 19 | 2 | 48 | 9 | 4 | 0 | 91 | 17 | 8 | 10 |
| 6 | 1 | 3 | 0 | 49 | 9 | 7 | 10 | 92 | 17 | 12 | 8 |
| 7 | 1 | 6 | 10 | 50 | 9 | 11 | 8 | 93 | 17 | 16 | 6 |
| 8 | 1 | 10 | 8 | 51 | 9 | 15 | 6 | 94 | 18 | 0 | 4 |
| 9 | 1 | 14 | 6 | 52 | 9 | 19 | 4 | 95 | 18 | 4 | 2 |
| 10 | 1 | 18 | 4 | 53 | 10 | 3 | 2 | 96 | 18 | 8 | 0 |
| 11 | 2 | 2 | 2 | 54 | 10 | 7 | 0 | 97 | 18 | 11 | 10 |
| 12 | 2 | 6 | 0 | 55 | 10 | 10 | 10 | 98 | 18 | 15 | 8 |
| 13 | 2 | 9 | 10 | 56 | 10 | 14 | 8 | 99 | 18 | 19 | 6 |
| 14 | 2 | 13 | 8 | 57 | 10 | 18 | 6 | 100 | 19 | 3 | 4 |
| 15 | 2 | 17 | 6 | 58 | 11 | 2 | 4 | 108 | 20 | 14 | 0 |
| 16 | 3 | 1 | 4 | 59 | 11 | 6 | 2 | 110 | 21 | 1 | 8 |
| 17 | 3 | 5 | 2 | 60 | 11 | 10 | 0 | 112 | 21 | 9 | 4 |
| 18 | 3 | 9 | 0 | 61 | 11 | 13 | 10 | 120 | 23 | 0 | 0 |
| 19 | 3 | 12 | 10 | 62 | 11 | 17 | 8 | 130 | 24 | 18 | 4 |
| 20 | 3 | 16 | 8 | 63 | 12 | 1 | 6 | 132 | 25 | 6 | 0 |
| 21 | 4 | 0 | 6 | 64 | 12 | 5 | 4 | 140 | 26 | 16 | 8 |
| 22 | 4 | 4 | 4 | 65 | 12 | 9 | 2 | 144 | 27 | 12 | 0 |
| 23 | 4 | 8 | 2 | 66 | 12 | 13 | 0 | 150 | 28 | 15 | 0 |
| 24 | 4 | 12 | 0 | 67 | 12 | 16 | 10 | 175 | 33 | 10 | 10 |
| 25 | 4 | 15 | 10 | 68 | 13 | 0 | 8 | 200 | 38 | 6 | 8 |
| 26 | 4 | 19 | 8 | 69 | 13 | 4 | 6 | 250 | 47 | 18 | 4 |
| 27 | 5 | 3 | 6 | 70 | 13 | 8 | 4 | 300 | 57 | 10 | 0 |
| 28 | 5 | 7 | 4 | 71 | 13 | 12 | 2 | 365 | 69 | 19 | 2 |
| 29 | 5 | 11 | 2 | 72 | 13 | 16 | 0 | 400 | 76 | 13 | 4 |
| 30 | 5 | 15 | 0 | 73 | 13 | 19 | 10 | 500 | 95 | 16 | 8 |
| 31 | 5 | 18 | 10 | 74 | 14 | 3 | 8 | 600 | 115 | 0 | 0 |
| 32 | 6 | 2 | 8 | 75 | 14 | 7 | 6 | 700 | 134 | 3 | 4 |
| 33 | 6 | 6 | 6 | 76 | 14 | 11 | 4 | 750 | 143 | 15 | 0 |
| 34 | 6 | 10 | 4 | 77 | 14 | 15 | 2 | 800 | 153 | 6 | 8 |
| 35 | 6 | 14 | 2 | 78 | 14 | 19 | 0 | 900 | 172 | 10 | 0 |
| 36 | 6 | 18 | 0 | 79 | 15 | 2 | 10 | 1000 | 191 | 13 | 4 |
| 37 | 7 | 1 | 10 | 80 | 15 | 6 | 8 | 1250 | 239 | 11 | 8 |
| 38 | 7 | 5 | 8 | 81 | 15 | 10 | 6 | 1500 | 287 | 10 | 0 |
| 39 | 7 | 9 | 6 | 82 | 15 | 14 | 4 | 1750 | 335 | 8 | 4 |
| 40 | 7 | 13 | 4 | 83 | 15 | 18 | 2 | 2000 | 383 | 6 | 8 |
| 41 | 7 | 17 | 2 | 84 | 16 | 2 | 0 | 2240 | 429 | 6 | 8 |
| 42 | 8 | 1 | 0 | 85 | 16 | 5 | 10 | 3000 | 575 | 0 | 0 |
| 43 | 8 | 4 | 10 | 86 | 16 | 9 | 8 | 5000 | 958 | 6 | 8 |

## 4s.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 4 | 0 | 44 | 8 | 16 | 0 | 87 | 17 | 8 | 0 |
| 2 | 0 | 8 | 0 | 45 | 9 | 0 | 0 | 88 | 17 | 12 | 0 |
| 3 | 0 | 12 | 0 | 46 | 9 | 4 | 0 | 89 | 17 | 16 | 0 |
| 4 | 0 | 16 | 0 | 47 | 9 | 8 | 0 | 90 | 18 | 0 | 0 |
| 5 | 1 | 0 | 0 | 48 | 9 | 12 | 0 | 91 | 18 | 4 | 0 |
| 6 | 1 | 4 | 0 | 49 | 9 | 16 | 0 | 92 | 18 | 8 | 0 |
| 7 | 1 | 8 | 0 | 50 | 10 | 0 | 0 | 93 | 18 | 12 | 0 |
| 8 | 1 | 12 | 0 | 51 | 10 | 4 | 0 | 94 | 18 | 16 | 0 |
| 9 | 1 | 16 | 0 | 52 | 10 | 8 | 0 | 95 | 19 | 0 | 0 |
| 10 | 2 | 0 | 0 | 53 | 10 | 12 | 0 | 96 | 19 | 4 | 0 |
| 11 | 2 | 4 | 0 | 54 | 10 | 16 | 0 | 97 | 19 | 8 | 0 |
| 12 | 2 | 8 | 0 | 55 | 11 | 0 | 0 | 98 | 19 | 12 | 0 |
| 13 | 2 | 12 | 0 | 56 | 11 | 4 | 0 | 99 | 19 | 16 | 0 |
| 14 | 2 | 16 | 0 | 57 | 11 | 8 | 0 | 100 | 20 | 0 | 0 |
| 15 | 3 | 0 | 0 | 58 | 11 | 12 | 0 | 108 | 21 | 12 | 0 |
| 16 | 3 | 4 | 0 | 59 | 11 | 16 | 0 | 110 | 22 | 0 | 0 |
| 17 | 3 | 8 | 0 | 60 | 12 | 0 | 0 | 112 | 22 | 8 | 0 |
| 18 | 3 | 12 | 0 | 61 | 12 | 4 | 0 | 120 | 24 | 0 | 0 |
| 19 | 3 | 16 | 0 | 62 | 12 | 8 | 0 | 130 | 26 | 0 | 0 |
| 20 | 4 | 0 | 0 | 63 | 12 | 12 | 0 | 132 | 26 | 8 | 0 |
| 21 | 4 | 4 | 0 | 64 | 12 | 16 | 0 | 140 | 28 | 0 | 0 |
| 22 | 4 | 8 | 0 | 65 | 13 | 0 | 0 | 144 | 28 | 16 | 0 |
| 23 | 4 | 12 | 0 | 66 | 13 | 4 | 0 | 150 | 30 | 0 | 0 |
| 24 | 4 | 16 | 0 | 67 | 13 | 8 | 0 | 175 | 35 | 0 | 0 |
| 25 | 5 | 0 | 0 | 68 | 13 | 12 | 0 | 200 | 40 | 0 | 0 |
| 26 | 5 | 4 | 0 | 69 | 13 | 16 | 0 | 250 | 50 | 0 | 0 |
| 27 | 5 | 8 | 0 | 70 | 14 | 0 | 0 | 300 | 60 | 0 | 0 |
| 28 | 5 | 12 | 0 | 71 | 14 | 4 | 0 | 365 | 73 | 0 | 0 |
| 29 | 5 | 16 | 0 | 72 | 14 | 8 | 0 | 400 | 80 | 0 | 0 |
| 30 | 6 | 0 | 0 | 73 | 14 | 12 | 0 | 500 | 100 | 0 | 0 |
| 31 | 6 | 4 | 0 | 74 | 14 | 16 | 0 | 600 | 120 | 0 | 0 |
| 32 | 6 | 8 | 0 | 75 | 15 | 0 | 0 | 700 | 140 | 0 | 0 |
| 33 | 6 | 12 | 0 | 76 | 15 | 4 | 0 | 750 | 150 | 0 | 0 |
| 34 | 6 | 16 | 0 | 77 | 15 | 8 | 0 | 800 | 160 | 0 | 0 |
| 35 | 7 | 0 | 0 | 78 | 15 | 12 | 0 | 900 | 180 | 0 | 0 |
| 36 | 7 | 4 | 0 | 79 | 15 | 16 | 0 | 1000 | 200 | 0 | 0 |
| 37 | 7 | 8 | 0 | 80 | 16 | 0 | 0 | 1250 | 250 | 0 | 0 |
| 38 | 7 | 12 | 0 | 81 | 16 | 4 | 0 | 1500 | 300 | 0 | 0 |
| 39 | 7 | 16 | 0 | 82 | 16 | 8 | 0 | 1750 | 350 | 0 | 0 |
| 40 | 8 | 0 | 0 | 83 | 16 | 12 | 0 | 2000 | 400 | 0 | 0 |
| 41 | 8 | 4 | 0 | 84 | 16 | 16 | 0 | 2240 | 448 | 0 | 0 |
| 42 | 8 | 8 | 0 | 85 | 17 | 0 | 0 | 3000 | 600 | 0 | 0 |
| 43 | 8 | 12 | 0 | 86 | 17 | 4 | 0 | 5000 | 1000 | 0 | 0 |

## 4s. 1d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 4 | 1 | 44 | 8 | 19 | 8 | 87 | 17 | 15 | 3 |
| 2 | 0 | 8 | 2 | 45 | 9 | 3 | 9 | 88 | 17 | 19 | 4 |
| 3 | 0 | 12 | 3 | 46 | 9 | 7 | 10 | 89 | 18 | 3 | 5 |
| 4 | 0 | 16 | 4 | 47 | 9 | 11 | 11 | 90 | 18 | 7 | 6 |
| 5 | 1 | 0 | 5 | 48 | 9 | 16 | 0 | 91 | 18 | 11 | 7 |
| 6 | 1 | 4 | 6 | 49 | 10 | 0 | 1 | 92 | 18 | 15 | 8 |
| 7 | 1 | 8 | 7 | 50 | 10 | 4 | 2 | 93 | 18 | 19 | 9 |
| 8 | 1 | 12 | 8 | 51 | 10 | 8 | 3 | 94 | 19 | 3 | 10 |
| 9 | 1 | 16 | 9 | 52 | 10 | 12 | 4 | 95 | 19 | 7 | 11 |
| 10 | 2 | 0 | 10 | 53 | 10 | 16 | 5 | 96 | 19 | 12 | 0 |
| 11 | 2 | 4 | 11 | 54 | 11 | 0 | 6 | 97 | 19 | 16 | 1 |
| 12 | 2 | 9 | 0 | 55 | 11 | 4 | 7 | 98 | 20 | 0 | 2 |
| 13 | 2 | 13 | 1 | 56 | 11 | 8 | 8 | 99 | 20 | 4 | 3 |
| 14 | 2 | 17 | 2 | 57 | 11 | 12 | 9 | 100 | 20 | 8 | 4 |
| 15 | 3 | 1 | 3 | 58 | 11 | 16 | 10 | 108 | 22 | 1 | 0 |
| 16 | 3 | 5 | 4 | 59 | 12 | 0 | 11 | 110 | 22 | 9 | 2 |
| 17 | 3 | 9 | 5 | 60 | 12 | 5 | 0 | 112 | 22 | 17 | 4 |
| 18 | 3 | 13 | 6 | 61 | 12 | 9 | 1 | 120 | 24 | 10 | 0 |
| 19 | 3 | 17 | 7 | 62 | 12 | 13 | 2 | 130 | 26 | 10 | 10 |
| 20 | 4 | 1 | 8 | 63 | 12 | 17 | 3 | 132 | 26 | 19 | 0 |
| 21 | 4 | 5 | 9 | 64 | 13 | 1 | 4 | 140 | 28 | 11 | 8 |
| 22 | 4 | 9 | 10 | 65 | 13 | 5 | 5 | 144 | 29 | 8 | 0 |
| 23 | 4 | 13 | 11 | 66 | 13 | 9 | 6 | 150 | 30 | 12 | 6 |
| 24 | 4 | 18 | 0 | 67 | 13 | 13 | 7 | 175 | 35 | 14 | 7 |
| 25 | 5 | 2 | 1 | 68 | 13 | 17 | 8 | 200 | 40 | 16 | 8 |
| 26 | 5 | 6 | 2 | 69 | 14 | 1 | 9 | 250 | 51 | 0 | 10 |
| 27 | 5 | 10 | 3 | 70 | 14 | 5 | 10 | 300 | 61 | 5 | 0 |
| 28 | 5 | 14 | 4 | 71 | 14 | 9 | 11 | 365 | 74 | 10 | 5 |
| 29 | 5 | 18 | 5 | 72 | 14 | 14 | 0 | 400 | 81 | 13 | 4 |
| 30 | 6 | 2 | 6 | 73 | 14 | 18 | 1 | 500 | 102 | 1 | 8 |
| 31 | 6 | 6 | 7 | 74 | 15 | 2 | 2 | 600 | 122 | 10 | 0 |
| 32 | 6 | 10 | 8 | 75 | 15 | 6 | 3 | 700 | 142 | 18 | 4 |
| 33 | 6 | 14 | 9 | 76 | 15 | 10 | 4 | 750 | 153 | 2 | 6 |
| 34 | 6 | 18 | 10 | 77 | 15 | 14 | 5 | 800 | 163 | 6 | 8 |
| 35 | 7 | 2 | 11 | 78 | 15 | 18 | 6 | 900 | 183 | 15 | 0 |
| 36 | 7 | 7 | 0 | 79 | 16 | 2 | 7 | 1000 | 204 | 3 | 4 |
| 37 | 7 | 11 | 1 | 80 | 16 | 6 | 8 | 1250 | 255 | 4 | 2 |
| 38 | 7 | 15 | 2 | 81 | 16 | 10 | 9 | 1500 | 306 | 5 | 0 |
| 39 | 7 | 19 | 3 | 82 | 16 | 14 | 10 | 1750 | 357 | 5 | 10 |
| 40 | 8 | 3 | 4 | 83 | 16 | 18 | 11 | 2000 | 408 | 6 | 8 |
| 41 | 8 | 7 | 5 | 84 | 17 | 3 | 0 | 2240 | 457 | 6 | 8 |
| 42 | 8 | 11 | 6 | 85 | 17 | 7 | 1 | 3000 | 612 | 10 | 0 |
| 43 | 8 | 15 | 7 | 86 | 17 | 11 | 2 | 5000 | 1020 | 16 | 8 |

## 4s. 2d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 4 | 2 | 44 | 9 | 3 | 4 | 87 | 18 | 2 | 6 |
| 2 | 0 | 8 | 4 | 45 | 9 | 7 | 6 | 88 | 18 | 6 | 8 |
| 3 | 0 | 12 | 6 | 46 | 9 | 11 | 8 | 89 | 18 | 10 | 10 |
| 4 | 0 | 16 | 8 | 47 | 9 | 15 | 10 | 90 | 18 | 15 | 0 |
| 5 | 1 | 0 | 10 | 48 | 10 | 0 | 0 | 91 | 18 | 19 | 2 |
| 6 | 1 | 5 | 0 | 49 | 10 | 4 | 2 | 92 | 19 | 3 | 4 |
| 7 | 1 | 9 | 2 | 50 | 10 | 8 | 4 | 93 | 19 | 7 | 6 |
| 8 | 1 | 13 | 4 | 51 | 10 | 12 | 6 | 94 | 19 | 11 | 8 |
| 9 | 1 | 17 | 6 | 52 | 10 | 16 | 8 | 95 | 19 | 15 | 10 |
| 10 | 2 | 1 | 8 | 53 | 11 | 0 | 10 | 96 | 20 | 0 | 0 |
| 11 | 2 | 5 | 10 | 54 | 11 | 5 | 0 | 97 | 20 | 4 | 2 |
| 12 | 2 | 10 | 0 | 55 | 11 | 9 | 2 | 98 | 20 | 8 | 4 |
| 13 | 2 | 14 | 2 | 56 | 11 | 13 | 4 | 99 | 20 | 12 | 6 |
| 14 | 2 | 18 | 4 | 57 | 11 | 17 | 6 | 100 | 20 | 16 | 8 |
| 15 | 3 | 2 | 6 | 58 | 12 | 1 | 8 | 108 | 22 | 10 | 0 |
| 16 | 3 | 6 | 8 | 59 | 12 | 5 | 10 | 110 | 22 | 18 | 4 |
| 17 | 3 | 10 | 10 | 60 | 12 | 10 | 0 | 112 | 23 | 6 | 8 |
| 18 | 3 | 15 | 0 | 61 | 12 | 14 | 2 | 120 | 25 | 0 | 0 |
| 19 | 3 | 19 | 2 | 62 | 12 | 18 | 4 | 130 | 27 | 1 | 8 |
| 20 | 4 | 3 | 4 | 63 | 13 | 2 | 6 | 132 | 27 | 10 | 0 |
| 21 | 4 | 7 | 6 | 64 | 13 | 6 | 8 | 140 | 29 | 3 | 4 |
| 22 | 4 | 11 | 8 | 65 | 13 | 10 | 10 | 144 | 30 | 0 | 0 |
| 23 | 4 | 15 | 10 | 66 | 13 | 15 | 0 | 150 | 31 | 5 | 0 |
| 24 | 5 | 0 | 0 | 67 | 13 | 19 | 2 | 175 | 36 | 9 | 2 |
| 25 | 5 | 4 | 2 | 68 | 14 | 3 | 4 | 200 | 41 | 13 | 4 |
| 26 | 5 | 8 | 4 | 69 | 14 | 7 | 6 | 250 | 52 | 1 | 8 |
| 27 | 5 | 12 | 6 | 70 | 14 | 11 | 8 | 300 | 62 | 10 | 0 |
| 28 | 5 | 16 | 8 | 71 | 14 | 15 | 10 | 365 | 76 | 0 | 10 |
| 29 | 6 | 0 | 10 | 72 | 15 | 0 | 0 | 400 | 83 | 6 | 8 |
| 30 | 6 | 5 | 0 | 73 | 15 | 4 | 2 | 500 | 104 | 3 | 4 |
| 31 | 6 | 9 | 2 | 74 | 15 | 8 | 4 | 600 | 125 | 0 | 0 |
| 32 | 6 | 13 | 4 | 75 | 15 | 12 | 6 | 700 | 145 | 16 | 8 |
| 33 | 6 | 17 | 6 | 76 | 15 | 16 | 8 | 750 | 156 | 5 | 0 |
| 34 | 7 | 1 | 8 | 77 | 16 | 0 | 10 | 800 | 166 | 13 | 4 |
| 35 | 7 | 5 | 10 | 78 | 16 | 5 | 0 | 900 | 187 | 10 | 0 |
| 36 | 7 | 10 | 0 | 79 | 16 | 9 | 2 | 1000 | 208 | 6 | 8 |
| 37 | 7 | 14 | 2 | 80 | 16 | 13 | 4 | 1250 | 260 | 8 | 4 |
| 38 | 7 | 18 | 4 | 81 | 16 | 17 | 6 | 1500 | 312 | 10 | 0 |
| 39 | 8 | 2 | 6 | 82 | 17 | 1 | 8 | 1750 | 364 | 11 | 8 |
| 40 | 8 | 6 | 8 | 83 | 17 | 5 | 10 | 2000 | 416 | 13 | 4 |
| 41 | 8 | 10 | 10 | 84 | 17 | 10 | 0 | 2240 | 466 | 13 | 4 |
| 42 | 8 | 15 | 0 | 85 | 17 | 14 | 2 | 3000 | 625 | 0 | 0 |
| 43 | 8 | 19 | 2 | 86 | 17 | 18 | 4 | 5000 | 1041 | 13 | 4 |

## 4s. 3d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 4 | 3 | 44 | 9 | 7 | 0 | 87 | 18 | 9 | 9 |
| 2 | 0 | 8 | 6 | 45 | 9 | 11 | 3 | 88 | 18 | 14 | 0 |
| 3 | 0 | 12 | 9 | 46 | 9 | 15 | 6 | 89 | 18 | 18 | 3 |
| 4 | 0 | 17 | 0 | 47 | 9 | 19 | 9 | 90 | 19 | 2 | 6 |
| 5 | 1 | 1 | 3 | 48 | 10 | 4 | 0 | 91 | 19 | 6 | 9 |
| 6 | 1 | 5 | 6 | 49 | 10 | 8 | 3 | 92 | 19 | 11 | 0 |
| 7 | 1 | 9 | 9 | 50 | 10 | 12 | 6 | 93 | 19 | 15 | 3 |
| 8 | 1 | 14 | 0 | 51 | 10 | 16 | 9 | 94 | 19 | 19 | 6 |
| 9 | 1 | 18 | 3 | 52 | 11 | 1 | 0 | 95 | 20 | 3 | 9 |
| 10 | 2 | 2 | 6 | 53 | 11 | 5 | 3 | 96 | 20 | 8 | 0 |
| 11 | 2 | 6 | 9 | 54 | 11 | 9 | 6 | 97 | 20 | 12 | 3 |
| 12 | 2 | 11 | 0 | 55 | 11 | 13 | 9 | 98 | 20 | 16 | 6 |
| 13 | 2 | 15 | 3 | 56 | 11 | 18 | 0 | 99 | 21 | 0 | 9 |
| 14 | 2 | 19 | 6 | 57 | 12 | 2 | 3 | 100 | 21 | 5 | 0 |
| 15 | 3 | 3 | 9 | 58 | 12 | 6 | 6 | 108 | 22 | 19 | 0 |
| 16 | 3 | 8 | 0 | 59 | 12 | 10 | 9 | 110 | 23 | 7 | 6 |
| 17 | 3 | 12 | 3 | 60 | 12 | 15 | 0 | 112 | 23 | 16 | 0 |
| 18 | 3 | 16 | 6 | 61 | 12 | 19 | 3 | 120 | 25 | 10 | 0 |
| 19 | 4 | 0 | 9 | 62 | 13 | 3 | 6 | 130 | 27 | 12 | 6 |
| 20 | 4 | 5 | 0 | 63 | 13 | 7 | 9 | 132 | 28 | 1 | 0 |
| 21 | 4 | 9 | 3 | 64 | 13 | 12 | 0 | 140 | 29 | 15 | 0 |
| 22 | 4 | 13 | 6 | 65 | 13 | 16 | 3 | 144 | 30 | 12 | 0 |
| 23 | 4 | 17 | 9 | 66 | 14 | 0 | 6 | 150 | 31 | 17 | 6 |
| 24 | 5 | 2 | 0 | 67 | 14 | 4 | 9 | 175 | 37 | 3 | 9 |
| 25 | 5 | 6 | 3 | 68 | 14 | 9 | 0 | 200 | 42 | 10 | 0 |
| 26 | 5 | 10 | 6 | 69 | 14 | 13 | 3 | 250 | 53 | 2 | 6 |
| 27 | 5 | 14 | 9 | 70 | 14 | 17 | 6 | 300 | 63 | 15 | 0 |
| 28 | 5 | 19 | 0 | 71 | 15 | 1 | 9 | 365 | 77 | 11 | 3 |
| 29 | 6 | 3 | 3 | 72 | 15 | 6 | 0 | 400 | 85 | 0 | 0 |
| 30 | 6 | 7 | 6 | 73 | 15 | 10 | 3 | 500 | 106 | 5 | 0 |
| 31 | 6 | 11 | 9 | 74 | 15 | 14 | 6 | 600 | 127 | 10 | 0 |
| 32 | 6 | 16 | 0 | 75 | 15 | 18 | 9 | 700 | 148 | 15 | 0 |
| 33 | 7 | 0 | 3 | 76 | 16 | 3 | 0 | 750 | 159 | 7 | 6 |
| 34 | 7 | 4 | 6 | 77 | 16 | 7 | 3 | 800 | 170 | 0 | 0 |
| 35 | 7 | 8 | 9 | 78 | 16 | 11 | 6 | 900 | 191 | 5 | 0 |
| 36 | 7 | 13 | 0 | 79 | 16 | 15 | 9 | 1000 | 212 | 10 | 0 |
| 37 | 7 | 17 | 3 | 80 | 17 | 0 | 0 | 1250 | 265 | 12 | 6 |
| 38 | 8 | 1 | 6 | 81 | 17 | 4 | 3 | 1500 | 318 | 15 | 0 |
| 39 | 8 | 5 | 9 | 82 | 17 | 8 | 6 | 1750 | 371 | 17 | 6 |
| 40 | 8 | 10 | 0 | 83 | 17 | 12 | 9 | 2000 | 425 | 0 | 0 |
| 41 | 8 | 14 | 3 | 84 | 17 | 17 | 0 | 2240 | 476 | 0 | 0 |
| 42 | 8 | 18 | 6 | 85 | 18 | 1 | 3 | 3000 | 637 | 10 | 0 |
| 43 | 9 | 2 | 9 | 86 | 18 | 5 | 6 | 5000 | 1062 | 10 | 0 |

## 4s. 4d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 4 | 4 | 44 | 9 | 10 | 8 | 87 | 18 | 17 | 0 |
| 2 | 0 | 8 | 8 | 45 | 9 | 15 | 0 | 88 | 19 | 1 | 4 |
| 3 | 0 | 13 | 0 | 46 | 9 | 19 | 4 | 89 | 19 | 5 | 8 |
| 4 | 0 | 17 | 4 | 47 | 10 | 3 | 8 | 90 | 19 | 10 | 0 |
| 5 | 1 | 1 | 8 | 48 | 10 | 8 | 0 | 91 | 19 | 14 | 4 |
| 6 | 1 | 6 | 0 | 49 | 10 | 12 | 4 | 92 | 19 | 18 | 8 |
| 7 | 1 | 10 | 4 | 50 | 10 | 16 | 8 | 93 | 20 | 3 | 0 |
| 8 | 1 | 14 | 8 | 51 | 11 | 1 | 0 | 94 | 20 | 7 | 4 |
| 9 | 1 | 19 | 0 | 52 | 11 | 5 | 4 | 95 | 20 | 11 | 8 |
| 10 | 2 | 3 | 4 | 53 | 11 | 9 | 8 | 96 | 20 | 16 | 0 |
| 11 | 2 | 7 | 8 | 54 | 11 | 14 | 0 | 97 | 21 | 0 | 4 |
| 12 | 2 | 12 | 0 | 55 | 11 | 18 | 4 | 98 | 21 | 4 | 8 |
| 13 | 2 | 16 | 4 | 56 | 12 | 2 | 8 | 99 | 21 | 9 | 0 |
| 14 | 3 | 0 | 8 | 57 | 12 | 7 | 0 | 100 | 21 | 13 | 4 |
| 15 | 3 | 5 | 0 | 58 | 12 | 11 | 4 | 108 | 23 | 8 | 0 |
| 16 | 3 | 9 | 4 | 59 | 12 | 15 | 8 | 110 | 23 | 16 | 8 |
| 17 | 3 | 13 | 8 | 60 | 13 | 0 | 0 | 112 | 24 | 5 | 4 |
| 18 | 3 | 18 | 0 | 61 | 13 | 4 | 4 | 120 | 26 | 0 | 0 |
| 19 | 4 | 2 | 4 | 62 | 13 | 8 | 8 | 130 | 28 | 3 | 4 |
| 20 | 4 | 6 | 8 | 63 | 13 | 13 | 0 | 132 | 28 | 12 | 0 |
| 21 | 4 | 11 | 0 | 64 | 13 | 17 | 4 | 140 | 30 | 6 | 8 |
| 22 | 4 | 15 | 4 | 65 | 14 | 1 | 8 | 144 | 31 | 4 | 0 |
| 23 | 4 | 19 | 8 | 66 | 14 | 6 | 0 | 150 | 32 | 10 | 0 |
| 24 | 5 | 4 | 0 | 67 | 14 | 10 | 4 | 175 | 37 | 18 | 4 |
| 25 | 5 | 8 | 4 | 68 | 14 | 14 | 8 | 200 | 43 | 6 | 8 |
| 26 | 5 | 12 | 8 | 69 | 14 | 19 | 0 | 250 | 54 | 3 | 4 |
| 27 | 5 | 17 | 0 | 70 | 15 | 3 | 4 | 300 | 65 | 0 | 0 |
| 28 | 6 | 1 | 4 | 71 | 15 | 7 | 8 | 365 | 79 | 1 | 8 |
| 29 | 6 | 5 | 8 | 72 | 15 | 12 | 0 | 400 | 86 | 13 | 4 |
| 30 | 6 | 10 | 0 | 73 | 15 | 16 | 4 | 500 | 108 | 6 | 8 |
| 31 | 6 | 14 | 4 | 74 | 16 | 0 | 8 | 600 | 130 | 0 | 0 |
| 32 | 6 | 18 | 8 | 75 | 16 | 5 | 0 | 700 | 151 | 13 | 4 |
| 33 | 7 | 3 | 0 | 76 | 16 | 9 | 4 | 750 | 162 | 10 | 0 |
| 34 | 7 | 7 | 4 | 77 | 16 | 13 | 8 | 800 | 173 | 6 | 8 |
| 35 | 7 | 11 | 8 | 78 | 16 | 18 | 0 | 900 | 195 | 0 | 0 |
| 36 | 7 | 16 | 0 | 79 | 17 | 2 | 4 | 1000 | 216 | 13 | 4 |
| 37 | 8 | 0 | 4 | 80 | 17 | 6 | 8 | 1250 | 270 | 16 | 8 |
| 38 | 8 | 4 | 8 | 81 | 17 | 11 | 0 | 1500 | 325 | 0 | 0 |
| 39 | 8 | 9 | 0 | 82 | 17 | 15 | 4 | 1750 | 379 | 3 | 4 |
| 40 | 8 | 13 | 4 | 83 | 17 | 19 | 8 | 2000 | 433 | 6 | 8 |
| 41 | 8 | 17 | 8 | 84 | 18 | 4 | 0 | 2240 | 485 | 6 | 8 |
| 42 | 9 | 2 | 0 | 85 | 18 | 8 | 4 | 3000 | 650 | 0 | 0 |
| 43 | 9 | 6 | 4 | 86 | 18 | 12 | 8 | 5000 | 1083 | 6 | 8 |

## 4s. 5d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 4 | 5 | 44 | 9 | 14 | 4 | 87 | 19 | 4 | 3 |
| 2 | 0 | 8 | 10 | 45 | 9 | 18 | 9 | 88 | 19 | 8 | 8 |
| 3 | 0 | 13 | 3 | 46 | 10 | 3 | 2 | 89 | 19 | 13 | 1 |
| 4 | 0 | 17 | 8 | 47 | 10 | 7 | 7 | 90 | 19 | 17 | 6 |
| 5 | 1 | 2 | 1 | 48 | 10 | 12 | 0 | 91 | 20 | 1 | 11 |
| 6 | 1 | 6 | 6 | 49 | 10 | 16 | 5 | 92 | 20 | 6 | 4 |
| 7 | 1 | 10 | 11 | 50 | 11 | 0 | 10 | 93 | 20 | 10 | 9 |
| 8 | 1 | 15 | 4 | 51 | 11 | 5 | 3 | 94 | 20 | 15 | 2 |
| 9 | 1 | 19 | 9 | 52 | 11 | 9 | 8 | 95 | 20 | 19 | 7 |
| 10 | 2 | 4 | 2 | 53 | 11 | 14 | 1 | 96 | 21 | 4 | 0 |
| 11 | 2 | 8 | 7 | 54 | 11 | 18 | 6 | 97 | 21 | 8 | 5 |
| 12 | 2 | 13 | 0 | 55 | 12 | 2 | 11 | 98 | 21 | 12 | 10 |
| 13 | 2 | 17 | 5 | 56 | 12 | 7 | 4 | 99 | 21 | 17 | 3 |
| 14 | 3 | 1 | 10 | 57 | 12 | 11 | 9 | 100 | 22 | 1 | 8 |
| 15 | 3 | 6 | 3 | 58 | 12 | 16 | 2 | 108 | 23 | 17 | 0 |
| 16 | 3 | 10 | 8 | 59 | 13 | 0 | 7 | 110 | 24 | 5 | 10 |
| 17 | 3 | 15 | 1 | 60 | 13 | 5 | 0 | 112 | 24 | 14 | 8 |
| 18 | 3 | 19 | 6 | 61 | 13 | 9 | 5 | 120 | 26 | 10 | 0 |
| 19 | 4 | 3 | 11 | 62 | 13 | 13 | 10 | 130 | 28 | 14 | 2 |
| 20 | 4 | 8 | 4 | 63 | 13 | 18 | 3 | 132 | 29 | 3 | 0 |
| 21 | 4 | 12 | 9 | 64 | 14 | 2 | 8 | 140 | 30 | 18 | 4 |
| 22 | 4 | 17 | 2 | 65 | 14 | 7 | 1 | 144 | 31 | 16 | 0 |
| 23 | 5 | 1 | 7 | 66 | 14 | 11 | 6 | 150 | 33 | 2 | 6 |
| 24 | 5 | 6 | 0 | 67 | 14 | 15 | 11 | 175 | 38 | 12 | 11 |
| 25 | 5 | 10 | 5 | 68 | 15 | 0 | 4 | 200 | 44 | 3 | 4 |
| 26 | 5 | 14 | 10 | 69 | 15 | 4 | 9 | 250 | 55 | 4 | 2 |
| 27 | 5 | 19 | 3 | 70 | 15 | 9 | 2 | 300 | 66 | 5 | 0 |
| 28 | 6 | 3 | 8 | 71 | 15 | 13 | 7 | 365 | 80 | 12 | 1 |
| 29 | 6 | 8 | 1 | 72 | 15 | 18 | 0 | 400 | 88 | 6 | 8 |
| 30 | 6 | 12 | 6 | 73 | 16 | 2 | 5 | 500 | 110 | 8 | 4 |
| 31 | 6 | 16 | 11 | 74 | 16 | 6 | 10 | 600 | 132 | 10 | 0 |
| 32 | 7 | 1 | 4 | 75 | 16 | 11 | 3 | 700 | 154 | 11 | 8 |
| 33 | 7 | 5 | 9 | 76 | 16 | 15 | 8 | 750 | 165 | 12 | 6 |
| 34 | 7 | 10 | 2 | 77 | 17 | 0 | 1 | 800 | 176 | 13 | 4 |
| 35 | 7 | 14 | 7 | 78 | 17 | 4 | 6 | 900 | 198 | 15 | 0 |
| 36 | 7 | 19 | 0 | 79 | 17 | 8 | 11 | 1000 | 220 | 16 | 8 |
| 37 | 8 | 3 | 5 | 80 | 17 | 13 | 4 | 1250 | 276 | 0 | 10 |
| 38 | 8 | 7 | 10 | 81 | 17 | 17 | 9 | 1500 | 331 | 5 | 0 |
| 39 | 8 | 12 | 3 | 82 | 18 | 2 | 2 | 1750 | 386 | 9 | 2 |
| 40 | 8 | 16 | 8 | 83 | 18 | 6 | 7 | 2000 | 441 | 13 | 4 |
| 41 | 9 | 1 | 1 | 84 | 18 | 11 | 0 | 2240 | 494 | 13 | 4 |
| 42 | 9 | 5 | 6 | 85 | 18 | 15 | 5 | 3000 | 662 | 10 | 0 |
| 43 | 9 | 9 | 11 | 86 | 18 | 19 | 10 | 5000 | 1104 | 3 | 4 |

## 4s. 7d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 4 | 7 | 44 | 10 | 1 | 8 | 87 | 19 | 18 | 9 |
| 2 | 0 | 9 | 2 | 45 | 10 | 6 | 3 | 88 | 20 | 3 | 4 |
| 3 | 0 | 13 | 9 | 46 | 10 | 10 | 10 | 89 | 20 | 7 | 11 |
| 4 | 0 | 18 | 4 | 47 | 10 | 15 | 5 | 90 | 20 | 12 | 6 |
| 5 | 1 | 2 | 11 | 48 | 11 | 0 | 0 | 91 | 20 | 17 | 1 |
| 6 | 1 | 7 | 6 | 49 | 11 | 4 | 7 | 92 | 21 | 1 | 8 |
| 7 | 1 | 12 | 1 | 50 | 11 | 9 | 2 | 93 | 21 | 6 | 3 |
| 8 | 1 | 16 | 8 | 51 | 11 | 13 | 9 | 94 | 21 | 10 | 10 |
| 9 | 2 | 1 | 3 | 52 | 11 | 18 | 4 | 95 | 21 | 15 | 5 |
| 10 | 2 | 5 | 10 | 53 | 12 | 2 | 11 | 96 | 22 | 0 | 0 |
| 11 | 2 | 10 | 5 | 54 | 12 | 7 | 6 | 97 | 22 | 4 | 7 |
| 12 | 2 | 15 | 0 | 55 | 12 | 12 | 1 | 98 | 22 | 9 | 2 |
| 13 | 2 | 19 | 7 | 56 | 12 | 16 | 8 | 99 | 22 | 13 | 9 |
| 14 | 3 | 4 | 2 | 57 | 13 | 1 | 3 | 100 | 22 | 18 | 4 |
| 15 | 3 | 8 | 9 | 58 | 13 | 5 | 10 | 108 | 24 | 15 | 0 |
| 16 | 3 | 13 | 4 | 59 | 13 | 10 | 5 | 110 | 25 | 4 | 2 |
| 17 | 3 | 17 | 11 | 60 | 13 | 15 | 0 | 112 | 25 | 13 | 4 |
| 18 | 4 | 2 | 6 | 61 | 13 | 19 | 7 | 120 | 27 | 10 | 0 |
| 19 | 4 | 7 | 1 | 62 | 14 | 4 | 2 | 130 | 29 | 15 | 10 |
| 20 | 4 | 11 | 8 | 63 | 14 | 8 | 9 | 132 | 30 | 5 | 0 |
| 21 | 4 | 16 | 3 | 64 | 14 | 13 | 4 | 140 | 32 | 1 | 8 |
| 22 | 5 | 0 | 10 | 65 | 14 | 17 | 11 | 144 | 33 | 0 | 0 |
| 23 | 5 | 5 | 5 | 66 | 15 | 2 | 6 | 150 | 34 | 7 | 6 |
| 24 | 5 | 10 | 0 | 67 | 15 | 7 | 1 | 175 | 40 | 2 | 1 |
| 25 | 5 | 14 | 7 | 68 | 15 | 11 | 8 | 200 | 45 | 16 | 8 |
| 26 | 5 | 19 | 2 | 69 | 15 | 16 | 3 | 250 | 57 | 5 | 10 |
| 27 | 6 | 3 | 9 | 70 | 16 | 0 | 10 | 300 | 68 | 15 | 0 |
| 28 | 6 | 8 | 4 | 71 | 16 | 5 | 5 | 365 | 83 | 12 | 11 |
| 29 | 6 | 12 | 11 | 72 | 16 | 10 | 0 | 400 | 91 | 13 | 4 |
| 30 | 6 | 17 | 6 | 73 | 16 | 14 | 7 | 500 | 114 | 11 | 8 |
| 31 | 7 | 2 | 1 | 74 | 16 | 19 | 2 | 600 | 137 | 10 | 0 |
| 32 | 7 | 6 | 8 | 75 | 17 | 3 | 9 | 700 | 160 | 8 | 4 |
| 33 | 7 | 11 | 3 | 76 | 17 | 8 | 4 | 750 | 171 | 17 | 6 |
| 34 | 7 | 15 | 10 | 77 | 17 | 12 | 11 | 800 | 183 | 6 | 8 |
| 35 | 8 | 0 | 5 | 78 | 17 | 17 | 6 | 900 | 206 | 5 | 0 |
| 36 | 8 | 5 | 0 | 79 | 18 | 2 | 1 | 1000 | 229 | 3 | 4 |
| 37 | 8 | 9 | 7 | 80 | 18 | 6 | 8 | 1250 | 286 | 0 | 2 |
| 38 | 8 | 14 | 2 | 81 | 18 | 11 | 3 | 1500 | 343 | 15 | 0 |
| 39 | 8 | 18 | 9 | 82 | 18 | 15 | 10 | 1750 | 401 | 0 | 10 |
| 40 | 9 | 3 | 4 | 83 | 19 | 0 | 5 | 2000 | 458 | 6 | 8 |
| 41 | 9 | 7 | 11 | 84 | 19 | 5 | 0 | 2240 | 513 | 6 | 8 |
| 42 | 9 | 12 | 6 | 85 | 19 | 9 | 7 | 3000 | 687 | 10 | 0 |
| 43 | 9 | 17 | 1 | 86 | 19 | 14 | 2 | 5000 | 1145 | 16 | 8 |

## 4s. 6d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 4 | 6 | 44 | 9 | 18 | 0 | 87 | 19 | 11 | 6 |
| 2 | 0 | 9 | 0 | 45 | 10 | 2 | 6 | 88 | 19 | 16 | 0 |
| 3 | 0 | 13 | 6 | 46 | 10 | 7 | 0 | 89 | 20 | 0 | 6 |
| 4 | 0 | 18 | 0 | 47 | 10 | 11 | 6 | 90 | 20 | 5 | 0 |
| 5 | 1 | 2 | 6 | 48 | 10 | 16 | 0 | 91 | 20 | 9 | 6 |
| 6 | 1 | 7 | 0 | 49 | 11 | 0 | 6 | 92 | 20 | 14 | 0 |
| 7 | 1 | 11 | 6 | 50 | 11 | 5 | 0 | 93 | 20 | 18 | 6 |
| 8 | 1 | 16 | 0 | 51 | 11 | 9 | 6 | 94 | 21 | 3 | 0 |
| 9 | 2 | 0 | 6 | 52 | 11 | 14 | 0 | 95 | 21 | 7 | 6 |
| 10 | 2 | 5 | 0 | 53 | 11 | 18 | 6 | 96 | 21 | 12 | 0 |
| 11 | 2 | 9 | 6 | 54 | 12 | 3 | 0 | 97 | 21 | 16 | 6 |
| 12 | 2 | 14 | 0 | 55 | 12 | 7 | 6 | 98 | 22 | 1 | 0 |
| 13 | 2 | 18 | 6 | 56 | 12 | 12 | 0 | 99 | 22 | 5 | 6 |
| 14 | 3 | 3 | 0 | 57 | 12 | 16 | 6 | 100 | 22 | 10 | 0 |
| 15 | 3 | 7 | 6 | 58 | 13 | 1 | 0 | 108 | 24 | 6 | 0 |
| 16 | 3 | 12 | 0 | 59 | 13 | 5 | 6 | 110 | 24 | 15 | 0 |
| 17 | 3 | 16 | 6 | 60 | 13 | 10 | 0 | 112 | 25 | 4 | 0 |
| 18 | 4 | 1 | 0 | 61 | 13 | 14 | 6 | 120 | 27 | 0 | 0 |
| 19 | 4 | 5 | 6 | 62 | 13 | 19 | 0 | 130 | 29 | 5 | 0 |
| 20 | 4 | 10 | 0 | 63 | 14 | 3 | 6 | 132 | 29 | 14 | 0 |
| 21 | 4 | 14 | 6 | 64 | 14 | 8 | 0 | 140 | 31 | 10 | 0 |
| 22 | 4 | 19 | 0 | 65 | 14 | 12 | 6 | 144 | 32 | 8 | 0 |
| 23 | 5 | 3 | 6 | 66 | 14 | 17 | 0 | 150 | 33 | 15 | 0 |
| 24 | 5 | 8 | 0 | 67 | 15 | 1 | 6 | 175 | 39 | 7 | 6 |
| 25 | 5 | 12 | 6 | 68 | 15 | 6 | 0 | 200 | 45 | 0 | 0 |
| 26 | 5 | 17 | 0 | 69 | 15 | 10 | 6 | 250 | 56 | 5 | 0 |
| 27 | 6 | 1 | 6 | 70 | 15 | 15 | 0 | 300 | 67 | 10 | 0 |
| 28 | 6 | 6 | 0 | 71 | 15 | 19 | 6 | 365 | 82 | 2 | 6 |
| 29 | 6 | 10 | 6 | 72 | 16 | 4 | 0 | 400 | 90 | 0 | 0 |
| 30 | 6 | 15 | 0 | 73 | 16 | 8 | 6 | 500 | 112 | 10 | 0 |
| 31 | 6 | 19 | 6 | 74 | 16 | 13 | 0 | 600 | 135 | 0 | 0 |
| 32 | 7 | 4 | 0 | 75 | 16 | 17 | 6 | 700 | 157 | 10 | 0 |
| 33 | 7 | 8 | 6 | 76 | 17 | 2 | 0 | 750 | 168 | 15 | 0 |
| 34 | 7 | 13 | 0 | 77 | 17 | 6 | 6 | 800 | 180 | 0 | 0 |
| 35 | 7 | 17 | 6 | 78 | 17 | 11 | 0 | 900 | 202 | 10 | 0 |
| 36 | 8 | 2 | 0 | 79 | 17 | 15 | 6 | 1000 | 225 | 0 | 0 |
| 37 | 8 | 6 | 6 | 80 | 18 | 0 | 0 | 1250 | 281 | 5 | 0 |
| 38 | 8 | 11 | 0 | 81 | 18 | 4 | 6 | 1500 | 337 | 10 | 0 |
| 39 | 8 | 15 | 6 | 82 | 18 | 9 | 0 | 1750 | 393 | 15 | 0 |
| 40 | 9 | 0 | 0 | 83 | 18 | 13 | 6 | 2000 | 450 | 0 | 0 |
| 41 | 9 | 4 | 6 | 84 | 18 | 18 | 0 | 2240 | 504 | 0 | 0 |
| 42 | 9 | 9 | 0 | 85 | 19 | 2 | 6 | 3000 | 675 | 0 | 0 |
| 43 | 9 | 13 | 6 | 86 | 19 | 7 | 0 | 5000 | 1125 | 0 | 0 |

## 4s. 8d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 4 | 8 | 44 | 10 | 5 | 4 | 87 | 20 | 6 | 0 |
| 2 | 0 | 9 | 4 | 45 | 10 | 10 | 0 | 88 | 20 | 10 | 8 |
| 3 | 0 | 14 | 0 | 46 | 10 | 14 | 8 | 89 | 20 | 15 | 4 |
| 4 | 0 | 18 | 8 | 47 | 10 | 19 | 4 | 90 | 21 | 0 | 0 |
| 5 | 1 | 3 | 4 | 48 | 11 | 4 | 0 | 91 | 21 | 4 | 8 |
| 6 | 1 | 8 | 0 | 49 | 11 | 8 | 8 | 92 | 21 | 9 | 4 |
| 7 | 1 | 12 | 8 | 50 | 11 | 13 | 4 | 93 | 21 | 14 | 0 |
| 8 | 1 | 17 | 4 | 51 | 11 | 18 | 0 | 94 | 21 | 18 | 8 |
| 9 | 2 | 2 | 0 | 52 | 12 | 2 | 8 | 95 | 22 | 3 | 4 |
| 10 | 2 | 6 | 8 | 53 | 12 | 7 | 4 | 96 | 22 | 8 | 0 |
| 11 | 2 | 11 | 4 | 54 | 12 | 12 | 0 | 97 | 22 | 12 | 8 |
| 12 | 2 | 16 | 0 | 55 | 12 | 16 | 8 | 98 | 22 | 17 | 4 |
| 13 | 3 | 0 | 8 | 56 | 13 | 1 | 4 | 99 | 23 | 2 | 0 |
| 14 | 3 | 5 | 4 | 57 | 13 | 6 | 0 | 100 | 23 | 6 | 8 |
| 15 | 3 | 10 | 0 | 58 | 13 | 10 | 8 | 108 | 25 | 4 | 0 |
| 16 | 3 | 14 | 8 | 59 | 13 | 15 | 4 | 110 | 25 | 13 | 4 |
| 17 | 3 | 19 | 4 | 60 | 14 | 0 | 0 | 112 | 26 | 2 | 8 |
| 18 | 4 | 4 | 0 | 61 | 14 | 4 | 8 | 120 | 28 | 0 | 0 |
| 19 | 4 | 8 | 8 | 62 | 14 | 9 | 4 | 130 | 30 | 6 | 8 |
| 20 | 4 | 13 | 4 | 63 | 14 | 14 | 0 | 132 | 30 | 16 | 0 |
| 21 | 4 | 18 | 0 | 64 | 14 | 18 | 8 | 140 | 32 | 13 | 4 |
| 22 | 5 | 2 | 8 | 65 | 15 | 3 | 4 | 144 | 33 | 12 | 0 |
| 23 | 5 | 7 | 4 | 66 | 15 | 8 | 0 | 150 | 35 | 0 | 0 |
| 24 | 5 | 12 | 0 | 67 | 15 | 12 | 8 | 175 | 40 | 16 | 8 |
| 25 | 5 | 16 | 8 | 68 | 15 | 17 | 4 | 200 | 46 | 13 | 4 |
| 26 | 6 | 1 | 4 | 69 | 16 | 2 | 0 | 250 | 58 | 6 | 8 |
| 27 | 6 | 6 | 0 | 70 | 16 | 6 | 8 | 300 | 70 | 0 | 0 |
| 28 | 6 | 10 | 8 | 71 | 16 | 11 | 4 | 365 | 85 | 3 | 4 |
| 29 | 6 | 15 | 4 | 72 | 16 | 16 | 0 | 400 | 93 | 6 | 8 |
| 30 | 7 | 0 | 0 | 73 | 17 | 0 | 8 | 500 | 116 | 13 | 4 |
| 31 | 7 | 4 | 8 | 74 | 17 | 5 | 4 | 600 | 140 | 0 | 0 |
| 32 | 7 | 9 | 4 | 75 | 17 | 10 | 0 | 700 | 163 | 6 | 8 |
| 33 | 7 | 14 | 0 | 76 | 17 | 14 | 8 | 750 | 175 | 0 | 0 |
| 34 | 7 | 18 | 8 | 77 | 17 | 19 | 4 | 800 | 186 | 13 | 4 |
| 35 | 8 | 3 | 4 | 78 | 18 | 4 | 0 | 900 | 210 | 0 | 0 |
| 36 | 8 | 8 | 0 | 79 | 18 | 8 | 8 | 1000 | 233 | 6 | 8 |
| 37 | 8 | 12 | 8 | 80 | 18 | 13 | 4 | 1250 | 291 | 13 | 4 |
| 38 | 8 | 17 | 4 | 81 | 18 | 18 | 0 | 1500 | 350 | 0 | 0 |
| 39 | 9 | 2 | 0 | 82 | 19 | 2 | 8 | 1750 | 408 | 6 | 8 |
| 40 | 9 | 6 | 8 | 83 | 19 | 7 | 4 | 2000 | 466 | 13 | 4 |
| 41 | 9 | 11 | 4 | 84 | 19 | 12 | 0 | 2240 | 522 | 13 | 4 |
| 42 | 9 | 16 | 0 | 85 | 19 | 16 | 8 | 3000 | 700 | 0 | 0 |
| 43 | 10 | 0 | 8 | 86 | 20 | 1 | 4 | 5000 | 1166 | 13 | 4 |

## 4s. 9d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 4 | 9 | 44 | 10 | 9 | 0 | 87 | 20 | 13 | 3 |
| 2 | 0 | 9 | 6 | 45 | 10 | 13 | 9 | 88 | 20 | 18 | 0 |
| 3 | 0 | 14 | 3 | 46 | 10 | 18 | 6 | 89 | 21 | 2 | 9 |
| 4 | 0 | 19 | 0 | 47 | 11 | 3 | 3 | 90 | 21 | 7 | 6 |
| 5 | 1 | 3 | 9 | 48 | 11 | 8 | 0 | 91 | 21 | 12 | 3 |
| 6 | 1 | 8 | 6 | 49 | 11 | 12 | 9 | 92 | 21 | 17 | 0 |
| 7 | 1 | 13 | 3 | 50 | 11 | 17 | 6 | 93 | 22 | 1 | 9 |
| 8 | 1 | 18 | 0 | 51 | 12 | 2 | 3 | 94 | 22 | 6 | 6 |
| 9 | 2 | 2 | 9 | 52 | 12 | 7 | 0 | 95 | 22 | 11 | 3 |
| 10 | 2 | 7 | 6 | 53 | 12 | 11 | 9 | 96 | 22 | 16 | 0 |
| 11 | 2 | 12 | 3 | 54 | 12 | 16 | 6 | 97 | 23 | 0 | 9 |
| 12 | 2 | 17 | 0 | 55 | 13 | 1 | 3 | 98 | 23 | 5 | 6 |
| 13 | 3 | 1 | 9 | 56 | 13 | 6 | 0 | 99 | 23 | 10 | 3 |
| 14 | 3 | 6 | 6 | 57 | 13 | 10 | 9 | 100 | 23 | 15 | 0 |
| 15 | 3 | 11 | 3 | 58 | 13 | 15 | 6 | 108 | 25 | 13 | 0 |
| 16 | 3 | 16 | 0 | 59 | 14 | 0 | 3 | 110 | 26 | 2 | 6 |
| 17 | 4 | 0 | 9 | 60 | 14 | 5 | 0 | 112 | 26 | 12 | 0 |
| 18 | 4 | 5 | 6 | 61 | 14 | 9 | 9 | 120 | 28 | 10 | 0 |
| 19 | 4 | 10 | 3 | 62 | 14 | 14 | 6 | 130 | 30 | 17 | 6 |
| 20 | 4 | 15 | 0 | 63 | 14 | 19 | 3 | 132 | 31 | 7 | 0 |
| 21 | 4 | 19 | 9 | 64 | 15 | 4 | 0 | 140 | 33 | 5 | 0 |
| 22 | 5 | 4 | 6 | 65 | 15 | 8 | 9 | 144 | 34 | 4 | 0 |
| 23 | 5 | 9 | 3 | 66 | 15 | 13 | 6 | 150 | 35 | 12 | 6 |
| 24 | 5 | 14 | 0 | 67 | 15 | 18 | 3 | 175 | 41 | 11 | 3 |
| 25 | 5 | 18 | 9 | 68 | 16 | 3 | 0 | 200 | 47 | 10 | 0 |
| 26 | 6 | 3 | 6 | 69 | 16 | 7 | 9 | 250 | 59 | 7 | 6 |
| 27 | 6 | 8 | 3 | 70 | 16 | 12 | 6 | 300 | 71 | 5 | 0 |
| 28 | 6 | 13 | 0 | 71 | 16 | 17 | 3 | 365 | 86 | 13 | 9 |
| 29 | 6 | 17 | 9 | 72 | 17 | 2 | 0 | 400 | 95 | 0 | 0 |
| 30 | 7 | 2 | 6 | 73 | 17 | 6 | 9 | 500 | 118 | 15 | 0 |
| 31 | 7 | 7 | 3 | 74 | 17 | 11 | 6 | 600 | 142 | 10 | 0 |
| 32 | 7 | 12 | 0 | 75 | 17 | 16 | 3 | 700 | 166 | 5 | 0 |
| 33 | 7 | 16 | 9 | 76 | 18 | 1 | 0 | 750 | 178 | 2 | 6 |
| 34 | 8 | 1 | 6 | 77 | 18 | 5 | 9 | 800 | 190 | 0 | 0 |
| 35 | 8 | 6 | 3 | 78 | 18 | 10 | 6 | 900 | 213 | 15 | 0 |
| 36 | 8 | 11 | 0 | 79 | 18 | 15 | 3 | 1000 | 237 | 10 | 0 |
| 37 | 8 | 15 | 9 | 80 | 19 | 0 | 0 | 1250 | 296 | 17 | 6 |
| 38 | 9 | 0 | 6 | 81 | 19 | 4 | 9 | 1500 | 356 | 5 | 0 |
| 39 | 9 | 5 | 3 | 82 | 19 | 9 | 6 | 1750 | 415 | 12 | 6 |
| 40 | 9 | 10 | 0 | 83 | 19 | 14 | 3 | 2000 | 475 | 0 | 0 |
| 41 | 9 | 14 | 9 | 84 | 19 | 19 | 0 | 2240 | 532 | 0 | 0 |
| 42 | 9 | 19 | 6 | 85 | 20 | 3 | 9 | 3000 | 712 | 10 | 0 |
| 43 | 10 | 4 | 3 | 86 | 20 | 8 | 6 | 5000 | 1187 | 10 | 0 |

## 4s. 11d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 4 | 11 | 44 | 10 | 16 | 4 | 87 | 21 | 7 | 9 |
| 2 | 0 | 9 | 10 | 45 | 11 | 1 | 3 | 88 | 21 | 12 | 8 |
| 3 | 0 | 14 | 9 | 46 | 11 | 6 | 2 | 89 | 21 | 17 | 7 |
| 4 | 0 | 19 | 8 | 47 | 11 | 11 | 1 | 90 | 22 | 2 | 6 |
| 5 | 1 | 4 | 7 | 48 | 11 | 16 | 0 | 91 | 22 | 7 | 5 |
| 6 | 1 | 9 | 6 | 49 | 12 | 0 | 11 | 92 | 22 | 12 | 4 |
| 7 | 1 | 14 | 5 | 50 | 12 | 5 | 10 | 93 | 22 | 17 | 3 |
| 8 | 1 | 19 | 4 | 51 | 12 | 10 | 9 | 94 | 23 | 2 | 2 |
| 9 | 2 | 4 | 3 | 52 | 12 | 15 | 8 | 95 | 23 | 7 | 1 |
| 10 | 2 | 9 | 2 | 53 | 13 | 0 | 7 | 96 | 23 | 12 | 0 |
| 11 | 2 | 14 | 1 | 54 | 13 | 5 | 6 | 97 | 23 | 16 | 11 |
| 12 | 2 | 19 | 0 | 55 | 13 | 10 | 5 | 98 | 24 | 1 | 10 |
| 13 | 3 | 3 | 11 | 56 | 13 | 15 | 4 | 99 | 24 | 6 | 9 |
| 14 | 3 | 8 | 10 | 57 | 14 | 0 | 3 | 100 | 24 | 11 | 8 |
| 15 | 3 | 13 | 9 | 58 | 14 | 5 | 2 | 108 | 26 | 11 | 0 |
| 16 | 3 | 18 | 8 | 59 | 14 | 10 | 1 | 110 | 27 | 0 | 10 |
| 17 | 4 | 3 | 7 | 60 | 14 | 15 | 0 | 112 | 27 | 10 | 8 |
| 18 | 4 | 8 | 6 | 61 | 14 | 19 | 11 | 120 | 29 | 10 | 0 |
| 19 | 4 | 13 | 5 | 62 | 15 | 4 | 10 | 130 | 31 | 19 | 2 |
| 20 | 4 | 18 | 4 | 63 | 15 | 9 | 9 | 132 | 32 | 9 | 0 |
| 21 | 5 | 3 | 3 | 64 | 15 | 14 | 8 | 140 | 34 | 8 | 4 |
| 22 | 5 | 8 | 2 | 65 | 15 | 19 | 7 | 144 | 35 | 8 | 0 |
| 23 | 5 | 13 | 1 | 66 | 16 | 4 | 6 | 150 | 36 | 17 | 6 |
| 24 | 5 | 18 | 0 | 67 | 16 | 9 | 5 | 175 | 43 | 0 | 5 |
| 25 | 6 | 2 | 11 | 68 | 16 | 14 | 4 | 200 | 49 | 3 | 4 |
| 26 | 6 | 7 | 10 | 69 | 16 | 19 | 3 | 250 | 61 | 9 | 2 |
| 27 | 6 | 12 | 9 | 70 | 17 | 4 | 2 | 300 | 73 | 15 | 0 |
| 28 | 6 | 17 | 8 | 71 | 17 | 9 | 1 | 365 | 89 | 14 | 7 |
| 29 | 7 | 2 | 7 | 72 | 17 | 14 | 0 | 400 | 98 | 6 | 8 |
| 30 | 7 | 7 | 6 | 73 | 17 | 18 | 11 | 500 | 122 | 18 | 4 |
| 31 | 7 | 12 | 5 | 74 | 18 | 3 | 10 | 600 | 147 | 10 | 0 |
| 32 | 7 | 17 | 4 | 75 | 18 | 8 | 9 | 700 | 172 | 1 | 8 |
| 33 | 8 | 2 | 3 | 76 | 18 | 13 | 8 | 750 | 184 | 7 | 6 |
| 34 | 8 | 7 | 2 | 77 | 18 | 18 | 7 | 800 | 196 | 13 | 4 |
| 35 | 8 | 12 | 1 | 78 | 19 | 3 | 6 | 900 | 221 | 5 | 0 |
| 36 | 8 | 17 | 0 | 79 | 19 | 8 | 5 | 1000 | 245 | 16 | 8 |
| 37 | 9 | 1 | 11 | 80 | 19 | 13 | 4 | 1250 | 307 | 5 | 10 |
| 38 | 9 | 6 | 10 | 81 | 19 | 18 | 3 | 1500 | 368 | 15 | 0 |
| 39 | 9 | 11 | 9 | 82 | 20 | 3 | 2 | 1750 | 430 | 4 | 2 |
| 40 | 9 | 16 | 8 | 83 | 20 | 8 | 1 | 2000 | 491 | 13 | 4 |
| 41 | 10 | 1 | 7 | 84 | 20 | 13 | 0 | 2240 | 550 | 13 | 4 |
| 42 | 10 | 6 | 6 | 85 | 20 | 17 | 11 | 3000 | 737 | 10 | 0 |
| 43 | 10 | 11 | 5 | 86 | 21 | 2 | 10 | 5000 | 1229 | 3 | 4 |

## 4s. 10d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 4 | 10 | 44 | 10 | 12 | 8 | 87 | 21 | 0 | 6 |
| 2 | 0 | 9 | 8 | 45 | 10 | 17 | 6 | 88 | 21 | 5 | 4 |
| 3 | 0 | 14 | 6 | 46 | 11 | 2 | 4 | 89 | 21 | 10 | 2 |
| 4 | 0 | 19 | 4 | 47 | 11 | 7 | 2 | 90 | 21 | 15 | 0 |
| 5 | 1 | 4 | 2 | 48 | 11 | 12 | 0 | 91 | 21 | 19 | 10 |
| 6 | 1 | 9 | 0 | 49 | 11 | 16 | 10 | 92 | 22 | 4 | 8 |
| 7 | 1 | 13 | 10 | 50 | 12 | 1 | 8 | 93 | 22 | 9 | 6 |
| 8 | 1 | 18 | 8 | 51 | 12 | 6 | 6 | 94 | 22 | 14 | 4 |
| 9 | 2 | 3 | 6 | 52 | 12 | 11 | 4 | 95 | 22 | 19 | 2 |
| 10 | 2 | 8 | 4 | 53 | 12 | 16 | 2 | 96 | 23 | 4 | 0 |
| 11 | 2 | 13 | 2 | 54 | 13 | 1 | 0 | 97 | 23 | 8 | 10 |
| 12 | 2 | 18 | 0 | 55 | 13 | 5 | 10 | 98 | 23 | 13 | 8 |
| 13 | 3 | 2 | 10 | 56 | 13 | 10 | 8 | 99 | 23 | 18 | 6 |
| 14 | 3 | 7 | 8 | 57 | 13 | 15 | 6 | 100 | 24 | 3 | 4 |
| 15 | 3 | 12 | 6 | 58 | 14 | 0 | 4 | 108 | 26 | 2 | 0 |
| 16 | 3 | 17 | 4 | 59 | 14 | 5 | 2 | 110 | 26 | 11 | 8 |
| 17 | 4 | 2 | 2 | 60 | 14 | 10 | 0 | 112 | 27 | 1 | 4 |
| 18 | 4 | 7 | 0 | 61 | 14 | 14 | 10 | 120 | 29 | 0 | 0 |
| 19 | 4 | 11 | 10 | 62 | 14 | 19 | 8 | 130 | 31 | 8 | 4 |
| 20 | 4 | 16 | 8 | 63 | 15 | 4 | 6 | 132 | 31 | 18 | 0 |
| 21 | 5 | 1 | 6 | 64 | 15 | 9 | 4 | 140 | 33 | 16 | 8 |
| 22 | 5 | 6 | 4 | 65 | 15 | 14 | 2 | 144 | 34 | 16 | 0 |
| 23 | 5 | 11 | 2 | 66 | 15 | 19 | 0 | 150 | 36 | 5 | 0 |
| 24 | 5 | 16 | 0 | 67 | 16 | 3 | 10 | 175 | 42 | 5 | 10 |
| 25 | 6 | 0 | 10 | 68 | 16 | 8 | 8 | 200 | 48 | 6 | 8 |
| 26 | 6 | 5 | 8 | 69 | 16 | 13 | 6 | 250 | 60 | 8 | 4 |
| 27 | 6 | 10 | 6 | 70 | 16 | 18 | 4 | 300 | 72 | 10 | 0 |
| 28 | 6 | 15 | 4 | 71 | 17 | 3 | 2 | 365 | 88 | 4 | 2 |
| 29 | 7 | 0 | 2 | 72 | 17 | 8 | 0 | 400 | 96 | 13 | 4 |
| 30 | 7 | 5 | 0 | 73 | 17 | 12 | 10 | 500 | 120 | 16 | 8 |
| 31 | 7 | 9 | 10 | 74 | 17 | 17 | 8 | 600 | 145 | 0 | 0 |
| 32 | 7 | 14 | 8 | 75 | 18 | 2 | 6 | 700 | 169 | 3 | 4 |
| 33 | 7 | 19 | 6 | 76 | 18 | 7 | 4 | 750 | 181 | 5 | 0 |
| 34 | 8 | 4 | 4 | 77 | 18 | 12 | 2 | 800 | 193 | 6 | 8 |
| 35 | 8 | 9 | 2 | 78 | 18 | 17 | 0 | 900 | 217 | 10 | 0 |
| 36 | 8 | 14 | 0 | 79 | 19 | 1 | 10 | 1000 | 241 | 13 | 4 |
| 37 | 8 | 18 | 10 | 80 | 19 | 6 | 8 | 1250 | 302 | 1 | 8 |
| 38 | 9 | 3 | 8 | 81 | 19 | 11 | 6 | 1500 | 362 | 10 | 0 |
| 39 | 9 | 8 | 6 | 82 | 19 | 16 | 4 | 1750 | 422 | 18 | 4 |
| 40 | 9 | 13 | 4 | 83 | 20 | 1 | 2 | 2000 | 483 | 6 | 8 |
| 41 | 9 | 18 | 2 | 84 | 20 | 6 | 0 | 2240 | 541 | 6 | 8 |
| 42 | 10 | 3 | 0 | 85 | 20 | 10 | 10 | 3000 | 725 | 0 | 0 |
| 43 | 10 | 7 | 10 | 86 | 20 | 15 | 8 | 5000 | 1208 | 6 | 8 |

## 5s.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 0 | 44 | 11 | 0 | 0 | 87 | 21 | 15 | 0 |
| 2 | 0 | 10 | 0 | 45 | 11 | 5 | 0 | 88 | 22 | 0 | 0 |
| 3 | 0 | 15 | 0 | 46 | 11 | 10 | 0 | 89 | 22 | 5 | 0 |
| 4 | 1 | 0 | 0 | 47 | 11 | 15 | 0 | 90 | 22 | 10 | 0 |
| 5 | 1 | 5 | 0 | 48 | 12 | 0 | 0 | 91 | 22 | 15 | 0 |
| 6 | 1 | 10 | 0 | 49 | 12 | 5 | 0 | 92 | 23 | 0 | 0 |
| 7 | 1 | 15 | 0 | 50 | 12 | 10 | 0 | 93 | 23 | 5 | 0 |
| 8 | 2 | 0 | 0 | 51 | 12 | 15 | 0 | 94 | 23 | 10 | 0 |
| 9 | 2 | 5 | 0 | 52 | 13 | 0 | 0 | 95 | 23 | 15 | 0 |
| 10 | 2 | 10 | 0 | 53 | 13 | 5 | 0 | 96 | 24 | 0 | 0 |
| 11 | 2 | 15 | 0 | 54 | 13 | 10 | 0 | 97 | 24 | 5 | 0 |
| 12 | 3 | 0 | 0 | 55 | 13 | 15 | 0 | 98 | 24 | 10 | 0 |
| 13 | 3 | 5 | 0 | 56 | 14 | 0 | 0 | 99 | 24 | 15 | 0 |
| 14 | 3 | 10 | 0 | 57 | 14 | 5 | 0 | 100 | 25 | 0 | 0 |
| 15 | 3 | 15 | 0 | 58 | 14 | 10 | 0 | 108 | 27 | 0 | 0 |
| 16 | 4 | 0 | 0 | 59 | 14 | 15 | 0 | 110 | 27 | 10 | 0 |
| 17 | 4 | 5 | 0 | 60 | 15 | 0 | 0 | 112 | 28 | 0 | 0 |
| 18 | 4 | 10 | 0 | 61 | 15 | 5 | 0 | 120 | 30 | 0 | 0 |
| 19 | 4 | 15 | 0 | 62 | 15 | 10 | 0 | 130 | 32 | 10 | 0 |
| 20 | 5 | 0 | 0 | 63 | 15 | 15 | 0 | 132 | 33 | 0 | 0 |
| 21 | 5 | 5 | 0 | 64 | 16 | 0 | 0 | 140 | 35 | 0 | 0 |
| 22 | 5 | 10 | 0 | 65 | 16 | 5 | 0 | 144 | 36 | 0 | 0 |
| 23 | 5 | 15 | 0 | 66 | 16 | 10 | 0 | 150 | 37 | 10 | 0 |
| 24 | 6 | 0 | 0 | 67 | 16 | 15 | 0 | 175 | 43 | 15 | 0 |
| 25 | 6 | 5 | 0 | 68 | 17 | 0 | 0 | 200 | 50 | 0 | 0 |
| 26 | 6 | 10 | 0 | 69 | 17 | 5 | 0 | 250 | 62 | 10 | 0 |
| 27 | 6 | 15 | 0 | 70 | 17 | 10 | 0 | 300 | 75 | 0 | 0 |
| 28 | 7 | 0 | 0 | 71 | 17 | 15 | 0 | 365 | 91 | 5 | 0 |
| 29 | 7 | 5 | 0 | 72 | 18 | 0 | 0 | 400 | 100 | 0 | 0 |
| 30 | 7 | 10 | 0 | 73 | 18 | 5 | 0 | 500 | 125 | 0 | 0 |
| 31 | 7 | 15 | 0 | 74 | 18 | 10 | 0 | 600 | 150 | 0 | 0 |
| 32 | 8 | 0 | 0 | 75 | 18 | 15 | 0 | 700 | 175 | 0 | 0 |
| 33 | 8 | 5 | 0 | 76 | 19 | 0 | 0 | 750 | 187 | 10 | 0 |
| 34 | 8 | 10 | 0 | 77 | 19 | 5 | 0 | 800 | 200 | 0 | 0 |
| 35 | 8 | 15 | 0 | 78 | 19 | 10 | 0 | 900 | 225 | 0 | 0 |
| 36 | 9 | 0 | 0 | 79 | 19 | 15 | 0 | 1000 | 250 | 0 | 0 |
| 37 | 9 | 5 | 0 | 80 | 20 | 0 | 0 | 1250 | 312 | 10 | 0 |
| 38 | 9 | 10 | 0 | 81 | 20 | 5 | 0 | 1500 | 375 | 0 | 0 |
| 39 | 9 | 15 | 0 | 82 | 20 | 10 | 0 | 1750 | 437 | 10 | 0 |
| 40 | 10 | 0 | 0 | 83 | 20 | 15 | 0 | 2000 | 500 | 0 | 0 |
| 41 | 10 | 5 | 0 | 84 | 21 | 0 | 0 | 2240 | 560 | 0 | 0 |
| 42 | 10 | 10 | 0 | 85 | 21 | 5 | 0 | 3000 | 750 | 0 | 0 |
| 43 | 10 | 15 | 0 | 86 | 21 | 10 | 0 | 5000 | 1250 | 0 | 0 |

## 5s. 1d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 1 | 44 | 11 | 3 | 8 | 87 | 22 | 2 | 3 |
| 2 | 0 | 10 | 2 | 45 | 11 | 8 | 9 | 88 | 22 | 7 | 4 |
| 3 | 0 | 15 | 3 | 46 | 11 | 13 | 10 | 89 | 22 | 12 | 5 |
| 4 | 1 | 0 | 4 | 47 | 11 | 18 | 11 | 90 | 22 | 17 | 6 |
| 5 | 1 | 5 | 5 | 48 | 12 | 4 | 0 | 91 | 23 | 2 | 7 |
| 6 | 1 | 10 | 6 | 49 | 12 | 9 | 1 | 92 | 23 | 7 | 8 |
| 7 | 1 | 15 | 7 | 50 | 12 | 14 | 2 | 93 | 23 | 12 | 9 |
| 8 | 2 | 0 | 8 | 51 | 12 | 19 | 3 | 94 | 23 | 17 | 10 |
| 9 | 2 | 5 | 9 | 52 | 13 | 4 | 4 | 95 | 24 | 2 | 11 |
| 10 | 2 | 10 | 10 | 53 | 13 | 9 | 5 | 96 | 24 | 8 | 0 |
| 11 | 2 | 15 | 11 | 54 | 13 | 14 | 6 | 97 | 24 | 13 | 1 |
| 12 | 3 | 1 | 0 | 55 | 13 | 19 | 7 | 98 | 24 | 18 | 2 |
| 13 | 3 | 6 | 1 | 56 | 14 | 4 | 8 | 99 | 25 | 3 | 3 |
| 14 | 3 | 11 | 2 | 57 | 14 | 9 | 9 | 100 | 25 | 8 | 4 |
| 15 | 3 | 16 | 3 | 58 | 14 | 14 | 10 | 108 | 27 | 9 | 0 |
| 16 | 4 | 1 | 4 | 59 | 14 | 19 | 11 | 110 | 27 | 19 | 2 |
| 17 | 4 | 6 | 5 | 60 | 15 | 5 | 0 | 112 | 28 | 9 | 4 |
| 18 | 4 | 11 | 6 | 61 | 15 | 10 | 1 | 120 | 30 | 10 | 0 |
| 19 | 4 | 16 | 7 | 62 | 15 | 15 | 2 | 130 | 33 | 0 | 10 |
| 20 | 5 | 1 | 8 | 63 | 16 | 0 | 3 | 132 | 33 | 11 | 0 |
| 21 | 5 | 6 | 9 | 64 | 16 | 5 | 4 | 140 | 35 | 11 | 8 |
| 22 | 5 | 11 | 10 | 65 | 16 | 10 | 5 | 144 | 36 | 12 | 0 |
| 23 | 5 | 16 | 11 | 66 | 16 | 15 | 6 | 150 | 38 | 2 | 6 |
| 24 | 6 | 2 | 0 | 67 | 17 | 0 | 7 | 175 | 44 | 9 | 7 |
| 25 | 6 | 7 | 1 | 68 | 17 | 5 | 8 | 200 | 50 | 16 | 8 |
| 26 | 6 | 12 | 2 | 69 | 17 | 10 | 9 | 250 | 63 | 10 | 10 |
| 27 | 6 | 17 | 3 | 70 | 17 | 15 | 10 | 300 | 76 | 5 | 0 |
| 28 | 7 | 2 | 4 | 71 | 18 | 0 | 11 | 365 | 92 | 15 | 5 |
| 29 | 7 | 7 | 5 | 72 | 18 | 6 | 0 | 400 | 101 | 13 | 4 |
| 30 | 7 | 12 | 6 | 73 | 18 | 11 | 1 | 500 | 127 | 1 | 8 |
| 31 | 7 | 17 | 7 | 74 | 18 | 16 | 2 | 600 | 152 | 10 | 0 |
| 32 | 8 | 2 | 8 | 75 | 19 | 1 | 3 | 700 | 177 | 18 | 4 |
| 33 | 8 | 7 | 9 | 76 | 19 | 6 | 4 | 750 | 190 | 12 | 6 |
| 34 | 8 | 12 | 10 | 77 | 19 | 11 | 5 | 800 | 203 | 6 | 8 |
| 35 | 8 | 17 | 11 | 78 | 19 | 16 | 6 | 900 | 228 | 15 | 0 |
| 36 | 9 | 3 | 0 | 79 | 20 | 1 | 7 | 1000 | 254 | 3 | 4 |
| 37 | 9 | 8 | 1 | 80 | 20 | 6 | 8 | 1250 | 317 | 14 | 2 |
| 38 | 9 | 13 | 2 | 81 | 20 | 11 | 9 | 1500 | 381 | 5 | 0 |
| 39 | 9 | 18 | 3 | 82 | 20 | 16 | 10 | 1750 | 444 | 15 | 10 |
| 40 | 10 | 3 | 4 | 83 | 21 | 1 | 11 | 2000 | 508 | 6 | 8 |
| 41 | 10 | 8 | 5 | 84 | 21 | 7 | 0 | 2240 | 569 | 6 | 8 |
| 42 | 10 | 13 | 6 | 85 | 21 | 12 | 1 | 3000 | 762 | 10 | 0 |
| 43 | 10 | 18 | 7 | 86 | 21 | 17 | 2 | 5000 | 1270 | 16 | 8 |

## 5s. 3d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 3 | 44 | 11 | 11 | 0 | 87 | 22 | 16 | 9 |
| 2 | 0 | 10 | 6 | 45 | 11 | 16 | 3 | 88 | 23 | 2 | 0 |
| 3 | 0 | 15 | 9 | 46 | 12 | 1 | 6 | 89 | 23 | 7 | 3 |
| 4 | 1 | 1 | 0 | 47 | 12 | 6 | 9 | 90 | 23 | 12 | 6 |
| 5 | 1 | 6 | 3 | 48 | 12 | 12 | 0 | 91 | 23 | 17 | 9 |
| 6 | 1 | 11 | 6 | 49 | 12 | 17 | 3 | 92 | 24 | 3 | 0 |
| 7 | 1 | 16 | 9 | 50 | 13 | 2 | 6 | 93 | 24 | 8 | 3 |
| 8 | 2 | 2 | 0 | 51 | 13 | 7 | 9 | 94 | 24 | 13 | 6 |
| 9 | 2 | 7 | 3 | 52 | 13 | 13 | 0 | 95 | 24 | 18 | 9 |
| 10 | 2 | 12 | 6 | 53 | 13 | 18 | 3 | 96 | 25 | 4 | 0 |
| 11 | 2 | 17 | 9 | 54 | 14 | 3 | 6 | 97 | 25 | 9 | 3 |
| 12 | 3 | 3 | 0 | 55 | 14 | 8 | 9 | 98 | 25 | 14 | 6 |
| 13 | 3 | 8 | 3 | 56 | 14 | 14 | 0 | 99 | 25 | 19 | 9 |
| 14 | 3 | 13 | 6 | 57 | 14 | 19 | 3 | 100 | 26 | 5 | 0 |
| 15 | 3 | 18 | 9 | 58 | 15 | 4 | 6 | 108 | 28 | 7 | 0 |
| 16 | 4 | 4 | 0 | 59 | 15 | 9 | 9 | 110 | 28 | 17 | 6 |
| 17 | 4 | 9 | 3 | 60 | 15 | 15 | 0 | 112 | 29 | 8 | 0 |
| 18 | 4 | 14 | 6 | 61 | 16 | 0 | 3 | 120 | 31 | 10 | 0 |
| 19 | 4 | 19 | 9 | 62 | 16 | 5 | 6 | 130 | 34 | 2 | 6 |
| 20 | 5 | 5 | 0 | 63 | 16 | 10 | 9 | 132 | 34 | 13 | 0 |
| 21 | 5 | 10 | 3 | 64 | 16 | 16 | 0 | 140 | 36 | 15 | 0 |
| 22 | 5 | 15 | 6 | 65 | 17 | 1 | 3 | 144 | 37 | 16 | 0 |
| 23 | 6 | 0 | 9 | 66 | 17 | 6 | 6 | 150 | 39 | 7 | 6 |
| 24 | 6 | 6 | 0 | 67 | 17 | 11 | 9 | 175 | 45 | 18 | 9 |
| 25 | 6 | 11 | 3 | 68 | 17 | 17 | 0 | 200 | 52 | 10 | 0 |
| 26 | 6 | 16 | 6 | 69 | 18 | 2 | 3 | 250 | 65 | 12 | 6 |
| 27 | 7 | 1 | 9 | 70 | 18 | 7 | 6 | 300 | 78 | 15 | 0 |
| 28 | 7 | 7 | 0 | 71 | 18 | 12 | 9 | 365 | 95 | 16 | 3 |
| 29 | 7 | 12 | 3 | 72 | 18 | 18 | 0 | 400 | 105 | 0 | 0 |
| 30 | 7 | 17 | 6 | 73 | 19 | 3 | 3 | 500 | 131 | 5 | 0 |
| 31 | 8 | 2 | 9 | 74 | 19 | 8 | 6 | 600 | 157 | 10 | 0 |
| 32 | 8 | 8 | 0 | 75 | 19 | 13 | 9 | 700 | 183 | 15 | 0 |
| 33 | 8 | 13 | 3 | 76 | 19 | 19 | 0 | 750 | 196 | 17 | 6 |
| 34 | 8 | 18 | 6 | 77 | 20 | 4 | 3 | 800 | 210 | 0 | 0 |
| 35 | 9 | 3 | 9 | 78 | 20 | 9 | 6 | 900 | 236 | 5 | 0 |
| 36 | 9 | 9 | 0 | 79 | 20 | 14 | 9 | 1000 | 262 | 10 | 0 |
| 37 | 9 | 14 | 3 | 80 | 21 | 0 | 0 | 1250 | 328 | 2 | 6 |
| 38 | 9 | 19 | 6 | 81 | 21 | 5 | 3 | 1500 | 393 | 15 | 0 |
| 39 | 10 | 4 | 9 | 82 | 21 | 10 | 6 | 1750 | 459 | 7 | 6 |
| 40 | 10 | 10 | 0 | 83 | 21 | 15 | 9 | 2000 | 525 | 0 | 0 |
| 41 | 10 | 15 | 3 | 84 | 22 | 1 | 0 | 2240 | 588 | 0 | 0 |
| 42 | 11 | 0 | 6 | 85 | 22 | 6 | 3 | 3000 | 787 | 10 | 0 |
| 43 | 11 | 5 | 9 | 86 | 22 | 11 | 6 | 5000 | 1312 | 10 | 0 |

## 5s. 2d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 2 | 44 | 11 | 7 | 4 | 87 | 22 | 9 | 6 |
| 2 | 0 | 10 | 4 | 45 | 11 | 12 | 6 | 88 | 22 | 14 | 8 |
| 3 | 0 | 15 | 6 | 46 | 11 | 17 | 8 | 89 | 22 | 19 | 10 |
| 4 | 1 | 0 | 8 | 47 | 12 | 2 | 10 | 90 | 23 | 5 | 0 |
| 5 | 1 | 5 | 10 | 48 | 12 | 8 | 0 | 91 | 23 | 10 | 2 |
| 6 | 1 | 11 | 0 | 49 | 12 | 13 | 2 | 92 | 23 | 15 | 4 |
| 7 | 1 | 16 | 2 | 50 | 12 | 18 | 4 | 93 | 24 | 0 | 6 |
| 8 | 2 | 1 | 4 | 51 | 13 | 3 | 6 | 94 | 24 | 5 | 8 |
| 9 | 2 | 6 | 6 | 52 | 13 | 8 | 8 | 95 | 24 | 10 | 10 |
| 10 | 2 | 11 | 8 | 53 | 13 | 13 | 10 | 96 | 24 | 16 | 0 |
| 11 | 2 | 16 | 10 | 54 | 13 | 19 | 0 | 97 | 25 | 1 | 2 |
| 12 | 3 | 2 | 0 | 55 | 14 | 4 | 2 | 98 | 25 | 6 | 4 |
| 13 | 3 | 7 | 2 | 56 | 14 | 9 | 4 | 99 | 25 | 11 | 6 |
| 14 | 3 | 12 | 4 | 57 | 14 | 14 | 6 | 100 | 25 | 16 | 8 |
| 15 | 3 | 17 | 6 | 58 | 14 | 19 | 8 | 108 | 27 | 18 | 0 |
| 16 | 4 | 2 | 8 | 59 | 15 | 4 | 10 | 110 | 28 | 8 | 4 |
| 17 | 4 | 7 | 10 | 60 | 15 | 10 | 0 | 112 | 28 | 18 | 8 |
| 18 | 4 | 13 | 0 | 61 | 15 | 15 | 2 | 120 | 31 | 0 | 0 |
| 19 | 4 | 18 | 2 | 62 | 16 | 0 | 4 | 130 | 33 | 11 | 8 |
| 20 | 5 | 3 | 4 | 63 | 16 | 5 | 6 | 132 | 34 | 2 | 0 |
| 21 | 5 | 8 | 6 | 64 | 16 | 10 | 8 | 140 | 36 | 3 | 4 |
| 22 | 5 | 13 | 8 | 65 | 16 | 15 | 10 | 144 | 37 | 4 | 0 |
| 23 | 5 | 18 | 10 | 66 | 17 | 1 | 0 | 150 | 38 | 15 | 0 |
| 24 | 6 | 4 | 0 | 67 | 17 | 6 | 2 | 175 | 45 | 4 | 2 |
| 25 | 6 | 9 | 2 | 68 | 17 | 11 | 4 | 200 | 51 | 13 | 4 |
| 26 | 6 | 14 | 4 | 69 | 17 | 16 | 6 | 250 | 64 | 11 | 8 |
| 27 | 6 | 19 | 6 | 70 | 18 | 1 | 8 | 300 | 77 | 10 | 0 |
| 28 | 7 | 4 | 8 | 71 | 18 | 6 | 10 | 365 | 94 | 5 | 10 |
| 29 | 7 | 9 | 10 | 72 | 18 | 12 | 0 | 400 | 103 | 6 | 8 |
| 30 | 7 | 15 | 0 | 73 | 18 | 17 | 2 | 500 | 129 | 3 | 4 |
| 31 | 8 | 0 | 2 | 74 | 19 | 2 | 4 | 600 | 155 | 0 | 0 |
| 32 | 8 | 5 | 4 | 75 | 19 | 7 | 6 | 700 | 180 | 16 | 8 |
| 33 | 8 | 10 | 6 | 76 | 19 | 12 | 8 | 750 | 193 | 15 | 0 |
| 34 | 8 | 15 | 8 | 77 | 19 | 17 | 10 | 800 | 206 | 13 | 4 |
| 35 | 9 | 0 | 10 | 78 | 20 | 3 | 0 | 900 | 232 | 10 | 0 |
| 36 | 9 | 6 | 0 | 79 | 20 | 8 | 2 | 1000 | 258 | 6 | 8 |
| 37 | 9 | 11 | 2 | 80 | 20 | 13 | 4 | 1250 | 322 | 18 | 4 |
| 38 | 9 | 16 | 4 | 81 | 20 | 18 | 6 | 1500 | 387 | 10 | 0 |
| 39 | 10 | 1 | 6 | 82 | 21 | 3 | 8 | 1750 | 452 | 1 | 8 |
| 40 | 10 | 6 | 8 | 83 | 21 | 8 | 10 | 2000 | 516 | 13 | 4 |
| 41 | 10 | 11 | 10 | 84 | 21 | 14 | 0 | 2240 | 578 | 13 | 4 |
| 42 | 10 | 17 | 0 | 85 | 21 | 19 | 2 | 3000 | 775 | 0 | 0 |
| 43 | 11 | 2 | 2 | 86 | 22 | 4 | 4 | 5000 | 1291 | 13 | 4 |

## 5s. 4d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 4 | 44 | 11 | 14 | 8 | 87 | 23 | 4 | 0 |
| 2 | 0 | 10 | 8 | 45 | 12 | 0 | 0 | 88 | 23 | 9 | 4 |
| 3 | 0 | 16 | 0 | 46 | 12 | 5 | 4 | 89 | 23 | 14 | 8 |
| 4 | 1 | 1 | 4 | 47 | 12 | 10 | 8 | 90 | 24 | 0 | 0 |
| 5 | 1 | 6 | 8 | 48 | 12 | 16 | 0 | 91 | 24 | 5 | 4 |
| 6 | 1 | 12 | 0 | 49 | 13 | 1 | 4 | 92 | 24 | 10 | 8 |
| 7 | 1 | 17 | 4 | 50 | 13 | 6 | 8 | 93 | 24 | 16 | 0 |
| 8 | 2 | 2 | 8 | 51 | 13 | 12 | 0 | 94 | 25 | 1 | 4 |
| 9 | 2 | 8 | 0 | 52 | 13 | 17 | 4 | 95 | 25 | 6 | 8 |
| 10 | 2 | 13 | 4 | 53 | 14 | 2 | 8 | 96 | 25 | 12 | 0 |
| 11 | 2 | 18 | 8 | 54 | 14 | 8 | 0 | 97 | 25 | 17 | 4 |
| 12 | 3 | 4 | 0 | 55 | 14 | 13 | 4 | 98 | 26 | 2 | 8 |
| 13 | 3 | 9 | 4 | 56 | 14 | 18 | 8 | 99 | 26 | 8 | 0 |
| 14 | 3 | 14 | 8 | 57 | 15 | 4 | 0 | 100 | 26 | 13 | 4 |
| 15 | 4 | 0 | 0 | 58 | 15 | 9 | 4 | 108 | 28 | 16 | 0 |
| 16 | 4 | 5 | 4 | 59 | 15 | 14 | 8 | 110 | 29 | 6 | 8 |
| 17 | 4 | 10 | 8 | 60 | 16 | 0 | 0 | 112 | 29 | 17 | 4 |
| 18 | 4 | 16 | 0 | 61 | 16 | 5 | 4 | 120 | 32 | 0 | 0 |
| 19 | 5 | 1 | 4 | 62 | 16 | 10 | 8 | 130 | 34 | 13 | 4 |
| 20 | 5 | 6 | 8 | 63 | 16 | 16 | 0 | 132 | 35 | 4 | 0 |
| 21 | 5 | 12 | 0 | 64 | 17 | 1 | 4 | 140 | 37 | 6 | 8 |
| 22 | 5 | 17 | 4 | 65 | 17 | 6 | 8 | 144 | 38 | 8 | 0 |
| 23 | 6 | 2 | 8 | 66 | 17 | 12 | 0 | 150 | 40 | 0 | 0 |
| 24 | 6 | 8 | 0 | 67 | 17 | 17 | 4 | 175 | 46 | 13 | 4 |
| 25 | 6 | 13 | 4 | 68 | 18 | 2 | 8 | 200 | 53 | 6 | 8 |
| 26 | 6 | 18 | 8 | 69 | 18 | 8 | 0 | 250 | 66 | 13 | 4 |
| 27 | 7 | 4 | 0 | 70 | 18 | 13 | 4 | 300 | 80 | 0 | 0 |
| 28 | 7 | 9 | 4 | 71 | 18 | 18 | 8 | 365 | 97 | 6 | 8 |
| 29 | 7 | 14 | 8 | 72 | 19 | 4 | 0 | 400 | 106 | 13 | 4 |
| 30 | 8 | 0 | 0 | 73 | 19 | 9 | 4 | 500 | 133 | 6 | 8 |
| 31 | 8 | 5 | 4 | 74 | 19 | 14 | 8 | 600 | 160 | 0 | 0 |
| 32 | 8 | 10 | 8 | 75 | 20 | 0 | 0 | 700 | 186 | 13 | 4 |
| 33 | 8 | 16 | 0 | 76 | 20 | 5 | 4 | 750 | 200 | 0 | 0 |
| 34 | 9 | 1 | 4 | 77 | 20 | 10 | 8 | 800 | 213 | 6 | 8 |
| 35 | 9 | 6 | 8 | 78 | 20 | 16 | 0 | 900 | 240 | 0 | 0 |
| 36 | 9 | 12 | 0 | 79 | 21 | 1 | 4 | 1000 | 266 | 13 | 4 |
| 37 | 9 | 17 | 4 | 80 | 21 | 6 | 8 | 1250 | 333 | 6 | 8 |
| 38 | 10 | 2 | 8 | 81 | 21 | 12 | 0 | 1500 | 400 | 0 | 0 |
| 39 | 10 | 8 | 0 | 82 | 21 | 17 | 4 | 1750 | 466 | 13 | 4 |
| 40 | 10 | 13 | 4 | 83 | 22 | 2 | 8 | 2000 | 533 | 6 | 8 |
| 41 | 10 | 18 | 8 | 84 | 22 | 8 | 0 | 2240 | 597 | 6 | 8 |
| 42 | 11 | 4 | 0 | 85 | 22 | 13 | 4 | 3000 | 800 | 0 | 0 |
| 43 | 11 | 9 | 4 | 86 | 22 | 18 | 8 | 5000 | 1333 | 6 | 8 |

## 5s. 5d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 5 | 44 | 11 | 18 | 4 | 87 | 23 | 11 | 3 |
| 2 | 0 | 10 | 10 | 45 | 12 | 3 | 9 | 88 | 23 | 16 | 8 |
| 3 | 0 | 16 | 3 | 46 | 12 | 9 | 2 | 89 | 24 | 2 | 1 |
| 4 | 1 | 1 | 8 | 47 | 12 | 14 | 7 | 90 | 24 | 7 | 6 |
| 5 | 1 | 7 | 1 | 48 | 13 | 0 | 0 | 91 | 24 | 12 | 11 |
| 6 | 1 | 12 | 6 | 49 | 13 | 5 | 5 | 92 | 24 | 18 | 4 |
| 7 | 1 | 17 | 11 | 50 | 13 | 10 | 10 | 93 | 25 | 3 | 9 |
| 8 | 2 | 3 | 4 | 51 | 13 | 16 | 3 | 94 | 25 | 9 | 2 |
| 9 | 2 | 8 | 9 | 52 | 14 | 1 | 8 | 95 | 25 | 14 | 7 |
| 10 | 2 | 14 | 2 | 53 | 14 | 7 | 1 | 96 | 26 | 0 | 0 |
| 11 | 2 | 19 | 7 | 54 | 14 | 12 | 6 | 97 | 26 | 5 | 5 |
| 12 | 3 | 5 | 0 | 55 | 14 | 17 | 11 | 98 | 26 | 10 | 10 |
| 13 | 3 | 10 | 5 | 56 | 15 | 3 | 4 | 99 | 26 | 16 | 3 |
| 14 | 3 | 15 | 10 | 57 | 15 | 8 | 9 | 100 | 27 | 1 | 8 |
| 15 | 4 | 1 | 3 | 58 | 15 | 14 | 2 | 108 | 29 | 5 | 0 |
| 16 | 4 | 6 | 8 | 59 | 15 | 19 | 7 | 110 | 29 | 15 | 10 |
| 17 | 4 | 12 | 1 | 60 | 16 | 5 | 0 | 112 | 30 | 6 | 8 |
| 18 | 4 | 17 | 6 | 61 | 16 | 10 | 5 | 120 | 32 | 10 | 0 |
| 19 | 5 | 2 | 11 | 62 | 16 | 15 | 10 | 130 | 35 | 4 | 2 |
| 20 | 5 | 8 | 4 | 63 | 17 | 1 | 3 | 132 | 35 | 15 | 0 |
| 21 | 5 | 13 | 9 | 64 | 17 | 6 | 8 | 140 | 37 | 18 | 4 |
| 22 | 5 | 19 | 2 | 65 | 17 | 12 | 1 | 144 | 39 | 0 | 0 |
| 23 | 6 | 4 | 7 | 66 | 17 | 17 | 6 | 150 | 40 | 12 | 6 |
| 24 | 6 | 10 | 0 | 67 | 18 | 2 | 11 | 175 | 47 | 7 | 11 |
| 25 | 6 | 15 | 5 | 68 | 18 | 8 | 4 | 200 | 54 | 3 | 4 |
| 26 | 7 | 0 | 10 | 69 | 18 | 13 | 9 | 250 | 67 | 14 | 2 |
| 27 | 7 | 6 | 3 | 70 | 18 | 19 | 2 | 300 | 81 | 5 | 0 |
| 28 | 7 | 11 | 8 | 71 | 19 | 4 | 7 | 365 | 98 | 17 | 1 |
| 29 | 7 | 17 | 1 | 72 | 19 | 10 | 0 | 400 | 108 | 6 | 8 |
| 30 | 8 | 2 | 6 | 73 | 19 | 15 | 5 | 500 | 135 | 8 | 4 |
| 31 | 8 | 7 | 11 | 74 | 20 | 0 | 10 | 600 | 162 | 10 | 0 |
| 32 | 8 | 13 | 4 | 75 | 20 | 6 | 3 | 700 | 189 | 11 | 8 |
| 33 | 8 | 18 | 9 | 76 | 20 | 11 | 8 | 750 | 203 | 2 | 6 |
| 34 | 9 | 4 | 2 | 77 | 20 | 17 | 1 | 800 | 216 | 13 | 4 |
| 35 | 9 | 9 | 7 | 78 | 21 | 2 | 6 | 900 | 243 | 15 | 0 |
| 36 | 9 | 15 | 0 | 79 | 21 | 7 | 11 | 1000 | 270 | 16 | 8 |
| 37 | 10 | 0 | 5 | 80 | 21 | 13 | 4 | 1250 | 338 | 10 | 10 |
| 38 | 10 | 5 | 10 | 81 | 21 | 18 | 9 | 1500 | 406 | 5 | 0 |
| 39 | 10 | 11 | 3 | 82 | 22 | 4 | 2 | 1750 | 473 | 19 | 2 |
| 40 | 10 | 16 | 8 | 83 | 22 | 9 | 7 | 2000 | 541 | 13 | 4 |
| 41 | 11 | 2 | 1 | 84 | 22 | 15 | 0 | 2240 | 606 | 13 | 4 |
| 42 | 11 | 7 | 6 | 85 | 23 | 0 | 5 | 3000 | 812 | 10 | 0 |
| 43 | 11 | 12 | 11 | 86 | 23 | 5 | 10 | 5000 | 1354 | 3 | 4 |

## 5s. 7d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 7 | 44 | 12 | 5 | 8 | 87 | 24 | 5 | 9 |
| 2 | 0 | 11 | 2 | 45 | 12 | 11 | 3 | 88 | 24 | 11 | 4 |
| 3 | 0 | 16 | 9 | 46 | 12 | 16 | 10 | 89 | 24 | 16 | 11 |
| 4 | 1 | 2 | 4 | 47 | 13 | 2 | 5 | 90 | 25 | 2 | 6 |
| 5 | 1 | 7 | 11 | 48 | 13 | 8 | 0 | 91 | 25 | 8 | 1 |
| 6 | 1 | 13 | 6 | 49 | 13 | 13 | 7 | 92 | 25 | 13 | 8 |
| 7 | 1 | 19 | 1 | 50 | 13 | 19 | 2 | 93 | 25 | 19 | 3 |
| 8 | 2 | 4 | 8 | 51 | 14 | 4 | 9 | 94 | 26 | 4 | 10 |
| 9 | 2 | 10 | 3 | 52 | 14 | 10 | 4 | 95 | 26 | 10 | 5 |
| 10 | 2 | 15 | 10 | 53 | 14 | 15 | 11 | 96 | 26 | 16 | 0 |
| 11 | 3 | 1 | 5 | 54 | 15 | 1 | 6 | 97 | 27 | 1 | 7 |
| 12 | 3 | 7 | 0 | 55 | 15 | 7 | 1 | 98 | 27 | 7 | 2 |
| 13 | 3 | 12 | 7 | 56 | 15 | 12 | 8 | 99 | 27 | 12 | 9 |
| 14 | 3 | 18 | 2 | 57 | 15 | 18 | 3 | 100 | 27 | 18 | 4 |
| 15 | 4 | 3 | 9 | 58 | 16 | 3 | 10 | 108 | 30 | 3 | 0 |
| 16 | 4 | 9 | 4 | 59 | 16 | 9 | 5 | 110 | 30 | 14 | 2 |
| 17 | 4 | 14 | 11 | 60 | 16 | 15 | 0 | 112 | 31 | 5 | 4 |
| 18 | 5 | 0 | 6 | 61 | 17 | 0 | 7 | 120 | 33 | 10 | 0 |
| 19 | 5 | 6 | 1 | 62 | 17 | 6 | 2 | 130 | 36 | 5 | 10 |
| 20 | 5 | 11 | 8 | 63 | 17 | 11 | 9 | 132 | 36 | 17 | 0 |
| 21 | 5 | 17 | 3 | 64 | 17 | 17 | 4 | 140 | 39 | 1 | 8 |
| 22 | 6 | 2 | 10 | 65 | 18 | 2 | 11 | 144 | 40 | 4 | 0 |
| 23 | 6 | 8 | 5 | 66 | 18 | 8 | 6 | 150 | 41 | 17 | 6 |
| 24 | 6 | 14 | 0 | 67 | 18 | 14 | 1 | 175 | 48 | 17 | 1 |
| 25 | 6 | 19 | 7 | 68 | 18 | 19 | 8 | 200 | 55 | 16 | 8 |
| 26 | 7 | 5 | 2 | 69 | 19 | 5 | 3 | 250 | 69 | 15 | 10 |
| 27 | 7 | 10 | 9 | 70 | 19 | 10 | 10 | 300 | 83 | 15 | 0 |
| 28 | 7 | 16 | 4 | 71 | 19 | 16 | 5 | 365 | 101 | 17 | 11 |
| 29 | 8 | 1 | 11 | 72 | 20 | 2 | 0 | 400 | 111 | 13 | 4 |
| 30 | 8 | 7 | 6 | 73 | 20 | 7 | 7 | 500 | 139 | 11 | 8 |
| 31 | 8 | 13 | 1 | 74 | 20 | 13 | 2 | 600 | 167 | 10 | 0 |
| 32 | 8 | 18 | 8 | 75 | 20 | 18 | 9 | 700 | 195 | 8 | 4 |
| 33 | 9 | 4 | 3 | 76 | 21 | 4 | 4 | 750 | 209 | 7 | 6 |
| 34 | 9 | 9 | 10 | 77 | 21 | 9 | 11 | 800 | 223 | 6 | 8 |
| 35 | 9 | 15 | 5 | 78 | 21 | 15 | 6 | 900 | 251 | 5 | 0 |
| 36 | 10 | 1 | 0 | 79 | 22 | 1 | 1 | 1000 | 279 | 3 | 4 |
| 37 | 10 | 6 | 7 | 80 | 22 | 6 | 8 | 1250 | 348 | 19 | 2 |
| 38 | 10 | 12 | 2 | 81 | 22 | 12 | 3 | 1500 | 418 | 15 | 0 |
| 39 | 10 | 17 | 9 | 82 | 22 | 17 | 10 | 1750 | 488 | 10 | 10 |
| 40 | 11 | 3 | 4 | 83 | 23 | 3 | 5 | 2000 | 558 | 6 | 8 |
| 41 | 11 | 8 | 11 | 84 | 23 | 9 | 0 | 2240 | 625 | 6 | 8 |
| 42 | 11 | 14 | 6 | 85 | 23 | 14 | 7 | 3000 | 837 | 10 | 0 |
| 43 | 12 | 0 | 1 | 86 | 24 | 0 | 2 | 5000 | 1395 | 16 | 8 |

## 5s. 6d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 6 | 44 | 12 | 2 | 0 | 87 | 23 | 18 | 6 |
| 2 | 0 | 11 | 0 | 45 | 12 | 7 | 6 | 88 | 24 | 4 | 0 |
| 3 | 0 | 16 | 6 | 46 | 12 | 13 | 0 | 89 | 24 | 9 | 6 |
| 4 | 1 | 2 | 0 | 47 | 12 | 18 | 6 | 90 | 24 | 15 | 0 |
| 5 | 1 | 7 | 6 | 48 | 13 | 4 | 0 | 91 | 25 | 0 | 6 |
| 6 | 1 | 13 | 0 | 49 | 13 | 9 | 6 | 92 | 25 | 6 | 0 |
| 7 | 1 | 18 | 6 | 50 | 13 | 15 | 0 | 93 | 25 | 11 | 6 |
| 8 | 2 | 4 | 0 | 51 | 14 | 0 | 6 | 94 | 25 | 17 | 0 |
| 9 | 2 | 9 | 6 | 52 | 14 | 6 | 0 | 95 | 26 | 2 | 6 |
| 10 | 2 | 15 | 0 | 53 | 14 | 11 | 6 | 96 | 26 | 8 | 0 |
| 11 | 3 | 0 | 6 | 54 | 14 | 17 | 0 | 97 | 26 | 13 | 6 |
| 12 | 3 | 6 | 0 | 55 | 15 | 2 | 6 | 98 | 26 | 19 | 0 |
| 13 | 3 | 11 | 6 | 56 | 15 | 8 | 0 | 99 | 27 | 4 | 6 |
| 14 | 3 | 17 | 0 | 57 | 15 | 13 | 6 | 100 | 27 | 10 | 0 |
| 15 | 4 | 2 | 6 | 58 | 15 | 19 | 0 | 108 | 29 | 14 | 0 |
| 16 | 4 | 8 | 0 | 59 | 16 | 4 | 6 | 110 | 30 | 5 | 0 |
| 17 | 4 | 13 | 6 | 60 | 16 | 10 | 0 | 112 | 30 | 16 | 0 |
| 18 | 4 | 19 | 0 | 61 | 16 | 15 | 6 | 120 | 33 | 0 | 0 |
| 19 | 5 | 4 | 6 | 62 | 17 | 1 | 0 | 130 | 35 | 15 | 0 |
| 20 | 5 | 10 | 0 | 63 | 17 | 6 | 6 | 132 | 36 | 6 | 0 |
| 21 | 5 | 15 | 6 | 64 | 17 | 12 | 0 | 140 | 38 | 10 | 0 |
| 22 | 6 | 1 | 0 | 65 | 17 | 17 | 6 | 144 | 39 | 12 | 0 |
| 23 | 6 | 6 | 6 | 66 | 18 | 3 | 0 | 150 | 41 | 5 | 0 |
| 24 | 6 | 12 | 0 | 67 | 18 | 8 | 6 | 175 | 48 | 2 | 6 |
| 25 | 6 | 17 | 6 | 68 | 18 | 14 | 0 | 200 | 55 | 0 | 0 |
| 26 | 7 | 3 | 0 | 69 | 18 | 19 | 6 | 250 | 68 | 15 | 0 |
| 27 | 7 | 8 | 6 | 70 | 19 | 5 | 0 | 300 | 82 | 10 | 0 |
| 28 | 7 | 14 | 0 | 71 | 19 | 10 | 6 | 365 | 100 | 7 | 6 |
| 29 | 7 | 19 | 6 | 72 | 19 | 16 | 0 | 400 | 110 | 0 | 0 |
| 30 | 8 | 5 | 0 | 73 | 20 | 1 | 6 | 500 | 137 | 10 | 0 |
| 31 | 8 | 10 | 6 | 74 | 20 | 7 | 0 | 600 | 165 | 0 | 0 |
| 32 | 8 | 16 | 0 | 75 | 20 | 12 | 6 | 700 | 192 | 10 | 0 |
| 33 | 9 | 1 | 6 | 76 | 20 | 18 | 0 | 750 | 206 | 5 | 0 |
| 34 | 9 | 7 | 0 | 77 | 21 | 3 | 6 | 800 | 220 | 0 | 0 |
| 35 | 9 | 12 | 6 | 78 | 21 | 9 | 0 | 900 | 247 | 10 | 0 |
| 36 | 9 | 18 | 0 | 79 | 21 | 14 | 6 | 1000 | 275 | 0 | 0 |
| 37 | 10 | 3 | 6 | 80 | 22 | 0 | 0 | 1250 | 343 | 15 | 0 |
| 38 | 10 | 9 | 0 | 81 | 22 | 5 | 6 | 1500 | 412 | 10 | 0 |
| 39 | 10 | 14 | 6 | 82 | 22 | 11 | 0 | 1750 | 481 | 5 | 0 |
| 40 | 11 | 0 | 0 | 83 | 22 | 16 | 6 | 2000 | 550 | 0 | 0 |
| 41 | 11 | 5 | 6 | 84 | 23 | 2 | 0 | 2240 | 616 | 0 | 0 |
| 42 | 11 | 11 | 0 | 85 | 23 | 7 | 6 | 3000 | 825 | 0 | 0 |
| 43 | 11 | 16 | 6 | 86 | 23 | 13 | 0 | 5000 | 1375 | 0 | 0 |

## 5s. 8d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 8 | 44 | 12 | 9 | 4 | 87 | 24 | 13 | 0 |
| 2 | 0 | 11 | 4 | 45 | 12 | 15 | 0 | 88 | 24 | 18 | 8 |
| 3 | 0 | 17 | 0 | 46 | 13 | 0 | 8 | 89 | 25 | 4 | 4 |
| 4 | 1 | 2 | 8 | 47 | 13 | 6 | 4 | 90 | 25 | 10 | 0 |
| 5 | 1 | 8 | 4 | 48 | 13 | 12 | 0 | 91 | 25 | 15 | 8 |
| 6 | 1 | 14 | 0 | 49 | 13 | 17 | 8 | 92 | 26 | 1 | 4 |
| 7 | 1 | 19 | 8 | 50 | 14 | 3 | 4 | 93 | 26 | 7 | 0 |
| 8 | 2 | 5 | 4 | 51 | 14 | 9 | 0 | 94 | 26 | 12 | 8 |
| 9 | 2 | 11 | 0 | 52 | 14 | 14 | 8 | 95 | 26 | 18 | 4 |
| 10 | 2 | 16 | 8 | 53 | 15 | 0 | 4 | 96 | 27 | 4 | 0 |
| 11 | 3 | 2 | 4 | 54 | 15 | 6 | 0 | 97 | 27 | 9 | 8 |
| 12 | 3 | 8 | 0 | 55 | 15 | 11 | 8 | 98 | 27 | 15 | 4 |
| 13 | 3 | 13 | 8 | 56 | 15 | 17 | 4 | 99 | 28 | 1 | 0 |
| 14 | 3 | 19 | 4 | 57 | 16 | 3 | 0 | 100 | 28 | 6 | 8 |
| 15 | 4 | 5 | 0 | 58 | 16 | 8 | 8 | 108 | 30 | 12 | 0 |
| 16 | 4 | 10 | 8 | 59 | 16 | 14 | 4 | 110 | 31 | 3 | 4 |
| 17 | 4 | 16 | 4 | 60 | 17 | 0 | 0 | 112 | 31 | 14 | 8 |
| 18 | 5 | 2 | 0 | 61 | 17 | 5 | 8 | 120 | 34 | 0 | 0 |
| 19 | 5 | 7 | 8 | 62 | 17 | 11 | 4 | 130 | 36 | 16 | 8 |
| 20 | 5 | 13 | 4 | 63 | 17 | 17 | 0 | 132 | 37 | 8 | 0 |
| 21 | 5 | 19 | 0 | 64 | 18 | 2 | 8 | 140 | 39 | 13 | 4 |
| 22 | 6 | 4 | 8 | 65 | 18 | 8 | 4 | 144 | 40 | 16 | 0 |
| 23 | 6 | 10 | 4 | 66 | 18 | 14 | 0 | 150 | 42 | 10 | 0 |
| 24 | 6 | 16 | 0 | 67 | 18 | 19 | 8 | 175 | 49 | 11 | 8 |
| 25 | 7 | 1 | 8 | 68 | 19 | 5 | 4 | 200 | 56 | 13 | 4 |
| 26 | 7 | 7 | 4 | 69 | 19 | 11 | 0 | 250 | 70 | 16 | 8 |
| 27 | 7 | 13 | 0 | 70 | 19 | 16 | 8 | 300 | 85 | 0 | 0 |
| 28 | 7 | 18 | 8 | 71 | 20 | 2 | 4 | 365 | 103 | 8 | 4 |
| 29 | 8 | 4 | 4 | 72 | 20 | 8 | 0 | 400 | 113 | 6 | 8 |
| 30 | 8 | 10 | 0 | 73 | 20 | 13 | 8 | 500 | 141 | 13 | 4 |
| 31 | 8 | 15 | 8 | 74 | 20 | 19 | 4 | 600 | 170 | 0 | 0 |
| 32 | 9 | 1 | 4 | 75 | 21 | 5 | 0 | 700 | 198 | 6 | 8 |
| 33 | 9 | 7 | 0 | 76 | 21 | 10 | 8 | 750 | 212 | 10 | 0 |
| 34 | 9 | 12 | 8 | 77 | 21 | 16 | 4 | 800 | 226 | 13 | 4 |
| 35 | 9 | 18 | 4 | 78 | 22 | 2 | 0 | 900 | 255 | 0 | 0 |
| 36 | 10 | 4 | 0 | 79 | 22 | 7 | 8 | 1000 | 283 | 6 | 8 |
| 37 | 10 | 9 | 8 | 80 | 22 | 13 | 4 | 1250 | 354 | 3 | 4 |
| 38 | 10 | 15 | 4 | 81 | 22 | 19 | 0 | 1500 | 425 | 0 | 0 |
| 39 | 11 | 1 | 0 | 82 | 23 | 4 | 8 | 1750 | 495 | 16 | 8 |
| 40 | 11 | 6 | 8 | 83 | 23 | 10 | 4 | 2000 | 566 | 13 | 4 |
| 41 | 11 | 12 | 4 | 84 | 23 | 16 | 0 | 2240 | 634 | 13 | 4 |
| 42 | 11 | 18 | 0 | 85 | 24 | 1 | 8 | 3000 | 850 | 0 | 0 |
| 43 | 12 | 8 | 8 | 86 | 24 | 7 | 4 | 5000 | 1416 | 13 | 4 |

## 5s. 9d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 9 | 44 | 12 | 13 | 0 | 87 | 25 | 0 | 3 |
| 2 | 0 | 11 | 6 | 45 | 12 | 18 | 9 | 88 | 25 | 6 | 0 |
| 3 | 0 | 17 | 3 | 46 | 13 | 4 | 6 | 89 | 25 | 11 | 9 |
| 4 | 1 | 3 | 0 | 47 | 13 | 10 | 3 | 90 | 25 | 17 | 6 |
| 5 | 1 | 8 | 9 | 48 | 13 | 16 | 0 | 91 | 26 | 3 | 3 |
| 6 | 1 | 14 | 6 | 49 | 14 | 1 | 9 | 92 | 26 | 9 | 0 |
| 7 | 2 | 0 | 3 | 50 | 14 | 7 | 6 | 93 | 26 | 14 | 9 |
| 8 | 2 | 6 | 0 | 51 | 14 | 13 | 3 | 94 | 27 | 0 | 6 |
| 9 | 2 | 11 | 9 | 52 | 14 | 19 | 0 | 95 | 27 | 6 | 3 |
| 10 | 2 | 17 | 6 | 53 | 15 | 4 | 9 | 96 | 27 | 12 | 0 |
| 11 | 3 | 3 | 3 | 54 | 15 | 10 | 6 | 97 | 27 | 17 | 9 |
| 12 | 3 | 9 | 0 | 55 | 15 | 16 | 3 | 98 | 28 | 3 | 6 |
| 13 | 3 | 14 | 9 | 56 | 16 | 2 | 0 | 99 | 28 | 9 | 3 |
| 14 | 4 | 0 | 6 | 57 | 16 | 7 | 9 | 100 | 28 | 15 | 0 |
| 15 | 4 | 6 | 3 | 58 | 16 | 13 | 6 | 108 | 31 | 1 | 0 |
| 16 | 4 | 12 | 0 | 59 | 16 | 19 | 3 | 110 | 31 | 12 | 6 |
| 17 | 4 | 17 | 9 | 60 | 17 | 5 | 0 | 112 | 32 | 4 | 0 |
| 18 | 5 | 3 | 6 | 61 | 17 | 10 | 9 | 120 | 34 | 10 | 0 |
| 19 | 5 | 9 | 3 | 62 | 17 | 16 | 6 | 130 | 37 | 7 | 6 |
| 20 | 5 | 15 | 0 | 63 | 18 | 2 | 3 | 132 | 37 | 19 | 0 |
| 21 | 6 | 0 | 9 | 64 | 18 | 8 | 0 | 140 | 40 | 5 | 0 |
| 22 | 6 | 6 | 6 | 65 | 18 | 13 | 9 | 144 | 41 | 8 | 0 |
| 23 | 6 | 12 | 3 | 66 | 18 | 19 | 6 | 150 | 43 | 2 | 6 |
| 24 | 6 | 18 | 0 | 67 | 19 | 5 | 3 | 175 | 50 | 6 | 3 |
| 25 | 7 | 3 | 9 | 68 | 19 | 11 | 0 | 200 | 57 | 10 | 0 |
| 26 | 7 | 9 | 6 | 69 | 19 | 16 | 9 | 250 | 71 | 17 | 6 |
| 27 | 7 | 15 | 3 | 70 | 20 | 2 | 6 | 300 | 86 | 5 | 0 |
| 28 | 8 | 1 | 0 | 71 | 20 | 8 | 3 | 365 | 104 | 18 | 9 |
| 29 | 8 | 6 | 9 | 72 | 20 | 14 | 0 | 400 | 115 | 0 | 0 |
| 30 | 8 | 12 | 6 | 73 | 20 | 19 | 9 | 500 | 143 | 15 | 0 |
| 31 | 8 | 18 | 3 | 74 | 21 | 5 | 6 | 600 | 172 | 10 | 0 |
| 32 | 9 | 4 | 0 | 75 | 21 | 11 | 3 | 700 | 201 | 5 | 0 |
| 33 | 9 | 9 | 9 | 76 | 21 | 17 | 0 | 750 | 215 | 12 | 6 |
| 34 | 9 | 15 | 6 | 77 | 22 | 2 | 9 | 800 | 230 | 0 | 0 |
| 35 | 10 | 1 | 3 | 78 | 22 | 8 | 6 | 900 | 258 | 15 | 0 |
| 36 | 10 | 7 | 0 | 79 | 22 | 14 | 3 | 1000 | 287 | 10 | 0 |
| 37 | 10 | 12 | 9 | 80 | 23 | 0 | 0 | 1250 | 359 | 7 | 6 |
| 38 | 10 | 18 | 6 | 81 | 23 | 5 | 9 | 1500 | 431 | 5 | 0 |
| 39 | 11 | 4 | 3 | 82 | 23 | 11 | 6 | 1750 | 503 | 2 | 6 |
| 40 | 11 | 10 | 0 | 83 | 23 | 17 | 3 | 2000 | 575 | 0 | 0 |
| 41 | 11 | 15 | 9 | 84 | 24 | 3 | 0 | 2240 | 644 | 0 | 0 |
| 42 | 12 | 1 | 6 | 85 | 24 | 8 | 9 | 3000 | 862 | 10 | 0 |
| 43 | 12 | 7 | 3 | 86 | 24 | 14 | 6 | 5000 | 1437 | 10 | 0 |

## 5s. 11d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 11 | 44 | 13 | 0 | 4 | 87 | 25 | 14 | 9 |
| 2 | 0 | 11 | 10 | 45 | 13 | 6 | 3 | 88 | 26 | 0 | 8 |
| 3 | 0 | 17 | 9 | 46 | 13 | 12 | 2 | 89 | 26 | 6 | 7 |
| 4 | 1 | 3 | 8 | 47 | 13 | 18 | 1 | 90 | 26 | 12 | 6 |
| 5 | 1 | 9 | 7 | 48 | 14 | 4 | 0 | 91 | 26 | 18 | 5 |
| 6 | 1 | 15 | 6 | 49 | 14 | 9 | 11 | 92 | 27 | 4 | 4 |
| 7 | 2 | 1 | 5 | 50 | 14 | 15 | 10 | 93 | 27 | 10 | 3 |
| 8 | 2 | 7 | 4 | 51 | 15 | 1 | 9 | 94 | 27 | 16 | 2 |
| 9 | 2 | 13 | 3 | 52 | 15 | 7 | 8 | 95 | 28 | 2 | 1 |
| 10 | 2 | 19 | 2 | 53 | 15 | 13 | 7 | 96 | 28 | 8 | 0 |
| 11 | 3 | 5 | 1 | 54 | 15 | 19 | 6 | 97 | 28 | 13 | 11 |
| 12 | 3 | 11 | 0 | 55 | 16 | 5 | 5 | 98 | 28 | 19 | 10 |
| 13 | 3 | 16 | 11 | 56 | 16 | 11 | 4 | 99 | 29 | 5 | 9 |
| 14 | 4 | 2 | 10 | 57 | 16 | 17 | 3 | 100 | 29 | 11 | 8 |
| 15 | 4 | 8 | 9 | 58 | 17 | 3 | 2 | 108 | 31 | 19 | 0 |
| 16 | 4 | 14 | 8 | 59 | 17 | 9 | 1 | 110 | 32 | 10 | 10 |
| 17 | 5 | 0 | 7 | 60 | 17 | 15 | 0 | 112 | 33 | 2 | 8 |
| 18 | 5 | 6 | 6 | 61 | 18 | 0 | 11 | 120 | 35 | 10 | 0 |
| 19 | 5 | 12 | 5 | 62 | 18 | 6 | 10 | 130 | 38 | 9 | 2 |
| 20 | 5 | 18 | 4 | 63 | 18 | 12 | 9 | 132 | 39 | 1 | 0 |
| 21 | 6 | 4 | 3 | 64 | 18 | 18 | 8 | 140 | 41 | 8 | 4 |
| 22 | 6 | 10 | 2 | 65 | 19 | 4 | 7 | 144 | 42 | 12 | 0 |
| 23 | 6 | 16 | 1 | 66 | 19 | 10 | 6 | 150 | 44 | 7 | 6 |
| 24 | 7 | 2 | 0 | 67 | 19 | 16 | 5 | 175 | 51 | 15 | 5 |
| 25 | 7 | 7 | 11 | 68 | 20 | 2 | 4 | 200 | 59 | 3 | 4 |
| 26 | 7 | 13 | 10 | 69 | 20 | 8 | 3 | 250 | 73 | 10 | 2 |
| 27 | 7 | 19 | 9 | 70 | 20 | 14 | 2 | 300 | 88 | 15 | 0 |
| 28 | 8 | 5 | 8 | 71 | 21 | 0 | 1 | 365 | 107 | 19 | 7 |
| 29 | 8 | 11 | 7 | 72 | 21 | 6 | 0 | 400 | 118 | 6 | 8 |
| 30 | 8 | 17 | 6 | 73 | 21 | 11 | 11 | 500 | 147 | 18 | 4 |
| 31 | 9 | 3 | 5 | 74 | 21 | 17 | 10 | 600 | 177 | 10 | 0 |
| 32 | 9 | 9 | 4 | 75 | 22 | 3 | 9 | 700 | 207 | 1 | 8 |
| 33 | 9 | 15 | 3 | 76 | 22 | 9 | 8 | 750 | 221 | 17 | 6 |
| 34 | 10 | 1 | 2 | 77 | 22 | 15 | 7 | 800 | 236 | 13 | 4 |
| 35 | 10 | 7 | 1 | 78 | 23 | 1 | 6 | 900 | 266 | 5 | 0 |
| 36 | 10 | 13 | 0 | 79 | 23 | 7 | 5 | 1000 | 295 | 16 | 8 |
| 37 | 10 | 18 | 11 | 80 | 23 | 13 | 4 | 1250 | 369 | 15 | 10 |
| 38 | 11 | 4 | 10 | 81 | 23 | 19 | 3 | 1500 | 443 | 15 | 0 |
| 39 | 11 | 10 | 9 | 82 | 24 | 5 | 2 | 1750 | 517 | 14 | 2 |
| 40 | 11 | 16 | 8 | 83 | 24 | 11 | 1 | 2000 | 591 | 13 | 4 |
| 41 | 12 | 2 | 7 | 84 | 24 | 17 | 0 | 2240 | 662 | 13 | 4 |
| 42 | 12 | 8 | 6 | 85 | 25 | 2 | 11 | 3000 | 887 | 10 | 0 |
| 43 | 12 | 14 | 5 | 86 | 25 | 8 | 10 | 5000 | 1479 | 3 | 4 |

## 5s. 10d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 10 | 44 | 12 | 16 | 8 | 87 | 25 | 7 | 6 |
| 2 | 0 | 11 | 8 | 45 | 13 | 2 | 6 | 88 | 25 | 13 | 4 |
| 3 | 0 | 17 | 6 | 46 | 13 | 8 | 4 | 89 | 25 | 19 | 2 |
| 4 | 1 | 3 | 4 | 47 | 13 | 14 | 2 | 90 | 26 | 5 | 0 |
| 5 | 1 | 9 | 2 | 48 | 14 | 0 | 0 | 91 | 26 | 10 | 10 |
| 6 | 1 | 15 | 0 | 49 | 14 | 5 | 10 | 92 | 26 | 16 | 8 |
| 7 | 2 | 0 | 10 | 50 | 14 | 11 | 8 | 93 | 27 | 2 | 6 |
| 8 | 2 | 6 | 8 | 51 | 14 | 17 | 6 | 94 | 27 | 8 | 4 |
| 9 | 2 | 12 | 6 | 52 | 15 | 3 | 4 | 95 | 27 | 14 | 2 |
| 10 | 2 | 18 | 4 | 53 | 15 | 9 | 2 | 96 | 28 | 0 | 0 |
| 11 | 3 | 4 | 2 | 54 | 15 | 15 | 0 | 97 | 28 | 5 | 10 |
| 12 | 3 | 10 | 0 | 55 | 16 | 0 | 10 | 98 | 28 | 11 | 8 |
| 13 | 3 | 15 | 10 | 56 | 16 | 6 | 8 | 99 | 28 | 17 | 6 |
| 14 | 4 | 1 | 8 | 57 | 16 | 12 | 6 | 100 | 29 | 3 | 4 |
| 15 | 4 | 7 | 6 | 58 | 16 | 18 | 4 | 108 | 31 | 10 | 0 |
| 16 | 4 | 13 | 4 | 59 | 17 | 4 | 2 | 110 | 32 | 1 | 8 |
| 17 | 4 | 19 | 2 | 60 | 17 | 10 | 0 | 112 | 32 | 13 | 4 |
| 18 | 5 | 5 | 0 | 61 | 17 | 15 | 10 | 120 | 35 | 0 | 0 |
| 19 | 5 | 10 | 10 | 62 | 18 | 1 | 8 | 130 | 37 | 18 | 4 |
| 20 | 5 | 16 | 8 | 63 | 18 | 7 | 6 | 132 | 38 | 10 | 0 |
| 21 | 6 | 2 | 6 | 64 | 18 | 13 | 4 | 140 | 40 | 16 | 8 |
| 22 | 6 | 8 | 4 | 65 | 18 | 19 | 2 | 144 | 42 | 0 | 0 |
| 23 | 6 | 14 | 2 | 66 | 19 | 5 | 0 | 150 | 43 | 15 | 0 |
| 24 | 7 | 0 | 0 | 67 | 19 | 10 | 10 | 175 | 51 | 0 | 10 |
| 25 | 7 | 5 | 10 | 68 | 19 | 16 | 8 | 200 | 58 | 6 | 8 |
| 26 | 7 | 11 | 8 | 69 | 20 | 2 | 6 | 250 | 72 | 18 | 4 |
| 27 | 7 | 17 | 6 | 70 | 20 | 8 | 4 | 300 | 87 | 10 | 0 |
| 28 | 8 | 3 | 4 | 71 | 20 | 14 | 2 | 365 | 106 | 9 | 2 |
| 29 | 8 | 9 | 2 | 72 | 21 | 0 | 0 | 400 | 116 | 13 | 4 |
| 30 | 8 | 15 | 0 | 73 | 21 | 5 | 10 | 500 | 145 | 16 | 8 |
| 31 | 9 | 0 | 10 | 74 | 21 | 11 | 8 | 600 | 175 | 0 | 0 |
| 32 | 9 | 6 | 8 | 75 | 21 | 17 | 6 | 700 | 204 | 3 | 4 |
| 33 | 9 | 12 | 6 | 76 | 22 | 3 | 4 | 750 | 218 | 15 | 0 |
| 34 | 9 | 18 | 4 | 77 | 22 | 9 | 2 | 800 | 233 | 6 | 8 |
| 35 | 10 | 4 | 2 | 78 | 22 | 15 | 0 | 900 | 262 | 10 | 0 |
| 36 | 10 | 10 | 0 | 79 | 23 | 0 | 10 | 1000 | 291 | 13 | 4 |
| 37 | 10 | 15 | 10 | 80 | 23 | 6 | 8 | 1250 | 364 | 11 | 8 |
| 38 | 11 | 1 | 8 | 81 | 23 | 12 | 6 | 1500 | 437 | 10 | 0 |
| 39 | 11 | 7 | 6 | 82 | 23 | 18 | 4 | 1750 | 510 | 8 | 4 |
| 40 | 11 | 13 | 4 | 83 | 24 | 4 | 2 | 2000 | 583 | 6 | 8 |
| 41 | 11 | 19 | 2 | 84 | 24 | 10 | 0 | 2240 | 653 | 6 | 8 |
| 42 | 12 | 5 | 0 | 85 | 24 | 15 | 10 | 3000 | 875 | 0 | 0 |
| 43 | 12 | 10 | 10 | 86 | 25 | 1 | 8 | 5000 | 1458 | 6 | 8 |

## 6s.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 6 | 0 | 44 | 13 | 4 | 0 | 87 | 26 | 2 | 0 |
| 2 | 0 | 12 | 0 | 45 | 13 | 10 | 0 | 88 | 26 | 8 | 0 |
| 3 | 0 | 18 | 0 | 46 | 13 | 16 | 0 | 89 | 26 | 14 | 0 |
| 4 | 1 | 4 | 0 | 47 | 14 | 2 | 0 | 90 | 27 | 0 | 0 |
| 5 | 1 | 10 | 0 | 48 | 14 | 8 | 0 | 91 | 27 | 6 | 0 |
| 6 | 1 | 16 | 0 | 49 | 14 | 14 | 0 | 92 | 27 | 12 | 0 |
| 7 | 2 | 2 | 0 | 50 | 15 | 0 | 0 | 93 | 27 | 18 | 0 |
| 8 | 2 | 8 | 0 | 51 | 15 | 6 | 0 | 94 | 28 | 4 | 0 |
| 9 | 2 | 14 | 0 | 52 | 15 | 12 | 0 | 95 | 28 | 10 | 0 |
| 10 | 3 | 0 | 0 | 53 | 15 | 18 | 0 | 96 | 28 | 16 | 0 |
| 11 | 3 | 6 | 0 | 54 | 16 | 4 | 0 | 97 | 29 | 2 | 0 |
| 12 | 3 | 12 | 0 | 55 | 16 | 10 | 0 | 98 | 29 | 8 | 0 |
| 13 | 3 | 18 | 0 | 56 | 16 | 16 | 0 | 99 | 29 | 14 | 0 |
| 14 | 4 | 4 | 0 | 57 | 17 | 2 | 0 | 100 | 30 | 0 | 0 |
| 15 | 4 | 10 | 0 | 58 | 17 | 8 | 0 | 108 | 32 | 8 | 0 |
| 16 | 4 | 16 | 0 | 59 | 17 | 14 | 0 | 110 | 33 | 0 | 0 |
| 17 | 5 | 2 | 0 | 60 | 18 | 0 | 0 | 112 | 33 | 12 | 0 |
| 18 | 5 | 8 | 0 | 61 | 18 | 6 | 0 | 120 | 36 | 0 | 0 |
| 19 | 5 | 14 | 0 | 62 | 18 | 12 | 0 | 130 | 39 | 0 | 0 |
| 20 | 6 | 0 | 0 | 63 | 18 | 18 | 0 | 132 | 39 | 12 | 0 |
| 21 | 6 | 6 | 0 | 64 | 19 | 4 | 0 | 140 | 42 | 0 | 0 |
| 22 | 6 | 12 | 0 | 65 | 19 | 10 | 0 | 144 | 43 | 4 | 0 |
| 23 | 6 | 18 | 0 | 66 | 19 | 16 | 0 | 150 | 45 | 0 | 0 |
| 24 | 7 | 4 | 0 | 67 | 20 | 2 | 0 | 175 | 52 | 10 | 0 |
| 25 | 7 | 10 | 0 | 68 | 20 | 8 | 0 | 200 | 60 | 0 | 0 |
| 26 | 7 | 16 | 0 | 69 | 20 | 14 | 0 | 250 | 75 | 0 | 0 |
| 27 | 8 | 2 | 0 | 70 | 21 | 0 | 0 | 300 | 90 | 0 | 0 |
| 28 | 8 | 8 | 0 | 71 | 21 | 6 | 0 | 365 | 109 | 10 | 0 |
| 29 | 8 | 14 | 0 | 72 | 21 | 12 | 0 | 400 | 120 | 0 | 0 |
| 30 | 9 | 0 | 0 | 73 | 21 | 18 | 0 | 500 | 150 | 0 | 0 |
| 31 | 9 | 6 | 0 | 74 | 22 | 4 | 0 | 600 | 180 | 0 | 0 |
| 32 | 9 | 12 | 0 | 75 | 22 | 10 | 0 | 700 | 210 | 0 | 0 |
| 33 | 9 | 18 | 0 | 76 | 22 | 16 | 0 | 750 | 225 | 0 | 0 |
| 34 | 10 | 4 | 0 | 77 | 23 | 2 | 0 | 800 | 240 | 0 | 0 |
| 35 | 10 | 10 | 0 | 78 | 23 | 8 | 0 | 900 | 270 | 0 | 0 |
| 36 | 10 | 16 | 0 | 79 | 23 | 14 | 0 | 1000 | 300 | 0 | 0 |
| 37 | 11 | 2 | 0 | 80 | 24 | 0 | 0 | 1250 | 375 | 0 | 0 |
| 38 | 11 | 8 | 0 | 81 | 24 | 6 | 0 | 1500 | 450 | 0 | 0 |
| 39 | 11 | 14 | 0 | 82 | 24 | 12 | 0 | 1750 | 525 | 0 | 0 |
| 40 | 12 | 0 | 0 | 83 | 24 | 18 | 0 | 2000 | 600 | 0 | 0 |
| 41 | 12 | 6 | 0 | 84 | 25 | 4 | 0 | 2240 | 672 | 0 | 0 |
| 42 | 12 | 12 | 0 | 85 | 25 | 10 | 0 | 3000 | 900 | 0 | 0 |
| 43 | 12 | 18 | 0 | 86 | 25 | 16 | 0 | 5000 | 1500 | 0 | 0 |

## 6s. 1d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 6 | 1 | 44 | 13 | 7 | 8 | 87 | 26 | 9 | 3 |
| 2 | 0 | 12 | 2 | 45 | 13 | 13 | 9 | 88 | 26 | 15 | 4 |
| 3 | 0 | 18 | 3 | 46 | 13 | 19 | 10 | 89 | 27 | 1 | 5 |
| 4 | 1 | 4 | 4 | 47 | 14 | 5 | 11 | 90 | 27 | 7 | 6 |
| 5 | 1 | 10 | 5 | 48 | 14 | 12 | 0 | 91 | 27 | 13 | 7 |
| 6 | 1 | 16 | 6 | 49 | 14 | 18 | 1 | 92 | 27 | 19 | 8 |
| 7 | 2 | 2 | 7 | 50 | 15 | 4 | 2 | 93 | 28 | 5 | 9 |
| 8 | 2 | 8 | 8 | 51 | 15 | 10 | 3 | 94 | 28 | 11 | 10 |
| 9 | 2 | 14 | 9 | 52 | 15 | 16 | 4 | 95 | 28 | 17 | 11 |
| 10 | 3 | 0 | 10 | 53 | 16 | 2 | 5 | 96 | 29 | 4 | 0 |
| 11 | 3 | 6 | 11 | 54 | 16 | 8 | 6 | 97 | 29 | 10 | 1 |
| 12 | 3 | 13 | 0 | 55 | 16 | 14 | 7 | 98 | 29 | 16 | 2 |
| 13 | 3 | 19 | 1 | 56 | 17 | 0 | 8 | 99 | 30 | 2 | 3 |
| 14 | 4 | 5 | 2 | 57 | 17 | 6 | 9 | 100 | 30 | 8 | 4 |
| 15 | 4 | 11 | 3 | 58 | 17 | 12 | 10 | 108 | 32 | 17 | 0 |
| 16 | 4 | 17 | 4 | 59 | 17 | 18 | 11 | 110 | 33 | 9 | 2 |
| 17 | 5 | 3 | 5 | 60 | 18 | 5 | 0 | 112 | 34 | 1 | 4 |
| 18 | 5 | 9 | 6 | 61 | 18 | 11 | 1 | 120 | 36 | 10 | 0 |
| 19 | 5 | 15 | 7 | 62 | 18 | 17 | 2 | 130 | 39 | 10 | 10 |
| 20 | 6 | 1 | 8 | 63 | 19 | 3 | 3 | 132 | 40 | 3 | 0 |
| 21 | 6 | 7 | 9 | 64 | 19 | 9 | 4 | 140 | 42 | 11 | 8 |
| 22 | 6 | 13 | 10 | 65 | 19 | 15 | 5 | 144 | 43 | 16 | 0 |
| 23 | 6 | 19 | 11 | 66 | 20 | 1 | 6 | 150 | 45 | 12 | 6 |
| 24 | 7 | 6 | 0 | 67 | 20 | 7 | 7 | 175 | 53 | 4 | 7 |
| 25 | 7 | 12 | 1 | 68 | 20 | 13 | 8 | 200 | 60 | 16 | 8 |
| 26 | 7 | 18 | 2 | 69 | 20 | 19 | 9 | 250 | 76 | 0 | 10 |
| 27 | 8 | 4 | 3 | 70 | 21 | 5 | 10 | 300 | 91 | 5 | 0 |
| 28 | 8 | 10 | 4 | 71 | 21 | 11 | 11 | 365 | 111 | 0 | 5 |
| 29 | 8 | 16 | 5 | 72 | 21 | 18 | 0 | 400 | 121 | 13 | 4 |
| 30 | 9 | 2 | 6 | 73 | 22 | 4 | 1 | 500 | 152 | 1 | 8 |
| 31 | 9 | 8 | 7 | 74 | 22 | 10 | 2 | 600 | 182 | 10 | 0 |
| 32 | 9 | 14 | 8 | 75 | 22 | 16 | 3 | 700 | 212 | 18 | 4 |
| 33 | 10 | 0 | 9 | 76 | 23 | 2 | 4 | 750 | 228 | 2 | 6 |
| 34 | 10 | 6 | 10 | 77 | 23 | 8 | 5 | 800 | 243 | 6 | 8 |
| 35 | 10 | 12 | 11 | 78 | 23 | 14 | 6 | 900 | 273 | 15 | 0 |
| 36 | 10 | 19 | 0 | 79 | 24 | 0 | 7 | 1000 | 304 | 3 | 4 |
| 37 | 11 | 5 | 1 | 80 | 24 | 6 | 8 | 1250 | 380 | 4 | 2 |
| 38 | 11 | 11 | 2 | 81 | 24 | 12 | 9 | 1500 | 456 | 5 | 0 |
| 39 | 11 | 17 | 3 | 82 | 24 | 18 | 10 | 1750 | 532 | 5 | 10 |
| 40 | 12 | 3 | 4 | 83 | 25 | 4 | 11 | 2000 | 608 | 6 | 8 |
| 41 | 12 | 9 | 5 | 84 | 25 | 11 | 0 | 2240 | 681 | 6 | 8 |
| 42 | 12 | 15 | 6 | 85 | 25 | 17 | 1 | 3000 | 912 | 10 | 0 |
| 43 | 13 | 1 | 7 | 86 | 26 | 3 | 2 | 5000 | 1520 | 16 | 8 |

## 6s. 3d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 6 | 3 | 44 | 13 | 15 | 0 | 87 | 27 | 3 | 9 |
| 2 | 0 | 12 | 6 | 45 | 14 | 1 | 3 | 88 | 27 | 10 | 0 |
| 3 | 0 | 18 | 9 | 46 | 14 | 7 | 6 | 89 | 27 | 16 | 3 |
| 4 | 1 | 5 | 0 | 47 | 14 | 13 | 9 | 90 | 28 | 2 | 6 |
| 5 | 1 | 11 | 3 | 48 | 15 | 0 | 0 | 91 | 28 | 8 | 9 |
| 6 | 1 | 17 | 6 | 49 | 15 | 6 | 3 | 92 | 28 | 15 | 0 |
| 7 | 2 | 3 | 9 | 50 | 15 | 12 | 6 | 93 | 29 | 1 | 3 |
| 8 | 2 | 10 | 0 | 51 | 15 | 18 | 9 | 94 | 29 | 7 | 6 |
| 9 | 2 | 16 | 3 | 52 | 16 | 5 | 0 | 95 | 29 | 13 | 9 |
| 10 | 3 | 2 | 6 | 53 | 16 | 11 | 3 | 96 | 30 | 0 | 0 |
| 11 | 3 | 8 | 9 | 54 | 16 | 17 | 6 | 97 | 30 | 6 | 3 |
| 12 | 3 | 15 | 0 | 55 | 17 | 3 | 9 | 98 | 30 | 12 | 6 |
| 13 | 4 | 1 | 3 | 56 | 17 | 10 | 0 | 99 | 30 | 18 | 9 |
| 14 | 4 | 7 | 6 | 57 | 17 | 16 | 3 | 100 | 31 | 5 | 0 |
| 15 | 4 | 13 | 9 | 58 | 18 | 2 | 6 | 108 | 33 | 15 | 0 |
| 16 | 5 | 0 | 0 | 59 | 18 | 8 | 9 | 110 | 34 | 7 | 6 |
| 17 | 5 | 6 | 3 | 60 | 18 | 15 | 0 | 112 | 35 | 0 | 0 |
| 18 | 5 | 12 | 6 | 61 | 19 | 1 | 3 | 120 | 37 | 10 | 0 |
| 19 | 5 | 18 | 9 | 62 | 19 | 7 | 6 | 130 | 40 | 12 | 6 |
| 20 | 6 | 5 | 0 | 63 | 19 | 13 | 9 | 132 | 41 | 5 | 0 |
| 21 | 6 | 11 | 3 | 64 | 20 | 0 | 0 | 140 | 43 | 15 | 0 |
| 22 | 6 | 17 | 6 | 65 | 20 | 6 | 3 | 144 | 45 | 0 | 0 |
| 23 | 7 | 3 | 9 | 66 | 20 | 12 | 6 | 150 | 46 | 17 | 6 |
| 24 | 7 | 10 | 0 | 67 | 20 | 18 | 9 | 175 | 54 | 13 | 9 |
| 25 | 7 | 16 | 3 | 68 | 21 | 5 | 0 | 200 | 62 | 10 | 0 |
| 26 | 8 | 2 | 6 | 69 | 21 | 11 | 3 | 250 | 78 | 2 | 6 |
| 27 | 8 | 8 | 9 | 70 | 21 | 17 | 6 | 300 | 93 | 15 | 0 |
| 28 | 8 | 15 | 0 | 71 | 22 | 3 | 9 | 365 | 114 | 1 | 3 |
| 29 | 9 | 1 | 3 | 72 | 22 | 10 | 0 | 400 | 125 | 0 | 0 |
| 30 | 9 | 7 | 6 | 73 | 22 | 16 | 3 | 500 | 156 | 5 | 0 |
| 31 | 9 | 13 | 9 | 74 | 23 | 2 | 6 | 600 | 187 | 10 | 0 |
| 32 | 10 | 0 | 0 | 75 | 23 | 8 | 9 | 700 | 218 | 15 | 0 |
| 33 | 10 | 6 | 3 | 76 | 23 | 15 | 0 | 750 | 234 | 7 | 6 |
| 34 | 10 | 12 | 6 | 77 | 24 | 1 | 3 | 800 | 250 | 0 | 0 |
| 35 | 10 | 18 | 9 | 78 | 24 | 7 | 6 | 900 | 281 | 5 | 0 |
| 36 | 11 | 5 | 0 | 79 | 24 | 13 | 9 | 1000 | 312 | 10 | 0 |
| 37 | 11 | 11 | 3 | 80 | 25 | 0 | 0 | 1250 | 390 | 12 | 6 |
| 38 | 11 | 17 | 6 | 81 | 25 | 6 | 3 | 1500 | 468 | 15 | 0 |
| 39 | 12 | 3 | 9 | 82 | 25 | 12 | 6 | 1750 | 546 | 17 | 6 |
| 40 | 12 | 10 | 0 | 83 | 25 | 18 | 9 | 2000 | 625 | 0 | 0 |
| 41 | 12 | 16 | 3 | 84 | 26 | 5 | 0 | 2240 | 700 | 0 | 0 |
| 42 | 13 | 2 | 6 | 85 | 26 | 11 | 3 | 3000 | 937 | 10 | 0 |
| 43 | 13 | 8 | 9 | 86 | 26 | 17 | 6 | 5000 | 1562 | 10 | 0 |

## 6s. 2d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 6 | 2 | 44 | 13 | 11 | 4 | 87 | 26 | 16 | 6 |
| 2 | 0 | 12 | 4 | 45 | 13 | 17 | 6 | 88 | 27 | 2 | 8 |
| 3 | 0 | 18 | 6 | 46 | 14 | 3 | 8 | 89 | 27 | 8 | 10 |
| 4 | 1 | 4 | 8 | 47 | 14 | 9 | 10 | 90 | 27 | 15 | 0 |
| 5 | 1 | 10 | 10 | 48 | 14 | 16 | 0 | 91 | 28 | 1 | 2 |
| 6 | 1 | 17 | 0 | 49 | 15 | 2 | 2 | 92 | 28 | 7 | 4 |
| 7 | 2 | 3 | 2 | 50 | 15 | 8 | 4 | 93 | 28 | 13 | 6 |
| 8 | 2 | 9 | 4 | 51 | 15 | 14 | 6 | 94 | 28 | 19 | 8 |
| 9 | 2 | 15 | 6 | 52 | 16 | 0 | 8 | 95 | 29 | 5 | 10 |
| 10 | 3 | 1 | 8 | 53 | 16 | 6 | 10 | 96 | 29 | 12 | 0 |
| 11 | 3 | 7 | 10 | 54 | 16 | 13 | 0 | 97 | 29 | 18 | 2 |
| 12 | 3 | 14 | 0 | 55 | 16 | 19 | 2 | 98 | 30 | 4 | 4 |
| 13 | 4 | 0 | 2 | 56 | 17 | 5 | 4 | 99 | 30 | 10 | 6 |
| 14 | 4 | 6 | 4 | 57 | 17 | 11 | 6 | 100 | 30 | 16 | 8 |
| 15 | 4 | 12 | 6 | 58 | 17 | 17 | 8 | 108 | 33 | 6 | 0 |
| 16 | 4 | 18 | 8 | 59 | 18 | 3 | 10 | 110 | 33 | 18 | 4 |
| 17 | 5 | 4 | 10 | 60 | 18 | 10 | 0 | 112 | 34 | 10 | 8 |
| 18 | 5 | 11 | 0 | 61 | 18 | 16 | 2 | 120 | 37 | 0 | 0 |
| 19 | 5 | 17 | 2 | 62 | 19 | 2 | 4 | 130 | 40 | 1 | 8 |
| 20 | 6 | 3 | 4 | 63 | 19 | 8 | 6 | 132 | 40 | 14 | 0 |
| 21 | 6 | 9 | 6 | 64 | 19 | 14 | 8 | 140 | 43 | 3 | 4 |
| 22 | 6 | 15 | 8 | 65 | 20 | 0 | 10 | 144 | 44 | 8 | 0 |
| 23 | 7 | 1 | 10 | 66 | 20 | 7 | 0 | 150 | 46 | 5 | 0 |
| 24 | 7 | 8 | 0 | 67 | 20 | 13 | 2 | 175 | 53 | 19 | 2 |
| 25 | 7 | 14 | 2 | 68 | 20 | 19 | 4 | 200 | 61 | 13 | 4 |
| 26 | 8 | 0 | 4 | 69 | 21 | 5 | 6 | 250 | 77 | 1 | 8 |
| 27 | 8 | 6 | 6 | 70 | 21 | 11 | 8 | 300 | 92 | 10 | 0 |
| 28 | 8 | 12 | 8 | 71 | 21 | 17 | 10 | 365 | 112 | 10 | 10 |
| 29 | 8 | 18 | 10 | 72 | 22 | 4 | 0 | 400 | 123 | 6 | 8 |
| 30 | 9 | 5 | 0 | 73 | 22 | 10 | 2 | 500 | 154 | 3 | 4 |
| 31 | 9 | 11 | 2 | 74 | 22 | 16 | 4 | 600 | 185 | 0 | 0 |
| 32 | 9 | 17 | 4 | 75 | 23 | 2 | 6 | 700 | 215 | 16 | 8 |
| 33 | 10 | 3 | 6 | 76 | 23 | 8 | 8 | 750 | 231 | 5 | 0 |
| 34 | 10 | 9 | 8 | 77 | 23 | 14 | 10 | 800 | 246 | 13 | 4 |
| 35 | 10 | 15 | 10 | 78 | 24 | 1 | 0 | 900 | 277 | 10 | 0 |
| 36 | 11 | 2 | 0 | 79 | 24 | 7 | 2 | 1000 | 308 | 6 | 8 |
| 37 | 11 | 8 | 2 | 80 | 24 | 13 | 4 | 1250 | 385 | 8 | 4 |
| 38 | 11 | 14 | 4 | 81 | 24 | 19 | 6 | 1500 | 462 | 10 | 0 |
| 39 | 12 | 0 | 6 | 82 | 25 | 5 | 8 | 1750 | 539 | 11 | 8 |
| 40 | 12 | 6 | 8 | 83 | 25 | 11 | 10 | 2000 | 616 | 13 | 4 |
| 41 | 12 | 12 | 10 | 84 | 25 | 18 | 0 | 2240 | 690 | 13 | 4 |
| 42 | 12 | 19 | 0 | 85 | 26 | 4 | 2 | 3000 | 925 | 0 | 0 |
| 43 | 13 | 5 | 2 | 86 | 26 | 10 | 4 | 5000 | 1541 | 13 | 4 |

## 6s. 4d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 6 | 4 | 44 | 13 | 18 | 8 | 87 | 27 | 11 | 0 |
| 2 | 0 | 12 | 8 | 45 | 14 | 5 | 0 | 88 | 27 | 17 | 4 |
| 3 | 0 | 19 | 0 | 46 | 14 | 11 | 4 | 89 | 28 | 3 | 8 |
| 4 | 1 | 5 | 4 | 47 | 14 | 17 | 8 | 90 | 28 | 10 | 0 |
| 5 | 1 | 11 | 8 | 48 | 15 | 4 | 0 | 91 | 28 | 16 | 4 |
| 6 | 1 | 18 | 0 | 49 | 15 | 10 | 4 | 92 | 29 | 2 | 8 |
| 7 | 2 | 4 | 4 | 50 | 15 | 16 | 8 | 93 | 29 | 9 | 0 |
| 8 | 2 | 10 | 8 | 51 | 16 | 3 | 0 | 94 | 29 | 15 | 4 |
| 9 | 2 | 17 | 0 | 52 | 16 | 9 | 4 | 95 | 30 | 1 | 8 |
| 10 | 3 | 3 | 4 | 53 | 16 | 15 | 8 | 96 | 30 | 8 | 0 |
| 11 | 3 | 9 | 8 | 54 | 17 | 2 | 0 | 97 | 30 | 14 | 4 |
| 12 | 3 | 16 | 0 | 55 | 17 | 8 | 4 | 98 | 31 | 0 | 8 |
| 13 | 4 | 2 | 4 | 56 | 17 | 14 | 8 | 99 | 31 | 7 | 0 |
| 14 | 4 | 8 | 8 | 57 | 18 | 1 | 0 | 100 | 31 | 13 | 4 |
| 15 | 4 | 15 | 0 | 58 | 18 | 7 | 4 | 108 | 34 | 4 | 0 |
| 16 | 5 | 1 | 4 | 59 | 18 | 13 | 8 | 110 | 34 | 16 | 8 |
| 17 | 5 | 7 | 8 | 60 | 19 | 0 | 0 | 112 | 35 | 9 | 4 |
| 18 | 5 | 14 | 0 | 61 | 19 | 6 | 4 | 120 | 38 | 0 | 0 |
| 19 | 6 | 0 | 4 | 62 | 19 | 12 | 8 | 130 | 41 | 3 | 4 |
| 20 | 6 | 6 | 8 | 63 | 19 | 19 | 0 | 132 | 41 | 16 | 0 |
| 21 | 6 | 13 | 0 | 64 | 20 | 5 | 4 | 140 | 44 | 6 | 8 |
| 22 | 6 | 19 | 4 | 65 | 20 | 11 | 8 | 144 | 45 | 12 | 0 |
| 23 | 7 | 5 | 8 | 66 | 20 | 18 | 0 | 150 | 47 | 10 | 0 |
| 24 | 7 | 12 | 0 | 67 | 21 | 4 | 4 | 175 | 55 | 8 | 4 |
| 25 | 7 | 18 | 4 | 68 | 21 | 10 | 8 | 200 | 63 | 6 | 8 |
| 26 | 8 | 4 | 8 | 69 | 21 | 17 | 0 | 250 | 79 | 3 | 4 |
| 27 | 8 | 11 | 0 | 70 | 22 | 3 | 4 | 300 | 95 | 0 | 0 |
| 28 | 8 | 17 | 4 | 71 | 22 | 9 | 8 | 365 | 115 | 11 | 8 |
| 29 | 9 | 3 | 8 | 72 | 22 | 16 | 0 | 400 | 126 | 13 | 4 |
| 30 | 9 | 10 | 0 | 73 | 23 | 2 | 4 | 500 | 158 | 6 | 8 |
| 31 | 9 | 16 | 4 | 74 | 23 | 8 | 8 | 600 | 190 | 0 | 0 |
| 32 | 10 | 2 | 8 | 75 | 23 | 15 | 0 | 700 | 221 | 13 | 4 |
| 33 | 10 | 9 | 0 | 76 | 24 | 1 | 4 | 750 | 237 | 10 | 0 |
| 34 | 10 | 15 | 4 | 77 | 24 | 7 | 8 | 800 | 253 | 6 | 8 |
| 35 | 11 | 1 | 8 | 78 | 24 | 14 | 0 | 900 | 285 | 0 | 0 |
| 36 | 11 | 8 | 0 | 79 | 25 | 0 | 4 | 1000 | 316 | 13 | 4 |
| 37 | 11 | 14 | 4 | 80 | 25 | 6 | 8 | 1250 | 395 | 16 | 8 |
| 38 | 12 | 0 | 8 | 81 | 25 | 13 | 0 | 1500 | 475 | 0 | 0 |
| 39 | 12 | 7 | 0 | 82 | 25 | 19 | 4 | 1750 | 554 | 3 | 4 |
| 40 | 12 | 13 | 4 | 83 | 26 | 5 | 8 | 2000 | 633 | 6 | 8 |
| 41 | 12 | 19 | 8 | 84 | 26 | 12 | 0 | 2240 | 709 | 6 | 8 |
| 42 | 13 | 6 | 0 | 85 | 26 | 18 | 4 | 3000 | 950 | 0 | 0 |
| 43 | 13 | 12 | 4 | 86 | 27 | 4 | 8 | 5000 | 1583 | 6 | 8 |

## 6s. 5d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 6 | 5 | 44 | 14 | 2 | 4 | 87 | 27 | 18 | 3 |
| 2 | 0 | 12 | 10 | 45 | 14 | 8 | 9 | 88 | 28 | 4 | 8 |
| 3 | 0 | 19 | 3 | 46 | 14 | 15 | 2 | 89 | 28 | 11 | 1 |
| 4 | 1 | 5 | 8 | 47 | 15 | 1 | 7 | 90 | 28 | 17 | 6 |
| 5 | 1 | 12 | 1 | 48 | 15 | 8 | 0 | 91 | 29 | 8 | 11 |
| 6 | 1 | 18 | 6 | 49 | 15 | 14 | 5 | 92 | 29 | 10 | 4 |
| 7 | 2 | 4 | 11 | 50 | 16 | 0 | 10 | 93 | 29 | 16 | 9 |
| 8 | 2 | 11 | 4 | 51 | 16 | 7 | 3 | 94 | 30 | 3 | 2 |
| 9 | 2 | 17 | 9 | 52 | 16 | 13 | 8 | 95 | 30 | 9 | 7 |
| 10 | 3 | 4 | 2 | 53 | 17 | 0 | 1 | 96 | 30 | 16 | 0 |
| 11 | 3 | 10 | 7 | 54 | 17 | 6 | 6 | 97 | 31 | 2 | 5 |
| 12 | 3 | 17 | 0 | 55 | 17 | 12 | 11 | 98 | 31 | 8 | 10 |
| 13 | 4 | 3 | 5 | 56 | 17 | 19 | 4 | 99 | 31 | 15 | 3 |
| 14 | 4 | 9 | 10 | 57 | 18 | 5 | 9 | 100 | 32 | 1 | 8 |
| 15 | 4 | 16 | 3 | 58 | 18 | 12 | 2 | 108 | 34 | 13 | 0 |
| 16 | 5 | 2 | 8 | 59 | 18 | 18 | 7 | 110 | 35 | 5 | 10 |
| 17 | 5 | 9 | 1 | 60 | 19 | 5 | 0 | 112 | 35 | 18 | 8 |
| 18 | 5 | 15 | 6 | 61 | 19 | 11 | 5 | 120 | 38 | 10 | 0 |
| 19 | 6 | 1 | 11 | 62 | 19 | 17 | 10 | 130 | 41 | 14 | 2 |
| 20 | 6 | 8 | 4 | 63 | 20 | 4 | 3 | 132 | 42 | 7 | 0 |
| 21 | 6 | 14 | 9 | 64 | 20 | 10 | 8 | 140 | 44 | 18 | 4 |
| 22 | 7 | 1 | 2 | 65 | 20 | 17 | 1 | 144 | 46 | 4 | 0 |
| 23 | 7 | 7 | 7 | 66 | 21 | 3 | 6 | 150 | 48 | 2 | 6 |
| 24 | 7 | 14 | 0 | 67 | 21 | 9 | 11 | 175 | 56 | 2 | 11 |
| 25 | 8 | 0 | 5 | 68 | 21 | 16 | 4 | 200 | 64 | 3 | 4 |
| 26 | 8 | 6 | 10 | 69 | 22 | 2 | 9 | 250 | 80 | 4 | 2 |
| 27 | 8 | 13 | 3 | 70 | 22 | 9 | 2 | 300 | 96 | 5 | 0 |
| 28 | 8 | 19 | 8 | 71 | 22 | 15 | 7 | 365 | 117 | 2 | 1 |
| 29 | 9 | 6 | 1 | 72 | 23 | 2 | 0 | 400 | 128 | 6 | 8 |
| 30 | 9 | 12 | 6 | 73 | 23 | 8 | 5 | 500 | 160 | 8 | 4 |
| 31 | 9 | 18 | 11 | 74 | 23 | 14 | 10 | 600 | 192 | 10 | 0 |
| 32 | 10 | 5 | 4 | 75 | 24 | 1 | 3 | 700 | 224 | 11 | 8 |
| 33 | 10 | 11 | 9 | 76 | 24 | 7 | 8 | 750 | 240 | 12 | 6 |
| 34 | 10 | 18 | 2 | 77 | 24 | 14 | 1 | 800 | 256 | 13 | 4 |
| 35 | 11 | 4 | 7 | 78 | 25 | 0 | 6 | 900 | 288 | 15 | 0 |
| 36 | 11 | 11 | 0 | 79 | 25 | 6 | 11 | 1000 | 320 | 16 | 8 |
| 37 | 11 | 17 | 5 | 80 | 25 | 13 | 4 | 1250 | 401 | 0 | 10 |
| 38 | 12 | 3 | 10 | 81 | 25 | 19 | 9 | 1500 | 481 | 5 | 0 |
| 39 | 12 | 10 | 3 | 82 | 26 | 6 | 2 | 1750 | 561 | 9 | 2 |
| 40 | 12 | 16 | 8 | 83 | 26 | 12 | 7 | 2000 | 641 | 13 | 4 |
| 41 | 13 | 3 | 1 | 84 | 26 | 19 | 0 | 2240 | 718 | 13 | 4 |
| 42 | 13 | 9 | 6 | 85 | 27 | 5 | 5 | 3000 | 962 | 10 | 0 |
| 43 | 13 | 15 | 11 | 86 | 27 | 11 | 10 | 5000 | 1604 | 3 | 4 |

## 6s. 7d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 6 | 7 | 44 | 14 | 9 | 8 | 87 | 28 | 12 | 9 |
| 2 | 0 | 13 | 2 | 45 | 14 | 16 | 3 | 88 | 28 | 19 | 4 |
| 3 | 0 | 19 | 9 | 46 | 15 | 2 | 10 | 89 | 29 | 5 | 11 |
| 4 | 1 | 6 | 4 | 47 | 15 | 9 | 5 | 90 | 29 | 12 | 6 |
| 5 | 1 | 12 | 11 | 48 | 15 | 16 | 0 | 91 | 29 | 19 | 1 |
| 6 | 1 | 19 | 6 | 49 | 16 | 2 | 7 | 92 | 30 | 5 | 8 |
| 7 | 2 | 6 | 1 | 50 | 16 | 9 | 2 | 93 | 30 | 12 | 3 |
| 8 | 2 | 12 | 8 | 51 | 16 | 15 | 9 | 94 | 30 | 18 | 10 |
| 9 | 2 | 19 | 3 | 52 | 17 | 2 | 4 | 95 | 31 | 5 | 5 |
| 10 | 3 | 5 | 10 | 53 | 17 | 8 | 11 | 96 | 31 | 12 | 0 |
| 11 | 3 | 12 | 5 | 54 | 17 | 15 | 6 | 97 | 31 | 18 | 7 |
| 12 | 3 | 19 | 0 | 55 | 18 | 2 | 1 | 98 | 32 | 5 | 2 |
| 13 | 4 | 5 | 7 | 56 | 18 | 8 | 8 | 99 | 32 | 11 | 9 |
| 14 | 4 | 12 | 2 | 57 | 18 | 15 | 3 | 100 | 32 | 18 | 4 |
| 15 | 4 | 18 | 9 | 58 | 19 | 1 | 10 | 108 | 35 | 11 | 0 |
| 16 | 5 | 5 | 4 | 59 | 19 | 8 | 5 | 110 | 36 | 4 | 2 |
| 17 | 5 | 11 | 11 | 60 | 19 | 15 | 0 | 112 | 36 | 17 | 4 |
| 18 | 5 | 18 | 6 | 61 | 20 | 1 | 7 | 120 | 39 | 10 | 0 |
| 19 | 6 | 5 | 1 | 62 | 20 | 8 | 2 | 130 | 42 | 15 | 10 |
| 20 | 6 | 11 | 8 | 63 | 20 | 14 | 9 | 132 | 43 | 9 | 0 |
| 21 | 6 | 18 | 3 | 64 | 21 | 1 | 4 | 140 | 46 | 1 | 8 |
| 22 | 7 | 4 | 10 | 65 | 21 | 7 | 11 | 144 | 47 | 8 | 0 |
| 23 | 7 | 11 | 5 | 66 | 21 | 14 | 6 | 150 | 49 | 7 | 6 |
| 24 | 7 | 18 | 0 | 67 | 22 | 1 | 1 | 175 | 57 | 12 | 1 |
| 25 | 8 | 4 | 7 | 68 | 22 | 7 | 8 | 200 | 65 | 16 | 8 |
| 26 | 8 | 11 | 2 | 69 | 22 | 14 | 3 | 250 | 82 | 5 | 10 |
| 27 | 8 | 17 | 9 | 70 | 23 | 0 | 10 | 300 | 98 | 15 | 0 |
| 28 | 9 | 4 | 4 | 71 | 23 | 7 | 5 | 365 | 120 | 2 | 11 |
| 29 | 9 | 10 | 11 | 72 | 23 | 14 | 0 | 400 | 131 | 13 | 4 |
| 30 | 9 | 17 | 6 | 73 | 24 | 0 | 7 | 500 | 164 | 11 | 8 |
| 31 | 10 | 4 | 1 | 74 | 24 | 7 | 2 | 600 | 197 | 10 | 0 |
| 32 | 10 | 10 | 8 | 75 | 24 | 13 | 9 | 700 | 230 | 8 | 4 |
| 33 | 10 | 17 | 3 | 76 | 25 | 0 | 4 | 750 | 246 | 17 | 6 |
| 34 | 11 | 3 | 10 | 77 | 25 | 6 | 11 | 800 | 263 | 6 | 8 |
| 35 | 11 | 10 | 5 | 78 | 25 | 13 | 6 | 900 | 296 | 5 | 0 |
| 36 | 11 | 17 | 0 | 79 | 26 | 0 | 1 | 1000 | 329 | 3 | 4 |
| 37 | 12 | 3 | 7 | 80 | 26 | 6 | 8 | 1250 | 411 | 9 | 2 |
| 38 | 12 | 10 | 2 | 81 | 26 | 13 | 3 | 1500 | 493 | 15 | 0 |
| 39 | 12 | 16 | 9 | 82 | 26 | 19 | 10 | 1750 | 576 | 0 | 10 |
| 40 | 13 | 3 | 4 | 83 | 27 | 6 | 5 | 2000 | 658 | 6 | 8 |
| 41 | 13 | 9 | 11 | 84 | 27 | 13 | 0 | 2240 | 737 | 6 | 8 |
| 42 | 13 | 16 | 6 | 85 | 27 | 19 | 7 | 3000 | 987 | 10 | 0 |
| 43 | 14 | 3 | 1 | 86 | 28 | 6 | 2 | 5000 | 1645 | 16 | 8 |

## 6s. 6d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 6 | 6 | 44 | 14 | 6 | 0 | 87 | 28 | 5 | 6 |
| 2 | 0 | 13 | 0 | 45 | 14 | 12 | 6 | 88 | 28 | 12 | 0 |
| 3 | 0 | 19 | 6 | 46 | 14 | 19 | 0 | 89 | 28 | 18 | 6 |
| 4 | 1 | 6 | 0 | 47 | 15 | 5 | 6 | 90 | 29 | 5 | 0 |
| 5 | 1 | 12 | 6 | 48 | 15 | 12 | 0 | 91 | 29 | 11 | 6 |
| 6 | 1 | 19 | 0 | 49 | 15 | 18 | 6 | 92 | 29 | 18 | 0 |
| 7 | 2 | 5 | 6 | 50 | 16 | 5 | 0 | 93 | 30 | 4 | 6 |
| 8 | 2 | 12 | 0 | 51 | 16 | 11 | 6 | 94 | 30 | 11 | 0 |
| 9 | 2 | 18 | 6 | 52 | 16 | 18 | 0 | 95 | 30 | 17 | 6 |
| 10 | 3 | 5 | 0 | 53 | 17 | 4 | 6 | 96 | 31 | 4 | 0 |
| 11 | 3 | 11 | 6 | 54 | 17 | 11 | 0 | 97 | 31 | 10 | 6 |
| 12 | 3 | 18 | 0 | 55 | 17 | 17 | 6 | 98 | 31 | 17 | 0 |
| 13 | 4 | 4 | 6 | 56 | 18 | 4 | 0 | 99 | 32 | 3 | 6 |
| 14 | 4 | 11 | 0 | 57 | 18 | 10 | 6 | 100 | 32 | 10 | 0 |
| 15 | 4 | 17 | 6 | 58 | 18 | 17 | 0 | 108 | 35 | 2 | 0 |
| 16 | 5 | 4 | 0 | 59 | 19 | 3 | 6 | 110 | 35 | 15 | 0 |
| 17 | 5 | 10 | 6 | 60 | 19 | 10 | 0 | 112 | 36 | 8 | 0 |
| 18 | 5 | 17 | 0 | 61 | 19 | 16 | 6 | 120 | 39 | 0 | 0 |
| 19 | 6 | 3 | 6 | 62 | 20 | 3 | 0 | 130 | 42 | 5 | 0 |
| 20 | 6 | 10 | 0 | 63 | 20 | 9 | 6 | 132 | 42 | 18 | 0 |
| 21 | 6 | 16 | 6 | 64 | 20 | 16 | 0 | 140 | 45 | 10 | 0 |
| 22 | 7 | 3 | 0 | 65 | 21 | 2 | 6 | 144 | 46 | 16 | 0 |
| 23 | 7 | 9 | 6 | 66 | 21 | 9 | 0 | 150 | 48 | 15 | 0 |
| 24 | 7 | 16 | 0 | 67 | 21 | 15 | 6 | 175 | 56 | 17 | 6 |
| 25 | 8 | 2 | 6 | 68 | 22 | 2 | 0 | 200 | 65 | 0 | 0 |
| 26 | 8 | 9 | 0 | 69 | 22 | 8 | 6 | 250 | 81 | 5 | 0 |
| 27 | 8 | 15 | 6 | 70 | 22 | 15 | 0 | 300 | 97 | 10 | 0 |
| 28 | 9 | 2 | 0 | 71 | 23 | 1 | 6 | 365 | 118 | 12 | 6 |
| 29 | 9 | 8 | 6 | 72 | 23 | 8 | 0 | 400 | 130 | 0 | 0 |
| 30 | 9 | 15 | 0 | 73 | 23 | 14 | 6 | 500 | 162 | 10 | 0 |
| 31 | 10 | 1 | 6 | 74 | 24 | 1 | 0 | 600 | 195 | 0 | 0 |
| 32 | 10 | 8 | 0 | 75 | 24 | 7 | 6 | 700 | 227 | 10 | 0 |
| 33 | 10 | 14 | 6 | 76 | 24 | 14 | 0 | 750 | 243 | 15 | 0 |
| 34 | 11 | 1 | 0 | 77 | 25 | 0 | 6 | 800 | 260 | 0 | 0 |
| 35 | 11 | 7 | 6 | 78 | 25 | 7 | 0 | 900 | 292 | 10 | 0 |
| 36 | 11 | 14 | 0 | 79 | 25 | 13 | 6 | 1000 | 325 | 0 | 0 |
| 37 | 12 | 0 | 6 | 80 | 26 | 0 | 0 | 1250 | 406 | 5 | 0 |
| 38 | 12 | 7 | 0 | 81 | 26 | 6 | 6 | 1500 | 487 | 10 | 0 |
| 39 | 12 | 13 | 6 | 82 | 26 | 13 | 0 | 1750 | 568 | 15 | 0 |
| 40 | 13 | 0 | 0 | 83 | 26 | 19 | 6 | 2000 | 650 | 0 | 0 |
| 41 | 13 | 6 | 6 | 84 | 27 | 6 | 0 | 2240 | 728 | 0 | 0 |
| 42 | 13 | 13 | 0 | 85 | 27 | 12 | 6 | 3000 | 975 | 0 | 0 |
| 43 | 13 | 19 | 6 | 86 | 27 | 19 | 0 | 5000 | 1625 | 0 | 0 |

## 6s. 8d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 6 | 8 | 44 | 14 | 13 | 4 | 87 | 29 | 0 | 0 |
| 2 | 0 | 13 | 4 | 45 | 15 | 0 | 0 | 88 | 29 | 6 | 8 |
| 3 | 1 | 0 | 0 | 46 | 15 | 6 | 8 | 89 | 29 | 13 | 4 |
| 4 | 1 | 6 | 8 | 47 | 15 | 13 | 4 | 90 | 30 | 0 | 0 |
| 5 | 1 | 13 | 4 | 48 | 16 | 0 | 0 | 91 | 30 | 6 | 8 |
| 6 | 2 | 0 | 0 | 49 | 16 | 6 | 8 | 92 | 30 | 13 | 4 |
| 7 | 2 | 6 | 8 | 50 | 16 | 13 | 4 | 93 | 31 | 0 | 0 |
| 8 | 2 | 13 | 4 | 51 | 17 | 0 | 0 | 94 | 31 | 6 | 8 |
| 9 | 3 | 0 | 0 | 52 | 17 | 6 | 8 | 95 | 31 | 13 | 4 |
| 10 | 3 | 6 | 8 | 53 | 17 | 13 | 4 | 96 | 32 | 0 | 0 |
| 11 | 3 | 13 | 4 | 54 | 18 | 0 | 0 | 97 | 32 | 6 | 8 |
| 12 | 4 | 0 | 0 | 55 | 18 | 6 | 8 | 98 | 32 | 13 | 4 |
| 13 | 4 | 6 | 8 | 56 | 18 | 13 | 4 | 99 | 33 | 0 | 0 |
| 14 | 4 | 13 | 4 | 57 | 19 | 0 | 0 | 100 | 33 | 6 | 8 |
| 15 | 5 | 0 | 0 | 58 | 19 | 6 | 8 | 108 | 36 | 0 | 0 |
| 16 | 5 | 6 | 8 | 59 | 19 | 13 | 4 | 110 | 36 | 13 | 4 |
| 17 | 5 | 13 | 4 | 60 | 20 | 0 | 0 | 112 | 37 | 6 | 8 |
| 18 | 6 | 0 | 0 | 61 | 20 | 6 | 8 | 120 | 40 | 0 | 0 |
| 19 | 6 | 6 | 8 | 62 | 20 | 13 | 4 | 130 | 43 | 6 | 8 |
| 20 | 6 | 13 | 4 | 63 | 21 | 0 | 0 | 132 | 44 | 0 | 0 |
| 21 | 7 | 0 | 0 | 64 | 21 | 6 | 8 | 140 | 46 | 13 | 4 |
| 22 | 7 | 6 | 8 | 65 | 21 | 13 | 4 | 144 | 48 | 0 | 0 |
| 23 | 7 | 13 | 4 | 66 | 22 | 0 | 0 | 150 | 50 | 0 | 0 |
| 24 | 8 | 0 | 0 | 67 | 22 | 6 | 8 | 175 | 58 | 6 | 8 |
| 25 | 8 | 6 | 8 | 68 | 22 | 13 | 4 | 200 | 66 | 13 | 4 |
| 26 | 8 | 13 | 4 | 69 | 23 | 0 | 0 | 250 | 83 | 6 | 8 |
| 27 | 9 | 0 | 0 | 70 | 23 | 6 | 8 | 300 | 100 | 0 | 0 |
| 28 | 9 | 6 | 8 | 71 | 23 | 13 | 4 | 365 | 121 | 13 | 4 |
| 29 | 9 | 13 | 4 | 72 | 24 | 0 | 0 | 400 | 133 | 6 | 8 |
| 30 | 10 | 0 | 0 | 73 | 24 | 6 | 8 | 500 | 166 | 13 | 4 |
| 31 | 10 | 6 | 8 | 74 | 24 | 13 | 4 | 600 | 200 | 0 | 0 |
| 32 | 10 | 13 | 4 | 75 | 25 | 0 | 0 | 700 | 233 | 6 | 8 |
| 33 | 11 | 0 | 0 | 76 | 25 | 6 | 8 | 750 | 250 | 0 | 0 |
| 34 | 11 | 6 | 8 | 77 | 25 | 13 | 4 | 800 | 266 | 13 | 4 |
| 35 | 11 | 13 | 4 | 78 | 26 | 0 | 0 | 900 | 300 | 0 | 0 |
| 36 | 12 | 0 | 0 | 79 | 26 | 6 | 8 | 1000 | 333 | 6 | 8 |
| 37 | 12 | 6 | 8 | 80 | 26 | 13 | 4 | 1250 | 416 | 13 | 4 |
| 38 | 12 | 13 | 4 | 81 | 27 | 0 | 0 | 1500 | 500 | 0 | 0 |
| 39 | 13 | 0 | 0 | 82 | 27 | 6 | 8 | 1750 | 583 | 6 | 8 |
| 40 | 13 | 6 | 8 | 83 | 27 | 13 | 4 | 2000 | 666 | 13 | 4 |
| 41 | 13 | 13 | 4 | 84 | 28 | 0 | 0 | 2240 | 746 | 13 | 4 |
| 42 | 14 | 0 | 0 | 85 | 28 | 6 | 8 | 3000 | 1000 | 0 | 0 |
| 43 | 14 | 6 | 8 | 86 | 28 | 13 | 4 | 5000 | 1666 | 13 | 4 |

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 6 | 9 | 44 | 14 | 17 | 0 | 87 | 29 | 7 | 3 |
| 2 | 0 | 13 | 6 | 45 | 15 | 3 | 9 | 88 | 29 | 14 | 0 |
| 3 | 1 | 0 | 3 | 46 | 15 | 10 | 6 | 89 | 30 | 0 | 9 |
| 4 | 1 | 7 | 0 | 47 | 15 | 17 | 3 | 90 | 30 | 7 | 6 |
| 5 | 1 | 13 | 9 | 48 | 16 | 4 | 0 | 91 | 30 | 14 | 3 |
| 6 | 2 | 0 | 6 | 49 | 16 | 10 | 9 | 92 | 31 | 1 | 0 |
| 7 | 2 | 7 | 3 | 50 | 16 | 17 | 6 | 93 | 31 | 7 | 9 |
| 8 | 2 | 14 | 0 | 51 | 17 | 4 | 3 | 94 | 31 | 14 | 6 |
| 9 | 3 | 0 | 9 | 52 | 17 | 11 | 0 | 95 | 32 | 1 | 3 |
| 10 | 3 | 7 | 6 | 53 | 17 | 17 | 9 | 96 | 32 | 8 | 0 |
| 11 | 3 | 14 | 3 | 54 | 18 | 4 | 6 | 97 | 32 | 14 | 9 |
| 12 | 4 | 1 | 0 | 55 | 18 | 11 | 3 | 98 | 33 | 1 | 6 |
| 13 | 4 | 7 | 9 | 56 | 18 | 18 | 0 | 99 | 33 | 8 | 3 |
| 14 | 4 | 14 | 6 | 57 | 19 | 4 | 9 | 100 | 33 | 15 | 0 |
| 15 | 5 | 1 | 3 | 58 | 19 | 11 | 6 | 108 | 36 | 9 | 0 |
| 16 | 5 | 8 | 0 | 59 | 19 | 18 | 3 | 110 | 37 | 2 | 6 |
| 17 | 5 | 14 | 9 | 60 | 20 | 5 | 0 | 112 | 37 | 16 | 0 |
| 18 | 6 | 1 | 6 | 61 | 20 | 11 | 9 | 120 | 40 | 10 | 0 |
| 19 | 6 | 8 | 3 | 62 | 20 | 18 | 6 | 130 | 43 | 17 | 6 |
| 20 | 6 | 15 | 0 | 63 | 21 | 5 | 3 | 132 | 44 | 11 | 0 |
| 21 | 7 | 1 | 9 | 64 | 21 | 12 | 0 | 140 | 47 | 5 | 0 |
| 22 | 7 | 8 | 6 | 65 | 21 | 18 | 9 | 144 | 48 | 12 | 0 |
| 23 | 7 | 15 | 3 | 66 | 22 | 5 | 6 | 150 | 50 | 12 | 6 |
| 24 | 8 | 2 | 0 | 67 | 22 | 12 | 3 | 175 | 59 | 1 | 3 |
| 25 | 8 | 8 | 9 | 68 | 22 | 19 | 0 | 200 | 67 | 10 | 0 |
| 26 | 8 | 15 | 6 | 69 | 23 | 5 | 9 | 250 | 84 | 7 | 6 |
| 27 | 9 | 2 | 3 | 70 | 23 | 12 | 6 | 300 | 101 | 5 | 0 |
| 28 | 9 | 9 | 0 | 71 | 23 | 19 | 3 | 365 | 123 | 3 | 9 |
| 29 | 9 | 15 | 9 | 72 | 24 | 6 | 0 | 400 | 135 | 0 | 0 |
| 30 | 10 | 2 | 6 | 73 | 24 | 12 | 9 | 500 | 168 | 15 | 0 |
| 31 | 10 | 9 | 3 | 74 | 24 | 19 | 6 | 600 | 202 | 10 | 0 |
| 32 | 10 | 16 | 0 | 75 | 25 | 6 | 3 | 700 | 236 | 5 | 0 |
| 33 | 11 | 2 | 9 | 76 | 25 | 13 | 0 | 750 | 253 | 2 | 6 |
| 34 | 11 | 9 | 6 | 77 | 25 | 19 | 9 | 800 | 270 | 0 | 0 |
| 35 | 11 | 16 | 3 | 78 | 26 | 6 | 6 | 900 | 303 | 15 | 0 |
| 36 | 12 | 3 | 0 | 79 | 26 | 13 | 3 | 1000 | 337 | 10 | 0 |
| 37 | 12 | 9 | 9 | 80 | 27 | 0 | 0 | 1250 | 421 | 17 | 6 |
| 38 | 12 | 16 | 6 | 81 | 27 | 6 | 9 | 1500 | 506 | 5 | 0 |
| 39 | 13 | 3 | 3 | 82 | 27 | 13 | 6 | 1750 | 590 | 12 | 6 |
| 40 | 13 | 10 | 0 | 83 | 28 | 0 | 3 | 2000 | 675 | 0 | 0 |
| 41 | 13 | 16 | 9 | 84 | 28 | 7 | 0 | 2240 | 756 | 0 | 0 |
| 42 | 14 | 3 | 6 | 85 | 28 | 13 | 9 | 3000 | 1012 | 10 | 0 |
| 43 | 14 | 10 | 3 | 86 | 29 | 0 | 6 | 5000 | 1687 | 10 | 0 |

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 6 | 11 | 44 | 15 | 4 | 4 | 87 | 30 | 1 | 9 |
| 2 | 0 | 13 | 10 | 45 | 15 | 11 | 3 | 88 | 30 | 8 | 8 |
| 3 | 1 | 0 | 9 | 46 | 15 | 18 | 2 | 89 | 30 | 15 | 7 |
| 4 | 1 | 7 | 8 | 47 | 16 | 5 | 1 | 90 | 31 | 2 | 6 |
| 5 | 1 | 14 | 7 | 48 | 16 | 12 | 0 | 91 | 31 | 9 | 5 |
| 6 | 2 | 1 | 6 | 49 | 16 | 18 | 11 | 92 | 31 | 16 | 4 |
| 7 | 2 | 8 | 5 | 50 | 17 | 5 | 10 | 93 | 32 | 3 | 3 |
| 8 | 2 | 15 | 4 | 51 | 17 | 12 | 9 | 94 | 32 | 10 | 2 |
| 9 | 3 | 2 | 3 | 52 | 17 | 19 | 8 | 95 | 32 | 17 | 1 |
| 10 | 3 | 9 | 2 | 53 | 18 | 6 | 7 | 96 | 33 | 4 | 0 |
| 11 | 3 | 16 | 1 | 54 | 18 | 13 | 6 | 97 | 33 | 10 | 11 |
| 12 | 4 | 3 | 0 | 55 | 19 | 0 | 5 | 98 | 33 | 17 | 10 |
| 13 | 4 | 9 | 11 | 56 | 19 | 7 | 4 | 99 | 34 | 4 | 9 |
| 14 | 4 | 16 | 10 | 57 | 19 | 14 | 3 | 100 | 34 | 11 | 8 |
| 15 | 5 | 3 | 9 | 58 | 20 | 1 | 2 | 108 | 37 | 7 | 0 |
| 16 | 5 | 10 | 8 | 59 | 20 | 8 | 1 | 110 | 38 | 0 | 10 |
| 17 | 5 | 17 | 7 | 60 | 20 | 15 | 0 | 112 | 38 | 14 | 8 |
| 18 | 6 | 4 | 6 | 61 | 21 | 1 | 11 | 120 | 41 | 10 | 0 |
| 19 | 6 | 11 | 5 | 62 | 21 | 8 | 10 | 130 | 44 | 19 | 2 |
| 20 | 6 | 18 | 4 | 63 | 21 | 15 | 9 | 132 | 45 | 13 | 0 |
| 21 | 7 | 5 | 3 | 64 | 22 | 2 | 8 | 140 | 48 | 8 | 4 |
| 22 | 7 | 12 | 2 | 65 | 22 | 9 | 7 | 144 | 49 | 16 | 0 |
| 23 | 7 | 19 | 1 | 66 | 22 | 16 | 6 | 150 | 51 | 17 | 6 |
| 24 | 8 | 6 | 0 | 67 | 23 | 3 | 5 | 175 | 60 | 10 | 5 |
| 25 | 8 | 12 | 11 | 68 | 23 | 10 | 4 | 200 | 69 | 3 | 4 |
| 26 | 8 | 19 | 10 | 69 | 23 | 17 | 3 | 250 | 86 | 9 | 2 |
| 27 | 9 | 6 | 9 | 70 | 24 | 4 | 2 | 300 | 103 | 15 | 0 |
| 28 | 9 | 13 | 8 | 71 | 24 | 11 | 1 | 365 | 126 | 4 | 7 |
| 29 | 10 | 0 | 7 | 72 | 24 | 18 | 0 | 400 | 138 | 6 | 8 |
| 30 | 10 | 7 | 6 | 73 | 25 | 4 | 11 | 500 | 172 | 18 | 4 |
| 31 | 10 | 14 | 5 | 74 | 25 | 11 | 10 | 600 | 207 | 10 | 0 |
| 32 | 11 | 1 | 4 | 75 | 25 | 18 | 9 | 700 | 242 | 1 | 8 |
| 33 | 11 | 8 | 3 | 76 | 26 | 5 | 8 | 750 | 259 | 7 | 6 |
| 34 | 11 | 15 | 2 | 77 | 26 | 12 | 7 | 800 | 276 | 13 | 4 |
| 35 | 12 | 2 | 1 | 78 | 26 | 19 | 6 | 900 | 311 | 5 | 0 |
| 36 | 12 | 9 | 0 | 79 | 27 | 6 | 5 | 1000 | 345 | 16 | 8 |
| 37 | 12 | 15 | 11 | 80 | 27 | 13 | 4 | 1250 | 432 | 5 | 10 |
| 38 | 13 | 2 | 10 | 81 | 28 | 0 | 3 | 1500 | 518 | 15 | 0 |
| 39 | 13 | 9 | 9 | 82 | 28 | 7 | 2 | 1750 | 605 | 4 | 2 |
| 40 | 13 | 16 | 8 | 83 | 28 | 14 | 1 | 2000 | 691 | 13 | 4 |
| 41 | 14 | 3 | 7 | 84 | 29 | 1 | 0 | 2240 | 774 | 13 | 4 |
| 42 | 14 | 10 | 6 | 85 | 29 | 7 | 11 | 3000 | 1037 | 10 | 0 |
| 43 | 14 | 17 | 5 | 86 | 29 | 14 | 10 | 5000 | 1729 | 3 | 4 |

## 6s. 10d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 6 | 10 | 44 | 15 | 0 | 8 | 87 | 29 | 14 | 6 |
| 2 | 0 | 13 | 8 | 45 | 15 | 7 | 6 | 88 | 30 | 1 | 4 |
| 3 | 1 | 0 | 6 | 46 | 15 | 14 | 4 | 89 | 30 | 8 | 2 |
| 4 | 1 | 7 | 4 | 47 | 16 | 1 | 2 | 90 | 30 | 15 | 0 |
| 5 | 1 | 14 | 2 | 48 | 16 | 8 | 0 | 91 | 31 | 1 | 10 |
| 6 | 2 | 1 | 0 | 49 | 16 | 14 | 10 | 92 | 31 | 8 | 8 |
| 7 | 2 | 7 | 10 | 50 | 17 | 1 | 8 | 93 | 31 | 15 | 6 |
| 8 | 2 | 14 | 8 | 51 | 17 | 8 | 6 | 94 | 32 | 2 | 4 |
| 9 | 3 | 1 | 6 | 52 | 17 | 15 | 4 | 95 | 32 | 9 | 2 |
| 10 | 3 | 8 | 4 | 53 | 18 | 2 | 2 | 96 | 32 | 16 | 0 |
| 11 | 3 | 15 | 2 | 54 | 18 | 9 | 0 | 97 | 33 | 2 | 10 |
| 12 | 4 | 2 | 0 | 55 | 18 | 15 | 10 | 98 | 33 | 9 | 8 |
| 13 | 4 | 8 | 10 | 56 | 19 | 2 | 8 | 99 | 33 | 16 | 6 |
| 14 | 4 | 15 | 8 | 57 | 19 | 9 | 6 | 100 | 34 | 3 | 4 |
| 15 | 5 | 2 | 6 | 58 | 19 | 16 | 4 | 108 | 36 | 18 | 0 |
| 16 | 5 | 9 | 4 | 59 | 20 | 3 | 2 | 110 | 37 | 11 | 8 |
| 17 | 5 | 16 | 2 | 60 | 20 | 10 | 0 | 112 | 38 | 5 | 4 |
| 18 | 6 | 3 | 0 | 61 | 20 | 16 | 10 | 120 | 41 | 0 | 0 |
| 19 | 6 | 9 | 10 | 62 | 21 | 3 | 8 | 130 | 44 | 8 | 4 |
| 20 | 6 | 16 | 8 | 63 | 21 | 10 | 6 | 132 | 45 | 2 | 0 |
| 21 | 7 | 3 | 6 | 64 | 21 | 17 | 4 | 140 | 47 | 16 | 8 |
| 22 | 7 | 10 | 4 | 65 | 22 | 4 | 2 | 144 | 49 | 4 | 0 |
| 23 | 7 | 17 | 2 | 66 | 22 | 11 | 0 | 150 | 51 | 5 | 0 |
| 24 | 8 | 4 | 0 | 67 | 22 | 17 | 10 | 175 | 59 | 15 | 10 |
| 25 | 8 | 10 | 10 | 68 | 23 | 4 | 8 | 200 | 68 | 6 | 8 |
| 26 | 8 | 17 | 8 | 69 | 23 | 11 | 6 | 250 | 85 | 8 | 4 |
| 27 | 9 | 4 | 6 | 70 | 23 | 18 | 4 | 300 | 102 | 10 | 0 |
| 28 | 9 | 11 | 4 | 71 | 24 | 5 | 2 | 365 | 124 | 14 | 2 |
| 29 | 9 | 18 | 2 | 72 | 24 | 12 | 0 | 400 | 136 | 13 | 4 |
| 30 | 10 | 5 | 0 | 73 | 24 | 18 | 10 | 500 | 170 | 16 | 8 |
| 31 | 10 | 11 | 10 | 74 | 25 | 5 | 8 | 600 | 205 | 0 | 0 |
| 32 | 10 | 18 | 8 | 75 | 25 | 12 | 6 | 700 | 239 | 3 | 4 |
| 33 | 11 | 5 | 6 | 76 | 25 | 19 | 4 | 750 | 256 | 5 | 0 |
| 34 | 11 | 12 | 4 | 77 | 26 | 6 | 2 | 800 | 273 | 6 | 8 |
| 35 | 11 | 19 | 2 | 78 | 26 | 13 | 0 | 900 | 307 | 10 | 0 |
| 36 | 12 | 6 | 0 | 79 | 26 | 19 | 10 | 1000 | 341 | 13 | 4 |
| 37 | 12 | 12 | 10 | 80 | 27 | 6 | 8 | 1250 | 427 | 1 | 8 |
| 38 | 12 | 19 | 8 | 81 | 27 | 13 | 6 | 1500 | 512 | 10 | 0 |
| 39 | 13 | 6 | 6 | 82 | 28 | 0 | 4 | 1750 | 597 | 18 | 4 |
| 40 | 13 | 13 | 4 | 83 | 28 | 7 | 2 | 2000 | 683 | 6 | 8 |
| 41 | 14 | 0 | 2 | 84 | 28 | 14 | 0 | 2240 | 765 | 6 | 8 |
| 42 | 14 | 7 | 0 | 85 | 29 | 0 | 10 | 3000 | 1025 | 0 | 0 |
| 43 | 14 | 13 | 10 | 86 | 29 | 7 | 8 | 5000 | 1708 | 6 | 8 |

## 7s.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 7 | 0 | 44 | 15 | 8 | 0 | 87 | 30 | 9 | 0 |
| 2 | 0 | 14 | 0 | 45 | 15 | 15 | 0 | 88 | 30 | 16 | 0 |
| 3 | 1 | 1 | 0 | 46 | 16 | 2 | 0 | 89 | 31 | 3 | 0 |
| 4 | 1 | 8 | 0 | 47 | 16 | 9 | 0 | 90 | 31 | 10 | 0 |
| 5 | 1 | 15 | 0 | 48 | 16 | 16 | 0 | 91 | 31 | 17 | 0 |
| 6 | 2 | 2 | 0 | 49 | 17 | 3 | 0 | 92 | 32 | 4 | 0 |
| 7 | 2 | 9 | 0 | 50 | 17 | 10 | 0 | 93 | 32 | 11 | 0 |
| 8 | 2 | 16 | 0 | 51 | 17 | 17 | 0 | 94 | 32 | 18 | 0 |
| 9 | 3 | 3 | 0 | 52 | 18 | 4 | 0 | 95 | 33 | 5 | 0 |
| 10 | 3 | 10 | 0 | 53 | 18 | 11 | 0 | 96 | 33 | 12 | 0 |
| 11 | 3 | 17 | 0 | 54 | 18 | 18 | 0 | 97 | 33 | 19 | 0 |
| 12 | 4 | 4 | 0 | 55 | 19 | 5 | 0 | 98 | 34 | 6 | 0 |
| 13 | 4 | 11 | 0 | 56 | 19 | 12 | 0 | 99 | 34 | 13 | 0 |
| 14 | 4 | 18 | 0 | 57 | 19 | 19 | 0 | 100 | 35 | 0 | 0 |
| 15 | 5 | 5 | 0 | 58 | 20 | 6 | 0 | 108 | 37 | 16 | 0 |
| 16 | 5 | 12 | 0 | 59 | 20 | 13 | 0 | 110 | 38 | 10 | 0 |
| 17 | 5 | 19 | 0 | 60 | 21 | 0 | 0 | 112 | 39 | 4 | 0 |
| 18 | 6 | 6 | 0 | 61 | 21 | 7 | 0 | 120 | 42 | 0 | 0 |
| 19 | 6 | 13 | 0 | 62 | 21 | 14 | 0 | 130 | 45 | 10 | 0 |
| 20 | 7 | 0 | 0 | 63 | 22 | 1 | 0 | 132 | 46 | 4 | 0 |
| 21 | 7 | 7 | 0 | 64 | 22 | 8 | 0 | 140 | 49 | 0 | 0 |
| 22 | 7 | 14 | 0 | 65 | 22 | 15 | 0 | 144 | 50 | 8 | 0 |
| 23 | 8 | 1 | 0 | 66 | 23 | 2 | 0 | 150 | 52 | 10 | 0 |
| 24 | 8 | 8 | 0 | 67 | 23 | 9 | 0 | 175 | 61 | 5 | 0 |
| 25 | 8 | 15 | 0 | 68 | 23 | 16 | 0 | 200 | 70 | 0 | 0 |
| 26 | 9 | 2 | 0 | 69 | 24 | 3 | 0 | 250 | 87 | 10 | 0 |
| 27 | 9 | 9 | 0 | 70 | 24 | 10 | 0 | 300 | 105 | 0 | 0 |
| 28 | 9 | 16 | 0 | 71 | 24 | 17 | 0 | 365 | 127 | 15 | 0 |
| 29 | 10 | 3 | 0 | 72 | 25 | 4 | 0 | 400 | 140 | 0 | 0 |
| 30 | 10 | 10 | 0 | 73 | 25 | 11 | 0 | 500 | 175 | 0 | 0 |
| 31 | 10 | 17 | 0 | 74 | 25 | 18 | 0 | 600 | 210 | 0 | 0 |
| 32 | 11 | 4 | 0 | 75 | 26 | 5 | 0 | 700 | 245 | 0 | 0 |
| 33 | 11 | 11 | 0 | 76 | 26 | 12 | 0 | 750 | 262 | 10 | 0 |
| 34 | 11 | 18 | 0 | 77 | 26 | 19 | 0 | 800 | 280 | 0 | 0 |
| 35 | 12 | 5 | 0 | 78 | 27 | 6 | 0 | 900 | 315 | 0 | 0 |
| 36 | 12 | 12 | 0 | 79 | 27 | 13 | 0 | 1000 | 350 | 0 | 0 |
| 37 | 12 | 19 | 0 | 80 | 28 | 0 | 0 | 1250 | 437 | 10 | 0 |
| 38 | 13 | 6 | 0 | 81 | 28 | 7 | 0 | 1500 | 525 | 0 | 0 |
| 39 | 13 | 13 | 0 | 82 | 28 | 14 | 0 | 1750 | 612 | 10 | 0 |
| 40 | 14 | 0 | 0 | 83 | 29 | 1 | 0 | 2000 | 700 | 0 | 0 |
| 41 | 14 | 7 | 0 | 84 | 29 | 8 | 0 | 2240 | 784 | 0 | 0 |
| 42 | 14 | 14 | 0 | 85 | 29 | 15 | 0 | 3000 | 1050 | 0 | 0 |
| 43 | 15 | 1 | 0 | 86 | 30 | 2 | 0 | 5000 | 1750 | 0 | 0 |

## 7s. 1d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 7 | 1 | 44 | 15 | 11 | 8 | 87 | 30 | 16 | 3 |
| 2 | 0 | 14 | 2 | 45 | 15 | 18 | 9 | 88 | 31 | 3 | 4 |
| 3 | 1 | 1 | 3 | 46 | 16 | 5 | 10 | 89 | 31 | 10 | 5 |
| 4 | 1 | 8 | 4 | 47 | 16 | 12 | 11 | 90 | 31 | 17 | 6 |
| 5 | 1 | 15 | 5 | 48 | 17 | 0 | 0 | 91 | 32 | 4 | 7 |
| 6 | 2 | 2 | 6 | 49 | 17 | 7 | 1 | 92 | 32 | 11 | 8 |
| 7 | 2 | 9 | 7 | 50 | 17 | 14 | 2 | 93 | 32 | 18 | 9 |
| 8 | 2 | 16 | 8 | 51 | 18 | 1 | 3 | 94 | 33 | 5 | 10 |
| 9 | 3 | 3 | 9 | 52 | 18 | 8 | 4 | 95 | 33 | 12 | 11 |
| 10 | 3 | 10 | 10 | 53 | 18 | 15 | 5 | 96 | 34 | 0 | 0 |
| 11 | 3 | 17 | 11 | 54 | 19 | 2 | 6 | 97 | 34 | 7 | 1 |
| 12 | 4 | 5 | 0 | 55 | 19 | 9 | 7 | 98 | 34 | 14 | 2 |
| 13 | 4 | 12 | 1 | 56 | 19 | 16 | 8 | 99 | 35 | 1 | 3 |
| 14 | 4 | 19 | 2 | 57 | 20 | 3 | 9 | 100 | 35 | 8 | 4 |
| 15 | 5 | 6 | 3 | 58 | 20 | 10 | 10 | 108 | 38 | 5 | 0 |
| 16 | 5 | 13 | 4 | 59 | 20 | 17 | 11 | 110 | 38 | 19 | 2 |
| 17 | 6 | 0 | 5 | 60 | 21 | 5 | 0 | 112 | 39 | 13 | 4 |
| 18 | 6 | 7 | 6 | 61 | 21 | 12 | 1 | 120 | 42 | 10 | 0 |
| 19 | 6 | 14 | 7 | 62 | 21 | 19 | 2 | 130 | 46 | 0 | 10 |
| 20 | 7 | 1 | 8 | 63 | 22 | 6 | 3 | 132 | 46 | 15 | 0 |
| 21 | 7 | 8 | 9 | 64 | 22 | 13 | 4 | 140 | 49 | 11 | 8 |
| 22 | 7 | 15 | 10 | 65 | 23 | 0 | 5 | 144 | 51 | 0 | 0 |
| 23 | 8 | 2 | 11 | 66 | 23 | 7 | 6 | 150 | 53 | 2 | 6 |
| 24 | 8 | 10 | 0 | 67 | 23 | 14 | 7 | 175 | 61 | 19 | 7 |
| 25 | 8 | 17 | 1 | 68 | 24 | 1 | 8 | 200 | 70 | 16 | 8 |
| 26 | 9 | 4 | 2 | 69 | 24 | 8 | 9 | 250 | 88 | 10 | 10 |
| 27 | 9 | 11 | 3 | 70 | 24 | 15 | 10 | 300 | 106 | 5 | 0 |
| 28 | 9 | 18 | 4 | 71 | 25 | 2 | 11 | 365 | 129 | 5 | 5 |
| 29 | 10 | 5 | 5 | 72 | 25 | 10 | 0 | 400 | 141 | 13 | 4 |
| 30 | 10 | 12 | 6 | 73 | 25 | 17 | 1 | 500 | 177 | 1 | 8 |
| 31 | 10 | 19 | 7 | 74 | 26 | 4 | 2 | 600 | 212 | 10 | 0 |
| 32 | 11 | 6 | 8 | 75 | 26 | 11 | 3 | 700 | 247 | 18 | 4 |
| 33 | 11 | 13 | 9 | 76 | 26 | 18 | 4 | 750 | 265 | 12 | 6 |
| 34 | 12 | 0 | 10 | 77 | 27 | 5 | 5 | 800 | 283 | 6 | 8 |
| 35 | 12 | 7 | 11 | 78 | 27 | 12 | 6 | 900 | 318 | 15 | 0 |
| 36 | 12 | 15 | 0 | 79 | 27 | 19 | 7 | 1000 | 354 | 3 | 4 |
| 37 | 13 | 2 | 1 | 80 | 28 | 6 | 8 | 1250 | 442 | 14 | 2 |
| 38 | 13 | 9 | 2 | 81 | 28 | 13 | 9 | 1500 | 531 | 5 | 0 |
| 39 | 13 | 16 | 3 | 82 | 29 | 0 | 10 | 1750 | 619 | 15 | 10 |
| 40 | 14 | 3 | 4 | 83 | 29 | 7 | 11 | 2000 | 708 | 6 | 8 |
| 41 | 14 | 10 | 5 | 84 | 29 | 15 | 0 | 2240 | 793 | 6 | 8 |
| 42 | 14 | 17 | 6 | 85 | 30 | 2 | 1 | 3000 | 1062 | 10 | 0 |
| 43 | 15 | 4 | 7 | 86 | 30 | 9 | 2 | 5000 | 1770 | 16 | 8 |

## 7s. 3d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 7 | 3 | 44 | 15 | 19 | 0 | 87 | 31 | 10 | 9 |
| 2 | 0 | 14 | 6 | 45 | 16 | 6 | 3 | 88 | 31 | 18 | 0 |
| 3 | 1 | 1 | 9 | 46 | 16 | 13 | 6 | 89 | 32 | 5 | 3 |
| 4 | 1 | 9 | 0 | 47 | 17 | 0 | 9 | 90 | 32 | 12 | 6 |
| 5 | 1 | 16 | 3 | 48 | 17 | 8 | 0 | 91 | 32 | 19 | 9 |
| 6 | 2 | 3 | 6 | 49 | 17 | 15 | 3 | 92 | 33 | 7 | 0 |
| 7 | 2 | 10 | 9 | 50 | 18 | 2 | 6 | 93 | 33 | 14 | 3 |
| 8 | 2 | 18 | 0 | 51 | 18 | 9 | 9 | 94 | 34 | 1 | 6 |
| 9 | 3 | 5 | 3 | 52 | 18 | 17 | 0 | 95 | 34 | 8 | 9 |
| 10 | 3 | 12 | 6 | 53 | 19 | 4 | 3 | 96 | 34 | 16 | 0 |
| 11 | 3 | 19 | 9 | 54 | 19 | 11 | 6 | 97 | 35 | 3 | 3 |
| 12 | 4 | 7 | 0 | 55 | 19 | 18 | 9 | 98 | 35 | 10 | 6 |
| 13 | 4 | 14 | 3 | 56 | 20 | 6 | 0 | 99 | 35 | 17 | 9 |
| 14 | 5 | 1 | 6 | 57 | 20 | 13 | 3 | 100 | 36 | 5 | 0 |
| 15 | 5 | 8 | 9 | 58 | 21 | 0 | 6 | 108 | 39 | 3 | 0 |
| 16 | 5 | 16 | 0 | 59 | 21 | 7 | 9 | 110 | 39 | 17 | 6 |
| 17 | 6 | 3 | 3 | 60 | 21 | 15 | 0 | 112 | 40 | 12 | 0 |
| 18 | 6 | 10 | 6 | 61 | 22 | 2 | 3 | 120 | 43 | 10 | 0 |
| 19 | 6 | 17 | 9 | 62 | 22 | 9 | 6 | 130 | 47 | 2 | 6 |
| 20 | 7 | 5 | 0 | 63 | 22 | 16 | 9 | 132 | 47 | 17 | 0 |
| 21 | 7 | 12 | 3 | 64 | 23 | 4 | 0 | 140 | 50 | 15 | 0 |
| 22 | 7 | 19 | 6 | 65 | 23 | 11 | 3 | 144 | 52 | 4 | 0 |
| 23 | 8 | 6 | 9 | 66 | 23 | 18 | 6 | 150 | 54 | 7 | 6 |
| 24 | 8 | 14 | 0 | 67 | 24 | 5 | 9 | 175 | 63 | 8 | 9 |
| 25 | 9 | 1 | 3 | 68 | 24 | 13 | 0 | 200 | 72 | 10 | 0 |
| 26 | 9 | 8 | 6 | 69 | 25 | 0 | 3 | 250 | 90 | 12 | 6 |
| 27 | 9 | 15 | 9 | 70 | 25 | 7 | 6 | 300 | 108 | 15 | 0 |
| 28 | 10 | 3 | 0 | 71 | 25 | 14 | 9 | 365 | 132 | 6 | 3 |
| 29 | 10 | 10 | 3 | 72 | 26 | 2 | 0 | 400 | 145 | 0 | 0 |
| 30 | 10 | 17 | 6 | 73 | 26 | 9 | 3 | 500 | 181 | 5 | 0 |
| 31 | 11 | 4 | 9 | 74 | 26 | 16 | 6 | 600 | 217 | 10 | 0 |
| 32 | 11 | 12 | 0 | 75 | 27 | 3 | 9 | 700 | 253 | 15 | 0 |
| 33 | 11 | 19 | 3 | 76 | 27 | 11 | 0 | 750 | 271 | 17 | 6 |
| 34 | 12 | 6 | 6 | 77 | 27 | 18 | 3 | 800 | 290 | 0 | 0 |
| 35 | 12 | 13 | 9 | 78 | 28 | 5 | 6 | 900 | 326 | 5 | 0 |
| 36 | 13 | 1 | 0 | 79 | 28 | 12 | 9 | 1000 | 362 | 10 | 0 |
| 37 | 13 | 8 | 3 | 80 | 29 | 0 | 0 | 1250 | 453 | 2 | 6 |
| 38 | 13 | 15 | 6 | 81 | 29 | 7 | 3 | 1500 | 543 | 15 | 0 |
| 39 | 14 | 2 | 9 | 82 | 29 | 14 | 6 | 1750 | 634 | 7 | 6 |
| 40 | 14 | 10 | 0 | 83 | 30 | 1 | 9 | 2000 | 725 | 0 | 0 |
| 41 | 14 | 17 | 3 | 84 | 30 | 9 | 0 | 2240 | 812 | 0 | 0 |
| 42 | 15 | 4 | 6 | 85 | 30 | 16 | 3 | 3000 | 1087 | 10 | 0 |
| 43 | 15 | 11 | 9 | 86 | 31 | 3 | 6 | 5000 | 1812 | 10 | 0 |

## 7s. 2d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 7 | 2 | 44 | 15 | 15 | 4 | 87 | 31 | 3 | 6 |
| 2 | 0 | 14 | 4 | 45 | 16 | 2 | 6 | 88 | 31 | 10 | 8 |
| 3 | 1 | 1 | 6 | 46 | 16 | 9 | 8 | 89 | 31 | 17 | 10 |
| 4 | 1 | 8 | 8 | 47 | 16 | 16 | 10 | 90 | 32 | 5 | 0 |
| 5 | 1 | 15 | 10 | 48 | 17 | 4 | 0 | 91 | 32 | 12 | 2 |
| 6 | 2 | 3 | 0 | 49 | 17 | 11 | 2 | 92 | 32 | 19 | 4 |
| 7 | 2 | 10 | 2 | 50 | 17 | 18 | 4 | 93 | 33 | 6 | 6 |
| 8 | 2 | 17 | 4 | 51 | 18 | 5 | 6 | 94 | 33 | 13 | 8 |
| 9 | 3 | 4 | 6 | 52 | 18 | 12 | 8 | 95 | 34 | 0 | 10 |
| 10 | 3 | 11 | 8 | 53 | 18 | 19 | 10 | 96 | 34 | 8 | 0 |
| 11 | 3 | 18 | 10 | 54 | 19 | 7 | 0 | 97 | 34 | 15 | 2 |
| 12 | 4 | 6 | 0 | 55 | 19 | 14 | 2 | 98 | 35 | 2 | 4 |
| 13 | 4 | 13 | 2 | 56 | 20 | 1 | 4 | 99 | 35 | 9 | 6 |
| 14 | 5 | 0 | 4 | 57 | 20 | 8 | 6 | 100 | 35 | 16 | 8 |
| 15 | 5 | 7 | 6 | 58 | 20 | 15 | 8 | 108 | 38 | 14 | 0 |
| 16 | 5 | 14 | 8 | 59 | 21 | 2 | 10 | 110 | 39 | 8 | 4 |
| 17 | 6 | 1 | 10 | 60 | 21 | 10 | 0 | 112 | 40 | 2 | 8 |
| 18 | 6 | 9 | 0 | 61 | 21 | 17 | 2 | 120 | 43 | 0 | 0 |
| 19 | 6 | 16 | 2 | 62 | 22 | 4 | 4 | 130 | 46 | 11 | 8 |
| 20 | 7 | 3 | 4 | 63 | 22 | 11 | 6 | 132 | 47 | 6 | 0 |
| 21 | 7 | 10 | 6 | 64 | 22 | 18 | 8 | 140 | 50 | 3 | 4 |
| 22 | 7 | 17 | 8 | 65 | 23 | 5 | 10 | 144 | 51 | 12 | 0 |
| 23 | 8 | 4 | 10 | 66 | 23 | 13 | 0 | 150 | 53 | 15 | 0 |
| 24 | 8 | 12 | 0 | 67 | 24 | 0 | 2 | 175 | 62 | 14 | 2 |
| 25 | 8 | 19 | 2 | 68 | 24 | 7 | 4 | 200 | 71 | 13 | 4 |
| 26 | 9 | 6 | 4 | 69 | 24 | 14 | 6 | 250 | 89 | 11 | 8 |
| 27 | 9 | 13 | 6 | 70 | 25 | 1 | 8 | 300 | 107 | 10 | 0 |
| 28 | 10 | 0 | 8 | 71 | 25 | 8 | 10 | 365 | 130 | 15 | 10 |
| 29 | 10 | 7 | 10 | 72 | 25 | 16 | 0 | 400 | 143 | 6 | 8 |
| 30 | 10 | 15 | 0 | 73 | 26 | 3 | 2 | 500 | 179 | 3 | 4 |
| 31 | 11 | 2 | 2 | 74 | 26 | 10 | 4 | 600 | 215 | 0 | 0 |
| 32 | 11 | 9 | 4 | 75 | 26 | 17 | 6 | 700 | 250 | 16 | 8 |
| 33 | 11 | 16 | 6 | 76 | 27 | 4 | 8 | 750 | 268 | 15 | 0 |
| 34 | 12 | 8 | 8 | 77 | 27 | 11 | 10 | 800 | 286 | 13 | 4 |
| 35 | 12 | 10 | 10 | 78 | 27 | 19 | 0 | 900 | 322 | 10 | 0 |
| 36 | 12 | 18 | 0 | 79 | 28 | 6 | 2 | 1000 | 358 | 6 | 8 |
| 37 | 13 | 5 | 2 | 80 | 28 | 13 | 4 | 1250 | 447 | 18 | 4 |
| 38 | 13 | 12 | 4 | 81 | 29 | 0 | 6 | 1500 | 537 | 10 | 0 |
| 39 | 13 | 19 | 6 | 82 | 29 | 7 | 8 | 1750 | 627 | 1 | 8 |
| 40 | 14 | 6 | 8 | 83 | 29 | 14 | 10 | 2000 | 716 | 13 | 4 |
| 41 | 14 | 13 | 10 | 84 | 30 | 2 | 0 | 2240 | 802 | 13 | 4 |
| 42 | 15 | 1 | 0 | 85 | 30 | 9 | 2 | 3000 | 1075 | 0 | 0 |
| 43 | 15 | 8 | 2 | 86 | 30 | 16 | 4 | 5000 | 1791 | 13 | 4 |

## 7s. 4d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 7 | 4 | 44 | 16 | 2 | 8 | 87 | 31 | 18 | 0 |
| 2 | 0 | 14 | 8 | 45 | 16 | 10 | 0 | 88 | 32 | 5 | 4 |
| 3 | 1 | 2 | 0 | 46 | 16 | 17 | 4 | 89 | 32 | 12 | 8 |
| 4 | 1 | 9 | 4 | 47 | 17 | 4 | 8 | 90 | 33 | 0 | 0 |
| 5 | 1 | 16 | 8 | 48 | 17 | 12 | 0 | 91 | 33 | 7 | 4 |
| 6 | 2 | 4 | 0 | 49 | 17 | 19 | 4 | 92 | 33 | 14 | 8 |
| 7 | 2 | 11 | 4 | 50 | 18 | 6 | 8 | 93 | 34 | 2 | 0 |
| 8 | 2 | 18 | 8 | 51 | 18 | 14 | 0 | 94 | 34 | 9 | 4 |
| 9 | 3 | 6 | 0 | 52 | 19 | 1 | 4 | 95 | 34 | 16 | 8 |
| 10 | 3 | 13 | 4 | 53 | 19 | 8 | 8 | 96 | 35 | 4 | 0 |
| 11 | 4 | 0 | 8 | 54 | 19 | 16 | 0 | 97 | 35 | 11 | 4 |
| 12 | 4 | 8 | 0 | 55 | 20 | 3 | 4 | 98 | 35 | 18 | 8 |
| 13 | 4 | 15 | 4 | 56 | 20 | 10 | 8 | 99 | 36 | 6 | 0 |
| 14 | 5 | 2 | 8 | 57 | 20 | 18 | 0 | 100 | 36 | 13 | 4 |
| 15 | 5 | 10 | 0 | 58 | 21 | 5 | 4 | 108 | 39 | 12 | 0 |
| 16 | 5 | 17 | 4 | 59 | 21 | 12 | 8 | 110 | 40 | 6 | 8 |
| 17 | 6 | 4 | 8 | 60 | 22 | 0 | 0 | 112 | 41 | 1 | 4 |
| 18 | 6 | 12 | 0 | 61 | 22 | 7 | 4 | 120 | 44 | 0 | 0 |
| 19 | 6 | 19 | 4 | 62 | 22 | 14 | 8 | 130 | 47 | 13 | 4 |
| 20 | 7 | 6 | 8 | 63 | 23 | 2 | 0 | 132 | 48 | 8 | 0 |
| 21 | 7 | 14 | 0 | 64 | 23 | 9 | 4 | 140 | 51 | 6 | 8 |
| 22 | 8 | 1 | 4 | 65 | 23 | 16 | 8 | 144 | 52 | 16 | 0 |
| 23 | 8 | 8 | 8 | 66 | 24 | 4 | 0 | 150 | 55 | 0 | 0 |
| 24 | 8 | 16 | 0 | 67 | 24 | 11 | 4 | 175 | 64 | 3 | 4 |
| 25 | 9 | 3 | 4 | 68 | 24 | 18 | 8 | 200 | 73 | 6 | 8 |
| 26 | 9 | 10 | 8 | 69 | 25 | 6 | 0 | 250 | 91 | 13 | 4 |
| 27 | 9 | 18 | 0 | 70 | 25 | 13 | 4 | 300 | 110 | 0 | 0 |
| 28 | 10 | 5 | 4 | 71 | 26 | 0 | 8 | 365 | 133 | 16 | 8 |
| 29 | 10 | 12 | 8 | 72 | 26 | 8 | 0 | 400 | 146 | 13 | 4 |
| 30 | 11 | 0 | 0 | 73 | 26 | 15 | 4 | 500 | 183 | 6 | 8 |
| 31 | 11 | 7 | 4 | 74 | 27 | 2 | 8 | 600 | 220 | 0 | 0 |
| 32 | 11 | 14 | 8 | 75 | 27 | 10 | 0 | 700 | 256 | 13 | 4 |
| 33 | 12 | 2 | 0 | 76 | 27 | 17 | 4 | 750 | 275 | 0 | 0 |
| 34 | 12 | 9 | 4 | 77 | 28 | 4 | 8 | 800 | 293 | 6 | 8 |
| 35 | 12 | 16 | 8 | 78 | 28 | 12 | 0 | 900 | 330 | 0 | 0 |
| 36 | 13 | 4 | 0 | 79 | 28 | 19 | 4 | 1000 | 366 | 13 | 4 |
| 37 | 13 | 11 | 4 | 80 | 29 | 6 | 8 | 1250 | 458 | 6 | 8 |
| 38 | 13 | 18 | 8 | 81 | 29 | 14 | 0 | 1500 | 550 | 0 | 0 |
| 39 | 14 | 6 | 0 | 82 | 30 | 1 | 4 | 1750 | 641 | 13 | 4 |
| 40 | 14 | 13 | 4 | 83 | 30 | 8 | 8 | 2000 | 733 | 6 | 8 |
| 41 | 15 | 0 | 8 | 84 | 30 | 16 | 0 | 2240 | 821 | 6 | 8 |
| 42 | 15 | 8 | 0 | 85 | 31 | 3 | 4 | 3000 | 1100 | 0 | 0 |
| 43 | 15 | 15 | 4 | 86 | 31 | 10 | 8 | 5000 | 1833 | 6 | 8 |

## 7s. 5d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 7 | 5 | 44 | 16 | 6 | 4 | 87 | 32 | 5 | 3 |
| 2 | 0 | 14 | 10 | 45 | 16 | 13 | 9 | 88 | 32 | 12 | 8 |
| 3 | 1 | 2 | 3 | 46 | 17 | 1 | 2 | 89 | 33 | 0 | 1 |
| 4 | 1 | 9 | 8 | 47 | 17 | 8 | 7 | 90 | 33 | 7 | 6 |
| 5 | 1 | 17 | 1 | 48 | 17 | 16 | 0 | 91 | 33 | 14 | 11 |
| 6 | 2 | 4 | 6 | 49 | 18 | 3 | 5 | 92 | 34 | 2 | 4 |
| 7 | 2 | 11 | 11 | 50 | 18 | 10 | 10 | 93 | 34 | 9 | 9 |
| 8 | 2 | 19 | 4 | 51 | 18 | 18 | 3 | 94 | 34 | 17 | 2 |
| 9 | 3 | 6 | 9 | 52 | 19 | 5 | 8 | 95 | 35 | 4 | 7 |
| 10 | 3 | 14 | 2 | 53 | 19 | 13 | 1 | 96 | 35 | 12 | 0 |
| 11 | 4 | 1 | 7 | 54 | 20 | 0 | 6 | 97 | 35 | 19 | 5 |
| 12 | 4 | 9 | 0 | 55 | 20 | 7 | 11 | 98 | 36 | 6 | 10 |
| 13 | 4 | 16 | 5 | 56 | 20 | 15 | 4 | 99 | 36 | 14 | 3 |
| 14 | 5 | 3 | 10 | 57 | 21 | 2 | 9 | 100 | 37 | 1 | 8 |
| 15 | 5 | 11 | 3 | 58 | 21 | 10 | 2 | 108 | 40 | 1 | 0 |
| 16 | 5 | 18 | 8 | 59 | 21 | 17 | 7 | 110 | 40 | 15 | 10 |
| 17 | 6 | 6 | 1 | 60 | 22 | 5 | 0 | 112 | 41 | 10 | 8 |
| 18 | 6 | 13 | 6 | 61 | 22 | 12 | 5 | 120 | 44 | 10 | 0 |
| 19 | 7 | 0 | 11 | 62 | 22 | 19 | 10 | 130 | 48 | 4 | 2 |
| 20 | 7 | 8 | 4 | 63 | 23 | 7 | 3 | 132 | 48 | 19 | 0 |
| 21 | 7 | 15 | 9 | 64 | 23 | 14 | 8 | 140 | 51 | 18 | 4 |
| 22 | 8 | 3 | 2 | 65 | 24 | 2 | 1 | 144 | 53 | 8 | 0 |
| 23 | 8 | 10 | 7 | 66 | 24 | 9 | 6 | 150 | 55 | 12 | 6 |
| 24 | 8 | 18 | 0 | 67 | 24 | 16 | 11 | 175 | 64 | 17 | 11 |
| 25 | 9 | 5 | 5 | 68 | 25 | 4 | 4 | 200 | 74 | 3 | 4 |
| 26 | 9 | 12 | 10 | 69 | 25 | 11 | 9 | 250 | 92 | 14 | 2 |
| 27 | 10 | 0 | 3 | 70 | 25 | 19 | 2 | 300 | 111 | 5 | 0 |
| 28 | 10 | 7 | 8 | 71 | 26 | 6 | 7 | 365 | 135 | 7 | 1 |
| 29 | 10 | 15 | 1 | 72 | 26 | 14 | 0 | 400 | 148 | 6 | 8 |
| 30 | 11 | 2 | 6 | 73 | 27 | 1 | 5 | 500 | 185 | 8 | 4 |
| 31 | 11 | 9 | 11 | 74 | 27 | 8 | 10 | 600 | 222 | 10 | 0 |
| 32 | 11 | 17 | 4 | 75 | 27 | 16 | 3 | 700 | 259 | 11 | 8 |
| 33 | 12 | 4 | 9 | 76 | 28 | 3 | 8 | 750 | 278 | 2 | 6 |
| 34 | 12 | 12 | 2 | 77 | 28 | 11 | 1 | 800 | 296 | 13 | 4 |
| 35 | 12 | 19 | 7 | 78 | 28 | 18 | 6 | 900 | 333 | 15 | 0 |
| 36 | 13 | 7 | 0 | 79 | 29 | 5 | 11 | 1000 | 370 | 16 | 8 |
| 37 | 13 | 14 | 5 | 80 | 29 | 13 | 4 | 1250 | 463 | 10 | 10 |
| 38 | 14 | 1 | 10 | 81 | 30 | 0 | 9 | 1500 | 556 | 5 | 0 |
| 39 | 14 | 9 | 3 | 82 | 30 | 8 | 2 | 1750 | 648 | 19 | 2 |
| 40 | 14 | 16 | 8 | 83 | 30 | 15 | 7 | 2000 | 741 | 13 | 4 |
| 41 | 15 | 4 | 1 | 84 | 31 | 3 | 0 | 2240 | 830 | 13 | 4 |
| 42 | 15 | 11 | 6 | 85 | 31 | 10 | 5 | 3000 | 1112 | 10 | 0 |
| 43 | 15 | 18 | 11 | 86 | 31 | 17 | 10 | 5000 | 1854 | 3 | 4 |

## 7s. 7d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 7 | 7 | 44 | 16 | 13 | 8 | 87 | 32 | 19 | 9 |
| 2 | 0 | 15 | 2 | 45 | 17 | 1 | 3 | 88 | 33 | 7 | 4 |
| 3 | 1 | 2 | 9 | 46 | 17 | 8 | 10 | 89 | 33 | 14 | 11 |
| 4 | 1 | 10 | 4 | 47 | 17 | 16 | 5 | 90 | 34 | 2 | 6 |
| 5 | 1 | 17 | 11 | 48 | 18 | 4 | 0 | 91 | 34 | 10 | 1 |
| 6 | 2 | 5 | 6 | 49 | 18 | 11 | 7 | 92 | 34 | 17 | 8 |
| 7 | 2 | 13 | 1 | 50 | 18 | 19 | 2 | 93 | 35 | 5 | 3 |
| 8 | 3 | 0 | 8 | 51 | 19 | 6 | 9 | 94 | 35 | 12 | 10 |
| 9 | 3 | 8 | 3 | 52 | 19 | 14 | 4 | 95 | 36 | 0 | 5 |
| 10 | 3 | 15 | 10 | 53 | 20 | 1 | 11 | 96 | 36 | 8 | 0 |
| 11 | 4 | 3 | 5 | 54 | 20 | 9 | 6 | 97 | 36 | 15 | 7 |
| 12 | 4 | 11 | 0 | 55 | 20 | 17 | 1 | 98 | 37 | 3 | 2 |
| 13 | 4 | 18 | 7 | 56 | 21 | 4 | 8 | 99 | 37 | 10 | 9 |
| 14 | 5 | 6 | 2 | 57 | 21 | 12 | 3 | 100 | 37 | 18 | 4 |
| 15 | 5 | 13 | 9 | 58 | 21 | 19 | 10 | 108 | 40 | 19 | 0 |
| 16 | 6 | 1 | 4 | 59 | 22 | 7 | 5 | 110 | 41 | 14 | 2 |
| 17 | 6 | 8 | 11 | 60 | 22 | 15 | 0 | 112 | 42 | 9 | 4 |
| 18 | 6 | 16 | 6 | 61 | 23 | 2 | 7 | 120 | 45 | 10 | 0 |
| 19 | 7 | 4 | 1 | 62 | 23 | 10 | 2 | 130 | 49 | 5 | 10 |
| 20 | 7 | 11 | 8 | 63 | 23 | 17 | 9 | 132 | 50 | 1 | 0 |
| 21 | 7 | 19 | 3 | 64 | 24 | 5 | 4 | 140 | 53 | 1 | 8 |
| 22 | 8 | 6 | 10 | 65 | 24 | 12 | 11 | 144 | 54 | 12 | 0 |
| 23 | 8 | 14 | 5 | 66 | 25 | 0 | 6 | 150 | 56 | 17 | 6 |
| 24 | 9 | 2 | 0 | 67 | 25 | 8 | 1 | 175 | 66 | 7 | 1 |
| 25 | 9 | 9 | 7 | 68 | 25 | 15 | 8 | 200 | 75 | 16 | 8 |
| 26 | 9 | 17 | 2 | 69 | 26 | 3 | 3 | 250 | 94 | 15 | 10 |
| 27 | 10 | 4 | 9 | 70 | 26 | 10 | 10 | 300 | 113 | 15 | 0 |
| 28 | 10 | 12 | 4 | 71 | 26 | 18 | 5 | 365 | 138 | 7 | 11 |
| 29 | 10 | 19 | 11 | 72 | 27 | 6 | 0 | 400 | 151 | 13 | 4 |
| 30 | 11 | 7 | 6 | 73 | 27 | 13 | 7 | 500 | 189 | 11 | 8 |
| 31 | 11 | 15 | 1 | 74 | 28 | 1 | 2 | 600 | 227 | 10 | 0 |
| 32 | 12 | 2 | 8 | 75 | 28 | 8 | 9 | 700 | 265 | 8 | 4 |
| 33 | 12 | 10 | 3 | 76 | 28 | 16 | 4 | 750 | 284 | 7 | 6 |
| 34 | 12 | 17 | 10 | 77 | 29 | 3 | 11 | 800 | 303 | 6 | 8 |
| 35 | 13 | 5 | 5 | 78 | 29 | 11 | 6 | 900 | 341 | 5 | 0 |
| 36 | 13 | 13 | 0 | 79 | 29 | 19 | 1 | 1000 | 379 | 3 | 4 |
| 37 | 14 | 0 | 7 | 80 | 30 | 6 | 8 | 1250 | 473 | 19 | 2 |
| 38 | 14 | 8 | 2 | 81 | 30 | 14 | 3 | 1500 | 568 | 15 | 0 |
| 39 | 14 | 15 | 9 | 82 | 31 | 1 | 10 | 1750 | 663 | 10 | 10 |
| 40 | 15 | 3 | 4 | 83 | 31 | 9 | 5 | 2000 | 758 | 6 | 8 |
| 41 | 15 | 10 | 11 | 84 | 31 | 17 | 0 | 2240 | 849 | 6 | 8 |
| 42 | 15 | 18 | 6 | 85 | 32 | 4 | 7 | 3000 | 1137 | 10 | 0 |
| 43 | 16 | 6 | 1 | 86 | 32 | 12 | 2 | 5000 | 1895 | 16 | 8 |

## 7s. 6d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 7 | 6 | 44 | 16 | 10 | 0 | 87 | 32 | 12 | 6 |
| 2 | 0 | 15 | 0 | 45 | 16 | 17 | 6 | 88 | 33 | 0 | 0 |
| 3 | 1 | 2 | 6 | 46 | 17 | 5 | 0 | 89 | 33 | 7 | 6 |
| 4 | 1 | 10 | 0 | 47 | 17 | 12 | 6 | 90 | 33 | 15 | 0 |
| 5 | 1 | 17 | 6 | 48 | 18 | 0 | 0 | 91 | 34 | 2 | 6 |
| 6 | 2 | 5 | 0 | 49 | 18 | 7 | 6 | 92 | 34 | 10 | 0 |
| 7 | 2 | 12 | 6 | 50 | 18 | 15 | 0 | 93 | 34 | 17 | 6 |
| 8 | 3 | 0 | 0 | 51 | 19 | 2 | 6 | 94 | 35 | 5 | 0 |
| 9 | 3 | 7 | 6 | 52 | 19 | 10 | 0 | 95 | 35 | 12 | 6 |
| 10 | 3 | 15 | 0 | 53 | 19 | 17 | 6 | 96 | 36 | 0 | 0 |
| 11 | 4 | 2 | 6 | 54 | 20 | 5 | 0 | 97 | 36 | 7 | 6 |
| 12 | 4 | 10 | 0 | 55 | 20 | 12 | 6 | 98 | 36 | 15 | 0 |
| 13 | 4 | 17 | 6 | 56 | 21 | 0 | 0 | 99 | 37 | 2 | 6 |
| 14 | 5 | 5 | 0 | 57 | 21 | 7 | 6 | 100 | 37 | 10 | 0 |
| 15 | 5 | 12 | 6 | 58 | 21 | 15 | 0 | 108 | 40 | 10 | 0 |
| 16 | 6 | 0 | 0 | 59 | 22 | 2 | 6 | 110 | 41 | 5 | 0 |
| 17 | 6 | 7 | 6 | 60 | 22 | 10 | 0 | 112 | 42 | 0 | 0 |
| 18 | 6 | 15 | 0 | 61 | 22 | 17 | 6 | 120 | 45 | 0 | 0 |
| 19 | 7 | 2 | 6 | 62 | 23 | 5 | 0 | 130 | 48 | 15 | 0 |
| 20 | 7 | 10 | 0 | 63 | 23 | 12 | 6 | 132 | 49 | 10 | 0 |
| 21 | 7 | 17 | 6 | 64 | 24 | 0 | 0 | 140 | 52 | 10 | 0 |
| 22 | 8 | 5 | 0 | 65 | 24 | 7 | 6 | 144 | 54 | 0 | 0 |
| 23 | 8 | 12 | 6 | 66 | 24 | 15 | 0 | 150 | 56 | 5 | 0 |
| 24 | 9 | 0 | 0 | 67 | 25 | 2 | 6 | 175 | 65 | 12 | 6 |
| 25 | 9 | 7 | 6 | 68 | 25 | 10 | 0 | 200 | 75 | 0 | 0 |
| 26 | 9 | 15 | 0 | 69 | 25 | 17 | 6 | 250 | 93 | 15 | 0 |
| 27 | 10 | 2 | 6 | 70 | 26 | 5 | 0 | 300 | 112 | 10 | 0 |
| 28 | 10 | 10 | 0 | 71 | 26 | 12 | 6 | 365 | 136 | 17 | 6 |
| 29 | 10 | 17 | 6 | 72 | 27 | 0 | 0 | 400 | 150 | 0 | 0 |
| 30 | 11 | 5 | 0 | 73 | 27 | 7 | 6 | 500 | 187 | 10 | 0 |
| 31 | 11 | 12 | 6 | 74 | 27 | 15 | 0 | 600 | 225 | 0 | 0 |
| 32 | 12 | 0 | 0 | 75 | 28 | 2 | 6 | 700 | 262 | 10 | 0 |
| 33 | 12 | 7 | 6 | 76 | 28 | 10 | 0 | 750 | 281 | 5 | 0 |
| 34 | 12 | 15 | 0 | 77 | 28 | 17 | 6 | 800 | 300 | 0 | 0 |
| 35 | 13 | 2 | 6 | 78 | 29 | 5 | 0 | 900 | 337 | 10 | 0 |
| 36 | 13 | 10 | 0 | 79 | 29 | 12 | 6 | 1000 | 375 | 0 | 0 |
| 37 | 13 | 17 | 6 | 80 | 30 | 0 | 0 | 1250 | 468 | 15 | 0 |
| 38 | 14 | 5 | 0 | 81 | 30 | 7 | 6 | 1500 | 562 | 10 | 0 |
| 39 | 14 | 12 | 6 | 82 | 30 | 15 | 0 | 1750 | 656 | 5 | 0 |
| 40 | 15 | 0 | 0 | 83 | 31 | 2 | 6 | 2000 | 750 | 0 | 0 |
| 41 | 15 | 7 | 6 | 84 | 31 | 10 | 0 | 2240 | 840 | 0 | 0 |
| 42 | 15 | 15 | 0 | 85 | 31 | 17 | 6 | 3000 | 1125 | 0 | 0 |
| 43 | 16 | 2 | 6 | 86 | 32 | 5 | 0 | 5000 | 1875 | 0 | 0 |

## 7s. 8d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 7 | 8 | 44 | 16 | 17 | 4 | 87 | 33 | 7 | 0 |
| 2 | 0 | 15 | 4 | 45 | 17 | 5 | 0 | 88 | 33 | 14 | 8 |
| 3 | 1 | 3 | 0 | 46 | 17 | 12 | 8 | 89 | 34 | 2 | 4 |
| 4 | 1 | 10 | 8 | 47 | 18 | 0 | 4 | 90 | 34 | 10 | 0 |
| 5 | 1 | 18 | 4 | 48 | 18 | 8 | 0 | 91 | 34 | 17 | 8 |
| 6 | 2 | 6 | 0 | 49 | 18 | 15 | 8 | 92 | 35 | 5 | 4 |
| 7 | 2 | 13 | 8 | 50 | 19 | 3 | 4 | 93 | 35 | 13 | 0 |
| 8 | 3 | 1 | 4 | 51 | 19 | 11 | 0 | 94 | 36 | 0 | 8 |
| 9 | 3 | 9 | 0 | 52 | 19 | 18 | 8 | 95 | 36 | 8 | 4 |
| 10 | 3 | 16 | 8 | 53 | 20 | 6 | 4 | 96 | 36 | 16 | 0 |
| 11 | 4 | 4 | 4 | 54 | 20 | 14 | 0 | 97 | 37 | 3 | 8 |
| 12 | 4 | 12 | 0 | 55 | 21 | 1 | 8 | 98 | 37 | 11 | 4 |
| 13 | 4 | 19 | 8 | 56 | 21 | 9 | 4 | 99 | 37 | 19 | 0 |
| 14 | 5 | 7 | 4 | 57 | 21 | 17 | 0 | 100 | 38 | 6 | 8 |
| 15 | 5 | 15 | 0 | 58 | 22 | 4 | 8 | 108 | 41 | 8 | 0 |
| 16 | 6 | 2 | 8 | 59 | 22 | 12 | 4 | 110 | 42 | 3 | 4 |
| 17 | 6 | 10 | 4 | 60 | 23 | 0 | 0 | 112 | 42 | 18 | 8 |
| 18 | 6 | 18 | 0 | 61 | 23 | 7 | 8 | 120 | 46 | 0 | 0 |
| 19 | 7 | 5 | 8 | 62 | 23 | 15 | 4 | 130 | 49 | 16 | 8 |
| 20 | 7 | 13 | 4 | 63 | 24 | 3 | 0 | 132 | 50 | 12 | 0 |
| 21 | 8 | 1 | 0 | 64 | 24 | 10 | 8 | 140 | 53 | 13 | 4 |
| 22 | 8 | 8 | 8 | 65 | 24 | 18 | 4 | 144 | 55 | 4 | 0 |
| 23 | 8 | 16 | 4 | 66 | 25 | 6 | 0 | 150 | 57 | 10 | 0 |
| 24 | 9 | 4 | 0 | 67 | 25 | 13 | 8 | 175 | 67 | 1 | 8 |
| 25 | 9 | 11 | 8 | 68 | 26 | 1 | 4 | 200 | 76 | 13 | 4 |
| 26 | 9 | 19 | 4 | 69 | 26 | 9 | 0 | 250 | 95 | 16 | 8 |
| 27 | 10 | 7 | 0 | 70 | 26 | 16 | 8 | 300 | 115 | 0 | 0 |
| 28 | 10 | 14 | 8 | 71 | 27 | 4 | 4 | 365 | 139 | 18 | 4 |
| 29 | 11 | 2 | 4 | 72 | 27 | 12 | 0 | 400 | 153 | 6 | 8 |
| 30 | 11 | 10 | 0 | 73 | 27 | 19 | 8 | 500 | 191 | 13 | 4 |
| 31 | 11 | 17 | 8 | 74 | 28 | 7 | 4 | 600 | 230 | 0 | 0 |
| 32 | 12 | 5 | 4 | 75 | 28 | 15 | 0 | 700 | 268 | 6 | 8 |
| 33 | 12 | 13 | 0 | 76 | 29 | 2 | 8 | 750 | 287 | 10 | 0 |
| 34 | 13 | 0 | 8 | 77 | 29 | 10 | 4 | 800 | 306 | 13 | 4 |
| 35 | 13 | 8 | 4 | 78 | 29 | 18 | 0 | 900 | 345 | 0 | 0 |
| 36 | 13 | 16 | 0 | 79 | 30 | 5 | 8 | 1000 | 383 | 6 | 8 |
| 37 | 14 | 3 | 8 | 80 | 30 | 13 | 4 | 1250 | 479 | 3 | 4 |
| 38 | 14 | 11 | 4 | 81 | 31 | 1 | 0 | 1500 | 575 | 0 | 0 |
| 39 | 14 | 19 | 0 | 82 | 31 | 8 | 8 | 1750 | 670 | 16 | 8 |
| 40 | 15 | 6 | 8 | 83 | 31 | 16 | 4 | 2000 | 766 | 13 | 4 |
| 41 | 15 | 14 | 4 | 84 | 32 | 4 | 0 | 2240 | 858 | 13 | 4 |
| 42 | 16 | 2 | 0 | 85 | 32 | 11 | 8 | 3000 | 1150 | 0 | 0 |
| 43 | 16 | 9 | 8 | 86 | 32 | 19 | 4 | 5000 | 1916 | 13 | 4 |

## 7s. 9d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 7 | 9 | 44 | 17 | 1 | 0 | 87 | 33 | 14 | 3 |
| 2 | 0 | 15 | 6 | 45 | 17 | 8 | 9 | 88 | 34 | 2 | 0 |
| 3 | 1 | 8 | 3 | 46 | 17 | 16 | 6 | 89 | 34 | 9 | 9 |
| 4 | 1 | 11 | 0 | 47 | 18 | 4 | 3 | 90 | 34 | 17 | 6 |
| 5 | 1 | 18 | 9 | 48 | 18 | 12 | 0 | 91 | 35 | 5 | 3 |
| 6 | 2 | 6 | 6 | 49 | 18 | 19 | 9 | 92 | 35 | 13 | 0 |
| 7 | 2 | 14 | 3 | 50 | 19 | 7 | 6 | 93 | 36 | 0 | 9 |
| 8 | 3 | 2 | 0 | 51 | 19 | 15 | 3 | 94 | 36 | 8 | 6 |
| 9 | 3 | 9 | 9 | 52 | 20 | 3 | 0 | 95 | 36 | 16 | 3 |
| 10 | 3 | 17 | 6 | 53 | 20 | 10 | 9 | 96 | 37 | 4 | 0 |
| 11 | 4 | 5 | 3 | 54 | 20 | 18 | 6 | 97 | 37 | 11 | 9 |
| 12 | 4 | 13 | 0 | 55 | 21 | 6 | 3 | 98 | 37 | 19 | 6 |
| 13 | 5 | 0 | 9 | 56 | 21 | 14 | 0 | 99 | 38 | 7 | 3 |
| 14 | 5 | 8 | 6 | 57 | 22 | 1 | 9 | 100 | 38 | 15 | 0 |
| 15 | 5 | 16 | 3 | 58 | 22 | 9 | 6 | 108 | 41 | 17 | 0 |
| 16 | 6 | 4 | 0 | 59 | 22 | 17 | 3 | 110 | 42 | 12 | 6 |
| 17 | 6 | 11 | 9 | 60 | 23 | 5 | 0 | 112 | 43 | 8 | 0 |
| 18 | 6 | 19 | 6 | 61 | 23 | 12 | 9 | 120 | 46 | 10 | 0 |
| 19 | 7 | 7 | 3 | 62 | 24 | 0 | 6 | 130 | 50 | 7 | 6 |
| 20 | 7 | 15 | 0 | 63 | 24 | 8 | 3 | 132 | 51 | 3 | 0 |
| 21 | 8 | 2 | 9 | 64 | 24 | 16 | 0 | 140 | 54 | 5 | 0 |
| 22 | 8 | 10 | 6 | 65 | 25 | 3 | 9 | 144 | 55 | 16 | 0 |
| 23 | 8 | 18 | 3 | 66 | 25 | 11 | 6 | 150 | 58 | 2 | 6 |
| 24 | 9 | 6 | 0 | 67 | 25 | 19 | 3 | 175 | 67 | 16 | 3 |
| 25 | 9 | 13 | 9 | 68 | 26 | 7 | 0 | 200 | 77 | 10 | 0 |
| 26 | 10 | 1 | 6 | 69 | 26 | 14 | 9 | 250 | 96 | 17 | 6 |
| 27 | 10 | 9 | 3 | 70 | 27 | 2 | 6 | 300 | 116 | 5 | 0 |
| 28 | 10 | 17 | 0 | 71 | 27 | 10 | 3 | 365 | 141 | 8 | 9 |
| 29 | 11 | 4 | 9 | 72 | 27 | 18 | 0 | 400 | 155 | 0 | 0 |
| 30 | 11 | 12 | 6 | 73 | 28 | 5 | 9 | 500 | 193 | 15 | 0 |
| 31 | 12 | 0 | 3 | 74 | 28 | 13 | 6 | 600 | 232 | 10 | 0 |
| 32 | 12 | 8 | 0 | 75 | 29 | 1 | 3 | 700 | 271 | 5 | 0 |
| 33 | 12 | 15 | 9 | 76 | 29 | 9 | 0 | 750 | 290 | 12 | 6 |
| 34 | 13 | 3 | 6 | 77 | 29 | 16 | 9 | 800 | 310 | 0 | 0 |
| 35 | 13 | 11 | 3 | 78 | 30 | 4 | 6 | 900 | 348 | 15 | 0 |
| 36 | 13 | 19 | 0 | 79 | 30 | 12 | 3 | 1000 | 387 | 10 | 0 |
| 37 | 14 | 6 | 9 | 80 | 31 | 0 | 0 | 1250 | 484 | 7 | 6 |
| 38 | 14 | 14 | 6 | 81 | 31 | 7 | 9 | 1500 | 581 | 5 | 0 |
| 39 | 15 | 2 | 3 | 82 | 31 | 15 | 6 | 1750 | 678 | 2 | 6 |
| 40 | 15 | 10 | 0 | 83 | 32 | 3 | 3 | 2000 | 775 | 0 | 0 |
| 41 | 15 | 17 | 9 | 84 | 32 | 11 | 0 | 2240 | 868 | 0 | 0 |
| 42 | 16 | 5 | 6 | 85 | 32 | 18 | 9 | 3000 | 1162 | 10 | 0 |
| 43 | 16 | 13 | 3 | 86 | 33 | 6 | 6 | 5000 | 1937 | 10 | 0 |

## 7s. 11d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 7 | 11 | 44 | 17 | 8 | 4 | 87 | 34 | 8 | 9 |
| 2 | 0 | 15 | 10 | 45 | 17 | 16 | 3 | 88 | 34 | 16 | 8 |
| 3 | 1 | 8 | 9 | 46 | 18 | 4 | 2 | 89 | 35 | 4 | 7 |
| 4 | 1 | 11 | 8 | 47 | 18 | 12 | 1 | 90 | 35 | 12 | 6 |
| 5 | 1 | 19 | 7 | 48 | 19 | 0 | 0 | 91 | 36 | 0 | 5 |
| 6 | 2 | 7 | 6 | 49 | 19 | 7 | 11 | 92 | 36 | 8 | 4 |
| 7 | 2 | 15 | 5 | 50 | 19 | 15 | 10 | 93 | 36 | 16 | 3 |
| 8 | 3 | 3 | 4 | 51 | 20 | 3 | 9 | 94 | 37 | 4 | 2 |
| 9 | 3 | 11 | 3 | 52 | 20 | 11 | 8 | 95 | 37 | 12 | 1 |
| 10 | 3 | 19 | 2 | 53 | 20 | 19 | 7 | 96 | 38 | 0 | 0 |
| 11 | 4 | 7 | 1 | 54 | 21 | 7 | 6 | 97 | 38 | 7 | 11 |
| 12 | 4 | 15 | 0 | 55 | 21 | 15 | 5 | 98 | 38 | 15 | 10 |
| 13 | 5 | 2 | 11 | 56 | 22 | 3 | 4 | 99 | 39 | 3 | 9 |
| 14 | 5 | 10 | 10 | 57 | 22 | 11 | 3 | 100 | 39 | 11 | 8 |
| 15 | 5 | 18 | 9 | 58 | 22 | 19 | 2 | 108 | 42 | 15 | 0 |
| 16 | 6 | 6 | 8 | 59 | 23 | 7 | 1 | 110 | 43 | 10 | 10 |
| 17 | 6 | 14 | 7 | 60 | 23 | 15 | 0 | 112 | 44 | 6 | 8 |
| 18 | 7 | 2 | 6 | 61 | 24 | 2 | 11 | 120 | 47 | 10 | 0 |
| 19 | 7 | 10 | 5 | 62 | 24 | 10 | 10 | 130 | 51 | 9 | 2 |
| 20 | 7 | 18 | 4 | 63 | 24 | 18 | 9 | 132 | 52 | 5 | 0 |
| 21 | 8 | 6 | 3 | 64 | 25 | 6 | 8 | 140 | 55 | 8 | 4 |
| 22 | 8 | 14 | 2 | 65 | 25 | 14 | 7 | 144 | 57 | 0 | 0 |
| 23 | 9 | 2 | 1 | 66 | 26 | 2 | 6 | 150 | 59 | 7 | 6 |
| 24 | 9 | 10 | 0 | 67 | 26 | 10 | 5 | 175 | 69 | 5 | 5 |
| 25 | 9 | 17 | 11 | 68 | 26 | 18 | 4 | 200 | 79 | 3 | 4 |
| 26 | 10 | 5 | 10 | 69 | 27 | 6 | 3 | 250 | 98 | 19 | 2 |
| 27 | 10 | 13 | 9 | 70 | 27 | 14 | 2 | 300 | 118 | 15 | 0 |
| 28 | 11 | 1 | 8 | 71 | 28 | 2 | 1 | 365 | 144 | 9 | 7 |
| 29 | 11 | 9 | 7 | 72 | 28 | 10 | 0 | 400 | 158 | 6 | 8 |
| 30 | 11 | 17 | 6 | 73 | 28 | 17 | 11 | 500 | 197 | 18 | 4 |
| 31 | 12 | 5 | 5 | 74 | 29 | 5 | 10 | 600 | 237 | 10 | 0 |
| 32 | 12 | 13 | 4 | 75 | 29 | 13 | 9 | 700 | 277 | 1 | 8 |
| 33 | 13 | 1 | 3 | 76 | 30 | 1 | 8 | 750 | 296 | 17 | 6 |
| 34 | 13 | 9 | 2 | 77 | 30 | 9 | 7 | 800 | 316 | 13 | 4 |
| 35 | 13 | 17 | 1 | 78 | 30 | 17 | 6 | 900 | 356 | 5 | 0 |
| 36 | 14 | 5 | 0 | 79 | 31 | 5 | 5 | 1000 | 395 | 16 | 8 |
| 37 | 14 | 12 | 11 | 80 | 31 | 13 | 4 | 1250 | 494 | 15 | 10 |
| 38 | 15 | 0 | 10 | 81 | 32 | 1 | 3 | 1500 | 593 | 15 | 0 |
| 39 | 15 | 8 | 9 | 82 | 32 | 9 | 2 | 1750 | 692 | 14 | 2 |
| 40 | 15 | 16 | 8 | 83 | 32 | 17 | 1 | 2000 | 791 | 13 | 4 |
| 41 | 16 | 4 | 7 | 84 | 33 | 5 | 0 | 2240 | 886 | 13 | 4 |
| 42 | 16 | 12 | 6 | 85 | 33 | 12 | 11 | 3000 | 1187 | 10 | 0 |
| 43 | 17 | 0 | 5 | 86 | 34 | 0 | 10 | 5000 | 1979 | 3 | 4 |

## 7s. 10d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 7 | 10 | 44 | 17 | 4 | 8 | 87 | 34 | 1 | 6 |
| 2 | 0 | 15 | 8 | 45 | 17 | 12 | 6 | 88 | 34 | 9 | 4 |
| 3 | 1 | 3 | 6 | 46 | 18 | 0 | 4 | 89 | 34 | 17 | 2 |
| 4 | 1 | 11 | 4 | 47 | 18 | 8 | 2 | 90 | 35 | 5 | 0 |
| 5 | 1 | 19 | 2 | 48 | 18 | 16 | 0 | 91 | 35 | 12 | 10 |
| 6 | 2 | 7 | 0 | 49 | 19 | 3 | 10 | 92 | 36 | 0 | 8 |
| 7 | 2 | 14 | 10 | 50 | 19 | 11 | 8 | 93 | 36 | 8 | 6 |
| 8 | 3 | 2 | 8 | 51 | 19 | 19 | 6 | 94 | 36 | 16 | 4 |
| 9 | 3 | 10 | 6 | 52 | 20 | 7 | 4 | 95 | 37 | 4 | 2 |
| 10 | 3 | 18 | 4 | 53 | 20 | 15 | 2 | 96 | 37 | 12 | 0 |
| 11 | 4 | 6 | 2 | 54 | 21 | 3 | 0 | 97 | 37 | 19 | 10 |
| 12 | 4 | 14 | 0 | 55 | 21 | 10 | 10 | 98 | 38 | 7 | 8 |
| 13 | 5 | 1 | 10 | 56 | 21 | 18 | 8 | 99 | 38 | 15 | 6 |
| 14 | 5 | 9 | 8 | 57 | 22 | 6 | 6 | 100 | 39 | 3 | 4 |
| 15 | 5 | 17 | 6 | 58 | 22 | 14 | 4 | 108 | 42 | 6 | 0 |
| 16 | 6 | 5 | 4 | 59 | 23 | 2 | 2 | 110 | 43 | 1 | 8 |
| 17 | 6 | 13 | 2 | 60 | 23 | 10 | 0 | 112 | 43 | 17 | 4 |
| 18 | 7 | 1 | 0 | 61 | 23 | 17 | 10 | 120 | 47 | 0 | 0 |
| 19 | 7 | 8 | 10 | 62 | 24 | 5 | 8 | 130 | 50 | 18 | 4 |
| 20 | 7 | 16 | 8 | 63 | 24 | 13 | 6 | 132 | 51 | 14 | 0 |
| 21 | 8 | 4 | 6 | 64 | 25 | 1 | 4 | 140 | 54 | 16 | 8 |
| 22 | 8 | 12 | 4 | 65 | 25 | 9 | 2 | 144 | 56 | 8 | 0 |
| 23 | 9 | 0 | 2 | 66 | 25 | 17 | 0 | 150 | 58 | 15 | 0 |
| 24 | 9 | 8 | 0 | 67 | 26 | 4 | 10 | 175 | 68 | 10 | 10 |
| 25 | 9 | 15 | 10 | 68 | 26 | 12 | 8 | 200 | 78 | 6 | 8 |
| 26 | 10 | 3 | 8 | 69 | 27 | 0 | 6 | 250 | 97 | 18 | 4 |
| 27 | 10 | 11 | 6 | 70 | 27 | 8 | 4 | 300 | 117 | 10 | 0 |
| 28 | 10 | 19 | 4 | 71 | 27 | 16 | 2 | 365 | 142 | 19 | 2 |
| 29 | 11 | 7 | 2 | 72 | 28 | 4 | 0 | 400 | 156 | 13 | 4 |
| 30 | 11 | 15 | 0 | 73 | 28 | 11 | 10 | 500 | 195 | 16 | 8 |
| 31 | 12 | 2 | 10 | 74 | 28 | 19 | 8 | 600 | 235 | 0 | 0 |
| 32 | 12 | 10 | 8 | 75 | 29 | 7 | 6 | 700 | 274 | 3 | 4 |
| 33 | 12 | 18 | 6 | 76 | 29 | 15 | 4 | 750 | 293 | 15 | 0 |
| 34 | 13 | 6 | 4 | 77 | 30 | 3 | 2 | 800 | 313 | 6 | 8 |
| 35 | 13 | 14 | 2 | 78 | 30 | 11 | 0 | 900 | 352 | 10 | 0 |
| 36 | 14 | 2 | 0 | 79 | 30 | 18 | 10 | 1000 | 391 | 13 | 4 |
| 37 | 14 | 9 | 10 | 80 | 31 | 6 | 8 | 1250 | 489 | 11 | 8 |
| 38 | 14 | 17 | 8 | 81 | 31 | 14 | 6 | 1500 | 587 | 10 | 0 |
| 39 | 15 | 5 | 6 | 82 | 32 | 2 | 4 | 1750 | 685 | 8 | 4 |
| 40 | 15 | 13 | 4 | 83 | 32 | 10 | 2 | 2000 | 783 | 6 | 8 |
| 41 | 16 | 1 | 2 | 84 | 32 | 18 | 0 | 2240 | 877 | 6 | 8 |
| 42 | 16 | 9 | 0 | 85 | 33 | 5 | 10 | 3000 | 1175 | 0 | 0 |
| 43 | 16 | 16 | 10 | 86 | 33 | 13 | 8 | 5000 | 1958 | 6 | 8 |

## 8s.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 8 | 0 | 44 | 17 | 12 | 0 | 87 | 34 | 16 | 0 |
| 2 | 0 | 16 | 0 | 45 | 18 | 0 | 0 | 88 | 35 | 4 | 0 |
| 3 | 1 | 4 | 0 | 46 | 18 | 8 | 0 | 89 | 35 | 12 | 0 |
| 4 | 1 | 12 | 0 | 47 | 18 | 16 | 0 | 90 | 36 | 0 | 0 |
| 5 | 2 | 0 | 0 | 48 | 19 | 4 | 0 | 91 | 36 | 8 | 0 |
| 6 | 2 | 8 | 0 | 49 | 19 | 12 | 0 | 92 | 36 | 16 | 0 |
| 7 | 2 | 16 | 0 | 50 | 20 | 0 | 0 | 93 | 37 | 4 | 0 |
| 8 | 3 | 4 | 0 | 51 | 20 | 8 | 0 | 94 | 37 | 12 | 0 |
| 9 | 3 | 12 | 0 | 52 | 20 | 16 | 0 | 95 | 38 | 0 | 0 |
| 10 | 4 | 0 | 0 | 53 | 21 | 4 | 0 | 96 | 38 | 8 | 0 |
| 11 | 4 | 8 | 0 | 54 | 21 | 12 | 0 | 97 | 38 | 16 | 0 |
| 12 | 4 | 16 | 0 | 55 | 22 | 0 | 0 | 98 | 39 | 4 | 0 |
| 13 | 5 | 4 | 0 | 56 | 22 | 8 | 0 | 99 | 39 | 12 | 0 |
| 14 | 5 | 12 | 0 | 57 | 22 | 16 | 0 | 100 | 40 | 0 | 0 |
| 15 | 6 | 0 | 0 | 58 | 23 | 4 | 0 | 108 | 43 | 4 | 0 |
| 16 | 6 | 8 | 0 | 59 | 23 | 12 | 0 | 110 | 44 | 0 | 0 |
| 17 | 6 | 16 | 0 | 60 | 24 | 0 | 0 | 112 | 44 | 16 | 0 |
| 18 | 7 | 4 | 0 | 61 | 24 | 8 | 0 | 120 | 48 | 0 | 0 |
| 19 | 7 | 12 | 0 | 62 | 24 | 16 | 0 | 130 | 52 | 0 | 0 |
| 20 | 8 | 0 | 0 | 63 | 25 | 4 | 0 | 132 | 52 | 16 | 0 |
| 21 | 8 | 8 | 0 | 64 | 25 | 12 | 0 | 140 | 56 | 0 | 0 |
| 22 | 8 | 16 | 0 | 65 | 26 | 0 | 0 | 144 | 57 | 12 | 0 |
| 23 | 9 | 4 | 0 | 66 | 26 | 8 | 0 | 150 | 60 | 0 | 0 |
| 24 | 9 | 12 | 0 | 67 | 26 | 16 | 0 | 175 | 70 | 0 | 0 |
| 25 | 10 | 0 | 0 | 68 | 27 | 4 | 0 | 200 | 80 | 0 | 0 |
| 26 | 10 | 8 | 0 | 69 | 27 | 12 | 0 | 250 | 100 | 0 | 0 |
| 27 | 10 | 16 | 0 | 70 | 28 | 0 | 0 | 300 | 120 | 0 | 0 |
| 28 | 11 | 4 | 0 | 71 | 28 | 8 | 0 | 365 | 146 | 0 | 0 |
| 29 | 11 | 12 | 0 | 72 | 28 | 16 | 0 | 400 | 160 | 0 | 0 |
| 30 | 12 | 0 | 0 | 73 | 29 | 4 | 0 | 500 | 200 | 0 | 0 |
| 31 | 12 | 8 | 0 | 74 | 29 | 12 | 0 | 600 | 240 | 0 | 0 |
| 32 | 12 | 16 | 0 | 75 | 30 | 0 | 0 | 700 | 280 | 0 | 0 |
| 33 | 13 | 4 | 0 | 76 | 30 | 8 | 0 | 750 | 300 | 0 | 0 |
| 34 | 13 | 12 | 0 | 77 | 30 | 16 | 0 | 800 | 320 | 0 | 0 |
| 35 | 14 | 0 | 0 | 78 | 31 | 4 | 0 | 900 | 360 | 0 | 0 |
| 36 | 14 | 8 | 0 | 79 | 31 | 12 | 0 | 1000 | 400 | 0 | 0 |
| 37 | 14 | 16 | 0 | 80 | 32 | 0 | 0 | 1250 | 500 | 0 | 0 |
| 38 | 15 | 4 | 0 | 81 | 32 | 8 | 0 | 1500 | 600 | 0 | 0 |
| 39 | 15 | 12 | 0 | 82 | 32 | 16 | 0 | 1750 | 700 | 0 | 0 |
| 40 | 16 | 0 | 0 | 83 | 33 | 4 | 0 | 2000 | 800 | 0 | 0 |
| 41 | 16 | 8 | 0 | 84 | 33 | 12 | 0 | 2240 | 896 | 0 | 0 |
| 42 | 16 | 16 | 0 | 85 | 34 | 0 | 0 | 3000 | 1200 | 0 | 0 |
| 43 | 17 | 4 | 0 | 86 | 34 | 8 | 0 | 5000 | 2000 | 0 | 0 |

## 8s. 1d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 8 | 1 | 44 | 17 | 15 | 8 | 87 | 35 | 3 | 3 |
| 2 | 0 | 16 | 2 | 45 | 18 | 8 | 9 | 88 | 35 | 11 | 4 |
| 3 | 1 | 4 | 3 | 46 | 18 | 11 | 10 | 89 | 35 | 19 | 5 |
| 4 | 1 | 12 | 4 | 47 | 18 | 19 | 11 | 90 | 36 | 7 | 6 |
| 5 | 2 | 0 | 5 | 48 | 19 | 8 | 0 | 91 | 36 | 15 | 7 |
| 6 | 2 | 8 | 6 | 49 | 19 | 16 | 1 | 92 | 37 | 3 | 8 |
| 7 | 2 | 16 | 7 | 50 | 20 | 4 | 2 | 93 | 37 | 11 | 9 |
| 8 | 3 | 4 | 8 | 51 | 20 | 12 | 3 | 94 | 37 | 19 | 10 |
| 9 | 3 | 12 | 9 | 52 | 21 | 0 | 4 | 95 | 38 | 7 | 11 |
| 10 | 4 | 0 | 10 | 53 | 21 | 8 | 5 | 96 | 38 | 16 | 0 |
| 11 | 4 | 8 | 11 | 54 | 21 | 16 | 6 | 97 | 39 | 4 | 1 |
| 12 | 4 | 17 | 0 | 55 | 22 | 4 | 7 | 98 | 39 | 12 | 2 |
| 13 | 5 | 5 | 1 | 56 | 22 | 12 | 8 | 99 | 40 | 0 | 3 |
| 14 | 5 | 13 | 2 | 57 | 23 | 0 | 9 | 100 | 40 | 8 | 4 |
| 15 | 6 | 1 | 3 | 58 | 23 | 8 | 10 | 108 | 43 | 13 | 0 |
| 16 | 6 | 9 | 4 | 59 | 23 | 16 | 11 | 110 | 44 | 9 | 2 |
| 17 | 6 | 17 | 5 | 60 | 24 | 5 | 0 | 112 | 45 | 5 | 4 |
| 18 | 7 | 5 | 6 | 61 | 24 | 13 | 1 | 120 | 48 | 10 | 0 |
| 19 | 7 | 13 | 7 | 62 | 25 | 1 | 2 | 130 | 52 | 10 | 10 |
| 20 | 8 | 1 | 8 | 63 | 25 | 9 | 3 | 132 | 53 | 7 | 0 |
| 21 | 8 | 9 | 9 | 64 | 25 | 17 | 4 | 140 | 56 | 11 | 8 |
| 22 | 8 | 17 | 10 | 65 | 26 | 5 | 5 | 144 | 58 | 4 | 0 |
| 23 | 9 | 5 | 11 | 66 | 26 | 13 | 6 | 150 | 60 | 12 | 6 |
| 24 | 9 | 14 | 0 | 67 | 27 | 1 | 7 | 175 | 70 | 14 | 7 |
| 25 | 10 | 2 | 1 | 68 | 27 | 9 | 8 | 200 | 80 | 16 | 8 |
| 26 | 10 | 10 | 2 | 69 | 27 | 17 | 9 | 250 | 101 | 0 | 10 |
| 27 | 10 | 18 | 3 | 70 | 28 | 5 | 10 | 300 | 121 | 5 | 0 |
| 28 | 11 | 6 | 4 | 71 | 28 | 13 | 11 | 365 | 147 | 10 | 5 |
| 29 | 11 | 14 | 5 | 72 | 29 | 2 | 0 | 400 | 161 | 13 | 4 |
| 30 | 12 | 2 | 6 | 73 | 29 | 10 | 1 | 500 | 202 | 1 | 8 |
| 31 | 12 | 10 | 7 | 74 | 29 | 18 | 2 | 600 | 242 | 10 | 0 |
| 32 | 12 | 18 | 8 | 75 | 30 | 6 | 3 | 700 | 282 | 18 | 4 |
| 33 | 13 | 6 | 9 | 76 | 30 | 14 | 4 | 750 | 303 | 2 | 6 |
| 34 | 13 | 14 | 10 | 77 | 31 | 2 | 5 | 800 | 323 | 6 | 8 |
| 35 | 14 | 2 | 11 | 78 | 31 | 10 | 6 | 900 | 363 | 15 | 0 |
| 36 | 14 | 11 | 0 | 79 | 31 | 18 | 7 | 1000 | 404 | 3 | 4 |
| 37 | 14 | 19 | 1 | 80 | 32 | 6 | 8 | 1250 | 505 | 4 | 2 |
| 38 | 15 | 7 | 2 | 81 | 32 | 14 | 9 | 1500 | 606 | 5 | 0 |
| 39 | 15 | 15 | 3 | 82 | 33 | 2 | 10 | 1750 | 707 | 5 | 10 |
| 40 | 16 | 3 | 4 | 83 | 33 | 10 | 11 | 2000 | 808 | 6 | 8 |
| 41 | 16 | 11 | 5 | 84 | 33 | 19 | 0 | 2240 | 905 | 6 | 8 |
| 42 | 16 | 19 | 6 | 85 | 34 | 7 | 1 | 3000 | 1212 | 10 | 0 |
| 43 | 17 | 7 | 7 | 86 | 34 | 15 | 2 | 5000 | 2020 | 16 | 8 |

## 8s. 3d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 8 | 3 | 44 | 18 | 3 | 0 | 87 | 35 | 17 | 9 |
| 2 | 0 | 16 | 6 | 45 | 18 | 11 | 3 | 88 | 36 | 6 | 0 |
| 3 | 1 | 4 | 9 | 46 | 18 | 19 | 6 | 89 | 36 | 14 | 3 |
| 4 | 1 | 13 | 0 | 47 | 19 | 7 | 9 | 90 | 37 | 2 | 6 |
| 5 | 2 | 1 | 3 | 48 | 19 | 16 | 0 | 91 | 37 | 10 | 9 |
| 6 | 2 | 9 | 6 | 49 | 20 | 4 | 3 | 92 | 37 | 19 | 0 |
| 7 | 2 | 17 | 9 | 50 | 20 | 12 | 6 | 93 | 38 | 7 | 3 |
| 8 | 3 | 6 | 0 | 51 | 21 | 0 | 9 | 94 | 38 | 15 | 6 |
| 9 | 3 | 14 | 3 | 52 | 21 | 9 | 0 | 95 | 39 | 3 | 9 |
| 10 | 4 | 2 | 6 | 53 | 21 | 17 | 3 | 96 | 39 | 12 | 0 |
| 11 | 4 | 10 | 9 | 54 | 22 | 5 | 6 | 97 | 40 | 0 | 3 |
| 12 | 4 | 19 | 0 | 55 | 22 | 13 | 9 | 98 | 40 | 8 | 6 |
| 13 | 5 | 7 | 3 | 56 | 23 | 2 | 0 | 99 | 40 | 16 | 9 |
| 14 | 5 | 15 | 6 | 57 | 23 | 10 | 3 | 100 | 41 | 5 | 0 |
| 15 | 6 | 3 | 9 | 58 | 23 | 18 | 6 | 108 | 44 | 11 | 0 |
| 16 | 6 | 12 | 0 | 59 | 24 | 6 | 9 | 110 | 45 | 7 | 6 |
| 17 | 7 | 0 | 3 | 60 | 24 | 15 | 0 | 112 | 46 | 4 | 0 |
| 18 | 7 | 8 | 6 | 61 | 25 | 3 | 3 | 120 | 49 | 10 | 0 |
| 19 | 7 | 16 | 9 | 62 | 25 | 11 | 6 | 130 | 53 | 12 | 6 |
| 20 | 8 | 5 | 0 | 63 | 25 | 19 | 9 | 132 | 54 | 9 | 0 |
| 21 | 8 | 13 | 3 | 64 | 26 | 8 | 0 | 140 | 57 | 15 | 0 |
| 22 | 9 | 1 | 6 | 65 | 26 | 16 | 3 | 144 | 59 | 8 | 0 |
| 23 | 9 | 9 | 9 | 66 | 27 | 4 | 6 | 150 | 61 | 17 | 6 |
| 24 | 9 | 18 | 0 | 67 | 27 | 12 | 9 | 175 | 72 | 3 | 9 |
| 25 | 10 | 6 | 3 | 68 | 28 | 1 | 0 | 200 | 82 | 10 | 0 |
| 26 | 10 | 14 | 6 | 69 | 28 | 9 | 3 | 250 | 103 | 2 | 6 |
| 27 | 11 | 2 | 9 | 70 | 28 | 17 | 6 | 300 | 123 | 15 | 0 |
| 28 | 11 | 11 | 0 | 71 | 29 | 5 | 9 | 365 | 150 | 11 | 3 |
| 29 | 11 | 19 | 3 | 72 | 29 | 14 | 0 | 400 | 165 | 0 | 0 |
| 30 | 12 | 7 | 6 | 73 | 30 | 2 | 3 | 500 | 206 | 5 | 0 |
| 31 | 12 | 15 | 9 | 74 | 30 | 10 | 6 | 600 | 247 | 10 | 0 |
| 32 | 13 | 4 | 0 | 75 | 30 | 18 | 9 | 700 | 288 | 15 | 0 |
| 33 | 13 | 12 | 3 | 76 | 31 | 7 | 0 | 750 | 309 | 7 | 6 |
| 34 | 14 | 0 | 6 | 77 | 31 | 15 | 3 | 800 | 330 | 0 | 0 |
| 35 | 14 | 8 | 9 | 78 | 32 | 3 | 6 | 900 | 371 | 5 | 0 |
| 36 | 14 | 17 | 0 | 79 | 32 | 11 | 9 | 1000 | 412 | 10 | 0 |
| 37 | 15 | 5 | 3 | 80 | 33 | 0 | 0 | 1250 | 515 | 12 | 6 |
| 38 | 15 | 13 | 6 | 81 | 33 | 8 | 3 | 1500 | 618 | 15 | 0 |
| 39 | 16 | 1 | 9 | 82 | 33 | 16 | 6 | 1750 | 721 | 17 | 6 |
| 40 | 16 | 10 | 0 | 83 | 34 | 4 | 9 | 2000 | 825 | 0 | 0 |
| 41 | 16 | 18 | 3 | 84 | 34 | 13 | 0 | 2240 | 924 | 0 | 0 |
| 42 | 17 | 6 | 6 | 85 | 35 | 1 | 3 | 3000 | 1237 | 10 | 0 |
| 43 | 17 | 14 | 9 | 86 | 35 | 9 | 6 | 5000 | 2062 | 10 | 0 |

## 8s. 2d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 8 | 2 | 44 | 17 | 19 | 4 | 87 | 35 | 10 | 6 |
| 2 | 0 | 16 | 4 | 45 | 18 | 7 | 6 | 88 | 35 | 18 | 8 |
| 3 | 1 | 4 | 6 | 46 | 18 | 15 | 8 | 89 | 36 | 6 | 10 |
| 4 | 1 | 12 | 8 | 47 | 19 | 3 | 10 | 90 | 36 | 15 | 0 |
| 5 | 2 | 0 | 10 | 48 | 19 | 12 | 0 | 91 | 37 | 3 | 2 |
| 6 | 2 | 9 | 0 | 49 | 20 | 0 | 2 | 92 | 37 | 11 | 4 |
| 7 | 2 | 17 | 2 | 50 | 20 | 8 | 4 | 93 | 37 | 19 | 6 |
| 8 | 3 | 5 | 4 | 51 | 20 | 16 | 6 | 94 | 38 | 7 | 8 |
| 9 | 3 | 13 | 6 | 52 | 21 | 4 | 8 | 95 | 38 | 15 | 10 |
| 10 | 4 | 1 | 8 | 53 | 21 | 12 | 10 | 96 | 39 | 4 | 0 |
| 11 | 4 | 9 | 10 | 54 | 22 | 1 | 0 | 97 | 39 | 12 | 2 |
| 12 | 4 | 18 | 0 | 55 | 22 | 9 | 2 | 98 | 40 | 0 | 4 |
| 13 | 5 | 6 | 2 | 56 | 22 | 17 | 4 | 99 | 40 | 8 | 6 |
| 14 | 5 | 14 | 4 | 57 | 23 | 5 | 6 | 100 | 40 | 16 | 8 |
| 15 | 6 | 2 | 6 | 58 | 23 | 13 | 8 | 108 | 44 | 2 | 0 |
| 16 | 6 | 10 | 8 | 59 | 24 | 1 | 10 | 110 | 44 | 18 | 4 |
| 17 | 6 | 18 | 10 | 60 | 24 | 10 | 0 | 112 | 45 | 14 | 8 |
| 18 | 7 | 7 | 0 | 61 | 24 | 18 | 2 | 120 | 49 | 0 | 0 |
| 19 | 7 | 15 | 2 | 62 | 25 | 6 | 4 | 130 | 53 | 1 | 8 |
| 20 | 8 | 3 | 4 | 63 | 25 | 14 | 6 | 132 | 53 | 18 | 0 |
| 21 | 8 | 11 | 6 | 64 | 26 | 2 | 8 | 140 | 57 | 3 | 4 |
| 22 | 8 | 19 | 8 | 65 | 26 | 10 | 10 | 144 | 58 | 16 | 0 |
| 23 | 9 | 7 | 10 | 66 | 26 | 19 | 0 | 150 | 61 | 5 | 0 |
| 24 | 9 | 16 | 0 | 67 | 27 | 7 | 2 | 175 | 71 | 9 | 2 |
| 25 | 10 | 4 | 2 | 68 | 27 | 15 | 4 | 200 | 81 | 13 | 4 |
| 26 | 10 | 12 | 4 | 69 | 28 | 3 | 6 | 250 | 102 | 1 | 8 |
| 27 | 11 | 0 | 6 | 70 | 28 | 11 | 8 | 300 | 122 | 10 | 0 |
| 28 | 11 | 8 | 8 | 71 | 28 | 19 | 10 | 365 | 149 | 0 | 10 |
| 29 | 11 | 16 | 10 | 72 | 29 | 8 | 0 | 400 | 163 | 6 | 8 |
| 30 | 12 | 5 | 0 | 73 | 29 | 16 | 2 | 500 | 204 | 3 | 4 |
| 31 | 12 | 13 | 2 | 74 | 30 | 4 | 4 | 600 | 245 | 0 | 0 |
| 32 | 13 | 1 | 4 | 75 | 30 | 12 | 6 | 700 | 285 | 16 | 8 |
| 33 | 13 | 9 | 6 | 76 | 31 | 0 | 8 | 750 | 306 | 5 | 0 |
| 34 | 13 | 17 | 8 | 77 | 31 | 8 | 10 | 800 | 326 | 13 | 4 |
| 35 | 14 | 5 | 10 | 78 | 31 | 17 | 0 | 900 | 367 | 10 | 0 |
| 36 | 14 | 14 | 0 | 79 | 32 | 5 | 2 | 1000 | 408 | 6 | 8 |
| 37 | 15 | 2 | 2 | 80 | 32 | 13 | 4 | 1250 | 510 | 8 | 4 |
| 38 | 15 | 10 | 4 | 81 | 33 | 1 | 6 | 1500 | 612 | 10 | 0 |
| 39 | 15 | 18 | 6 | 82 | 33 | 9 | 8 | 1750 | 714 | 11 | 8 |
| 40 | 16 | 6 | 8 | 83 | 33 | 17 | 10 | 2000 | 816 | 13 | 4 |
| 41 | 16 | 14 | 10 | 84 | 34 | 6 | 0 | 2240 | 914 | 13 | 4 |
| 42 | 17 | 3 | 0 | 85 | 34 | 14 | 2 | 3000 | 1225 | 0 | 0 |
| 43 | 17 | 11 | 2 | 86 | 35 | 2 | 4 | 5000 | 2041 | 13 | 4 |

## 8s. 4d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 8 | 4 | 44 | 18 | 6 | 8 | 87 | 36 | 5 | 0 |
| 2 | 0 | 16 | 8 | 45 | 18 | 15 | 0 | 88 | 36 | 13 | 4 |
| 3 | 1 | 5 | 0 | 46 | 19 | 3 | 4 | 89 | 37 | 1 | 8 |
| 4 | 1 | 13 | 4 | 47 | 19 | 11 | 8 | 90 | 37 | 10 | 0 |
| 5 | 2 | 1 | 8 | 48 | 20 | 0 | 0 | 91 | 37 | 18 | 4 |
| 6 | 2 | 10 | 0 | 49 | 20 | 8 | 4 | 92 | 38 | 6 | 8 |
| 7 | 2 | 18 | 4 | 50 | 20 | 16 | 8 | 93 | 38 | 15 | 0 |
| 8 | 3 | 6 | 8 | 51 | 21 | 5 | 0 | 94 | 39 | 3 | 4 |
| 9 | 3 | 15 | 0 | 52 | 21 | 13 | 4 | 95 | 39 | 11 | 8 |
| 10 | 4 | 3 | 4 | 53 | 22 | 1 | 8 | 96 | 40 | 0 | 0 |
| 11 | 4 | 11 | 8 | 54 | 22 | 10 | 0 | 97 | 40 | 8 | 4 |
| 12 | 5 | 0 | 0 | 55 | 22 | 18 | 4 | 98 | 40 | 16 | 8 |
| 13 | 5 | 8 | 4 | 56 | 23 | 6 | 8 | 99 | 41 | 5 | 0 |
| 14 | 5 | 16 | 8 | 57 | 23 | 15 | 0 | 100 | 41 | 13 | 4 |
| 15 | 6 | 5 | 0 | 58 | 24 | 3 | 4 | 108 | 45 | 0 | 0 |
| 16 | 6 | 13 | 4 | 59 | 24 | 11 | 8 | 110 | 45 | 16 | 8 |
| 17 | 7 | 1 | 8 | 60 | 25 | 0 | 0 | 112 | 46 | 13 | 4 |
| 18 | 7 | 10 | 0 | 61 | 25 | 8 | 4 | 120 | 50 | 0 | 0 |
| 19 | 7 | 18 | 4 | 62 | 25 | 16 | 8 | 130 | 54 | 3 | 4 |
| 20 | 8 | 6 | 8 | 63 | 26 | 5 | 0 | 132 | 55 | 0 | 0 |
| 21 | 8 | 15 | 0 | 64 | 26 | 13 | 4 | 140 | 58 | 6 | 8 |
| 22 | 9 | 3 | 4 | 65 | 27 | 1 | 8 | 144 | 60 | 0 | 0 |
| 23 | 9 | 11 | 8 | 66 | 27 | 10 | 0 | 150 | 62 | 10 | 0 |
| 24 | 10 | 0 | 0 | 67 | 27 | 18 | 4 | 175 | 72 | 18 | 4 |
| 25 | 10 | 8 | 4 | 68 | 28 | 6 | 8 | 200 | 83 | 6 | 8 |
| 26 | 10 | 16 | 8 | 69 | 28 | 15 | 0 | 250 | 104 | 3 | 4 |
| 27 | 11 | 5 | 0 | 70 | 29 | 3 | 4 | 300 | 125 | 0 | 0 |
| 28 | 11 | 13 | 4 | 71 | 29 | 11 | 8 | 365 | 152 | 1 | 8 |
| 29 | 12 | 1 | 8 | 72 | 30 | 0 | 0 | 400 | 166 | 13 | 4 |
| 30 | 12 | 10 | 0 | 73 | 30 | 8 | 4 | 500 | 208 | 6 | 8 |
| 31 | 12 | 18 | 4 | 74 | 30 | 16 | 8 | 600 | 250 | 0 | 0 |
| 32 | 13 | 6 | 8 | 75 | 31 | 5 | 0 | 700 | 291 | 13 | 4 |
| 33 | 13 | 15 | 0 | 76 | 31 | 13 | 4 | 750 | 312 | 10 | 0 |
| 34 | 14 | 3 | 4 | 77 | 32 | 1 | 8 | 800 | 333 | 6 | 8 |
| 35 | 14 | 11 | 8 | 78 | 32 | 10 | 0 | 900 | 375 | 0 | 0 |
| 36 | 15 | 0 | 0 | 79 | 32 | 18 | 4 | 1000 | 416 | 13 | 4 |
| 37 | 15 | 8 | 4 | 80 | 33 | 6 | 8 | 1250 | 520 | 16 | 8 |
| 38 | 15 | 16 | 8 | 81 | 33 | 15 | 0 | 1500 | 625 | 0 | 0 |
| 39 | 16 | 5 | 0 | 82 | 34 | 3 | 4 | 1750 | 729 | 3 | 4 |
| 40 | 16 | 13 | 4 | 83 | 34 | 11 | 8 | 2000 | 833 | 6 | 8 |
| 41 | 17 | 1 | 8 | 84 | 35 | 0 | 0 | 2240 | 933 | 6 | 8 |
| 42 | 17 | 10 | 0 | 85 | 35 | 8 | 4 | 3000 | 1250 | 0 | 0 |
| 43 | 17 | 18 | 4 | 86 | 35 | 16 | 8 | 5000 | 2083 | 6 | 8 |

## 8s. 5d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 8 | 5 | 44 | 18 | 10 | 4 | 87 | 36 | 12 | 3 |
| 2 | 0 | 16 | 10 | 45 | 18 | 18 | 9 | 88 | 37 | 0 | 8 |
| 3 | 1 | 5 | 3 | 46 | 19 | 7 | 2 | 89 | 37 | 9 | 1 |
| 4 | 1 | 13 | 8 | 47 | 19 | 15 | 7 | 90 | 37 | 17 | 6 |
| 5 | 2 | 2 | 1 | 48 | 20 | 4 | 0 | 91 | 38 | 5 | 11 |
| 6 | 2 | 10 | 6 | 49 | 20 | 12 | 5 | 92 | 38 | 14 | 4 |
| 7 | 2 | 18 | 11 | 50 | 21 | 0 | 10 | 93 | 39 | 2 | 9 |
| 8 | 3 | 7 | 4 | 51 | 21 | 9 | 3 | 94 | 39 | 11 | 2 |
| 9 | 3 | 15 | 9 | 52 | 21 | 17 | 8 | 95 | 39 | 19 | 7 |
| 10 | 4 | 4 | 2 | 53 | 22 | 6 | 1 | 96 | 40 | 8 | 0 |
| 11 | 4 | 12 | 7 | 54 | 22 | 14 | 6 | 97 | 40 | 16 | 5 |
| 12 | 5 | 1 | 0 | 55 | 23 | 2 | 11 | 98 | 41 | 4 | 10 |
| 13 | 5 | 9 | 5 | 56 | 23 | 11 | 4 | 99 | 41 | 13 | 3 |
| 14 | 5 | 17 | 10 | 57 | 23 | 19 | 9 | 100 | 42 | 1 | 8 |
| 15 | 6 | 6 | 3 | 58 | 24 | 8 | 2 | 108 | 45 | 9 | 0 |
| 16 | 6 | 14 | 8 | 59 | 24 | 16 | 7 | 110 | 46 | 5 | 10 |
| 17 | 7 | 3 | 1 | 60 | 25 | 5 | 0 | 112 | 47 | 2 | 8 |
| 18 | 7 | 11 | 6 | 61 | 25 | 13 | 5 | 120 | 50 | 10 | 0 |
| 19 | 7 | 19 | 11 | 62 | 26 | 1 | 10 | 130 | 54 | 14 | 2 |
| 20 | 8 | 8 | 4 | 63 | 26 | 10 | 3 | 132 | 55 | 11 | 0 |
| 21 | 8 | 16 | 9 | 64 | 26 | 18 | 8 | 140 | 58 | 18 | 4 |
| 22 | 9 | 5 | 2 | 65 | 27 | 7 | 1 | 144 | 60 | 12 | 0 |
| 23 | 9 | 13 | 7 | 66 | 27 | 15 | 6 | 150 | 63 | 2 | 6 |
| 24 | 10 | 2 | 0 | 67 | 28 | 3 | 11 | 175 | 73 | 12 | 11 |
| 25 | 10 | 10 | 5 | 68 | 28 | 12 | 4 | 200 | 84 | 3 | 4 |
| 26 | 10 | 18 | 10 | 69 | 29 | 0 | 9 | 250 | 105 | 4 | 2 |
| 27 | 11 | 7 | 3 | 70 | 29 | 9 | 2 | 300 | 126 | 5 | 0 |
| 28 | 11 | 15 | 8 | 71 | 29 | 17 | 7 | 365 | 153 | 12 | 1 |
| 29 | 12 | 4 | 1 | 72 | 30 | 6 | 0 | 400 | 168 | 6 | 8 |
| 30 | 12 | 12 | 6 | 73 | 30 | 14 | 5 | 500 | 210 | 8 | 4 |
| 31 | 13 | 0 | 11 | 74 | 31 | 2 | 10 | 600 | 252 | 10 | 0 |
| 32 | 13 | 9 | 4 | 75 | 31 | 11 | 3 | 700 | 294 | 11 | 8 |
| 33 | 13 | 17 | 9 | 76 | 31 | 19 | 8 | 750 | 315 | 12 | 6 |
| 34 | 14 | 6 | 2 | 77 | 32 | 8 | 1 | 800 | 336 | 13 | 4 |
| 35 | 14 | 14 | 7 | 78 | 32 | 16 | 6 | 900 | 378 | 15 | 0 |
| 36 | 15 | 3 | 0 | 79 | 33 | 4 | 11 | 1000 | 420 | 16 | 8 |
| 37 | 15 | 11 | 5 | 80 | 33 | 13 | 4 | 1250 | 526 | 0 | 10 |
| 38 | 15 | 19 | 10 | 81 | 34 | 1 | 9 | 1500 | 631 | 5 | 0 |
| 39 | 16 | 8 | 3 | 82 | 34 | 10 | 2 | 1750 | 736 | 9 | 2 |
| 40 | 16 | 16 | 8 | 83 | 34 | 18 | 7 | 2000 | 841 | 13 | 4 |
| 41 | 17 | 5 | 1 | 84 | 35 | 7 | 0 | 2240 | 942 | 13 | 4 |
| 42 | 17 | 13 | 6 | 85 | 35 | 15 | 5 | 3000 | 1262 | 10 | 0 |
| 43 | 18 | 1 | 11 | 86 | 36 | 3 | 10 | 5000 | 2104 | 3 | 4 |

## 8s. 7d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 8 | 7 | 44 | 18 | 17 | 8 | 87 | 37 | 6 | 9 |
| 2 | 0 | 17 | 2 | 45 | 19 | 6 | 3 | 88 | 37 | 15 | 4 |
| 3 | 1 | 5 | 9 | 46 | 19 | 14 | 10 | 89 | 38 | 3 | 11 |
| 4 | 1 | 14 | 4 | 47 | 20 | 3 | 5 | 90 | 38 | 12 | 6 |
| 5 | 2 | 2 | 11 | 48 | 20 | 12 | 0 | 91 | 39 | 1 | 1 |
| 6 | 2 | 11 | 6 | 49 | 21 | 0 | 7 | 92 | 39 | 9 | 8 |
| 7 | 3 | 0 | 1 | 50 | 21 | 9 | 2 | 93 | 39 | 18 | 3 |
| 8 | 3 | 8 | 8 | 51 | 21 | 17 | 9 | 94 | 40 | 6 | 10 |
| 9 | 3 | 17 | 3 | 52 | 22 | 6 | 4 | 95 | 40 | 15 | 5 |
| 10 | 4 | 5 | 10 | 53 | 22 | 14 | 11 | 96 | 41 | 4 | 0 |
| 11 | 4 | 14 | 5 | 54 | 23 | 3 | 6 | 97 | 41 | 12 | 7 |
| 12 | 5 | 3 | 0 | 55 | 23 | 12 | 1 | 98 | 42 | 1 | 2 |
| 13 | 5 | 11 | 7 | 56 | 24 | 0 | 8 | 99 | 42 | 9 | 9 |
| 14 | 6 | 0 | 2 | 57 | 24 | 9 | 3 | 100 | 42 | 18 | 4 |
| 15 | 6 | 8 | 9 | 58 | 24 | 17 | 10 | 108 | 46 | 7 | 0 |
| 16 | 6 | 17 | 4 | 59 | 25 | 6 | 5 | 110 | 47 | 4 | 2 |
| 17 | 7 | 5 | 11 | 60 | 25 | 15 | 0 | 112 | 48 | 1 | 4 |
| 18 | 7 | 14 | 6 | 61 | 26 | 3 | 7 | 120 | 51 | 10 | 0 |
| 19 | 8 | 3 | 1 | 62 | 26 | 12 | 2 | 130 | 55 | 15 | 10 |
| 20 | 8 | 11 | 8 | 63 | 27 | 0 | 9 | 132 | 56 | 13 | 0 |
| 21 | 9 | 0 | 3 | 64 | 27 | 9 | 4 | 140 | 60 | 1 | 8 |
| 22 | 9 | 8 | 10 | 65 | 27 | 17 | 11 | 144 | 61 | 16 | 0 |
| 23 | 9 | 17 | 5 | 66 | 28 | 6 | 6 | 150 | 64 | 7 | 6 |
| 24 | 10 | 6 | 0 | 67 | 28 | 15 | 1 | 175 | 75 | 2 | 1 |
| 25 | 10 | 14 | 7 | 68 | 29 | 3 | 8 | 200 | 85 | 16 | 8 |
| 26 | 11 | 3 | 2 | 69 | 29 | 12 | 3 | 250 | 107 | 5 | 10 |
| 27 | 11 | 11 | 9 | 70 | 30 | 0 | 10 | 300 | 128 | 15 | 0 |
| 28 | 12 | 0 | 4 | 71 | 30 | 9 | 5 | 365 | 156 | 12 | 11 |
| 29 | 12 | 8 | 11 | 72 | 30 | 18 | 0 | 400 | 171 | 13 | 4 |
| 30 | 12 | 17 | 6 | 73 | 31 | 6 | 7 | 500 | 214 | 11 | 8 |
| 31 | 13 | 6 | 1 | 74 | 31 | 15 | 2 | 600 | 257 | 10 | 0 |
| 32 | 13 | 14 | 8 | 75 | 32 | 3 | 9 | 700 | 300 | 8 | 4 |
| 33 | 14 | 3 | 3 | 76 | 32 | 12 | 4 | 750 | 321 | 17 | 6 |
| 34 | 14 | 11 | 10 | 77 | 33 | 0 | 11 | 800 | 343 | 6 | 8 |
| 35 | 15 | 0 | 5 | 78 | 33 | 9 | 6 | 900 | 386 | 5 | 0 |
| 36 | 15 | 9 | 0 | 79 | 33 | 18 | 1 | 1000 | 429 | 3 | 4 |
| 37 | 15 | 17 | 7 | 80 | 34 | 6 | 8 | 1250 | 536 | 9 | 2 |
| 38 | 16 | 6 | 2 | 81 | 34 | 15 | 3 | 1500 | 643 | 15 | 0 |
| 39 | 16 | 14 | 9 | 82 | 35 | 3 | 10 | 1750 | 751 | 0 | 10 |
| 40 | 17 | 3 | 4 | 83 | 35 | 12 | 5 | 2000 | 858 | 6 | 8 |
| 41 | 17 | 11 | 11 | 84 | 36 | 1 | 0 | 2240 | 961 | 6 | 8 |
| 42 | 18 | 0 | 6 | 85 | 36 | 9 | 7 | 3000 | 1287 | 10 | 0 |
| 43 | 18 | 9 | 1 | 86 | 36 | 18 | 2 | 5000 | 2145 | 16 | 8 |

## 8s. 6d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 8 | 6 | 44 | 18 | 14 | 0 | 87 | 36 | 19 | 6 |
| 2 | 0 | 17 | 0 | 45 | 19 | 2 | 6 | 88 | 37 | 8 | 0 |
| 3 | 1 | 5 | 6 | 46 | 19 | 11 | 0 | 89 | 37 | 16 | 6 |
| 4 | 1 | 14 | 0 | 47 | 19 | 19 | 6 | 90 | 38 | 5 | 0 |
| 5 | 2 | 2 | 6 | 48 | 20 | 8 | 0 | 91 | 38 | 13 | 6 |
| 6 | 2 | 11 | 0 | 49 | 20 | 16 | 6 | 92 | 39 | 2 | 0 |
| 7 | 2 | 19 | 6 | 50 | 21 | 5 | 0 | 93 | 39 | 10 | 6 |
| 8 | 3 | 8 | 0 | 51 | 21 | 13 | 6 | 94 | 39 | 19 | 0 |
| 9 | 3 | 16 | 6 | 52 | 22 | 2 | 0 | 95 | 40 | 7 | 6 |
| 10 | 4 | 5 | 0 | 53 | 22 | 10 | 6 | 96 | 40 | 16 | 0 |
| 11 | 4 | 13 | 6 | 54 | 22 | 19 | 0 | 97 | 41 | 4 | 6 |
| 12 | 5 | 2 | 0 | 55 | 23 | 7 | 6 | 98 | 41 | 13 | 0 |
| 13 | 5 | 10 | 6 | 56 | 23 | 16 | 0 | 99 | 42 | 1 | 6 |
| 14 | 5 | 19 | 0 | 57 | 24 | 4 | 6 | 100 | 42 | 10 | 0 |
| 15 | 6 | 7 | 6 | 58 | 24 | 13 | 0 | 108 | 45 | 18 | 0 |
| 16 | 6 | 16 | 0 | 59 | 25 | 1 | 6 | 110 | 46 | 15 | 0 |
| 17 | 7 | 4 | 6 | 60 | 25 | 10 | 0 | 112 | 47 | 12 | 0 |
| 18 | 7 | 13 | 0 | 61 | 25 | 18 | 6 | 120 | 51 | 0 | 0 |
| 19 | 8 | 1 | 6 | 62 | 26 | 7 | 0 | 130 | 55 | 5 | 0 |
| 20 | 8 | 10 | 0 | 63 | 26 | 15 | 6 | 132 | 56 | 2 | 0 |
| 21 | 8 | 18 | 6 | 64 | 27 | 4 | 0 | 140 | 59 | 10 | 0 |
| 22 | 9 | 7 | 0 | 65 | 27 | 12 | 6 | 144 | 61 | 4 | 0 |
| 23 | 9 | 15 | 6 | 66 | 28 | 1 | 0 | 150 | 63 | 15 | 0 |
| 24 | 10 | 4 | 0 | 67 | 28 | 9 | 6 | 175 | 74 | 7 | 6 |
| 25 | 10 | 12 | 6 | 68 | 28 | 18 | 0 | 200 | 85 | 0 | 0 |
| 26 | 11 | 1 | 0 | 69 | 29 | 6 | 6 | 250 | 106 | 5 | 0 |
| 27 | 11 | 9 | 6 | 70 | 29 | 15 | 0 | 300 | 127 | 10 | 0 |
| 28 | 11 | 18 | 0 | 71 | 30 | 3 | 6 | 365 | 155 | 2 | 6 |
| 29 | 12 | 6 | 6 | 72 | 30 | 12 | 0 | 400 | 170 | 0 | 0 |
| 30 | 12 | 15 | 0 | 73 | 31 | 0 | 6 | 500 | 212 | 10 | 0 |
| 31 | 13 | 3 | 6 | 74 | 31 | 9 | 0 | 600 | 255 | 0 | 0 |
| 32 | 13 | 12 | 0 | 75 | 31 | 17 | 6 | 700 | 297 | 10 | 0 |
| 33 | 14 | 0 | 6 | 76 | 32 | 6 | 0 | 750 | 318 | 15 | 0 |
| 34 | 14 | 9 | 0 | 77 | 32 | 14 | 6 | 800 | 340 | 0 | 0 |
| 35 | 14 | 17 | 6 | 78 | 33 | 3 | 0 | 900 | 382 | 10 | 0 |
| 36 | 15 | 6 | 0 | 79 | 33 | 11 | 6 | 1000 | 425 | 0 | 0 |
| 37 | 15 | 14 | 6 | 80 | 34 | 0 | 0 | 1250 | 531 | 5 | 0 |
| 38 | 16 | 3 | 0 | 81 | 34 | 8 | 6 | 1500 | 637 | 10 | 0 |
| 39 | 16 | 11 | 6 | 82 | 34 | 17 | 0 | 1750 | 743 | 15 | 0 |
| 40 | 17 | 0 | 0 | 83 | 35 | 5 | 6 | 2000 | 850 | 0 | 0 |
| 41 | 17 | 8 | 6 | 84 | 35 | 14 | 0 | 2240 | 952 | 0 | 0 |
| 42 | 17 | 17 | 0 | 85 | 36 | 2 | 6 | 3000 | 1275 | 0 | 0 |
| 43 | 18 | 5 | 6 | 86 | 36 | 11 | 0 | 5000 | 2125 | 0 | 0 |

## 8s. 8d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 8 | 8 | 44 | 19 | 1 | 4 | 87 | 37 | 14 | 0 |
| 2 | 0 | 17 | 4 | 45 | 19 | 10 | 0 | 88 | 38 | 2 | 8 |
| 3 | 1 | 6 | 0 | 46 | 19 | 18 | 8 | 89 | 38 | 11 | 4 |
| 4 | 1 | 14 | 8 | 47 | 20 | 7 | 4 | 90 | 39 | 0 | 0 |
| 5 | 2 | 3 | 4 | 48 | 20 | 16 | 0 | 91 | 39 | 8 | 8 |
| 6 | 2 | 12 | 0 | 49 | 21 | 4 | 8 | 92 | 39 | 17 | 4 |
| 7 | 3 | 0 | 8 | 50 | 21 | 13 | 4 | 93 | 40 | 6 | 0 |
| 8 | 3 | 9 | 4 | 51 | 22 | 2 | 0 | 94 | 40 | 14 | 8 |
| 9 | 3 | 18 | 0 | 52 | 22 | 10 | 8 | 95 | 41 | 3 | 4 |
| 10 | 4 | 6 | 8 | 53 | 22 | 19 | 4 | 96 | 41 | 12 | 0 |
| 11 | 4 | 15 | 4 | 54 | 23 | 8 | 0 | 97 | 42 | 0 | 8 |
| 12 | 5 | 4 | 0 | 55 | 23 | 16 | 8 | 98 | 42 | 9 | 4 |
| 13 | 5 | 12 | 8 | 56 | 24 | 5 | 4 | 99 | 42 | 18 | 0 |
| 14 | 6 | 1 | 4 | 57 | 24 | 14 | 0 | 100 | 43 | 6 | 8 |
| 15 | 6 | 10 | 0 | 58 | 25 | 2 | 8 | 108 | 46 | 16 | 0 |
| 16 | 6 | 18 | 8 | 59 | 25 | 11 | 4 | 110 | 47 | 13 | 4 |
| 17 | 7 | 7 | 4 | 60 | 26 | 0 | 0 | 112 | 48 | 10 | 8 |
| 18 | 7 | 16 | 0 | 61 | 26 | 8 | 8 | 120 | 52 | 0 | 0 |
| 19 | 8 | 4 | 8 | 62 | 26 | 17 | 4 | 130 | 56 | 6 | 8 |
| 20 | 8 | 13 | 4 | 63 | 27 | 6 | 0 | 132 | 57 | 4 | 0 |
| 21 | 9 | 2 | 0 | 64 | 27 | 14 | 8 | 140 | 60 | 13 | 4 |
| 22 | 9 | 10 | 8 | 65 | 28 | 3 | 4 | 144 | 62 | 8 | 0 |
| 23 | 9 | 19 | 4 | 66 | 28 | 12 | 0 | 150 | 65 | 0 | 0 |
| 24 | 10 | 8 | 0 | 67 | 29 | 0 | 8 | 175 | 75 | 16 | 8 |
| 25 | 10 | 16 | 8 | 68 | 29 | 9 | 4 | 200 | 86 | 13 | 4 |
| 26 | 11 | 5 | 4 | 69 | 29 | 18 | 0 | 250 | 108 | 6 | 8 |
| 27 | 11 | 14 | 0 | 70 | 30 | 6 | 8 | 300 | 130 | 0 | 0 |
| 28 | 12 | 2 | 8 | 71 | 30 | 15 | 4 | 365 | 158 | 3 | 4 |
| 29 | 12 | 11 | 4 | 72 | 31 | 4 | 0 | 400 | 173 | 6 | 8 |
| 30 | 13 | 0 | 0 | 73 | 31 | 12 | 8 | 500 | 216 | 18 | 4 |
| 31 | 13 | 8 | 8 | 74 | 32 | 1 | 4 | 600 | 260 | 0 | 0 |
| 32 | 13 | 17 | 4 | 75 | 32 | 10 | 0 | 700 | 303 | 6 | 8 |
| 33 | 14 | 6 | 0 | 76 | 32 | 18 | 8 | 750 | 325 | 0 | 0 |
| 34 | 14 | 14 | 8 | 77 | 33 | 7 | 4 | 800 | 346 | 13 | 4 |
| 35 | 15 | 3 | 4 | 78 | 33 | 16 | 0 | 900 | 390 | 0 | 0 |
| 36 | 15 | 12 | 0 | 79 | 34 | 4 | 8 | 1000 | 433 | 6 | 8 |
| 37 | 16 | 0 | 8 | 80 | 34 | 13 | 4 | 1250 | 541 | 13 | 4 |
| 38 | 16 | 9 | 4 | 81 | 35 | 2 | 0 | 1500 | 650 | 0 | 0 |
| 39 | 16 | 18 | 0 | 82 | 35 | 10 | 8 | 1750 | 758 | 6 | 8 |
| 40 | 17 | 6 | 8 | 83 | 35 | 19 | 4 | 2000 | 866 | 13 | 4 |
| 41 | 17 | 15 | 4 | 84 | 36 | 8 | 0 | 2240 | 970 | 13 | 4 |
| 42 | 18 | 4 | 0 | 85 | 36 | 16 | 8 | 3000 | 1300 | 0 | 0 |
| 43 | 18 | 12 | 8 | 86 | 37 | 5 | 4 | 5000 | 2166 | 13 | 4 |

## 8s. 9d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 8 | 9 | 44 | 19 | 5 | 0 | 87 | 38 | 1 | 3 |
| 2 | 0 | 17 | 6 | 45 | 19 | 13 | 9 | 88 | 38 | 10 | 0 |
| 3 | 1 | 6 | 3 | 46 | 20 | 2 | 6 | 89 | 38 | 18 | 9 |
| 4 | 1 | 15 | 0 | 47 | 20 | 11 | 3 | 90 | 39 | 7 | 6 |
| 5 | 2 | 3 | 9 | 48 | 21 | 0 | 0 | 91 | 39 | 16 | 3 |
| 6 | 2 | 12 | 6 | 49 | 21 | 8 | 9 | 92 | 40 | 5 | 0 |
| 7 | 3 | 1 | 3 | 50 | 21 | 17 | 6 | 93 | 40 | 13 | 9 |
| 8 | 3 | 10 | 0 | 51 | 22 | 6 | 3 | 94 | 41 | 2 | 6 |
| 9 | 3 | 18 | 9 | 52 | 22 | 15 | 0 | 95 | 41 | 11 | 3 |
| 10 | 4 | 7 | 6 | 53 | 23 | 3 | 9 | 96 | 42 | 0 | 0 |
| 11 | 4 | 16 | 3 | 54 | 23 | 12 | 6 | 97 | 42 | 8 | 9 |
| 12 | 5 | 5 | 0 | 55 | 24 | 1 | 3 | 98 | 42 | 17 | 6 |
| 13 | 5 | 13 | 9 | 56 | 24 | 10 | 0 | 99 | 43 | 6 | 3 |
| 14 | 6 | 2 | 6 | 57 | 24 | 18 | 9 | 100 | 43 | 15 | 0 |
| 15 | 6 | 11 | 3 | 58 | 25 | 7 | 6 | 108 | 47 | 5 | 0 |
| 16 | 7 | 0 | 0 | 59 | 25 | 16 | 3 | 110 | 48 | 2 | 6 |
| 17 | 7 | 8 | 9 | 60 | 26 | 5 | 0 | 112 | 49 | 0 | 0 |
| 18 | 7 | 17 | 6 | 61 | 26 | 13 | 9 | 120 | 52 | 10 | 0 |
| 19 | 8 | 6 | 3 | 62 | 27 | 2 | 6 | 130 | 56 | 17 | 6 |
| 20 | 8 | 15 | 0 | 63 | 27 | 11 | 3 | 132 | 57 | 15 | 0 |
| 21 | 9 | 3 | 9 | 64 | 28 | 0 | 0 | 140 | 61 | 5 | 0 |
| 22 | 9 | 12 | 6 | 65 | 28 | 8 | 9 | 144 | 63 | 0 | 0 |
| 23 | 10 | 1 | 3 | 66 | 28 | 17 | 6 | 150 | 65 | 12 | 6 |
| 24 | 10 | 10 | 0 | 67 | 29 | 6 | 3 | 175 | 76 | 11 | 3 |
| 25 | 10 | 18 | 9 | 68 | 29 | 15 | 0 | 200 | 87 | 10 | 0 |
| 26 | 11 | 7 | 6 | 69 | 30 | 3 | 9 | 250 | 109 | 7 | 6 |
| 27 | 11 | 16 | 3 | 70 | 30 | 12 | 6 | 300 | 131 | 5 | 0 |
| 28 | 12 | 5 | 0 | 71 | 31 | 1 | 3 | 365 | 159 | 13 | 9 |
| 29 | 12 | 13 | 9 | 72 | 31 | 10 | 0 | 400 | 175 | 0 | 0 |
| 30 | 13 | 2 | 6 | 73 | 31 | 18 | 9 | 500 | 218 | 15 | 0 |
| 31 | 13 | 11 | 3 | 74 | 32 | 7 | 6 | 600 | 262 | 10 | 0 |
| 32 | 14 | 0 | 0 | 75 | 32 | 16 | 3 | 700 | 306 | 5 | 0 |
| 33 | 14 | 8 | 9 | 76 | 33 | 5 | 0 | 750 | 328 | 2 | 6 |
| 34 | 14 | 17 | 6 | 77 | 33 | 13 | 9 | 800 | 350 | 0 | 0 |
| 35 | 15 | 6 | 3 | 78 | 34 | 2 | 6 | 900 | 393 | 15 | 0 |
| 36 | 15 | 15 | 0 | 79 | 34 | 11 | 3 | 1000 | 437 | 10 | 0 |
| 37 | 16 | 3 | 9 | 80 | 35 | 0 | 0 | 1250 | 546 | 17 | 6 |
| 38 | 16 | 12 | 6 | 81 | 35 | 8 | 9 | 1500 | 656 | 5 | 0 |
| 39 | 17 | 1 | 3 | 82 | 35 | 17 | 6 | 1750 | 765 | 12 | 6 |
| 40 | 17 | 10 | 0 | 83 | 36 | 6 | 3 | 2000 | 875 | 0 | 0 |
| 41 | 17 | 18 | 9 | 84 | 36 | 15 | 0 | 2240 | 980 | 0 | 0 |
| 42 | 18 | 7 | 6 | 85 | 37 | 3 | 9 | 3000 | 1312 | 10 | 0 |
| 43 | 18 | 16 | 3 | 86 | 37 | 12 | 6 | 5000 | 2187 | 10 | 0 |

## 8s. 11d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 8 | 11 | 44 | 19 | 12 | 4 | 87 | 38 | 15 | 9 |
| 2 | 0 | 17 | 10 | 45 | 20 | 1 | 3 | 88 | 39 | 4 | 8 |
| 3 | 1 | 6 | 9 | 46 | 20 | 10 | 2 | 89 | 39 | 13 | 7 |
| 4 | 1 | 15 | 8 | 47 | 20 | 19 | 1 | 90 | 40 | 2 | 6 |
| 5 | 2 | 4 | 7 | 48 | 21 | 8 | 0 | 91 | 40 | 11 | 5 |
| 6 | 2 | 13 | 6 | 49 | 21 | 16 | 11 | 92 | 41 | 0 | 4 |
| 7 | 3 | 2 | 5 | 50 | 22 | 5 | 10 | 93 | 41 | 9 | 3 |
| 8 | 3 | 11 | 4 | 51 | 22 | 14 | 9 | 94 | 41 | 18 | 2 |
| 9 | 4 | 0 | 3 | 52 | 23 | 3 | 8 | 95 | 42 | 7 | 1 |
| 10 | 4 | 9 | 2 | 53 | 23 | 12 | 7 | 96 | 42 | 16 | 0 |
| 11 | 4 | 18 | 1 | 54 | 24 | 1 | 6 | 97 | 43 | 4 | 11 |
| 12 | 5 | 7 | 0 | 55 | 24 | 10 | 5 | 98 | 43 | 13 | 10 |
| 13 | 5 | 15 | 11 | 56 | 24 | 19 | 4 | 99 | 44 | 2 | 9 |
| 14 | 6 | 4 | 10 | 57 | 25 | 8 | 3 | 100 | 44 | 11 | 8 |
| 15 | 6 | 13 | 9 | 58 | 25 | 17 | 2 | 108 | 48 | 3 | 0 |
| 16 | 7 | 2 | 8 | 59 | 26 | 6 | 1 | 110 | 49 | 0 | 10 |
| 17 | 7 | 11 | 7 | 60 | 26 | 15 | 0 | 112 | 49 | 18 | 8 |
| 18 | 8 | 0 | 6 | 61 | 27 | 3 | 11 | 120 | 53 | 10 | 0 |
| 19 | 8 | 9 | 5 | 62 | 27 | 12 | 10 | 130 | 57 | 19 | 2 |
| 20 | 8 | 18 | 4 | 63 | 28 | 1 | 9 | 132 | 58 | 17 | 0 |
| 21 | 9 | 7 | 3 | 64 | 28 | 10 | 8 | 140 | 62 | 8 | 4 |
| 22 | 9 | 16 | 2 | 65 | 28 | 19 | 7 | 144 | 64 | 4 | 0 |
| 23 | 10 | 5 | 1 | 66 | 29 | 8 | 6 | 150 | 66 | 17 | 6 |
| 24 | 10 | 14 | 0 | 67 | 29 | 17 | 5 | 175 | 78 | 0 | 5 |
| 25 | 11 | 2 | 11 | 68 | 30 | 6 | 4 | 200 | 89 | 3 | 4 |
| 26 | 11 | 11 | 10 | 69 | 30 | 15 | 3 | 250 | 111 | 9 | 2 |
| 27 | 12 | 0 | 9 | 70 | 31 | 4 | 2 | 300 | 133 | 15 | 0 |
| 28 | 12 | 9 | 8 | 71 | 31 | 13 | 1 | 365 | 162 | 14 | 7 |
| 29 | 12 | 18 | 7 | 72 | 32 | 2 | 0 | 400 | 178 | 6 | 8 |
| 30 | 13 | 7 | 6 | 73 | 32 | 10 | 11 | 500 | 222 | 18 | 4 |
| 31 | 13 | 16 | 5 | 74 | 32 | 19 | 10 | 600 | 267 | 10 | 0 |
| 32 | 14 | 5 | 4 | 75 | 33 | 8 | 9 | 700 | 312 | 1 | 8 |
| 33 | 14 | 14 | 3 | 76 | 33 | 17 | 8 | 750 | 334 | 7 | 6 |
| 34 | 15 | 3 | 2 | 77 | 34 | 6 | 7 | 800 | 356 | 13 | 4 |
| 35 | 15 | 12 | 1 | 78 | 34 | 15 | 6 | 900 | 401 | 5 | 0 |
| 36 | 16 | 1 | 0 | 79 | 35 | 4 | 5 | 1000 | 445 | 16 | 8 |
| 37 | 16 | 9 | 11 | 80 | 35 | 13 | 4 | 1250 | 557 | 5 | 10 |
| 38 | 16 | 18 | 10 | 81 | 36 | 2 | 3 | 1500 | 668 | 15 | 0 |
| 39 | 17 | 7 | 9 | 82 | 36 | 11 | 2 | 1750 | 780 | 4 | 2 |
| 40 | 17 | 16 | 8 | 83 | 37 | 0 | 1 | 2000 | 891 | 13 | 4 |
| 41 | 18 | 5 | 7 | 84 | 37 | 9 | 0 | 2240 | 998 | 13 | 4 |
| 42 | 18 | 14 | 6 | 85 | 37 | 17 | 11 | 3000 | 1337 | 10 | 0 |
| 43 | 19 | 3 | 5 | 86 | 38 | 6 | 10 | 5000 | 2229 | 3 | 4 |

## 8s. 10d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 8 | 10 | 44 | 19 | 8 | 8 | 87 | 38 | 8 | 6 |
| 2 | 0 | 17 | 8 | 45 | 19 | 17 | 6 | 88 | 38 | 17 | 4 |
| 3 | 1 | 6 | 6 | 46 | 20 | 6 | 4 | 89 | 39 | 6 | 2 |
| 4 | 1 | 15 | 4 | 47 | 20 | 15 | 2 | 90 | 39 | 15 | 0 |
| 5 | 2 | 4 | 2 | 48 | 21 | 4 | 0 | 91 | 40 | 3 | 10 |
| 6 | 2 | 13 | 0 | 49 | 21 | 12 | 10 | 92 | 40 | 12 | 8 |
| 7 | 3 | 1 | 10 | 50 | 22 | 1 | 8 | 93 | 41 | 1 | 6 |
| 8 | 3 | 10 | 8 | 51 | 22 | 10 | 6 | 94 | 41 | 10 | 4 |
| 9 | 3 | 19 | 6 | 52 | 22 | 19 | 4 | 95 | 41 | 19 | 2 |
| 10 | 4 | 8 | 4 | 53 | 23 | 8 | 2 | 96 | 42 | 8 | 0 |
| 11 | 4 | 17 | 2 | 54 | 23 | 17 | 0 | 97 | 42 | 16 | 10 |
| 12 | 5 | 6 | 0 | 55 | 24 | 5 | 10 | 98 | 43 | 5 | 8 |
| 13 | 5 | 14 | 10 | 56 | 24 | 14 | 8 | 99 | 43 | 14 | 6 |
| 14 | 6 | 3 | 8 | 57 | 25 | 3 | 6 | 100 | 44 | 3 | 4 |
| 15 | 6 | 12 | 6 | 58 | 25 | 12 | 4 | 108 | 47 | 14 | 0 |
| 16 | 7 | 1 | 4 | 59 | 26 | 1 | 2 | 110 | 48 | 11 | 8 |
| 17 | 7 | 10 | 2 | 60 | 26 | 10 | 0 | 112 | 49 | 9 | 4 |
| 18 | 7 | 19 | 0 | 61 | 26 | 18 | 10 | 120 | 53 | 0 | 0 |
| 19 | 8 | 7 | 10 | 62 | 27 | 7 | 8 | 130 | 57 | 8 | 4 |
| 20 | 8 | 16 | 8 | 63 | 27 | 16 | 6 | 132 | 58 | 6 | 0 |
| 21 | 9 | 5 | 6 | 64 | 28 | 5 | 4 | 140 | 61 | 16 | 8 |
| 22 | 9 | 14 | 4 | 65 | 28 | 14 | 2 | 144 | 63 | 12 | 0 |
| 23 | 10 | 3 | 2 | 66 | 29 | 3 | 0 | 150 | 66 | 5 | 0 |
| 24 | 10 | 12 | 0 | 67 | 29 | 11 | 10 | 175 | 77 | 5 | 10 |
| 25 | 11 | 0 | 10 | 68 | 30 | 0 | 8 | 200 | 88 | 6 | 8 |
| 26 | 11 | 9 | 8 | 69 | 30 | 9 | 6 | 250 | 110 | 8 | 4 |
| 27 | 11 | 18 | 6 | 70 | 30 | 18 | 4 | 300 | 132 | 10 | 0 |
| 28 | 12 | 7 | 4 | 71 | 31 | 7 | 2 | 365 | 161 | 4 | 2 |
| 29 | 12 | 16 | 2 | 72 | 31 | 16 | 0 | 400 | 176 | 13 | 4 |
| 30 | 13 | 5 | 0 | 73 | 32 | 4 | 10 | 500 | 220 | 16 | 8 |
| 31 | 13 | 13 | 10 | 74 | 32 | 13 | 8 | 600 | 265 | 0 | 0 |
| 32 | 14 | 2 | 8 | 75 | 33 | 2 | 6 | 700 | 309 | 3 | 4 |
| 33 | 14 | 11 | 6 | 76 | 33 | 11 | 4 | 750 | 331 | 5 | 0 |
| 34 | 15 | 0 | 4 | 77 | 34 | 0 | 2 | 800 | 353 | 6 | 8 |
| 35 | 15 | 9 | 2 | 78 | 34 | 9 | 0 | 900 | 397 | 10 | 0 |
| 36 | 15 | 18 | 0 | 79 | 34 | 17 | 10 | 1000 | 441 | 13 | 4 |
| 37 | 16 | 6 | 10 | 80 | 35 | 6 | 8 | 1250 | 552 | 1 | 8 |
| 38 | 16 | 15 | 8 | 81 | 35 | 15 | 6 | 1500 | 662 | 10 | 0 |
| 39 | 17 | 4 | 6 | 82 | 36 | 4 | 4 | 1750 | 772 | 18 | 4 |
| 40 | 17 | 13 | 4 | 83 | 36 | 13 | 2 | 2000 | 883 | 6 | 8 |
| 41 | 18 | 2 | 2 | 84 | 37 | 2 | 0 | 2240 | 989 | 6 | 8 |
| 42 | 18 | 11 | 0 | 85 | 37 | 10 | 10 | 3000 | 1325 | 0 | 0 |
| 43 | 18 | 19 | 10 | 86 | 37 | 19 | 8 | 5000 | 2208 | 6 | 8 |

## 9s.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 9 | 0 | 44 | 19 | 16 | 0 | 87 | 39 | 3 | 0 |
| 2 | 0 | 18 | 0 | 45 | 20 | 5 | 0 | 88 | 39 | 12 | 0 |
| 3 | 1 | 7 | 0 | 46 | 20 | 14 | 0 | 89 | 40 | 1 | 0 |
| 4 | 1 | 16 | 0 | 47 | 21 | 3 | 0 | 90 | 40 | 10 | 0 |
| 5 | 2 | 5 | 0 | 48 | 21 | 12 | 0 | 91 | 40 | 19 | 0 |
| 6 | 2 | 14 | 0 | 49 | 22 | 1 | 0 | 92 | 41 | 8 | 0 |
| 7 | 3 | 3 | 0 | 50 | 22 | 10 | 0 | 93 | 41 | 17 | 0 |
| 8 | 3 | 12 | 0 | 51 | 22 | 19 | 0 | 94 | 42 | 6 | 0 |
| 9 | 4 | 1 | 0 | 52 | 23 | 8 | 0 | 95 | 42 | 15 | 0 |
| 10 | 4 | 10 | 0 | 53 | 23 | 17 | 0 | 96 | 43 | 4 | 0 |
| 11 | 4 | 19 | 0 | 54 | 24 | 6 | 0 | 97 | 43 | 13 | 0 |
| 12 | 5 | 8 | 0 | 55 | 24 | 15 | 0 | 98 | 44 | 2 | 0 |
| 13 | 5 | 17 | 0 | 56 | 25 | 4 | 0 | 99 | 44 | 11 | 0 |
| 14 | 6 | 6 | 0 | 57 | 25 | 13 | 0 | 100 | 45 | 0 | 0 |
| 15 | 6 | 15 | 0 | 58 | 26 | 2 | 0 | 108 | 48 | 12 | 0 |
| 16 | 7 | 4 | 0 | 59 | 26 | 11 | 0 | 110 | 49 | 10 | 0 |
| 17 | 7 | 13 | 0 | 60 | 27 | 0 | 0 | 112 | 50 | 8 | 0 |
| 18 | 8 | 2 | 0 | 61 | 27 | 9 | 0 | 120 | 54 | 0 | 0 |
| 19 | 8 | 11 | 0 | 62 | 27 | 18 | 0 | 130 | 58 | 10 | 0 |
| 20 | 9 | 0 | 0 | 63 | 28 | 7 | 0 | 132 | 59 | 8 | 0 |
| 21 | 9 | 9 | 0 | 64 | 28 | 16 | 0 | 140 | 63 | 0 | 0 |
| 22 | 9 | 18 | 0 | 65 | 29 | 5 | 0 | 144 | 64 | 16 | 0 |
| 23 | 10 | 7 | 0 | 66 | 29 | 14 | 0 | 150 | 67 | 10 | 0 |
| 24 | 10 | 16 | 0 | 67 | 30 | 3 | 0 | 175 | 78 | 15 | 0 |
| 25 | 11 | 5 | 0 | 68 | 30 | 12 | 0 | 200 | 90 | 0 | 0 |
| 26 | 11 | 14 | 0 | 69 | 31 | 1 | 0 | 250 | 112 | 10 | 0 |
| 27 | 12 | 3 | 0 | 70 | 31 | 10 | 0 | 300 | 135 | 0 | 0 |
| 28 | 12 | 12 | 0 | 71 | 31 | 19 | 0 | 365 | 164 | 5 | 0 |
| 29 | 13 | 1 | 0 | 72 | 32 | 8 | 0 | 400 | 180 | 0 | 0 |
| 30 | 13 | 10 | 0 | 73 | 32 | 17 | 0 | 500 | 225 | 0 | 0 |
| 31 | 13 | 19 | 0 | 74 | 33 | 6 | 0 | 600 | 270 | 0 | 0 |
| 32 | 14 | 8 | 0 | 75 | 33 | 15 | 0 | 700 | 315 | 0 | 0 |
| 33 | 14 | 17 | 0 | 76 | 34 | 4 | 0 | 750 | 337 | 10 | 0 |
| 34 | 15 | 6 | 0 | 77 | 34 | 13 | 0 | 800 | 360 | 0 | 0 |
| 35 | 15 | 15 | 0 | 78 | 35 | 2 | 0 | 900 | 405 | 0 | 0 |
| 36 | 16 | 4 | 0 | 79 | 35 | 11 | 0 | 1000 | 450 | 0 | 0 |
| 37 | 16 | 13 | 0 | 80 | 36 | 0 | 0 | 1250 | 562 | 10 | 0 |
| 38 | 17 | 2 | 0 | 81 | 36 | 9 | 0 | 1500 | 675 | 0 | 0 |
| 39 | 17 | 11 | 0 | 82 | 36 | 18 | 0 | 1750 | 787 | 10 | 0 |
| 40 | 18 | 0 | 0 | 83 | 37 | 7 | 0 | 2000 | 900 | 0 | 0 |
| 41 | 18 | 9 | 0 | 84 | 37 | 16 | 0 | 2240 | 1008 | 0 | 0 |
| 42 | 18 | 18 | 0 | 85 | 38 | 5 | 0 | 3000 | 1350 | 0 | 0 |
| 43 | 19 | 7 | 0 | 86 | 38 | 14 | 0 | 5000 | 2250 | 0 | 0 |

## 9s. 1d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 9 | 1 | 44 | 19 | 19 | 8 | 87 | 39 | 10 | 3 |
| 2 | 0 | 18 | 2 | 45 | 20 | 8 | 9 | 88 | 39 | 19 | 4 |
| 3 | 1 | 7 | 3 | 46 | 20 | 17 | 10 | 89 | 40 | 8 | 5 |
| 4 | 1 | 16 | 4 | 47 | 21 | 6 | 11 | 90 | 40 | 17 | 6 |
| 5 | 2 | 5 | 5 | 48 | 21 | 16 | 0 | 91 | 41 | 6 | 7 |
| 6 | 2 | 14 | 6 | 49 | 22 | 5 | 1 | 92 | 41 | 15 | 8 |
| 7 | 3 | 3 | 7 | 50 | 22 | 14 | 2 | 93 | 42 | 4 | 9 |
| 8 | 3 | 12 | 8 | 51 | 23 | 3 | 3 | 94 | 42 | 13 | 10 |
| 9 | 4 | 1 | 9 | 52 | 23 | 12 | 4 | 95 | 43 | 2 | 11 |
| 10 | 4 | 10 | 10 | 53 | 24 | 1 | 5 | 96 | 43 | 12 | 0 |
| 11 | 4 | 19 | 11 | 54 | 24 | 10 | 6 | 97 | 44 | 1 | 1 |
| 12 | 5 | 9 | 0 | 55 | 24 | 19 | 7 | 98 | 44 | 10 | 2 |
| 13 | 5 | 18 | 1 | 56 | 25 | 8 | 8 | 99 | 44 | 19 | 3 |
| 14 | 6 | 7 | 2 | 57 | 25 | 17 | 9 | 100 | 45 | 8 | 4 |
| 15 | 6 | 16 | 3 | 58 | 26 | 6 | 10 | 108 | 49 | 1 | 0 |
| 16 | 7 | 5 | 4 | 59 | 26 | 15 | 11 | 110 | 49 | 19 | 2 |
| 17 | 7 | 14 | 5 | 60 | 27 | 5 | 0 | 112 | 50 | 17 | 4 |
| 18 | 8 | 3 | 6 | 61 | 27 | 14 | 1 | 120 | 54 | 10 | 0 |
| 19 | 8 | 12 | 7 | 62 | 28 | 3 | 2 | 130 | 59 | 0 | 10 |
| 20 | 9 | 1 | 8 | 63 | 28 | 12 | 3 | 132 | 59 | 19 | 0 |
| 21 | 9 | 10 | 9 | 64 | 29 | 1 | 4 | 140 | 63 | 11 | 8 |
| 22 | 9 | 19 | 10 | 65 | 29 | 10 | 5 | 144 | 65 | 8 | 0 |
| 23 | 10 | 8 | 11 | 66 | 29 | 19 | 6 | 150 | 68 | 2 | 6 |
| 24 | 10 | 18 | 0 | 67 | 30 | 8 | 7 | 175 | 79 | 9 | 7 |
| 25 | 11 | 7 | 1 | 68 | 30 | 17 | 8 | 200 | 90 | 16 | 8 |
| 26 | 11 | 16 | 2 | 69 | 31 | 6 | 9 | 250 | 113 | 10 | 10 |
| 27 | 12 | 5 | 3 | 70 | 31 | 15 | 10 | 300 | 136 | 5 | 0 |
| 28 | 12 | 14 | 4 | 71 | 32 | 4 | 11 | 365 | 165 | 15 | 5 |
| 29 | 13 | 3 | 5 | 72 | 32 | 14 | 0 | 400 | 181 | 13 | 4 |
| 30 | 13 | 12 | 6 | 73 | 33 | 3 | 1 | 500 | 227 | 1 | 8 |
| 31 | 14 | 1 | 7 | 74 | 33 | 12 | 2 | 600 | 272 | 10 | 0 |
| 32 | 14 | 10 | 8 | 75 | 34 | 1 | 3 | 700 | 317 | 18 | 4 |
| 33 | 14 | 19 | 9 | 76 | 34 | 10 | 4 | 750 | 340 | 12 | 6 |
| 34 | 15 | 8 | 10 | 77 | 34 | 19 | 5 | 800 | 363 | 6 | 8 |
| 35 | 15 | 17 | 11 | 78 | 35 | 8 | 6 | 900 | 408 | 15 | 0 |
| 36 | 16 | 7 | 0 | 79 | 35 | 17 | 7 | 1000 | 454 | 3 | 4 |
| 37 | 16 | 16 | 1 | 80 | 36 | 6 | 8 | 1250 | 567 | 14 | 2 |
| 38 | 17 | 5 | 2 | 81 | 36 | 15 | 9 | 1500 | 681 | 5 | 0 |
| 39 | 17 | 14 | 3 | 82 | 37 | 4 | 10 | 1750 | 794 | 15 | 10 |
| 40 | 18 | 4 | 4 | 83 | 37 | 13 | 11 | 2000 | 908 | 6 | 8 |
| 41 | 18 | 12 | 5 | 84 | 38 | 3 | 0 | 2240 | 1017 | 6 | 8 |
| 42 | 19 | 1 | 6 | 85 | 38 | 12 | 1 | 3000 | 1362 | 10 | 0 |
| 43 | 19 | 10 | 7 | 86 | 39 | 1 | 2 | 5000 | 2270 | 16 | 8 |

## 9s. 3d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 9 | 3 | 44 | 20 | 7 | 0 | 87 | 40 | 4 | 9 |
| 2 | 0 | 18 | 6 | 45 | 20 | 16 | 3 | 88 | 40 | 14 | 0 |
| 3 | 1 | 7 | 9 | 46 | 21 | 5 | 6 | 89 | 41 | 3 | 3 |
| 4 | 1 | 17 | 0 | 47 | 21 | 14 | 9 | 90 | 41 | 12 | 6 |
| 5 | 2 | 6 | 3 | 48 | 22 | 4 | 0 | 91 | 42 | 1 | 9 |
| 6 | 2 | 15 | 6 | 49 | 22 | 13 | 3 | 92 | 42 | 11 | 0 |
| 7 | 3 | 4 | 9 | 50 | 23 | 2 | 6 | 93 | 43 | 0 | 3 |
| 8 | 3 | 14 | 0 | 51 | 23 | 11 | 9 | 94 | 43 | 9 | 6 |
| 9 | 4 | 3 | 3 | 52 | 24 | 1 | 0 | 95 | 43 | 18 | 9 |
| 10 | 4 | 12 | 6 | 53 | 24 | 10 | 3 | 96 | 44 | 8 | 0 |
| 11 | 5 | 1 | 9 | 54 | 24 | 19 | 6 | 97 | 44 | 17 | 3 |
| 12 | 5 | 11 | 0 | 55 | 25 | 8 | 9 | 98 | 45 | 6 | 6 |
| 13 | 6 | 0 | 3 | 56 | 25 | 18 | 0 | 99 | 45 | 15 | 9 |
| 14 | 6 | 9 | 6 | 57 | 26 | 7 | 3 | 100 | 46 | 5 | 0 |
| 15 | 6 | 18 | 9 | 58 | 26 | 16 | 6 | 108 | 49 | 19 | 0 |
| 16 | 7 | 8 | 0 | 59 | 27 | 5 | 9 | 110 | 50 | 17 | 6 |
| 17 | 7 | 17 | 3 | 60 | 27 | 15 | 0 | 112 | 51 | 16 | 0 |
| 18 | 8 | 6 | 6 | 61 | 28 | 4 | 3 | 120 | 55 | 10 | 0 |
| 19 | 8 | 15 | 9 | 62 | 28 | 13 | 6 | 130 | 60 | 2 | 6 |
| 20 | 9 | 5 | 0 | 63 | 29 | 2 | 9 | 132 | 61 | 1 | 0 |
| 21 | 9 | 14 | 3 | 64 | 29 | 12 | 0 | 140 | 64 | 15 | 0 |
| 22 | 10 | 3 | 6 | 65 | 30 | 1 | 3 | 144 | 66 | 12 | 0 |
| 23 | 10 | 12 | 9 | 66 | 30 | 10 | 6 | 150 | 69 | 7 | 6 |
| 24 | 11 | 2 | 0 | 67 | 30 | 19 | 9 | 175 | 80 | 18 | 9 |
| 25 | 11 | 11 | 3 | 68 | 31 | 9 | 0 | 200 | 92 | 10 | 0 |
| 26 | 12 | 0 | 6 | 69 | 31 | 18 | 3 | 250 | 115 | 12 | 6 |
| 27 | 12 | 9 | 9 | 70 | 32 | 7 | 6 | 300 | 138 | 15 | 0 |
| 28 | 12 | 19 | 0 | 71 | 32 | 16 | 9 | 365 | 168 | 16 | 3 |
| 29 | 13 | 8 | 3 | 72 | 33 | 6 | 0 | 400 | 185 | 0 | 0 |
| 30 | 13 | 17 | 6 | 73 | 33 | 15 | 3 | 500 | 231 | 5 | 0 |
| 31 | 14 | 6 | 9 | 74 | 34 | 4 | 6 | 600 | 277 | 10 | 0 |
| 32 | 14 | 16 | 0 | 75 | 34 | 13 | 9 | 700 | 323 | 15 | 0 |
| 33 | 15 | 5 | 3 | 76 | 35 | 3 | 0 | 750 | 346 | 17 | 6 |
| 34 | 15 | 14 | 6 | 77 | 35 | 12 | 3 | 800 | 370 | 0 | 0 |
| 35 | 16 | 3 | 9 | 78 | 36 | 1 | 6 | 900 | 416 | 5 | 0 |
| 36 | 16 | 13 | 0 | 79 | 36 | 10 | 9 | 1000 | 462 | 10 | 0 |
| 37 | 17 | 2 | 3 | 80 | 37 | 0 | 0 | 1250 | 578 | 2 | 6 |
| 38 | 17 | 11 | 6 | 81 | 37 | 9 | 3 | 1500 | 693 | 15 | 0 |
| 39 | 18 | 0 | 9 | 82 | 37 | 18 | 6 | 1750 | 809 | 7 | 6 |
| 40 | 18 | 10 | 0 | 83 | 38 | 7 | 9 | 2000 | 925 | 0 | 0 |
| 41 | 18 | 19 | 3 | 84 | 38 | 17 | 0 | 2240 | 1036 | 0 | 0 |
| 42 | 19 | 8 | 6 | 85 | 39 | 6 | 3 | 3000 | 1387 | 10 | 0 |
| 43 | 19 | 17 | 9 | 86 | 39 | 15 | 6 | 5000 | 2312 | 10 | 0 |

## 9s. 2d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 9 | 2 | 44 | 20 | 3 | 4 | 87 | 39 | 17 | 6 |
| 2 | 0 | 18 | 4 | 45 | 20 | 12 | 6 | 88 | 40 | 6 | 8 |
| 3 | 1 | 7 | 6 | 46 | 21 | 1 | 8 | 89 | 40 | 15 | 10 |
| 4 | 1 | 16 | 8 | 47 | 21 | 10 | 10 | 90 | 41 | 5 | 0 |
| 5 | 2 | 5 | 10 | 48 | 22 | 0 | 0 | 91 | 41 | 14 | 2 |
| 6 | 2 | 15 | 0 | 49 | 22 | 9 | 2 | 92 | 42 | 3 | 4 |
| 7 | 3 | 4 | 2 | 50 | 22 | 18 | 4 | 93 | 42 | 12 | 6 |
| 8 | 3 | 13 | 4 | 51 | 23 | 7 | 6 | 94 | 43 | 1 | 8 |
| 9 | 4 | 2 | 6 | 52 | 23 | 16 | 8 | 95 | 43 | 10 | 10 |
| 10 | 4 | 11 | 8 | 53 | 24 | 5 | 10 | 96 | 44 | 0 | 0 |
| 11 | 5 | 0 | 10 | 54 | 24 | 15 | 0 | 97 | 44 | 9 | 2 |
| 12 | 5 | 10 | 0 | 55 | 25 | 4 | 2 | 98 | 44 | 18 | 4 |
| 13 | 5 | 19 | 2 | 56 | 25 | 13 | 4 | 99 | 45 | 7 | 6 |
| 14 | 6 | 8 | 4 | 57 | 26 | 2 | 6 | 100 | 45 | 16 | 8 |
| 15 | 6 | 17 | 6 | 58 | 26 | 11 | 8 | 108 | 49 | 10 | 0 |
| 16 | 7 | 6 | 8 | 59 | 27 | 0 | 10 | 110 | 50 | 8 | 4 |
| 17 | 7 | 15 | 10 | 60 | 27 | 10 | 0 | 112 | 51 | 6 | 8 |
| 18 | 8 | 5 | 0 | 61 | 27 | 19 | 2 | 120 | 55 | 0 | 0 |
| 19 | 8 | 14 | 2 | 62 | 28 | 8 | 4 | 130 | 59 | 11 | 8 |
| 20 | 9 | 3 | 4 | 63 | 28 | 17 | 6 | 132 | 60 | 10 | 0 |
| 21 | 9 | 12 | 6 | 64 | 29 | 6 | 8 | 140 | 64 | 3 | 4 |
| 22 | 10 | 1 | 8 | 65 | 29 | 15 | 10 | 144 | 66 | 0 | 0 |
| 23 | 10 | 10 | 10 | 66 | 30 | 5 | 0 | 150 | 68 | 15 | 0 |
| 24 | 11 | 0 | 0 | 67 | 30 | 14 | 2 | 175 | 80 | 4 | 2 |
| 25 | 11 | 9 | 2 | 68 | 31 | 3 | 4 | 200 | 91 | 13 | 4 |
| 26 | 11 | 18 | 4 | 69 | 31 | 12 | 6 | 250 | 114 | 11 | 8 |
| 27 | 12 | 7 | 6 | 70 | 32 | 1 | 8 | 300 | 137 | 10 | 0 |
| 28 | 12 | 16 | 8 | 71 | 32 | 10 | 10 | 365 | 167 | 5 | 10 |
| 29 | 13 | 5 | 10 | 72 | 33 | 0 | 0 | 400 | 183 | 6 | 8 |
| 30 | 13 | 15 | 0 | 73 | 33 | 9 | 2 | 500 | 229 | 3 | 4 |
| 31 | 14 | 4 | 2 | 74 | 33 | 18 | 4 | 600 | 275 | 0 | 0 |
| 32 | 14 | 13 | 4 | 75 | 34 | 7 | 6 | 700 | 320 | 16 | 8 |
| 33 | 15 | 2 | 6 | 76 | 34 | 16 | 8 | 750 | 343 | 15 | 0 |
| 34 | 15 | 11 | 8 | 77 | 35 | 5 | 10 | 800 | 366 | 13 | 4 |
| 35 | 16 | 0 | 10 | 78 | 35 | 15 | 0 | 900 | 412 | 10 | 0 |
| 36 | 16 | 10 | 0 | 79 | 36 | 4 | 2 | 1000 | 458 | 6 | 8 |
| 37 | 16 | 19 | 2 | 80 | 36 | 13 | 4 | 1250 | 572 | 18 | 4 |
| 38 | 17 | 8 | 4 | 81 | 37 | 2 | 6 | 1500 | 687 | 10 | 0 |
| 39 | 17 | 17 | 6 | 82 | 37 | 11 | 8 | 1750 | 802 | 1 | 8 |
| 40 | 18 | 6 | 8 | 83 | 38 | 0 | 10 | 2000 | 916 | 13 | 4 |
| 41 | 18 | 15 | 10 | 84 | 38 | 10 | 0 | 2240 | 1026 | 13 | 4 |
| 42 | 19 | 5 | 0 | 85 | 38 | 19 | 2 | 3000 | 1375 | 0 | 0 |
| 43 | 19 | 14 | 2 | 86 | 39 | 8 | 4 | 5000 | 2291 | 13 | 4 |

## 9s. 4d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 9 | 4 | 44 | 20 | 10 | 8 | 87 | 40 | 12 | 0 |
| 2 | 0 | 18 | 8 | 45 | 21 | 0 | 0 | 88 | 41 | 1 | 4 |
| 3 | 1 | 8 | 0 | 46 | 21 | 9 | 4 | 89 | 41 | 10 | 8 |
| 4 | 1 | 17 | 4 | 47 | 21 | 18 | 8 | 90 | 42 | 0 | 0 |
| 5 | 2 | 6 | 8 | 48 | 22 | 8 | 0 | 91 | 42 | 9 | 4 |
| 6 | 2 | 16 | 0 | 49 | 22 | 17 | 4 | 92 | 42 | 18 | 8 |
| 7 | 3 | 5 | 4 | 50 | 23 | 6 | 8 | 93 | 43 | 8 | 0 |
| 8 | 3 | 14 | 8 | 51 | 23 | 16 | 0 | 94 | 43 | 17 | 4 |
| 9 | 4 | 4 | 0 | 52 | 24 | 5 | 4 | 95 | 44 | 6 | 8 |
| 10 | 4 | 13 | 4 | 53 | 24 | 14 | 8 | 96 | 44 | 16 | 0 |
| 11 | 5 | 2 | 8 | 54 | 25 | 4 | 0 | 97 | 45 | 5 | 4 |
| 12 | 5 | 12 | 0 | 55 | 25 | 13 | 4 | 98 | 45 | 14 | 8 |
| 13 | 6 | 1 | 4 | 56 | 26 | 2 | 8 | 99 | 46 | 4 | 0 |
| 14 | 6 | 10 | 8 | 57 | 26 | 12 | 0 | 100 | 46 | 13 | 4 |
| 15 | 7 | 0 | 0 | 58 | 27 | 1 | 4 | 108 | 50 | 8 | 0 |
| 16 | 7 | 9 | 4 | 59 | 27 | 10 | 8 | 110 | 51 | 6 | 8 |
| 17 | 7 | 18 | 8 | 60 | 28 | 0 | 0 | 112 | 52 | 5 | 4 |
| 18 | 8 | 8 | 0 | 61 | 28 | 9 | 4 | 120 | 56 | 0 | 0 |
| 19 | 8 | 17 | 4 | 62 | 28 | 18 | 8 | 130 | 60 | 13 | 4 |
| 20 | 9 | 6 | 8 | 63 | 29 | 8 | 0 | 132 | 61 | 12 | 0 |
| 21 | 9 | 16 | 0 | 64 | 29 | 17 | 4 | 140 | 65 | 6 | 8 |
| 22 | 10 | 5 | 4 | 65 | 30 | 6 | 8 | 144 | 67 | 4 | 0 |
| 23 | 10 | 14 | 8 | 66 | 30 | 16 | 0 | 150 | 70 | 0 | 0 |
| 24 | 11 | 4 | 0 | 67 | 31 | 5 | 4 | 175 | 81 | 13 | 4 |
| 25 | 11 | 13 | 4 | 68 | 31 | 14 | 8 | 200 | 93 | 6 | 8 |
| 26 | 12 | 2 | 8 | 69 | 32 | 4 | 0 | 250 | 116 | 13 | 4 |
| 27 | 12 | 12 | 0 | 70 | 32 | 13 | 4 | 300 | 140 | 0 | 0 |
| 28 | 13 | 1 | 4 | 71 | 33 | 2 | 8 | 365 | 170 | 6 | 8 |
| 29 | 13 | 10 | 8 | 72 | 33 | 12 | 0 | 400 | 186 | 13 | 4 |
| 30 | 14 | 0 | 0 | 73 | 34 | 1 | 4 | 500 | 233 | 6 | 8 |
| 31 | 14 | 9 | 4 | 74 | 34 | 10 | 8 | 600 | 280 | 0 | 0 |
| 32 | 14 | 18 | 8 | 75 | 35 | 0 | 0 | 700 | 326 | 13 | 4 |
| 33 | 15 | 8 | 0 | 76 | 35 | 9 | 4 | 750 | 350 | 0 | 0 |
| 34 | 15 | 17 | 4 | 77 | 35 | 18 | 8 | 800 | 373 | 6 | 8 |
| 35 | 16 | 6 | 8 | 78 | 36 | 8 | 0 | 900 | 420 | 0 | 0 |
| 36 | 16 | 16 | 0 | 79 | 36 | 17 | 4 | 1000 | 466 | 13 | 4 |
| 37 | 17 | 5 | 4 | 80 | 37 | 6 | 8 | 1250 | 583 | 6 | 8 |
| 38 | 17 | 14 | 8 | 81 | 37 | 16 | 0 | 1500 | 700 | 0 | 0 |
| 39 | 18 | 4 | 0 | 82 | 38 | 5 | 4 | 1750 | 816 | 13 | 4 |
| 40 | 18 | 13 | 4 | 83 | 38 | 14 | 8 | 2000 | 933 | 6 | 8 |
| 41 | 19 | 2 | 8 | 84 | 39 | 4 | 0 | 2240 | 1045 | 6 | 8 |
| 42 | 19 | 12 | 0 | 85 | 39 | 13 | 4 | 3000 | 1400 | 0 | 0 |
| 43 | 20 | 1 | 4 | 86 | 40 | 2 | 8 | 5000 | 2333 | 6 | 8 |

## 9s. 5d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 9 | 5 | 44 | 20 | 14 | 4 | 87 | 40 | 19 | 3 |
| 2 | 0 | 18 | 10 | 45 | 21 | 3 | 9 | 88 | 41 | 8 | 8 |
| 3 | 1 | 8 | 3 | 46 | 21 | 13 | 2 | 89 | 41 | 18 | 1 |
| 4 | 1 | 17 | 8 | 47 | 22 | 2 | 7 | 90 | 42 | 7 | 6 |
| 5 | 2 | 7 | 1 | 48 | 22 | 12 | 0 | 91 | 42 | 16 | 11 |
| 6 | 2 | 16 | 6 | 49 | 23 | 1 | 5 | 92 | 43 | 6 | 4 |
| 7 | 3 | 5 | 11 | 50 | 23 | 10 | 10 | 93 | 43 | 15 | 9 |
| 8 | 3 | 15 | 4 | 51 | 24 | 0 | 3 | 94 | 44 | 5 | 2 |
| 9 | 4 | 4 | 9 | 52 | 24 | 9 | 8 | 95 | 44 | 14 | 7 |
| 10 | 4 | 14 | 2 | 53 | 24 | 19 | 1 | 96 | 45 | 4 | 0 |
| 11 | 5 | 3 | 7 | 54 | 25 | 8 | 6 | 97 | 45 | 13 | 5 |
| 12 | 5 | 13 | 0 | 55 | 26 | 17 | 11 | 98 | 46 | 2 | 10 |
| 13 | 6 | 2 | 5 | 56 | 26 | 7 | 4 | 99 | 46 | 12 | 3 |
| 14 | 6 | 11 | 10 | 57 | 26 | 16 | 9 | 100 | 47 | 1 | 8 |
| 15 | 7 | 1 | 3 | 58 | 27 | 6 | 2 | 108 | 50 | 17 | 0 |
| 16 | 7 | 10 | 8 | 59 | 27 | 15 | 7 | 110 | 51 | 15 | 10 |
| 17 | 8 | 0 | 1 | 60 | 28 | 5 | 0 | 112 | 52 | 14 | 8 |
| 18 | 8 | 9 | 6 | 61 | 28 | 14 | 5 | 120 | 56 | 10 | 0 |
| 19 | 8 | 18 | 11 | 62 | 29 | 3 | 10 | 130 | 61 | 4 | 2 |
| 20 | 9 | 8 | 4 | 63 | 29 | 13 | 3 | 132 | 62 | 3 | 0 |
| 21 | 9 | 17 | 9 | 64 | 30 | 2 | 8 | 140 | 65 | 18 | 4 |
| 22 | 10 | 7 | 2 | 65 | 30 | 12 | 1 | 144 | 67 | 16 | 0 |
| 23 | 10 | 16 | 7 | 66 | 31 | 1 | 6 | 150 | 70 | 12 | 6 |
| 24 | 11 | 6 | 0 | 67 | 31 | 10 | 11 | 175 | 82 | 7 | 11 |
| 25 | 11 | 15 | 5 | 68 | 32 | 0 | 4 | 200 | 94 | 3 | 4 |
| 26 | 12 | 4 | 10 | 69 | 32 | 9 | 9 | 250 | 117 | 14 | 2 |
| 27 | 12 | 14 | 3 | 70 | 32 | 19 | 2 | 300 | 141 | 5 | 0 |
| 28 | 13 | 3 | 8 | 71 | 33 | 8 | 7 | 365 | 171 | 17 | 1 |
| 29 | 13 | 13 | 1 | 72 | 33 | 18 | 0 | 400 | 188 | 6 | 8 |
| 30 | 14 | 2 | 6 | 73 | 34 | 7 | 5 | 500 | 235 | 8 | 4 |
| 31 | 14 | 11 | 11 | 74 | 34 | 16 | 10 | 600 | 282 | 10 | 0 |
| 32 | 15 | 1 | 4 | 75 | 35 | 6 | 3 | 700 | 329 | 11 | 8 |
| 33 | 15 | 10 | 9 | 76 | 35 | 15 | 8 | 750 | 353 | 2 | 6 |
| 34 | 16 | 0 | 2 | 77 | 36 | 5 | 1 | 800 | 376 | 13 | 4 |
| 35 | 16 | 9 | 7 | 78 | 36 | 14 | 6 | 900 | 423 | 15 | 0 |
| 36 | 16 | 19 | 0 | 79 | 37 | 3 | 11 | 1000 | 470 | 16 | 8 |
| 37 | 17 | 8 | 5 | 80 | 37 | 13 | 4 | 1250 | 588 | 10 | 10 |
| 38 | 17 | 17 | 10 | 81 | 38 | 2 | 9 | 1500 | 706 | 5 | 0 |
| 39 | 18 | 7 | 3 | 82 | 38 | 12 | 2 | 1750 | 823 | 19 | 2 |
| 40 | 18 | 16 | 8 | 83 | 39 | 1 | 7 | 2000 | 941 | 13 | 4 |
| 41 | 19 | 6 | 1 | 84 | 39 | 11 | 0 | 2240 | 1054 | 13 | 4 |
| 42 | 19 | 15 | 6 | 85 | 40 | 0 | 5 | 3000 | 1412 | 10 | 0 |
| 43 | 20 | 4 | 11 | 86 | 40 | 9 | 10 | 5000 | 2354 | 3 | 4 |

## 9s. 7d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 9 | 7 | 44 | 21 | 1 | 8 | 87 | 41 | 13 | 9 |
| 2 | 0 | 19 | 2 | 45 | 21 | 11 | 3 | 88 | 42 | 3 | 4 |
| 3 | 1 | 8 | 9 | 46 | 22 | 0 | 10 | 89 | 42 | 12 | 11 |
| 4 | 1 | 18 | 4 | 47 | 22 | 10 | 5 | 90 | 43 | 2 | 6 |
| 5 | 2 | 7 | 11 | 48 | 23 | 0 | 0 | 91 | 43 | 12 | 1 |
| 6 | 2 | 17 | 6 | 49 | 23 | 9 | 7 | 92 | 44 | 1 | 8 |
| 7 | 3 | 7 | 1 | 50 | 23 | 19 | 2 | 93 | 44 | 11 | 3 |
| 8 | 3 | 16 | 8 | 51 | 24 | 8 | 9 | 94 | 45 | 0 | 10 |
| 9 | 4 | 6 | 3 | 52 | 24 | 18 | 4 | 95 | 45 | 10 | 5 |
| 10 | 4 | 15 | 10 | 53 | 25 | 7 | 11 | 96 | 46 | 0 | 0 |
| 11 | 5 | 5 | 5 | 54 | 25 | 17 | 6 | 97 | 46 | 9 | 7 |
| 12 | 5 | 15 | 0 | 55 | 26 | 7 | 1 | 98 | 46 | 19 | 2 |
| 13 | 6 | 4 | 7 | 56 | 26 | 16 | 8 | 99 | 47 | 8 | 9 |
| 14 | 6 | 14 | 2 | 57 | 27 | 6 | 3 | 100 | 47 | 18 | 4 |
| 15 | 7 | 3 | 9 | 58 | 27 | 15 | 10 | 108 | 51 | 15 | 0 |
| 16 | 7 | 13 | 4 | 59 | 28 | 5 | 5 | 110 | 52 | 14 | 2 |
| 17 | 8 | 2 | 11 | 60 | 28 | 15 | 0 | 112 | 53 | 13 | 4 |
| 18 | 8 | 12 | 6 | 61 | 29 | 4 | 7 | 120 | 57 | 10 | 0 |
| 19 | 9 | 2 | 1 | 62 | 29 | 14 | 2 | 130 | 62 | 5 | 10 |
| 20 | 9 | 11 | 8 | 63 | 30 | 3 | 9 | 132 | 63 | 5 | 0 |
| 21 | 10 | 1 | 3 | 64 | 30 | 13 | 4 | 140 | 67 | 1 | 8 |
| 22 | 10 | 10 | 10 | 65 | 31 | 2 | 11 | 144 | 69 | 0 | 0 |
| 23 | 11 | 0 | 5 | 66 | 31 | 12 | 6 | 150 | 71 | 17 | 6 |
| 24 | 11 | 10 | 0 | 67 | 32 | 2 | 1 | 175 | 83 | 17 | 1 |
| 25 | 11 | 19 | 7 | 68 | 32 | 11 | 8 | 200 | 95 | 16 | 8 |
| 26 | 12 | 9 | 2 | 69 | 33 | 1 | 3 | 250 | 119 | 15 | 10 |
| 27 | 12 | 18 | 9 | 70 | 33 | 10 | 10 | 300 | 143 | 15 | 0 |
| 28 | 13 | 8 | 4 | 71 | 34 | 0 | 5 | 365 | 174 | 17 | 11 |
| 29 | 13 | 17 | 11 | 72 | 34 | 10 | 0 | 400 | 191 | 13 | 4 |
| 30 | 14 | 7 | 6 | 73 | 34 | 19 | 7 | 500 | 239 | 11 | 8 |
| 31 | 14 | 17 | 1 | 74 | 35 | 9 | 2 | 600 | 287 | 10 | 0 |
| 32 | 15 | 6 | 8 | 75 | 35 | 18 | 9 | 700 | 335 | 8 | 4 |
| 33 | 15 | 16 | 3 | 76 | 36 | 8 | 4 | 750 | 359 | 7 | 6 |
| 34 | 16 | 5 | 10 | 77 | 36 | 17 | 11 | 800 | 383 | 6 | 8 |
| 35 | 16 | 15 | 5 | 78 | 37 | 7 | 6 | 900 | 431 | 5 | 0 |
| 36 | 17 | 5 | 0 | 79 | 37 | 17 | 1 | 1000 | 479 | 3 | 4 |
| 37 | 17 | 14 | 7 | 80 | 38 | 6 | 8 | 1250 | 598 | 19 | 2 |
| 38 | 18 | 4 | 2 | 81 | 38 | 16 | 3 | 1500 | 718 | 15 | 0 |
| 39 | 18 | 13 | 9 | 82 | 39 | 5 | 10 | 1750 | 838 | 10 | 10 |
| 40 | 19 | 3 | 4 | 83 | 39 | 15 | 5 | 2000 | 958 | 6 | 8 |
| 41 | 19 | 12 | 11 | 84 | 40 | 5 | 0 | 2240 | 1073 | 6 | 8 |
| 42 | 20 | 2 | 6 | 85 | 40 | 14 | 7 | 3000 | 1437 | 10 | 0 |
| 43 | 20 | 12 | 1 | 86 | 41 | 4 | 2 | 5000 | 2395 | 16 | 8 |

## 9s. 6d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 9 | 6 | 44 | 20 | 18 | 0 | 87 | 41 | 6 | 6 |
| 2 | 0 | 19 | 0 | 45 | 21 | 7 | 6 | 88 | 41 | 16 | 0 |
| 3 | 1 | 8 | 6 | 46 | 21 | 17 | 0 | 89 | 42 | 5 | 6 |
| 4 | 1 | 18 | 0 | 47 | 22 | 6 | 6 | 90 | 42 | 15 | 0 |
| 5 | 2 | 7 | 6 | 48 | 22 | 16 | 0 | 91 | 43 | 4 | 6 |
| 6 | 2 | 17 | 0 | 49 | 23 | 5 | 6 | 92 | 43 | 14 | 0 |
| 7 | 3 | 6 | 6 | 50 | 23 | 15 | 0 | 93 | 44 | 3 | 6 |
| 8 | 3 | 16 | 0 | 51 | 24 | 4 | 6 | 94 | 44 | 13 | 0 |
| 9 | 4 | 5 | 6 | 52 | 24 | 14 | 0 | 95 | 45 | 2 | 6 |
| 10 | 4 | 15 | 0 | 53 | 25 | 3 | 6 | 96 | 45 | 12 | 0 |
| 11 | 5 | 4 | 6 | 54 | 25 | 13 | 0 | 97 | 46 | 1 | 6 |
| 12 | 5 | 14 | 0 | 55 | 26 | 2 | 6 | 98 | 46 | 11 | 0 |
| 13 | 6 | 3 | 6 | 56 | 26 | 12 | 0 | 99 | 47 | 0 | 6 |
| 14 | 6 | 13 | 0 | 57 | 27 | 1 | 6 | 100 | 47 | 10 | 0 |
| 15 | 7 | 2 | 6 | 58 | 27 | 11 | 0 | 108 | 51 | 6 | 0 |
| 16 | 7 | 12 | 0 | 59 | 28 | 0 | 6 | 110 | 52 | 5 | 0 |
| 17 | 8 | 1 | 6 | 60 | 28 | 10 | 0 | 112 | 53 | 4 | 0 |
| 18 | 8 | 11 | 0 | 61 | 28 | 19 | 6 | 120 | 57 | 0 | 0 |
| 19 | 9 | 0 | 6 | 62 | 29 | 9 | 0 | 130 | 61 | 15 | 0 |
| 20 | 9 | 10 | 0 | 63 | 29 | 18 | 6 | 132 | 62 | 14 | 0 |
| 21 | 9 | 19 | 6 | 64 | 30 | 8 | 0 | 140 | 66 | 10 | 0 |
| 22 | 10 | 9 | 0 | 65 | 30 | 17 | 6 | 144 | 68 | 8 | 0 |
| 23 | 10 | 18 | 6 | 66 | 31 | 7 | 0 | 150 | 71 | 5 | 0 |
| 24 | 11 | 8 | 0 | 67 | 31 | 16 | 6 | 175 | 83 | 2 | 6 |
| 25 | 11 | 17 | 6 | 68 | 32 | 6 | 0 | 200 | 95 | 0 | 0 |
| 26 | 12 | 7 | 0 | 69 | 32 | 15 | 6 | 250 | 118 | 15 | 0 |
| 27 | 12 | 16 | 6 | 70 | 33 | 5 | 0 | 300 | 142 | 10 | 0 |
| 28 | 13 | 6 | 0 | 71 | 33 | 14 | 6 | 365 | 173 | 7 | 6 |
| 29 | 13 | 15 | 6 | 72 | 34 | 4 | 0 | 400 | 190 | 0 | 0 |
| 30 | 14 | 5 | 0 | 73 | 34 | 13 | 6 | 500 | 237 | 10 | 0 |
| 31 | 14 | 14 | 6 | 74 | 35 | 3 | 0 | 600 | 285 | 0 | 0 |
| 32 | 15 | 4 | 0 | 75 | 35 | 12 | 6 | 700 | 332 | 10 | 0 |
| 33 | 15 | 13 | 6 | 76 | 36 | 2 | 0 | 750 | 356 | 5 | 0 |
| 34 | 16 | 3 | 0 | 77 | 36 | 11 | 6 | 800 | 380 | 0 | 0 |
| 35 | 16 | 12 | 6 | 78 | 37 | 1 | 0 | 900 | 427 | 10 | 0 |
| 36 | 17 | 2 | 0 | 79 | 37 | 10 | 6 | 1000 | 475 | 0 | 0 |
| 37 | 17 | 11 | 6 | 80 | 38 | 0 | 0 | 1250 | 593 | 15 | 0 |
| 38 | 18 | 1 | 0 | 81 | 38 | 9 | 6 | 1500 | 712 | 10 | 0 |
| 39 | 18 | 10 | 6 | 82 | 38 | 19 | 0 | 1750 | 831 | 5 | 0 |
| 40 | 19 | 0 | 0 | 83 | 39 | 8 | 6 | 2000 | 950 | 0 | 0 |
| 41 | 19 | 9 | 6 | 84 | 39 | 18 | 0 | 2240 | 1064 | 0 | 0 |
| 42 | 19 | 19 | 0 | 85 | 40 | 7 | 6 | 3000 | 1425 | 0 | 0 |
| 43 | 20 | 8 | 6 | 86 | 40 | 17 | 0 | 5000 | 2375 | 0 | 0 |

## 9s. 8d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 9 | 8 | 44 | 21 | 5 | 4 | 87 | 42 | 1 | 0 |
| 2 | 0 | 19 | 4 | 45 | 21 | 15 | 0 | 88 | 42 | 10 | 8 |
| 3 | 1 | 9 | 0 | 46 | 22 | 4 | 8 | 89 | 43 | 0 | 4 |
| 4 | 1 | 18 | 8 | 47 | 22 | 14 | 4 | 90 | 43 | 10 | 0 |
| 5 | 2 | 8 | 4 | 48 | 23 | 4 | 0 | 91 | 43 | 19 | 8 |
| 6 | 2 | 18 | 0 | 49 | 23 | 13 | 8 | 92 | 44 | 9 | 4 |
| 7 | 3 | 7 | 8 | 50 | 24 | 3 | 4 | 93 | 44 | 19 | 0 |
| 8 | 3 | 17 | 4 | 51 | 24 | 13 | 0 | 94 | 45 | 8 | 8 |
| 9 | 4 | 7 | 0 | 52 | 25 | 2 | 8 | 95 | 45 | 18 | 4 |
| 10 | 4 | 16 | 8 | 53 | 25 | 12 | 4 | 96 | 46 | 8 | 0 |
| 11 | 5 | 6 | 4 | 54 | 26 | 2 | 0 | 97 | 46 | 17 | 8 |
| 12 | 5 | 16 | 0 | 55 | 26 | 11 | 8 | 98 | 47 | 7 | 4 |
| 13 | 6 | 5 | 8 | 56 | 27 | 1 | 4 | 99 | 47 | 17 | 0 |
| 14 | 6 | 15 | 4 | 57 | 27 | 11 | 0 | 100 | 48 | 6 | 8 |
| 15 | 7 | 5 | 0 | 58 | 28 | 0 | 8 | 108 | 52 | 4 | 0 |
| 16 | 7 | 14 | 8 | 59 | 28 | 10 | 4 | 110 | 53 | 3 | 4 |
| 17 | 8 | 4 | 4 | 60 | 29 | 0 | 0 | 112 | 54 | 2 | 8 |
| 18 | 8 | 14 | 0 | 61 | 29 | 9 | 8 | 120 | 58 | 0 | 0 |
| 19 | 9 | 3 | 8 | 62 | 29 | 19 | 4 | 130 | 62 | 16 | 8 |
| 20 | 9 | 13 | 4 | 63 | 30 | 9 | 0 | 132 | 63 | 16 | 0 |
| 21 | 10 | 3 | 0 | 64 | 30 | 18 | 8 | 140 | 67 | 13 | 4 |
| 22 | 10 | 12 | 8 | 65 | 31 | 8 | 4 | 144 | 69 | 12 | 0 |
| 23 | 11 | 2 | 4 | 66 | 31 | 18 | 0 | 150 | 72 | 10 | 0 |
| 24 | 11 | 12 | 0 | 67 | 32 | 7 | 8 | 175 | 84 | 11 | 8 |
| 25 | 12 | 1 | 8 | 68 | 32 | 17 | 4 | 200 | 96 | 13 | 4 |
| 26 | 12 | 11 | 4 | 69 | 33 | 7 | 0 | 250 | 120 | 16 | 8 |
| 27 | 13 | 1 | 0 | 70 | 33 | 16 | 8 | 300 | 145 | 0 | 0 |
| 28 | 13 | 10 | 8 | 71 | 34 | 6 | 4 | 365 | 176 | 8 | 4 |
| 29 | 14 | 0 | 4 | 72 | 34 | 16 | 0 | 400 | 193 | 6 | 8 |
| 30 | 14 | 10 | 0 | 73 | 35 | 5 | 8 | 500 | 241 | 13 | 4 |
| 31 | 14 | 19 | 8 | 74 | 35 | 15 | 4 | 600 | 290 | 0 | 0 |
| 32 | 15 | 9 | 4 | 75 | 36 | 5 | 0 | 700 | 338 | 6 | 8 |
| 33 | 15 | 19 | 0 | 76 | 36 | 14 | 8 | 750 | 362 | 10 | 0 |
| 34 | 16 | 8 | 8 | 77 | 37 | 4 | 4 | 800 | 386 | 13 | 4 |
| 35 | 16 | 18 | 4 | 78 | 37 | 14 | 0 | 900 | 435 | 0 | 0 |
| 36 | 17 | 8 | 0 | 79 | 38 | 3 | 8 | 1000 | 483 | 6 | 8 |
| 37 | 17 | 17 | 8 | 80 | 38 | 13 | 4 | 1250 | 604 | 3 | 4 |
| 38 | 18 | 7 | 4 | 81 | 39 | 3 | 0 | 1500 | 725 | 0 | 0 |
| 39 | 18 | 17 | 0 | 82 | 39 | 12 | 8 | 1750 | 845 | 16 | 8 |
| 40 | 19 | 6 | 8 | 83 | 40 | 2 | 4 | 2000 | 966 | 13 | 4 |
| 41 | 19 | 16 | 4 | 84 | 40 | 12 | 0 | 2240 | 1082 | 13 | 4 |
| 42 | 20 | 6 | 0 | 85 | 41 | 1 | 8 | 3000 | 1450 | 0 | 0 |
| 43 | 20 | 15 | 8 | 86 | 41 | 11 | 4 | 5000 | 2416 | 13 | 4 |

## 9s. 9d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 9 | 9 | 44 | 21 | 9 | 0 | 87 | 42 | 8 | 3 |
| 2 | 0 | 19 | 6 | 45 | 21 | 18 | 9 | 88 | 42 | 18 | 0 |
| 3 | 1 | 9 | 3 | 46 | 22 | 8 | 6 | 89 | 43 | 7 | 9 |
| 4 | 1 | 19 | 0 | 47 | 22 | 18 | 3 | 90 | 43 | 17 | 6 |
| 5 | 2 | 8 | 9 | 48 | 23 | 8 | 0 | 91 | 44 | 7 | 3 |
| 6 | 2 | 18 | 6 | 49 | 23 | 17 | 9 | 92 | 44 | 17 | 0 |
| 7 | 3 | 8 | 3 | 50 | 24 | 7 | 6 | 93 | 45 | 6 | 9 |
| 8 | 3 | 18 | 0 | 51 | 24 | 17 | 3 | 94 | 45 | 16 | 6 |
| 9 | 4 | 7 | 9 | 52 | 25 | 7 | 0 | 95 | 46 | 6 | 3 |
| 10 | 4 | 17 | 6 | 53 | 25 | 16 | 9 | 96 | 46 | 16 | 0 |
| 11 | 5 | 7 | 3 | 54 | 26 | 6 | 6 | 97 | 47 | 5 | 9 |
| 12 | 5 | 17 | 0 | 55 | 26 | 16 | 3 | 98 | 47 | 15 | 6 |
| 13 | 6 | 6 | 9 | 56 | 27 | 6 | 0 | 99 | 48 | 5 | 3 |
| 14 | 6 | 16 | 6 | 57 | 27 | 15 | 9 | 100 | 48 | 15 | 0 |
| 15 | 7 | 6 | 3 | 58 | 28 | 5 | 6 | 108 | 52 | 13 | 0 |
| 16 | 7 | 16 | 0 | 59 | 28 | 15 | 3 | 110 | 53 | 12 | 6 |
| 17 | 8 | 5 | 9 | 60 | 29 | 5 | 0 | 112 | 54 | 12 | 0 |
| 18 | 8 | 15 | 6 | 61 | 29 | 14 | 9 | 120 | 58 | 10 | 0 |
| 19 | 9 | 5 | 3 | 62 | 30 | 4 | 6 | 130 | 63 | 7 | 6 |
| 20 | 9 | 15 | 0 | 63 | 30 | 14 | 3 | 132 | 64 | 7 | 0 |
| 21 | 10 | 4 | 9 | 64 | 31 | 4 | 0 | 140 | 68 | 5 | 0 |
| 22 | 10 | 14 | 6 | 65 | 31 | 13 | 9 | 144 | 70 | 4 | 0 |
| 23 | 11 | 4 | 3 | 66 | 32 | 3 | 6 | 150 | 73 | 2 | 6 |
| 24 | 11 | 14 | 0 | 67 | 32 | 13 | 3 | 175 | 85 | 6 | 3 |
| 25 | 12 | 3 | 9 | 68 | 33 | 3 | 0 | 200 | 97 | 10 | 0 |
| 26 | 12 | 13 | 6 | 69 | 33 | 12 | 9 | 250 | 121 | 17 | 6 |
| 27 | 13 | 3 | 3 | 70 | 34 | 2 | 6 | 300 | 146 | 5 | 0 |
| 28 | 13 | 13 | 0 | 71 | 34 | 12 | 3 | 365 | 177 | 18 | 9 |
| 29 | 14 | 2 | 9 | 72 | 35 | 2 | 0 | 400 | 195 | 0 | 0 |
| 30 | 14 | 12 | 6 | 73 | 35 | 11 | 9 | 500 | 243 | 15 | 0 |
| 31 | 15 | 2 | 3 | 74 | 36 | 1 | 6 | 600 | 292 | 10 | 0 |
| 32 | 15 | 12 | 0 | 75 | 36 | 11 | 3 | 700 | 341 | 5 | 0 |
| 33 | 16 | 1 | 9 | 76 | 37 | 1 | 0 | 750 | 365 | 12 | 6 |
| 34 | 16 | 11 | 6 | 77 | 37 | 10 | 9 | 800 | 390 | 0 | 0 |
| 35 | 17 | 1 | 3 | 78 | 38 | 0 | 6 | 900 | 438 | 15 | 0 |
| 36 | 17 | 11 | 0 | 79 | 38 | 10 | 3 | 1000 | 487 | 10 | 0 |
| 37 | 18 | 0 | 9 | 80 | 39 | 0 | 0 | 1250 | 609 | 7 | 6 |
| 38 | 18 | 10 | 6 | 81 | 39 | 9 | 9 | 1500 | 731 | 5 | 0 |
| 39 | 19 | 0 | 3 | 82 | 39 | 19 | 6 | 1750 | 853 | 2 | 6 |
| 40 | 19 | 10 | 0 | 83 | 40 | 9 | 3 | 2000 | 975 | 0 | 0 |
| 41 | 19 | 19 | 9 | 84 | 40 | 19 | 0 | 2240 | 1092 | 0 | 0 |
| 42 | 20 | 9 | 6 | 85 | 41 | 8 | 9 | 3000 | 1462 | 10 | 0 |
| 43 | 20 | 19 | 3 | 86 | 41 | 18 | 6 | 5000 | 2437 | 10 | 0 |

## 9s. 11d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 9 | 11 | 44 | 21 | 16 | 4 | 87 | 43 | 2 | 9 |
| 2 | 0 | 19 | 10 | 45 | 22 | 6 | 3 | 88 | 43 | 12 | 8 |
| 3 | 1 | 9 | 9 | 46 | 22 | 16 | 2 | 89 | 44 | 2 | 7 |
| 4 | 1 | 19 | 8 | 47 | 23 | 6 | 1 | 90 | 44 | 12 | 6 |
| 5 | 2 | 9 | 7 | 48 | 23 | 16 | 0 | 91 | 45 | 2 | 5 |
| 6 | 2 | 19 | 6 | 49 | 24 | 5 | 11 | 92 | 45 | 12 | 4 |
| 7 | 3 | 9 | 5 | 50 | 24 | 15 | 10 | 93 | 46 | 2 | 3 |
| 8 | 3 | 19 | 4 | 51 | 25 | 5 | 9 | 94 | 46 | 12 | 2 |
| 9 | 4 | 9 | 3 | 52 | 25 | 15 | 8 | 95 | 47 | 2 | 1 |
| 10 | 4 | 19 | 2 | 53 | 26 | 5 | 7 | 96 | 47 | 12 | 0 |
| 11 | 5 | 9 | 1 | 54 | 26 | 15 | 6 | 97 | 48 | 1 | 11 |
| 12 | 5 | 19 | 0 | 55 | 27 | 5 | 5 | 98 | 48 | 11 | 10 |
| 13 | 6 | 8 | 11 | 56 | 27 | 15 | 4 | 99 | 49 | 1 | 9 |
| 14 | 6 | 18 | 10 | 57 | 28 | 5 | 3 | 100 | 49 | 11 | 8 |
| 15 | 7 | 8 | 9 | 58 | 28 | 15 | 2 | 108 | 53 | 11 | 0 |
| 16 | 7 | 18 | 8 | 59 | 29 | 5 | 1 | 110 | 54 | 10 | 10 |
| 17 | 8 | 8 | 7 | 60 | 29 | 15 | 0 | 112 | 55 | 10 | 8 |
| 18 | 8 | 18 | 6 | 61 | 30 | 4 | 11 | 120 | 59 | 10 | 0 |
| 19 | 9 | 8 | 5 | 62 | 30 | 14 | 10 | 130 | 64 | 9 | 2 |
| 20 | 9 | 18 | 4 | 63 | 31 | 4 | 9 | 132 | 65 | 9 | 0 |
| 21 | 10 | 8 | 3 | 64 | 31 | 14 | 8 | 140 | 69 | 8 | 4 |
| 22 | 10 | 18 | 2 | 65 | 32 | 4 | 7 | 144 | 71 | 8 | 0 |
| 23 | 11 | 8 | 1 | 66 | 32 | 14 | 6 | 150 | 74 | 7 | 6 |
| 24 | 11 | 18 | 0 | 67 | 33 | 4 | 5 | 175 | 86 | 15 | 5 |
| 25 | 12 | 7 | 11 | 68 | 33 | 14 | 4 | 200 | 99 | 3 | 4 |
| 26 | 12 | 17 | 10 | 69 | 34 | 4 | 3 | 250 | 123 | 19 | 2 |
| 27 | 13 | 7 | 9 | 70 | 34 | 14 | 2 | 300 | 148 | 15 | 0 |
| 28 | 13 | 17 | 8 | 71 | 35 | 4 | 1 | 365 | 180 | 19 | 7 |
| 29 | 14 | 7 | 7 | 72 | 35 | 14 | 0 | 400 | 198 | 6 | 8 |
| 30 | 14 | 17 | 6 | 73 | 36 | 3 | 11 | 500 | 247 | 18 | 4 |
| 31 | 15 | 7 | 5 | 74 | 36 | 13 | 10 | 600 | 297 | 10 | 0 |
| 32 | 15 | 17 | 4 | 75 | 37 | 3 | 9 | 700 | 347 | 1 | 8 |
| 33 | 16 | 7 | 3 | 76 | 37 | 13 | 8 | 750 | 371 | 17 | 6 |
| 34 | 16 | 17 | 2 | 77 | 38 | 3 | 7 | 800 | 396 | 13 | 4 |
| 35 | 17 | 7 | 1 | 78 | 38 | 13 | 6 | 900 | 446 | 5 | 0 |
| 36 | 17 | 17 | 0 | 79 | 39 | 3 | 5 | 1000 | 495 | 16 | 8 |
| 37 | 18 | 6 | 11 | 80 | 39 | 13 | 4 | 1250 | 619 | 15 | 10 |
| 38 | 18 | 16 | 10 | 81 | 40 | 3 | 3 | 1500 | 743 | 15 | 0 |
| 39 | 19 | 6 | 9 | 82 | 40 | 13 | 2 | 1750 | 867 | 14 | 2 |
| 40 | 19 | 16 | 8 | 83 | 41 | 3 | 1 | 2000 | 991 | 13 | 4 |
| 41 | 20 | 6 | 7 | 84 | 41 | 13 | 0 | 2240 | 1110 | 13 | 4 |
| 42 | 20 | 16 | 6 | 85 | 42 | 2 | 11 | 3000 | 1487 | 10 | 0 |
| 43 | 21 | 6 | 5 | 86 | 42 | 12 | 10 | 5000 | 2479 | 3 | 4 |

## 9s. 10d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 9 | 10 | 44 | 21 | 12 | 8 | 87 | 42 | 15 | 6 |
| 2 | 0 | 19 | 8 | 45 | 22 | 2 | 6 | 88 | 43 | 5 | 4 |
| 3 | 1 | 9 | 6 | 46 | 22 | 12 | 4 | 89 | 43 | 15 | 2 |
| 4 | 1 | 19 | 4 | 47 | 23 | 2 | 2 | 90 | 44 | 5 | 0 |
| 5 | 2 | 9 | 2 | 48 | 23 | 12 | 0 | 91 | 44 | 14 | 10 |
| 6 | 2 | 19 | 0 | 49 | 24 | 1 | 10 | 92 | 45 | 4 | 8 |
| 7 | 3 | 8 | 10 | 50 | 24 | 11 | 8 | 93 | 45 | 14 | 6 |
| 8 | 3 | 18 | 8 | 51 | 25 | 1 | 6 | 94 | 46 | 4 | 4 |
| 9 | 4 | 8 | 6 | 52 | 25 | 11 | 4 | 95 | 46 | 14 | 2 |
| 10 | 4 | 18 | 4 | 53 | 26 | 1 | 2 | 96 | 47 | 4 | 0 |
| 11 | 5 | 8 | 2 | 54 | 26 | 11 | 0 | 97 | 47 | 13 | 10 |
| 12 | 5 | 18 | 0 | 55 | 27 | 0 | 10 | 98 | 48 | 3 | 8 |
| 13 | 6 | 7 | 10 | 56 | 27 | 10 | 8 | 99 | 48 | 13 | 6 |
| 14 | 6 | 17 | 8 | 57 | 28 | 0 | 6 | 100 | 49 | 3 | 4 |
| 15 | 7 | 7 | 6 | 58 | 28 | 10 | 4 | 108 | 53 | 2 | 0 |
| 16 | 7 | 17 | 4 | 59 | 29 | 0 | 2 | 110 | 54 | 1 | 8 |
| 17 | 8 | 7 | 2 | 60 | 29 | 10 | 0 | 112 | 55 | 1 | 4 |
| 18 | 8 | 17 | 0 | 61 | 29 | 19 | 10 | 120 | 59 | 0 | 0 |
| 19 | 9 | 6 | 10 | 62 | 30 | 9 | 8 | 130 | 63 | 18 | 4 |
| 20 | 9 | 16 | 8 | 63 | 30 | 19 | 6 | 132 | 64 | 18 | 0 |
| 21 | 10 | 6 | 6 | 64 | 31 | 9 | 4 | 140 | 68 | 16 | 8 |
| 22 | 10 | 16 | 4 | 65 | 31 | 19 | 2 | 144 | 70 | 16 | 0 |
| 23 | 11 | 6 | 2 | 66 | 32 | 9 | 0 | 150 | 73 | 15 | 0 |
| 24 | 11 | 16 | 0 | 67 | 32 | 18 | 10 | 175 | 86 | 0 | 10 |
| 25 | 12 | 5 | 10 | 68 | 33 | 8 | 8 | 200 | 98 | 6 | 8 |
| 26 | 12 | 15 | 8 | 69 | 33 | 18 | 6 | 250 | 122 | 18 | 4 |
| 27 | 13 | 5 | 6 | 70 | 34 | 8 | 4 | 300 | 147 | 10 | 0 |
| 28 | 13 | 15 | 4 | 71 | 34 | 18 | 2 | 365 | 179 | 9 | 2 |
| 29 | 14 | 5 | 2 | 72 | 35 | 8 | 0 | 400 | 196 | 13 | 4 |
| 30 | 14 | 15 | 0 | 73 | 35 | 17 | 10 | 500 | 245 | 16 | 8 |
| 31 | 15 | 4 | 10 | 74 | 36 | 7 | 8 | 600 | 295 | 0 | 0 |
| 32 | 15 | 14 | 8 | 75 | 36 | 17 | 6 | 700 | 344 | 3 | 4 |
| 33 | 16 | 4 | 6 | 76 | 37 | 7 | 4 | 750 | 368 | 15 | 0 |
| 34 | 16 | 14 | 4 | 77 | 37 | 17 | 2 | 800 | 393 | 6 | 8 |
| 35 | 17 | 4 | 2 | 78 | 38 | 7 | 0 | 900 | 442 | 10 | 0 |
| 36 | 17 | 14 | 0 | 79 | 38 | 16 | 10 | 1000 | 491 | 13 | 4 |
| 37 | 18 | 3 | 10 | 80 | 39 | 6 | 8 | 1250 | 614 | 11 | 8 |
| 38 | 18 | 13 | 8 | 81 | 39 | 16 | 6 | 1500 | 737 | 10 | 0 |
| 39 | 19 | 3 | 6 | 82 | 40 | 6 | 4 | 1750 | 860 | 8 | 4 |
| 40 | 19 | 13 | 4 | 83 | 40 | 16 | 2 | 2000 | 983 | 6 | 8 |
| 41 | 20 | 3 | 2 | 84 | 41 | 6 | 0 | 2240 | 1101 | 6 | 8 |
| 42 | 20 | 13 | 0 | 85 | 41 | 15 | 10 | 3000 | 1475 | 0 | 0 |
| 43 | 21 | 2 | 10 | 86 | 42 | 5 | 8 | 5000 | 2458 | 6 | 8 |

## 10s.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 10 | 0 | 44 | 22 | 0 | 0 | 87 | 43 | 10 | 0 |
| 2 | 1 | 0 | 0 | 45 | 22 | 10 | 0 | 88 | 44 | 0 | 0 |
| 3 | 1 | 10 | 0 | 46 | 23 | 0 | 0 | 89 | 44 | 10 | 0 |
| 4 | 2 | 0 | 0 | 47 | 23 | 10 | 0 | 90 | 45 | 0 | 0 |
| 5 | 2 | 10 | 0 | 48 | 24 | 0 | 0 | 91 | 45 | 10 | 0 |
| 6 | 3 | 0 | 0 | 49 | 24 | 10 | 0 | 92 | 46 | 0 | 0 |
| 7 | 3 | 10 | 0 | 50 | 25 | 0 | 0 | 93 | 46 | 10 | 0 |
| 8 | 4 | 0 | 0 | 51 | 25 | 10 | 0 | 94 | 47 | 0 | 0 |
| 9 | 4 | 10 | 0 | 52 | 26 | 0 | 0 | 95 | 47 | 10 | 0 |
| 10 | 5 | 0 | 0 | 53 | 26 | 10 | 0 | 96 | 48 | 0 | 0 |
| 11 | 5 | 10 | 0 | 54 | 27 | 0 | 0 | 97 | 48 | 10 | 0 |
| 12 | 6 | 0 | 0 | 55 | 27 | 10 | 0 | 98 | 49 | 0 | 0 |
| 13 | 6 | 10 | 0 | 56 | 28 | 0 | 0 | 99 | 49 | 10 | 0 |
| 14 | 7 | 0 | 0 | 57 | 28 | 10 | 0 | 100 | 50 | 0 | 0 |
| 15 | 7 | 10 | 0 | 58 | 29 | 0 | 0 | 108 | 54 | 0 | 0 |
| 16 | 8 | 0 | 0 | 59 | 29 | 10 | 0 | 110 | 55 | 0 | 0 |
| 17 | 8 | 10 | 0 | 60 | 30 | 0 | 0 | 112 | 56 | 0 | 0 |
| 18 | 9 | 0 | 0 | 61 | 30 | 10 | 0 | 120 | 60 | 0 | 0 |
| 19 | 9 | 10 | 0 | 62 | 31 | 0 | 0 | 130 | 65 | 0 | 0 |
| 20 | 10 | 0 | 0 | 63 | 31 | 10 | 0 | 132 | 66 | 0 | 0 |
| 21 | 10 | 10 | 0 | 64 | 32 | 0 | 0 | 140 | 70 | 0 | 0 |
| 22 | 11 | 0 | 0 | 65 | 32 | 10 | 0 | 144 | 72 | 0 | 0 |
| 23 | 11 | 10 | 0 | 66 | 33 | 0 | 0 | 150 | 75 | 0 | 0 |
| 24 | 12 | 0 | 0 | 67 | 33 | 10 | 0 | 175 | 87 | 10 | 0 |
| 25 | 12 | 10 | 0 | 68 | 34 | 0 | 0 | 200 | 100 | 0 | 0 |
| 26 | 13 | 0 | 0 | 69 | 34 | 10 | 0 | 250 | 125 | 0 | 0 |
| 27 | 13 | 10 | 0 | 70 | 35 | 0 | 0 | 300 | 150 | 0 | 0 |
| 28 | 14 | 0 | 0 | 71 | 35 | 10 | 0 | 365 | 182 | 10 | 0 |
| 29 | 14 | 10 | 0 | 72 | 36 | 0 | 0 | 400 | 200 | 0 | 0 |
| 30 | 15 | 0 | 0 | 73 | 36 | 10 | 0 | 500 | 250 | 0 | 0 |
| 31 | 15 | 10 | 0 | 74 | 37 | 0 | 0 | 600 | 300 | 0 | 0 |
| 32 | 16 | 0 | 0 | 75 | 37 | 10 | 0 | 700 | 350 | 0 | 0 |
| 33 | 16 | 10 | 0 | 76 | 38 | 0 | 0 | 750 | 375 | 0 | 0 |
| 34 | 17 | 0 | 0 | 77 | 38 | 10 | 0 | 800 | 400 | 0 | 0 |
| 35 | 17 | 10 | 0 | 78 | 39 | 0 | 0 | 900 | 450 | 0 | 0 |
| 36 | 18 | 0 | 0 | 79 | 39 | 10 | 0 | 1000 | 500 | 0 | 0 |
| 37 | 18 | 10 | 0 | 80 | 40 | 0 | 0 | 1250 | 625 | 0 | 0 |
| 38 | 19 | 0 | 0 | 81 | 40 | 10 | 0 | 1500 | 750 | 0 | 0 |
| 39 | 19 | 10 | 0 | 82 | 41 | 0 | 0 | 1750 | 875 | 0 | 0 |
| 40 | 20 | 0 | 0 | 83 | 41 | 10 | 0 | 2000 | 1000 | 0 | 0 |
| 41 | 20 | 10 | 0 | 84 | 42 | 0 | 0 | 2240 | 1120 | 0 | 0 |
| 42 | 21 | 0 | 0 | 85 | 42 | 10 | 0 | 3000 | 1500 | 0 | 0 |
| 43 | 21 | 10 | 0 | 86 | 43 | 0 | 0 | 5000 | 2500 | 0 | 0 |

## 10s. 6d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 10 | 6 | 44 | 23 | 2 | 0 | 87 | 45 | 13 | 6 |
| 2 | 1 | 1 | 0 | 45 | 23 | 12 | 6 | 88 | 46 | 4 | 0 |
| 3 | 1 | 11 | 6 | 46 | 24 | 3 | 0 | 89 | 46 | 14 | 6 |
| 4 | 2 | 2 | 0 | 47 | 24 | 13 | 6 | 90 | 47 | 5 | 0 |
| 5 | 2 | 12 | 6 | 48 | 25 | 4 | 0 | 91 | 47 | 15 | 6 |
| 6 | 3 | 3 | 0 | 49 | 25 | 14 | 6 | 92 | 48 | 6 | 0 |
| 7 | 3 | 13 | 6 | 50 | 26 | 5 | 0 | 93 | 48 | 16 | 6 |
| 8 | 4 | 4 | 0 | 51 | 26 | 15 | 6 | 94 | 49 | 7 | 0 |
| 9 | 4 | 14 | 6 | 52 | 27 | 6 | 0 | 95 | 49 | 17 | 6 |
| 10 | 5 | 5 | 0 | 53 | 27 | 16 | 6 | 96 | 50 | 8 | 0 |
| 11 | 5 | 15 | 6 | 54 | 28 | 7 | 0 | 97 | 50 | 18 | 6 |
| 12 | 6 | 6 | 0 | 55 | 28 | 17 | 6 | 98 | 51 | 9 | 0 |
| 13 | 6 | 16 | 6 | 56 | 29 | 8 | 0 | 99 | 51 | 19 | 6 |
| 14 | 7 | 7 | 0 | 57 | 29 | 18 | 6 | 100 | 52 | 10 | 0 |
| 15 | 7 | 17 | 6 | 58 | 30 | 9 | 0 | 108 | 56 | 14 | 0 |
| 16 | 8 | 8 | 0 | 59 | 30 | 19 | 6 | 110 | 57 | 15 | 0 |
| 17 | 8 | 18 | 6 | 60 | 31 | 10 | 0 | 112 | 58 | 16 | 0 |
| 18 | 9 | 9 | 0 | 61 | 32 | 0 | 6 | 120 | 63 | 0 | 0 |
| 19 | 9 | 19 | 6 | 62 | 32 | 11 | 0 | 130 | 68 | 5 | 0 |
| 20 | 10 | 10 | 0 | 63 | 33 | 1 | 6 | 132 | 69 | 6 | 0 |
| 21 | 11 | 0 | 6 | 64 | 33 | 12 | 0 | 140 | 73 | 10 | 0 |
| 22 | 11 | 11 | 0 | 65 | 34 | 2 | 6 | 144 | 75 | 12 | 0 |
| 23 | 12 | 1 | 6 | 66 | 34 | 13 | 0 | 150 | 78 | 15 | 0 |
| 24 | 12 | 12 | 0 | 67 | 35 | 3 | 6 | 175 | 91 | 17 | 6 |
| 25 | 13 | 2 | 6 | 68 | 35 | 14 | 0 | 200 | 105 | 0 | 0 |
| 26 | 13 | 13 | 0 | 69 | 36 | 4 | 6 | 250 | 131 | 5 | 0 |
| 27 | 14 | 3 | 6 | 70 | 36 | 15 | 0 | 300 | 157 | 10 | 0 |
| 28 | 14 | 14 | 0 | 71 | 37 | 5 | 6 | 365 | 191 | 12 | 6 |
| 29 | 15 | 4 | 6 | 72 | 37 | 16 | 0 | 400 | 210 | 0 | 0 |
| 30 | 15 | 15 | 0 | 73 | 38 | 6 | 6 | 500 | 262 | 10 | 0 |
| 31 | 16 | 5 | 6 | 74 | 38 | 17 | 0 | 600 | 315 | 0 | 0 |
| 32 | 16 | 16 | 0 | 75 | 39 | 7 | 6 | 700 | 367 | 10 | 0 |
| 33 | 17 | 6 | 6 | 76 | 39 | 18 | 0 | 750 | 393 | 15 | 0 |
| 34 | 17 | 17 | 0 | 77 | 40 | 8 | 6 | 800 | 420 | 0 | 0 |
| 35 | 18 | 7 | 6 | 78 | 40 | 19 | 0 | 900 | 472 | 10 | 0 |
| 36 | 18 | 18 | 0 | 79 | 41 | 9 | 6 | 1000 | 525 | 0 | 0 |
| 37 | 19 | 8 | 6 | 80 | 42 | 0 | 0 | 1250 | 656 | 5 | 0 |
| 38 | 19 | 19 | 0 | 81 | 42 | 10 | 6 | 1500 | 787 | 10 | 0 |
| 39 | 20 | 9 | 6 | 82 | 43 | 1 | 0 | 1750 | 918 | 15 | 0 |
| 40 | 21 | 0 | 0 | 83 | 43 | 11 | 6 | 2000 | 1050 | 0 | 0 |
| 41 | 21 | 10 | 6 | 84 | 44 | 2 | 0 | 2240 | 1176 | 0 | 0 |
| 42 | 22 | 1 | 0 | 85 | 44 | 12 | 6 | 3000 | 1575 | 0 | 0 |
| 43 | 22 | 11 | 6 | 86 | 45 | 3 | 0 | 5000 | 2625 | 0 | 0 |

## 11s. 6d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 11 | 6 | 44 | 25 | 6 | 0 | 87 | 50 | 0 | 6 |
| 2 | 1 | 3 | 0 | 45 | 25 | 17 | 6 | 88 | 50 | 12 | 0 |
| 3 | 1 | 14 | 6 | 46 | 26 | 9 | 0 | 89 | 51 | 3 | 6 |
| 4 | 2 | 6 | 0 | 47 | 27 | 0 | 6 | 90 | 51 | 15 | 0 |
| 5 | 2 | 17 | 6 | 48 | 27 | 12 | 0 | 91 | 52 | 6 | 6 |
| 6 | 3 | 9 | 0 | 49 | 28 | 3 | 6 | 92 | 52 | 18 | 0 |
| 7 | 4 | 0 | 6 | 50 | 28 | 15 | 0 | 93 | 53 | 9 | 6 |
| 8 | 4 | 12 | 0 | 51 | 29 | 6 | 6 | 94 | 54 | 1 | 0 |
| 9 | 5 | 3 | 6 | 52 | 29 | 18 | 0 | 95 | 54 | 12 | 6 |
| 10 | 5 | 15 | 0 | 53 | 30 | 9 | 6 | 96 | 55 | 4 | 0 |
| 11 | 6 | 6 | 6 | 54 | 31 | 1 | 0 | 97 | 55 | 15 | 6 |
| 12 | 6 | 18 | 0 | 55 | 31 | 12 | 6 | 98 | 56 | 7 | 0 |
| 13 | 7 | 9 | 6 | 56 | 32 | 4 | 0 | 99 | 56 | 18 | 6 |
| 14 | 8 | 1 | 0 | 57 | 32 | 15 | 6 | 100 | 57 | 10 | 0 |
| 15 | 8 | 12 | 6 | 58 | 33 | 7 | 0 | 108 | 62 | 2 | 0 |
| 16 | 9 | 4 | 0 | 59 | 33 | 18 | 6 | 110 | 63 | 5 | 0 |
| 17 | 9 | 15 | 6 | 60 | 34 | 10 | 0 | 112 | 64 | 8 | 0 |
| 18 | 10 | 7 | 0 | 61 | 35 | 1 | 6 | 120 | 69 | 0 | 0 |
| 19 | 10 | 18 | 6 | 62 | 35 | 13 | 0 | 130 | 74 | 15 | 0 |
| 20 | 11 | 10 | 0 | 63 | 36 | 4 | 6 | 132 | 75 | 18 | 0 |
| 21 | 12 | 1 | 6 | 64 | 36 | 16 | 0 | 140 | 80 | 10 | 0 |
| 22 | 12 | 13 | 0 | 65 | 37 | 7 | 6 | 144 | 82 | 16 | 0 |
| 23 | 13 | 4 | 6 | 66 | 37 | 19 | 0 | 150 | 86 | 5 | 0 |
| 24 | 13 | 16 | 0 | 67 | 38 | 10 | 6 | 175 | 100 | 12 | 6 |
| 25 | 14 | 7 | 6 | 68 | 39 | 2 | 0 | 200 | 115 | 0 | 0 |
| 26 | 14 | 19 | 0 | 69 | 39 | 13 | 6 | 250 | 143 | 15 | 0 |
| 27 | 15 | 10 | 6 | 70 | 40 | 5 | 0 | 300 | 172 | 10 | 0 |
| 28 | 16 | 2 | 0 | 71 | 40 | 16 | 6 | 365 | 209 | 17 | 6 |
| 29 | 16 | 13 | 6 | 72 | 41 | 8 | 0 | 400 | 230 | 0 | 0 |
| 30 | 17 | 5 | 0 | 73 | 41 | 19 | 6 | 500 | 287 | 10 | 0 |
| 31 | 17 | 16 | 6 | 74 | 42 | 11 | 0 | 600 | 345 | 0 | 0 |
| 32 | 18 | 8 | 0 | 75 | 43 | 2 | 6 | 700 | 402 | 10 | 0 |
| 33 | 18 | 19 | 6 | 76 | 43 | 14 | 0 | 750 | 431 | 5 | 0 |
| 34 | 19 | 11 | 0 | 77 | 44 | 5 | 6 | 800 | 460 | 0 | 0 |
| 35 | 20 | 2 | 6 | 78 | 44 | 17 | 0 | 900 | 517 | 10 | 0 |
| 36 | 20 | 14 | 0 | 79 | 45 | 8 | 6 | 1000 | 575 | 0 | 0 |
| 37 | 21 | 5 | 6 | 80 | 46 | 0 | 0 | 1250 | 718 | 15 | 0 |
| 38 | 21 | 17 | 0 | 81 | 46 | 11 | 6 | 1500 | 862 | 10 | 0 |
| 39 | 22 | 8 | 6 | 82 | 47 | 3 | 0 | 1750 | 1006 | 5 | 0 |
| 40 | 23 | 0 | 0 | 83 | 47 | 14 | 6 | 2000 | 1150 | 0 | 0 |
| 41 | 23 | 11 | 6 | 84 | 48 | 6 | 0 | 2240 | 1288 | 0 | 0 |
| 42 | 24 | 3 | 0 | 85 | 48 | 17 | 6 | 3000 | 1725 | 0 | 0 |
| 43 | 24 | 14 | 6 | 86 | 49 | 9 | 0 | 5000 | 2875 | 0 | 0 |

## 11s.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 11 | 0 | 44 | 24 | 4 | 0 | 87 | 47 | 17 | 0 |
| 2 | 1 | 2 | 0 | 45 | 24 | 15 | 0 | 88 | 48 | 8 | 0 |
| 3 | 1 | 13 | 0 | 46 | 25 | 6 | 0 | 89 | 48 | 19 | 0 |
| 4 | 2 | 4 | 0 | 47 | 25 | 17 | 0 | 90 | 49 | 10 | 0 |
| 5 | 2 | 15 | 0 | 48 | 26 | 8 | 0 | 91 | 50 | 1 | 0 |
| 6 | 3 | 6 | 0 | 49 | 26 | 19 | 0 | 92 | 50 | 12 | 0 |
| 7 | 3 | 17 | 0 | 50 | 27 | 10 | 0 | 93 | 51 | 3 | 0 |
| 8 | 4 | 8 | 0 | 51 | 28 | 1 | 0 | 94 | 51 | 14 | 0 |
| 9 | 4 | 19 | 0 | 52 | 28 | 12 | 0 | 95 | 52 | 5 | 0 |
| 10 | 5 | 10 | 0 | 53 | 29 | 3 | 0 | 96 | 52 | 16 | 0 |
| 11 | 6 | 1 | 0 | 54 | 29 | 14 | 0 | 97 | 53 | 7 | 0 |
| 12 | 6 | 12 | 0 | 55 | 30 | 5 | 0 | 98 | 53 | 18 | 0 |
| 13 | 7 | 3 | 0 | 56 | 30 | 16 | 0 | 99 | 54 | 9 | 0 |
| 14 | 7 | 14 | 0 | 57 | 31 | 7 | 0 | 100 | 55 | 0 | 0 |
| 15 | 8 | 5 | 0 | 58 | 31 | 18 | 0 | 108 | 59 | 8 | 0 |
| 16 | 8 | 16 | 0 | 59 | 32 | 9 | 0 | 110 | 60 | 10 | 0 |
| 17 | 9 | 7 | 0 | 60 | 33 | 0 | 0 | 112 | 61 | 12 | 0 |
| 18 | 9 | 18 | 0 | 61 | 33 | 11 | 0 | 120 | 66 | 0 | 0 |
| 19 | 10 | 9 | 0 | 62 | 34 | 2 | 0 | 130 | 71 | 10 | 0 |
| 20 | 11 | 0 | 0 | 63 | 34 | 13 | 0 | 132 | 72 | 12 | 0 |
| 21 | 11 | 11 | 0 | 64 | 35 | 4 | 0 | 140 | 77 | 0 | 0 |
| 22 | 12 | 2 | 0 | 65 | 35 | 15 | 0 | 144 | 79 | 4 | 0 |
| 23 | 12 | 13 | 0 | 66 | 36 | 6 | 0 | 150 | 82 | 10 | 0 |
| 24 | 13 | 4 | 0 | 67 | 36 | 17 | 0 | 175 | 96 | 5 | 0 |
| 25 | 13 | 15 | 0 | 68 | 37 | 8 | 0 | 200 | 110 | 0 | 0 |
| 26 | 14 | 6 | 0 | 69 | 37 | 19 | 0 | 250 | 137 | 10 | 0 |
| 27 | 14 | 17 | 0 | 70 | 38 | 10 | 0 | 300 | 165 | 0 | 0 |
| 28 | 15 | 8 | 0 | 71 | 39 | 1 | 0 | 365 | 200 | 15 | 0 |
| 29 | 15 | 19 | 0 | 72 | 39 | 12 | 0 | 400 | 220 | 0 | 0 |
| 30 | 16 | 10 | 0 | 73 | 40 | 3 | 0 | 500 | 275 | 0 | 0 |
| 31 | 17 | 1 | 0 | 74 | 40 | 14 | 0 | 600 | 330 | 0 | 0 |
| 32 | 17 | 12 | 0 | 75 | 41 | 5 | 0 | 700 | 385 | 0 | 0 |
| 33 | 18 | 3 | 0 | 76 | 41 | 16 | 0 | 750 | 412 | 10 | 0 |
| 34 | 18 | 14 | 0 | 77 | 42 | 7 | 0 | 800 | 440 | 0 | 0 |
| 35 | 19 | 5 | 0 | 78 | 42 | 18 | 0 | 900 | 495 | 0 | 0 |
| 36 | 19 | 16 | 0 | 79 | 43 | 9 | 0 | 1000 | 550 | 0 | 0 |
| 37 | 20 | 7 | 0 | 80 | 44 | 0 | 0 | 1250 | 687 | 10 | 0 |
| 38 | 20 | 18 | 0 | 81 | 44 | 11 | 0 | 1500 | 825 | 0 | 0 |
| 39 | 21 | 9 | 0 | 82 | 45 | 2 | 0 | 1750 | 962 | 10 | 0 |
| 40 | 22 | 0 | 0 | 83 | 45 | 13 | 0 | 2000 | 1100 | 0 | 0 |
| 41 | 22 | 11 | 0 | 84 | 46 | 4 | 0 | 2240 | 1232 | 0 | 0 |
| 42 | 23 | 2 | 0 | 85 | 46 | 15 | 0 | 3000 | 1650 | 0 | 0 |
| 43 | 23 | 13 | 0 | 86 | 47 | 6 | 0 | 5000 | 2750 | 0 | 0 |

## 12s.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 12 | 0 | 44 | 26 | 8 | 0 | 87 | 52 | 4 | 0 |
| 2 | 1 | 4 | 0 | 45 | 27 | 0 | 0 | 88 | 52 | 16 | 0 |
| 3 | 1 | 16 | 0 | 46 | 27 | 12 | 0 | 89 | 53 | 8 | 0 |
| 4 | 2 | 8 | 0 | 47 | 28 | 4 | 0 | 90 | 54 | 0 | 0 |
| 5 | 3 | 0 | 0 | 48 | 28 | 16 | 0 | 91 | 54 | 12 | 0 |
| 6 | 3 | 12 | 0 | 49 | 29 | 8 | 0 | 92 | 55 | 4 | 0 |
| 7 | 4 | 4 | 0 | 50 | 30 | 0 | 0 | 93 | 55 | 16 | 0 |
| 8 | 4 | 16 | 0 | 51 | 30 | 12 | 0 | 94 | 56 | 8 | 0 |
| 9 | 5 | 8 | 0 | 52 | 31 | 4 | 0 | 95 | 57 | 0 | 0 |
| 10 | 6 | 0 | 0 | 53 | 31 | 16 | 0 | 96 | 57 | 12 | 0 |
| 11 | 6 | 12 | 0 | 54 | 32 | 8 | 0 | 97 | 58 | 4 | 0 |
| 12 | 7 | 4 | 0 | 55 | 33 | 0 | 0 | 98 | 58 | 16 | 0 |
| 13 | 7 | 16 | 0 | 56 | 33 | 12 | 0 | 99 | 59 | 8 | 0 |
| 14 | 8 | 8 | 0 | 57 | 34 | 4 | 0 | 100 | 60 | 0 | 0 |
| 15 | 9 | 0 | 0 | 58 | 34 | 16 | 0 | 108 | 64 | 16 | 0 |
| 16 | 9 | 12 | 0 | 59 | 35 | 8 | 0 | 110 | 66 | 0 | 0 |
| 17 | 10 | 4 | 0 | 60 | 36 | 0 | 0 | 112 | 67 | 4 | 0 |
| 18 | 10 | 16 | 0 | 61 | 36 | 12 | 0 | 120 | 72 | 0 | 0 |
| 19 | 11 | 8 | 0 | 62 | 37 | 4 | 0 | 130 | 78 | 0 | 0 |
| 20 | 12 | 0 | 0 | 63 | 37 | 16 | 0 | 132 | 79 | 4 | 0 |
| 21 | 12 | 12 | 0 | 64 | 38 | 8 | 0 | 140 | 84 | 0 | 0 |
| 22 | 13 | 4 | 0 | 65 | 39 | 0 | 0 | 144 | 86 | 8 | 0 |
| 23 | 13 | 16 | 0 | 66 | 39 | 12 | 0 | 150 | 90 | 0 | 0 |
| 24 | 14 | 8 | 0 | 67 | 40 | 4 | 0 | 175 | 105 | 0 | 0 |
| 25 | 15 | 0 | 0 | 68 | 40 | 16 | 0 | 200 | 120 | 0 | 0 |
| 26 | 15 | 12 | 0 | 69 | 41 | 8 | 0 | 250 | 150 | 0 | 0 |
| 27 | 16 | 4 | 0 | 70 | 42 | 0 | 0 | 300 | 180 | 0 | 0 |
| 28 | 16 | 16 | 0 | 71 | 42 | 12 | 0 | 365 | 219 | 0 | 0 |
| 29 | 17 | 8 | 0 | 72 | 43 | 4 | 0 | 400 | 240 | 0 | 0 |
| 30 | 18 | 0 | 0 | 73 | 43 | 16 | 0 | 500 | 300 | 0 | 0 |
| 31 | 18 | 12 | 0 | 74 | 44 | 8 | 0 | 600 | 360 | 0 | 0 |
| 32 | 19 | 4 | 0 | 75 | 45 | 0 | 0 | 700 | 420 | 0 | 0 |
| 33 | 19 | 16 | 0 | 76 | 45 | 12 | 0 | 750 | 450 | 0 | 0 |
| 34 | 20 | 8 | 0 | 77 | 46 | 4 | 0 | 800 | 480 | 0 | 0 |
| 35 | 21 | 0 | 0 | 78 | 46 | 16 | 0 | 900 | 540 | 0 | 0 |
| 36 | 21 | 12 | 0 | 79 | 47 | 8 | 0 | 1000 | 600 | 0 | 0 |
| 37 | 22 | 4 | 0 | 80 | 48 | 0 | 0 | 1250 | 750 | 0 | 0 |
| 38 | 22 | 16 | 0 | 81 | 48 | 12 | 0 | 1500 | 900 | 0 | 0 |
| 39 | 23 | 8 | 0 | 82 | 49 | 4 | 0 | 1750 | 1050 | 0 | 0 |
| 40 | 24 | 0 | 0 | 83 | 49 | 16 | 0 | 2000 | 1200 | 0 | 0 |
| 41 | 24 | 12 | 0 | 84 | 50 | 8 | 0 | 2240 | 1344 | 0 | 0 |
| 42 | 25 | 4 | 0 | 85 | 51 | 0 | 0 | 3000 | 1800 | 0 | 0 |
| 43 | 25 | 16 | 0 | 86 | 51 | 12 | 0 | 5000 | 3000 | 0 | 0 |

## 12s. 6d.

| No. | £ | s. | d. | No. | £ | s. | d. | No. | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 12 | 6 | 44 | 27 | 10 | 0 | 87 | 54 | 7 | 6 |
| 2 | 1 | 5 | 0 | 45 | 28 | 2 | 6 | 88 | 55 | 0 | 0 |
| 3 | 1 | 17 | 6 | 46 | 28 | 15 | 0 | 89 | 55 | 12 | 6 |
| 4 | 2 | 10 | 0 | 47 | 29 | 7 | 6 | 90 | 56 | 5 | 0 |
| 5 | 3 | 2 | 6 | 48 | 30 | 0 | 0 | 91 | 56 | 17 | 6 |
| 6 | 3 | 15 | 0 | 49 | 30 | 12 | 6 | 92 | 57 | 10 | 0 |
| 7 | 4 | 7 | 6 | 50 | 31 | 5 | 0 | 93 | 58 | 2 | 6 |
| 8 | 5 | 0 | 0 | 51 | 31 | 17 | 6 | 94 | 58 | 15 | 0 |
| 9 | 5 | 12 | 6 | 52 | 32 | 10 | 0 | 95 | 59 | 7 | 6 |
| 10 | 6 | 5 | 0 | 53 | 33 | 2 | 6 | 96 | 60 | 0 | 0 |
| 11 | 6 | 17 | 6 | 54 | 33 | 15 | 0 | 97 | 60 | 12 | 6 |
| 12 | 7 | 10 | 0 | 55 | 34 | 7 | 6 | 98 | 61 | 5 | 0 |
| 13 | 8 | 2 | 6 | 56 | 35 | 0 | 0 | 99 | 61 | 17 | 6 |
| 14 | 8 | 15 | 0 | 57 | 35 | 12 | 6 | 100 | 62 | 10 | 0 |
| 15 | 9 | 7 | 6 | 58 | 36 | 5 | 0 | 108 | 67 | 10 | 0 |
| 16 | 10 | 0 | 0 | 59 | 36 | 17 | 6 | 110 | 68 | 15 | 0 |
| 17 | 10 | 12 | 6 | 60 | 37 | 10 | 0 | 112 | 70 | 0 | 0 |
| 18 | 11 | 5 | 0 | 61 | 38 | 2 | 6 | 120 | 75 | 0 | 0 |
| 19 | 11 | 17 | 6 | 62 | 38 | 15 | 0 | 130 | 81 | 5 | 0 |
| 20 | 12 | 10 | 0 | 63 | 39 | 7 | 6 | 132 | 82 | 10 | 0 |
| 21 | 13 | 2 | 6 | 64 | 40 | 0 | 0 | 140 | 87 | 10 | 0 |
| 22 | 13 | 15 | 0 | 65 | 40 | 12 | 6 | 144 | 90 | 0 | 0 |
| 23 | 14 | 7 | 6 | 66 | 41 | 5 | 0 | 150 | 93 | 15 | 0 |
| 24 | 15 | 0 | 0 | 67 | 41 | 17 | 6 | 175 | 109 | 7 | 6 |
| 25 | 15 | 12 | 6 | 68 | 42 | 10 | 0 | 200 | 125 | 0 | 0 |
| 26 | 16 | 5 | 0 | 69 | 43 | 2 | 6 | 250 | 156 | 5 | 0 |
| 27 | 16 | 17 | 6 | 70 | 43 | 15 | 0 | 300 | 187 | 10 | 0 |
| 28 | 17 | 10 | 0 | 71 | 44 | 7 | 6 | 365 | 228 | 2 | 6 |
| 29 | 18 | 2 | 6 | 72 | 45 | 0 | 0 | 400 | 250 | 0 | 0 |
| 30 | 18 | 15 | 0 | 73 | 45 | 12 | 6 | 500 | 312 | 10 | 0 |
| 31 | 19 | 7 | 6 | 74 | 46 | 5 | 0 | 600 | 375 | 0 | 0 |
| 32 | 20 | 0 | 0 | 75 | 46 | 17 | 6 | 700 | 437 | 10 | 0 |
| 33 | 20 | 12 | 6 | 76 | 47 | 10 | 0 | 750 | 468 | 15 | 0 |
| 34 | 21 | 5 | 0 | 77 | 48 | 2 | 6 | 800 | 500 | 0 | 0 |
| 35 | 21 | 17 | 6 | 78 | 48 | 15 | 0 | 900 | 562 | 10 | 0 |
| 36 | 22 | 10 | 0 | 79 | 49 | 7 | 6 | 1000 | 625 | 0 | 0 |
| 37 | 23 | 2 | 6 | 80 | 50 | 0 | 0 | 1250 | 781 | 5 | 0 |
| 38 | 23 | 15 | 0 | 81 | 50 | 12 | 6 | 1500 | 937 | 10 | 0 |
| 39 | 24 | 7 | 6 | 82 | 51 | 5 | 0 | 1750 | 1093 | 15 | 0 |
| 40 | 25 | 0 | 0 | 83 | 51 | 17 | 6 | 2000 | 1250 | 0 | 0 |
| 41 | 25 | 12 | 6 | 84 | 52 | 10 | 0 | 2240 | 1400 | 0 | 0 |
| 42 | 26 | 5 | 0 | 85 | 53 | 2 | 6 | 3000 | 1875 | 0 | 0 |
| 43 | 26 | 17 | 6 | 86 | 53 | 15 | 0 | 5000 | 3125 | 0 | 0 |

## 13s. 6d.

| No. | £ | s. | d. | No. | £ | s. | d. | No. | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 13 | 6 | 44 | 29 | 14 | 0 | 87 | 58 | 14 | 6 |
| 2 | 1 | 7 | 0 | 45 | 30 | 7 | 6 | 88 | 59 | 8 | 0 |
| 3 | 2 | 0 | 6 | 46 | 31 | 1 | 0 | 89 | 60 | 1 | 6 |
| 4 | 2 | 14 | 0 | 47 | 31 | 14 | 6 | 90 | 60 | 15 | 0 |
| 5 | 3 | 7 | 6 | 48 | 32 | 8 | 0 | 91 | 61 | 8 | 6 |
| 6 | 4 | 1 | 0 | 49 | 33 | 1 | 6 | 92 | 62 | 2 | 0 |
| 7 | 4 | 14 | 6 | 50 | 33 | 15 | 0 | 93 | 62 | 15 | 6 |
| 8 | 5 | 8 | 0 | 51 | 34 | 8 | 6 | 94 | 63 | 9 | 0 |
| 9 | 6 | 1 | 6 | 52 | 35 | 2 | 0 | 95 | 64 | 2 | 6 |
| 10 | 6 | 15 | 0 | 53 | 35 | 15 | 6 | 96 | 64 | 16 | 0 |
| 11 | 7 | 8 | 6 | 54 | 36 | 9 | 0 | 97 | 65 | 9 | 6 |
| 12 | 8 | 2 | 0 | 55 | 37 | 2 | 6 | 98 | 66 | 3 | 0 |
| 13 | 8 | 15 | 6 | 56 | 37 | 16 | 0 | 99 | 66 | 16 | 6 |
| 14 | 9 | 9 | 0 | 57 | 38 | 9 | 6 | 100 | 67 | 10 | 0 |
| 15 | 10 | 2 | 6 | 58 | 39 | 3 | 0 | 108 | 72 | 18 | 0 |
| 16 | 10 | 16 | 0 | 59 | 39 | 16 | 6 | 110 | 74 | 5 | 0 |
| 17 | 11 | 9 | 6 | 60 | 40 | 10 | 0 | 112 | 75 | 12 | 0 |
| 18 | 12 | 3 | 0 | 61 | 41 | 3 | 6 | 120 | 81 | 0 | 0 |
| 19 | 12 | 16 | 6 | 62 | 41 | 17 | 0 | 130 | 87 | 15 | 0 |
| 20 | 13 | 10 | 0 | 63 | 42 | 10 | 6 | 132 | 89 | 2 | 0 |
| 21 | 14 | 3 | 6 | 64 | 43 | 4 | 0 | 140 | 94 | 10 | 0 |
| 22 | 14 | 17 | 0 | 65 | 43 | 17 | 6 | 144 | 97 | 4 | 0 |
| 23 | 15 | 10 | 6 | 66 | 44 | 11 | 0 | 150 | 101 | 5 | 0 |
| 24 | 16 | 4 | 0 | 67 | 45 | 4 | 6 | 175 | 118 | 2 | 6 |
| 25 | 16 | 17 | 6 | 68 | 45 | 18 | 0 | 200 | 135 | 0 | 0 |
| 26 | 17 | 11 | 0 | 69 | 46 | 11 | 6 | 250 | 168 | 15 | 0 |
| 27 | 18 | 4 | 6 | 70 | 47 | 5 | 0 | 300 | 202 | 10 | 0 |
| 28 | 18 | 18 | 0 | 71 | 47 | 18 | 6 | 365 | 246 | 7 | 6 |
| 29 | 19 | 11 | 6 | 72 | 48 | 12 | 0 | 400 | 270 | 0 | 0 |
| 30 | 20 | 5 | 0 | 73 | 49 | 5 | 6 | 500 | 337 | 10 | 0 |
| 31 | 20 | 18 | 6 | 74 | 49 | 19 | 0 | 600 | 405 | 0 | 0 |
| 32 | 21 | 12 | 0 | 75 | 50 | 12 | 6 | 700 | 472 | 10 | 0 |
| 33 | 22 | 5 | 6 | 76 | 51 | 6 | 0 | 750 | 506 | 5 | 0 |
| 34 | 22 | 19 | 0 | 77 | 51 | 19 | 6 | 800 | 540 | 0 | 0 |
| 35 | 23 | 12 | 6 | 78 | 52 | 13 | 0 | 900 | 607 | 10 | 0 |
| 36 | 24 | 6 | 0 | 79 | 53 | 6 | 6 | 1000 | 675 | 0 | 0 |
| 37 | 24 | 19 | 6 | 80 | 54 | 0 | 0 | 1250 | 843 | 15 | 0 |
| 38 | 25 | 13 | 0 | 81 | 54 | 13 | 6 | 1500 | 1012 | 10 | 0 |
| 39 | 26 | 6 | 6 | 82 | 55 | 7 | 0 | 1750 | 1181 | 5 | 0 |
| 40 | 27 | 0 | 0 | 83 | 56 | 0 | 6 | 2000 | 1350 | 0 | 0 |
| 41 | 27 | 13 | 6 | 84 | 56 | 14 | 0 | 2240 | 1512 | 0 | 0 |
| 42 | 28 | 7 | 0 | 85 | 57 | 7 | 6 | 3000 | 2025 | 0 | 0 |
| 43 | 29 | 0 | 6 | 86 | 58 | 1 | 0 | 5000 | 3375 | 0 | 0 |

## 13s.

| No. | £ | s. | d. | No. | £ | s. | d. | No. | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 13 | 0 | 44 | 28 | 12 | 0 | 87 | 56 | 11 | 0 |
| 2 | 1 | 6 | 0 | 45 | 29 | 5 | 0 | 88 | 57 | 4 | 0 |
| 3 | 1 | 19 | 0 | 46 | 29 | 18 | 0 | 89 | 57 | 17 | 0 |
| 4 | 2 | 12 | 0 | 47 | 30 | 11 | 0 | 90 | 58 | 10 | 0 |
| 5 | 3 | 5 | 0 | 48 | 31 | 4 | 0 | 91 | 59 | 3 | 0 |
| 6 | 3 | 18 | 0 | 49 | 31 | 17 | 0 | 92 | 59 | 16 | 0 |
| 7 | 4 | 11 | 0 | 50 | 32 | 10 | 0 | 93 | 60 | 9 | 0 |
| 8 | 5 | 4 | 0 | 51 | 33 | 3 | 0 | 94 | 61 | 2 | 0 |
| 9 | 5 | 17 | 0 | 52 | 33 | 16 | 0 | 95 | 61 | 15 | 0 |
| 10 | 6 | 10 | 0 | 53 | 34 | 9 | 0 | 96 | 62 | 8 | 0 |
| 11 | 7 | 3 | 0 | 54 | 35 | 2 | 0 | 97 | 63 | 1 | 0 |
| 12 | 7 | 16 | 0 | 55 | 35 | 15 | 0 | 98 | 63 | 14 | 0 |
| 13 | 8 | 9 | 0 | 56 | 36 | 8 | 0 | 99 | 64 | 7 | 0 |
| 14 | 9 | 2 | 0 | 57 | 37 | 1 | 0 | 100 | 65 | 0 | 0 |
| 15 | 9 | 15 | 0 | 58 | 37 | 14 | 0 | 108 | 70 | 4 | 0 |
| 16 | 10 | 8 | 0 | 59 | 38 | 7 | 0 | 110 | 71 | 10 | 0 |
| 17 | 11 | 1 | 0 | 60 | 39 | 0 | 0 | 112 | 72 | 16 | 0 |
| 18 | 11 | 14 | 0 | 61 | 39 | 13 | 0 | 120 | 78 | 0 | 0 |
| 19 | 12 | 7 | 0 | 62 | 40 | 6 | 0 | 130 | 84 | 10 | 0 |
| 20 | 13 | 0 | 0 | 63 | 40 | 19 | 0 | 132 | 85 | 16 | 0 |
| 21 | 13 | 13 | 0 | 64 | 41 | 12 | 0 | 140 | 91 | 0 | 0 |
| 22 | 14 | 6 | 0 | 65 | 42 | 5 | 0 | 144 | 93 | 12 | 0 |
| 23 | 14 | 19 | 0 | 66 | 42 | 18 | 0 | 150 | 97 | 10 | 0 |
| 24 | 15 | 12 | 0 | 67 | 43 | 11 | 0 | 175 | 113 | 15 | 0 |
| 25 | 16 | 5 | 0 | 68 | 44 | 4 | 0 | 200 | 130 | 0 | 0 |
| 26 | 16 | 18 | 0 | 69 | 44 | 17 | 0 | 250 | 162 | 10 | 0 |
| 27 | 17 | 11 | 0 | 70 | 45 | 10 | 0 | 300 | 195 | 0 | 0 |
| 28 | 18 | 4 | 0 | 71 | 46 | 3 | 0 | 365 | 237 | 5 | 0 |
| 29 | 18 | 17 | 0 | 72 | 46 | 16 | 0 | 400 | 260 | 0 | 0 |
| 30 | 19 | 10 | 0 | 73 | 47 | 9 | 0 | 500 | 325 | 0 | 0 |
| 31 | 20 | 3 | 0 | 74 | 48 | 2 | 0 | 600 | 390 | 0 | 0 |
| 32 | 20 | 16 | 0 | 75 | 48 | 15 | 0 | 700 | 455 | 0 | 0 |
| 33 | 21 | 9 | 0 | 76 | 49 | 8 | 0 | 750 | 487 | 10 | 0 |
| 34 | 22 | 2 | 0 | 77 | 50 | 1 | 0 | 800 | 520 | 0 | 0 |
| 35 | 22 | 15 | 0 | 78 | 50 | 14 | 0 | 900 | 585 | 0 | 0 |
| 36 | 23 | 8 | 0 | 79 | 51 | 7 | 0 | 1000 | 650 | 0 | 0 |
| 37 | 24 | 1 | 0 | 80 | 52 | 0 | 0 | 1250 | 812 | 10 | 0 |
| 38 | 24 | 14 | 0 | 81 | 52 | 13 | 0 | 1500 | 975 | 0 | 0 |
| 39 | 25 | 7 | 0 | 82 | 53 | 6 | 0 | 1750 | 1137 | 10 | 0 |
| 40 | 26 | 0 | 0 | 83 | 53 | 19 | 0 | 2000 | 1300 | 0 | 0 |
| 41 | 26 | 13 | 0 | 84 | 54 | 12 | 0 | 2240 | 1456 | 0 | 0 |
| 42 | 27 | 6 | 0 | 85 | 55 | 5 | 0 | 3000 | 1950 | 0 | 0 |
| 43 | 27 | 19 | 0 | 86 | 55 | 18 | 0 | 5000 | 3250 | 0 | 0 |

## 14s.

| No. | £ | s. | d. | No. | £ | s. | d. | No. | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 14 | 0 | 44 | 30 | 16 | 0 | 87 | 60 | 18 | 0 |
| 2 | 1 | 8 | 0 | 45 | 31 | 10 | 0 | 88 | 61 | 12 | 0 |
| 3 | 2 | 2 | 0 | 46 | 32 | 4 | 0 | 89 | 62 | 6 | 0 |
| 4 | 2 | 16 | 0 | 47 | 32 | 18 | 0 | 90 | 63 | 0 | 0 |
| 5 | 3 | 10 | 0 | 48 | 33 | 12 | 0 | 91 | 63 | 14 | 0 |
| 6 | 4 | 4 | 0 | 49 | 34 | 6 | 0 | 92 | 64 | 8 | 0 |
| 7 | 4 | 18 | 0 | 50 | 35 | 0 | 0 | 93 | 65 | 2 | 0 |
| 8 | 5 | 12 | 0 | 51 | 35 | 14 | 0 | 94 | 65 | 16 | 0 |
| 9 | 6 | 6 | 0 | 52 | 36 | 8 | 0 | 95 | 66 | 10 | 0 |
| 10 | 7 | 0 | 0 | 53 | 37 | 2 | 0 | 96 | 67 | 4 | 0 |
| 11 | 7 | 14 | 0 | 54 | 37 | 16 | 0 | 97 | 67 | 18 | 0 |
| 12 | 8 | 8 | 0 | 55 | 38 | 10 | 0 | 98 | 68 | 12 | 0 |
| 13 | 9 | 2 | 0 | 56 | 39 | 4 | 0 | 99 | 69 | 6 | 0 |
| 14 | 9 | 16 | 0 | 57 | 39 | 18 | 0 | 100 | 70 | 0 | 0 |
| 15 | 10 | 10 | 0 | 58 | 40 | 12 | 0 | 108 | 75 | 12 | 0 |
| 16 | 11 | 4 | 0 | 59 | 41 | 6 | 0 | 110 | 77 | 0 | 0 |
| 17 | 11 | 18 | 0 | 60 | 42 | 0 | 0 | 112 | 78 | 8 | 0 |
| 18 | 12 | 12 | 0 | 61 | 42 | 14 | 0 | 120 | 84 | 0 | 0 |
| 19 | 13 | 6 | 0 | 62 | 43 | 8 | 0 | 130 | 91 | 0 | 0 |
| 20 | 14 | 0 | 0 | 63 | 44 | 2 | 0 | 132 | 92 | 8 | 0 |
| 21 | 14 | 14 | 0 | 64 | 44 | 16 | 0 | 140 | 98 | 0 | 0 |
| 22 | 15 | 8 | 0 | 65 | 45 | 10 | 0 | 144 | 100 | 16 | 0 |
| 23 | 16 | 2 | 0 | 66 | 46 | 4 | 0 | 150 | 105 | 0 | 0 |
| 24 | 16 | 16 | 0 | 67 | 46 | 18 | 0 | 175 | 122 | 10 | 0 |
| 25 | 17 | 10 | 0 | 68 | 47 | 12 | 0 | 200 | 140 | 0 | 0 |
| 26 | 18 | 4 | 0 | 69 | 48 | 6 | 0 | 250 | 175 | 0 | 0 |
| 27 | 18 | 18 | 0 | 70 | 49 | 0 | 0 | 300 | 210 | 0 | 0 |
| 28 | 19 | 12 | 0 | 71 | 49 | 14 | 0 | 365 | 255 | 10 | 0 |
| 29 | 20 | 6 | 0 | 72 | 50 | 8 | 0 | 400 | 280 | 0 | 0 |
| 30 | 21 | 0 | 0 | 73 | 51 | 2 | 0 | 500 | 350 | 0 | 0 |
| 31 | 21 | 14 | 0 | 74 | 51 | 16 | 0 | 600 | 420 | 0 | 0 |
| 32 | 22 | 8 | 0 | 75 | 52 | 10 | 0 | 700 | 490 | 0 | 0 |
| 33 | 23 | 2 | 0 | 76 | 53 | 4 | 0 | 750 | 525 | 0 | 0 |
| 34 | 23 | 16 | 0 | 77 | 53 | 18 | 0 | 800 | 560 | 0 | 0 |
| 35 | 24 | 10 | 0 | 78 | 54 | 12 | 0 | 900 | 630 | 0 | 0 |
| 36 | 25 | 4 | 0 | 79 | 55 | 6 | 0 | 1000 | 700 | 0 | 0 |
| 37 | 25 | 18 | 0 | 80 | 56 | 0 | 0 | 1250 | 875 | 0 | 0 |
| 38 | 26 | 12 | 0 | 81 | 56 | 14 | 0 | 1500 | 1050 | 0 | 0 |
| 39 | 27 | 6 | 0 | 82 | 57 | 8 | 0 | 1750 | 1225 | 0 | 0 |
| 40 | 28 | 0 | 0 | 83 | 58 | 2 | 0 | 2000 | 1400 | 0 | 0 |
| 41 | 28 | 14 | 0 | 84 | 58 | 16 | 0 | 2240 | 1568 | 0 | 0 |
| 42 | 29 | 8 | 0 | 85 | 59 | 10 | 0 | 3000 | 2100 | 0 | 0 |
| 43 | 30 | 2 | 0 | 86 | 60 | 4 | 0 | 5000 | 3500 | 0 | 0 |

## 14s. 6d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 14 | 6 | 44 | 31 | 18 | 0 | 87 | 63 | 1 | 6 |
| 2 | 1 | 9 | 0 | 45 | 32 | 12 | 6 | 88 | 63 | 16 | 0 |
| 3 | 2 | 3 | 6 | 46 | 33 | 7 | 0 | 89 | 64 | 10 | 6 |
| 4 | 2 | 18 | 0 | 47 | 34 | 1 | 6 | 90 | 65 | 5 | 0 |
| 5 | 3 | 12 | 6 | 48 | 34 | 16 | 0 | 91 | 65 | 19 | 6 |
| 6 | 4 | 7 | 0 | 49 | 35 | 10 | 6 | 92 | 66 | 14 | 0 |
| 7 | 5 | 1 | 6 | 50 | 36 | 5 | 0 | 93 | 67 | 8 | 6 |
| 8 | 5 | 16 | 0 | 51 | 36 | 19 | 6 | 94 | 68 | 3 | 0 |
| 9 | 6 | 10 | 6 | 52 | 37 | 14 | 0 | 95 | 68 | 17 | 6 |
| 10 | 7 | 5 | 0 | 53 | 38 | 8 | 6 | 96 | 69 | 12 | 0 |
| 11 | 7 | 19 | 6 | 54 | 39 | 3 | 0 | 97 | 70 | 6 | 6 |
| 12 | 8 | 14 | 0 | 55 | 39 | 17 | 6 | 98 | 71 | 1 | 0 |
| 13 | 9 | 8 | 6 | 56 | 40 | 12 | 0 | 99 | 71 | 15 | 6 |
| 14 | 10 | 3 | 0 | 57 | 41 | 6 | 6 | 100 | 72 | 10 | 0 |
| 15 | 10 | 17 | 6 | 58 | 42 | 1 | 0 | 108 | 78 | 6 | 0 |
| 16 | 11 | 12 | 0 | 59 | 42 | 15 | 6 | 110 | 79 | 15 | 0 |
| 17 | 12 | 6 | 6 | 60 | 43 | 10 | 0 | 112 | 81 | 4 | 0 |
| 18 | 13 | 1 | 0 | 61 | 44 | 4 | 6 | 120 | 87 | 0 | 0 |
| 19 | 13 | 15 | 6 | 62 | 44 | 19 | 0 | 130 | 94 | 5 | 0 |
| 20 | 14 | 10 | 0 | 63 | 45 | 13 | 6 | 132 | 95 | 14 | 0 |
| 21 | 15 | 4 | 6 | 64 | 46 | 8 | 0 | 140 | 101 | 10 | 0 |
| 22 | 15 | 19 | 0 | 65 | 47 | 2 | 6 | 144 | 104 | 8 | 0 |
| 23 | 16 | 13 | 6 | 66 | 47 | 17 | 0 | 150 | 108 | 15 | 0 |
| 24 | 17 | 8 | 0 | 67 | 48 | 11 | 6 | 175 | 126 | 17 | 6 |
| 25 | 18 | 2 | 6 | 68 | 49 | 6 | 0 | 200 | 145 | 0 | 0 |
| 26 | 18 | 17 | 0 | 69 | 50 | 0 | 6 | 250 | 181 | 5 | 0 |
| 27 | 19 | 11 | 6 | 70 | 50 | 15 | 0 | 300 | 217 | 10 | 0 |
| 28 | 20 | 6 | 0 | 71 | 51 | 9 | 6 | 365 | 264 | 12 | 6 |
| 29 | 21 | 0 | 6 | 72 | 52 | 4 | 0 | 400 | 290 | 0 | 0 |
| 30 | 21 | 15 | 0 | 73 | 52 | 18 | 6 | 500 | 362 | 10 | 0 |
| 31 | 22 | 9 | 6 | 74 | 53 | 13 | 0 | 600 | 435 | 0 | 0 |
| 32 | 23 | 4 | 0 | 75 | 54 | 7 | 6 | 700 | 507 | 10 | 0 |
| 33 | 23 | 18 | 6 | 76 | 55 | 2 | 0 | 750 | 543 | 15 | 0 |
| 34 | 24 | 13 | 0 | 77 | 55 | 16 | 6 | 800 | 580 | 0 | 0 |
| 35 | 25 | 7 | 6 | 78 | 56 | 11 | 0 | 900 | 652 | 10 | 0 |
| 36 | 26 | 2 | 0 | 79 | 57 | 5 | 6 | 1000 | 725 | 0 | 0 |
| 37 | 26 | 16 | 6 | 80 | 58 | 0 | 0 | 1250 | 906 | 5 | 0 |
| 38 | 27 | 11 | 0 | 81 | 58 | 14 | 6 | 1500 | 1087 | 10 | 0 |
| 39 | 28 | 5 | 6 | 82 | 59 | 9 | 0 | 1750 | 1268 | 15 | 0 |
| 40 | 29 | 0 | 0 | 83 | 60 | 3 | 6 | 2000 | 1450 | 0 | 0 |
| 41 | 29 | 14 | 6 | 84 | 60 | 18 | 0 | 2240 | 1624 | 0 | 0 |
| 42 | 30 | 9 | 0 | 85 | 61 | 12 | 6 | 3000 | 2175 | 0 | 0 |
| 43 | 31 | 3 | 6 | 86 | 62 | 7 | 0 | 5000 | 3625 | 0 | 0 |

## 15s. 6d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 15 | 6 | 44 | 34 | 2 | 0 | 87 | 67 | 8 | 6 |
| 2 | 1 | 11 | 0 | 45 | 34 | 17 | 6 | 88 | 68 | 4 | 0 |
| 3 | 2 | 6 | 6 | 46 | 35 | 13 | 0 | 89 | 68 | 19 | 6 |
| 4 | 3 | 2 | 0 | 47 | 36 | 8 | 6 | 90 | 69 | 15 | 0 |
| 5 | 3 | 17 | 6 | 48 | 37 | 4 | 0 | 91 | 70 | 10 | 6 |
| 6 | 4 | 13 | 0 | 49 | 37 | 19 | 6 | 92 | 71 | 6 | 0 |
| 7 | 5 | 8 | 6 | 50 | 38 | 15 | 0 | 93 | 72 | 1 | 6 |
| 8 | 6 | 4 | 0 | 51 | 39 | 10 | 6 | 94 | 72 | 17 | 0 |
| 9 | 6 | 19 | 6 | 52 | 40 | 6 | 0 | 95 | 73 | 12 | 6 |
| 10 | 7 | 15 | 0 | 53 | 41 | 1 | 6 | 96 | 74 | 8 | 0 |
| 11 | 8 | 10 | 6 | 54 | 41 | 17 | 0 | 97 | 75 | 3 | 6 |
| 12 | 9 | 6 | 0 | 55 | 42 | 12 | 6 | 98 | 75 | 19 | 0 |
| 13 | 10 | 1 | 6 | 56 | 43 | 8 | 0 | 99 | 76 | 14 | 6 |
| 14 | 10 | 17 | 0 | 57 | 44 | 3 | 6 | 100 | 77 | 10 | 0 |
| 15 | 11 | 12 | 6 | 58 | 44 | 19 | 0 | 108 | 83 | 14 | 0 |
| 16 | 12 | 8 | 0 | 59 | 45 | 14 | 6 | 110 | 85 | 5 | 0 |
| 17 | 13 | 3 | 6 | 60 | 46 | 10 | 0 | 112 | 86 | 16 | 0 |
| 18 | 13 | 19 | 0 | 61 | 47 | 5 | 6 | 120 | 93 | 0 | 0 |
| 19 | 14 | 14 | 6 | 62 | 48 | 1 | 0 | 130 | 100 | 15 | 0 |
| 20 | 15 | 10 | 0 | 63 | 48 | 16 | 6 | 132 | 102 | 6 | 0 |
| 21 | 16 | 5 | 6 | 64 | 49 | 12 | 0 | 140 | 108 | 10 | 0 |
| 22 | 17 | 1 | 0 | 65 | 50 | 7 | 6 | 144 | 111 | 12 | 0 |
| 23 | 17 | 16 | 6 | 66 | 51 | 3 | 0 | 150 | 116 | 5 | 0 |
| 24 | 18 | 12 | 0 | 67 | 51 | 18 | 6 | 175 | 135 | 12 | 6 |
| 25 | 19 | 7 | 6 | 68 | 52 | 14 | 0 | 200 | 155 | 0 | 0 |
| 26 | 20 | 3 | 0 | 69 | 53 | 9 | 6 | 250 | 193 | 15 | 0 |
| 27 | 20 | 18 | 6 | 70 | 54 | 5 | 0 | 300 | 232 | 10 | 0 |
| 28 | 21 | 14 | 0 | 71 | 55 | 0 | 6 | 365 | 282 | 17 | 6 |
| 29 | 22 | 9 | 6 | 72 | 55 | 16 | 0 | 400 | 310 | 0 | 0 |
| 30 | 23 | 5 | 0 | 73 | 56 | 11 | 6 | 500 | 387 | 10 | 0 |
| 31 | 24 | 0 | 6 | 74 | 57 | 7 | 0 | 600 | 465 | 0 | 0 |
| 32 | 24 | 16 | 0 | 75 | 58 | 2 | 6 | 700 | 542 | 10 | 0 |
| 33 | 25 | 11 | 6 | 76 | 58 | 18 | 0 | 750 | 581 | 5 | 0 |
| 34 | 26 | 7 | 0 | 77 | 59 | 13 | 6 | 800 | 620 | 0 | 0 |
| 35 | 27 | 2 | 6 | 78 | 60 | 9 | 0 | 900 | 697 | 10 | 0 |
| 36 | 27 | 18 | 0 | 79 | 61 | 4 | 6 | 1000 | 775 | 0 | 0 |
| 37 | 28 | 13 | 6 | 80 | 62 | 0 | 0 | 1250 | 968 | 15 | 0 |
| 38 | 29 | 9 | 0 | 81 | 62 | 15 | 6 | 1500 | 1162 | 10 | 0 |
| 39 | 30 | 4 | 6 | 82 | 63 | 11 | 0 | 1750 | 1356 | 5 | 0 |
| 40 | 31 | 0 | 0 | 83 | 64 | 6 | 6 | 2000 | 1550 | 0 | 0 |
| 41 | 31 | 15 | 6 | 84 | 65 | 2 | 0 | 2240 | 1736 | 0 | 0 |
| 42 | 32 | 11 | 0 | 85 | 65 | 17 | 6 | 3000 | 2325 | 0 | 0 |
| 43 | 33 | 6 | 6 | 86 | 66 | 13 | 0 | 5000 | 3875 | 0 | 0 |

## 15s.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 15 | 0 | 44 | 33 | 0 | 0 | 87 | 65 | 5 | 0 |
| 2 | 1 | 10 | 0 | 45 | 33 | 15 | 0 | 88 | 66 | 0 | 0 |
| 3 | 2 | 5 | 0 | 46 | 34 | 10 | 0 | 89 | 66 | 15 | 0 |
| 4 | 3 | 0 | 0 | 47 | 35 | 5 | 0 | 90 | 67 | 10 | 0 |
| 5 | 3 | 15 | 0 | 48 | 36 | 0 | 0 | 91 | 68 | 5 | 0 |
| 6 | 4 | 10 | 0 | 49 | 36 | 15 | 0 | 92 | 69 | 0 | 0 |
| 7 | 5 | 5 | 0 | 50 | 37 | 10 | 0 | 93 | 69 | 15 | 0 |
| 8 | 6 | 0 | 0 | 51 | 38 | 5 | 0 | 94 | 70 | 10 | 0 |
| 9 | 6 | 15 | 0 | 52 | 39 | 0 | 0 | 95 | 71 | 5 | 0 |
| 10 | 7 | 10 | 0 | 53 | 39 | 15 | 0 | 96 | 72 | 0 | 0 |
| 11 | 8 | 5 | 0 | 54 | 40 | 10 | 0 | 97 | 72 | 15 | 0 |
| 12 | 9 | 0 | 0 | 55 | 41 | 5 | 0 | 98 | 73 | 10 | 0 |
| 13 | 9 | 15 | 0 | 56 | 42 | 0 | 0 | 99 | 74 | 5 | 0 |
| 14 | 10 | 10 | 0 | 57 | 42 | 15 | 0 | 100 | 75 | 0 | 0 |
| 15 | 11 | 5 | 0 | 58 | 43 | 10 | 0 | 108 | 81 | 0 | 0 |
| 16 | 12 | 0 | 0 | 59 | 44 | 5 | 0 | 110 | 82 | 10 | 0 |
| 17 | 12 | 15 | 0 | 60 | 45 | 0 | 0 | 112 | 84 | 0 | 0 |
| 18 | 13 | 10 | 0 | 61 | 45 | 15 | 0 | 120 | 90 | 0 | 0 |
| 19 | 14 | 5 | 0 | 62 | 46 | 10 | 0 | 130 | 97 | 10 | 0 |
| 20 | 15 | 0 | 0 | 63 | 47 | 5 | 0 | 132 | 99 | 0 | 0 |
| 21 | 15 | 15 | 0 | 64 | 48 | 0 | 0 | 140 | 105 | 0 | 0 |
| 22 | 16 | 10 | 0 | 65 | 48 | 15 | 0 | 144 | 108 | 0 | 0 |
| 23 | 17 | 5 | 0 | 66 | 49 | 10 | 0 | 150 | 112 | 10 | 0 |
| 24 | 18 | 0 | 0 | 67 | 50 | 5 | 0 | 175 | 131 | 5 | 0 |
| 25 | 18 | 15 | 0 | 68 | 51 | 0 | 0 | 200 | 150 | 0 | 0 |
| 26 | 19 | 10 | 0 | 69 | 51 | 15 | 0 | 250 | 187 | 10 | 0 |
| 27 | 20 | 5 | 0 | 70 | 52 | 10 | 0 | 300 | 225 | 0 | 0 |
| 28 | 21 | 0 | 0 | 71 | 53 | 5 | 0 | 365 | 273 | 15 | 0 |
| 29 | 21 | 15 | 0 | 72 | 54 | 0 | 0 | 400 | 300 | 0 | 0 |
| 30 | 22 | 10 | 0 | 73 | 54 | 15 | 0 | 500 | 375 | 0 | 0 |
| 31 | 23 | 5 | 0 | 74 | 55 | 10 | 0 | 600 | 450 | 0 | 0 |
| 32 | 24 | 0 | 0 | 75 | 56 | 5 | 0 | 700 | 525 | 0 | 0 |
| 33 | 24 | 15 | 0 | 76 | 57 | 0 | 0 | 750 | 562 | 10 | 0 |
| 34 | 25 | 10 | 0 | 77 | 57 | 15 | 0 | 800 | 600 | 0 | 0 |
| 35 | 26 | 5 | 0 | 78 | 58 | 10 | 0 | 900 | 675 | 0 | 0 |
| 36 | 27 | 0 | 0 | 79 | 59 | 5 | 0 | 1000 | 750 | 0 | 0 |
| 37 | 27 | 15 | 0 | 80 | 60 | 0 | 0 | 1250 | 937 | 10 | 0 |
| 38 | 28 | 10 | 0 | 81 | 60 | 15 | 0 | 1500 | 1125 | 0 | 0 |
| 39 | 29 | 5 | 0 | 82 | 61 | 10 | 0 | 1750 | 1312 | 10 | 0 |
| 40 | 30 | 0 | 0 | 83 | 62 | 5 | 0 | 2000 | 1500 | 0 | 0 |
| 41 | 30 | 15 | 0 | 84 | 63 | 0 | 0 | 2240 | 1680 | 0 | 0 |
| 42 | 31 | 10 | 0 | 85 | 63 | 15 | 0 | 3000 | 2250 | 0 | 0 |
| 43 | 32 | 5 | 0 | 86 | 64 | 10 | 0 | 5000 | 3750 | 0 | 0 |

## 16s.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 16 | 0 | 44 | 35 | 4 | 0 | 87 | 69 | 12 | 0 |
| 2 | 1 | 12 | 0 | 45 | 36 | 0 | 0 | 88 | 70 | 8 | 0 |
| 3 | 2 | 8 | 0 | 46 | 36 | 16 | 0 | 89 | 71 | 4 | 0 |
| 4 | 3 | 4 | 0 | 47 | 37 | 12 | 0 | 90 | 72 | 0 | 0 |
| 5 | 4 | 0 | 0 | 48 | 38 | 8 | 0 | 91 | 72 | 16 | 0 |
| 6 | 4 | 16 | 0 | 49 | 39 | 4 | 0 | 92 | 73 | 12 | 0 |
| 7 | 5 | 12 | 0 | 50 | 40 | 0 | 0 | 93 | 74 | 8 | 0 |
| 8 | 6 | 8 | 0 | 51 | 40 | 16 | 0 | 94 | 75 | 4 | 0 |
| 9 | 7 | 4 | 0 | 52 | 41 | 12 | 0 | 95 | 76 | 0 | 0 |
| 10 | 8 | 0 | 0 | 53 | 42 | 8 | 0 | 96 | 76 | 16 | 0 |
| 11 | 8 | 16 | 0 | 54 | 43 | 4 | 0 | 97 | 77 | 12 | 0 |
| 12 | 9 | 12 | 0 | 55 | 44 | 0 | 0 | 98 | 78 | 8 | 0 |
| 13 | 10 | 8 | 0 | 56 | 44 | 16 | 0 | 99 | 79 | 4 | 0 |
| 14 | 11 | 4 | 0 | 57 | 45 | 12 | 0 | 100 | 80 | 0 | 0 |
| 15 | 12 | 0 | 0 | 58 | 46 | 8 | 0 | 108 | 86 | 8 | 0 |
| 16 | 12 | 16 | 0 | 59 | 47 | 4 | 0 | 110 | 88 | 0 | 0 |
| 17 | 13 | 12 | 0 | 60 | 48 | 0 | 0 | 112 | 89 | 12 | 0 |
| 18 | 14 | 8 | 0 | 61 | 48 | 16 | 0 | 120 | 96 | 0 | 0 |
| 19 | 15 | 4 | 0 | 62 | 49 | 12 | 0 | 130 | 104 | 0 | 0 |
| 20 | 16 | 0 | 0 | 63 | 50 | 8 | 0 | 132 | 105 | 12 | 0 |
| 21 | 16 | 16 | 0 | 64 | 51 | 4 | 0 | 140 | 112 | 0 | 0 |
| 22 | 17 | 12 | 0 | 65 | 52 | 0 | 0 | 144 | 115 | 4 | 0 |
| 23 | 18 | 8 | 0 | 66 | 52 | 16 | 0 | 150 | 120 | 0 | 0 |
| 24 | 19 | 4 | 0 | 67 | 53 | 12 | 0 | 175 | 140 | 0 | 0 |
| 25 | 20 | 0 | 0 | 68 | 54 | 8 | 0 | 200 | 160 | 0 | 0 |
| 26 | 20 | 16 | 0 | 69 | 55 | 4 | 0 | 250 | 200 | 0 | 0 |
| 27 | 21 | 12 | 0 | 70 | 56 | 0 | 0 | 300 | 240 | 0 | 0 |
| 28 | 22 | 8 | 0 | 71 | 56 | 16 | 0 | 365 | 292 | 0 | 0 |
| 29 | 23 | 4 | 0 | 72 | 57 | 12 | 0 | 400 | 320 | 0 | 0 |
| 30 | 24 | 0 | 0 | 73 | 58 | 8 | 0 | 500 | 400 | 0 | 0 |
| 31 | 24 | 16 | 0 | 74 | 59 | 4 | 0 | 600 | 480 | 0 | 0 |
| 32 | 25 | 12 | 0 | 75 | 60 | 0 | 0 | 700 | 560 | 0 | 0 |
| 33 | 26 | 8 | 0 | 76 | 60 | 16 | 0 | 750 | 600 | 0 | 0 |
| 34 | 27 | 4 | 0 | 77 | 61 | 12 | 0 | 800 | 640 | 0 | 0 |
| 35 | 28 | 0 | 0 | 78 | 62 | 8 | 0 | 900 | 720 | 0 | 0 |
| 36 | 28 | 16 | 0 | 79 | 63 | 4 | 0 | 1000 | 800 | 0 | 0 |
| 37 | 29 | 12 | 0 | 80 | 64 | 0 | 0 | 1250 | 1000 | 0 | 0 |
| 38 | 30 | 8 | 0 | 81 | 64 | 16 | 0 | 1500 | 1200 | 0 | 0 |
| 39 | 31 | 4 | 0 | 82 | 65 | 12 | 0 | 1750 | 1400 | 0 | 0 |
| 40 | 32 | 0 | 0 | 83 | 66 | 8 | 0 | 2000 | 1600 | 0 | 0 |
| 41 | 32 | 16 | 0 | 84 | 67 | 4 | 0 | 2240 | 1792 | 0 | 0 |
| 42 | 33 | 12 | 0 | 85 | 68 | 0 | 0 | 3000 | 2400 | 0 | 0 |
| 43 | 34 | 8 | 0 | 86 | 68 | 16 | 0 | 5000 | 4000 | 0 | 0 |

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 16 | 6 | 44 | 36 | 6 | 0 | 87 | 71 | 15 | 6 |
| 2 | 1 | 13 | 0 | 45 | 37 | 2 | 6 | 88 | 72 | 12 | 0 |
| 3 | 2 | 9 | 6 | 46 | 37 | 19 | 0 | 89 | 73 | 8 | 6 |
| 4 | 3 | 6 | 0 | 47 | 38 | 15 | 6 | 90 | 74 | 5 | 0 |
| 5 | 4 | 2 | 6 | 48 | 39 | 12 | 0 | 91 | 75 | 1 | 6 |
| 6 | 4 | 19 | 0 | 49 | 40 | 8 | 6 | 92 | 75 | 18 | 0 |
| 7 | 5 | 15 | 6 | 50 | 41 | 5 | 0 | 93 | 76 | 14 | 6 |
| 8 | 6 | 12 | 0 | 51 | 42 | 1 | 6 | 94 | 77 | 11 | 0 |
| 9 | 7 | 8 | 6 | 52 | 42 | 18 | 0 | 95 | 78 | 7 | 6 |
| 10 | 8 | 5 | 0 | 53 | 43 | 14 | 6 | 96 | 79 | 4 | 0 |
| 11 | 9 | 1 | 6 | 54 | 44 | 11 | 0 | 97 | 80 | 0 | 6 |
| 12 | 9 | 18 | 0 | 55 | 45 | 7 | 6 | 98 | 80 | 17 | 0 |
| 13 | 10 | 14 | 6 | 56 | 46 | 4 | 0 | 99 | 81 | 13 | 6 |
| 14 | 11 | 11 | 0 | 57 | 47 | 0 | 6 | 100 | 82 | 10 | 0 |
| 15 | 12 | 7 | 6 | 58 | 47 | 17 | 0 | 108 | 89 | 2 | 0 |
| 16 | 13 | 4 | 0 | 59 | 48 | 13 | 6 | 110 | 90 | 15 | 0 |
| 17 | 14 | 0 | 6 | 60 | 49 | 10 | 0 | 112 | 92 | 8 | 0 |
| 18 | 14 | 17 | 0 | 61 | 50 | 6 | 6 | 120 | 99 | 0 | 0 |
| 19 | 15 | 13 | 6 | 62 | 51 | 3 | 0 | 130 | 107 | 5 | 0 |
| 20 | 16 | 10 | 0 | 63 | 51 | 19 | 6 | 132 | 108 | 18 | 0 |
| 21 | 17 | 6 | 6 | 64 | 52 | 16 | 0 | 140 | 115 | 10 | 0 |
| 22 | 18 | 3 | 0 | 65 | 53 | 12 | 6 | 144 | 118 | 16 | 0 |
| 23 | 18 | 19 | 6 | 66 | 54 | 9 | 0 | 150 | 123 | 15 | 0 |
| 24 | 19 | 16 | 0 | 67 | 55 | 5 | 6 | 175 | 144 | 7 | 6 |
| 25 | 20 | 12 | 6 | 68 | 56 | 2 | 0 | 200 | 165 | 0 | 0 |
| 26 | 21 | 9 | 0 | 69 | 56 | 18 | 6 | 250 | 206 | 5 | 0 |
| 27 | 22 | 5 | 6 | 70 | 57 | 15 | 0 | 300 | 247 | 10 | 0 |
| 28 | 23 | 2 | 0 | 71 | 58 | 11 | 6 | 365 | 301 | 2 | 6 |
| 29 | 23 | 18 | 6 | 72 | 59 | 8 | 0 | 400 | 330 | 0 | 0 |
| 30 | 24 | 15 | 0 | 73 | 60 | 4 | 6 | 500 | 412 | 10 | 0 |
| 31 | 25 | 11 | 6 | 74 | 61 | 1 | 0 | 600 | 495 | 0 | 0 |
| 32 | 26 | 8 | 0 | 75 | 61 | 17 | 6 | 700 | 577 | 10 | 0 |
| 33 | 27 | 4 | 6 | 76 | 62 | 14 | 0 | 750 | 618 | 15 | 0 |
| 34 | 28 | 1 | 0 | 77 | 63 | 10 | 6 | 800 | 660 | 0 | 0 |
| 35 | 28 | 17 | 6 | 78 | 64 | 7 | 0 | 900 | 742 | 10 | 0 |
| 36 | 29 | 14 | 0 | 79 | 65 | 3 | 6 | 1000 | 825 | 0 | 0 |
| 37 | 30 | 10 | 6 | 80 | 66 | 0 | 0 | 1250 | 1031 | 5 | 0 |
| 38 | 31 | 7 | 0 | 81 | 66 | 16 | 6 | 1500 | 1237 | 10 | 0 |
| 39 | 32 | 3 | 6 | 82 | 67 | 13 | 0 | 1750 | 1443 | 15 | 0 |
| 40 | 33 | 0 | 0 | 83 | 68 | 9 | 6 | 2000 | 1650 | 0 | 0 |
| 41 | 33 | 16 | 6 | 84 | 69 | 6 | 0 | 2240 | 1848 | 0 | 0 |
| 42 | 34 | 13 | 0 | 85 | 70 | 2 | 6 | 3000 | 2475 | 0 | 0 |
| 43 | 35 | 9 | 6 | 86 | 70 | 19 | 0 | 5000 | 4125 | 0 | 0 |

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 17 | 6 | 44 | 38 | 10 | 0 | 87 | 76 | 2 | 6 |
| 2 | 1 | 15 | 0 | 45 | 39 | 7 | 6 | 88 | 77 | 0 | 0 |
| 3 | 2 | 12 | 6 | 46 | 40 | 5 | 0 | 89 | 77 | 17 | 6 |
| 4 | 3 | 10 | 0 | 47 | 41 | 2 | 6 | 90 | 78 | 15 | 0 |
| 5 | 4 | 7 | 6 | 48 | 42 | 0 | 0 | 91 | 79 | 12 | 6 |
| 6 | 5 | 5 | 0 | 49 | 42 | 17 | 6 | 92 | 80 | 10 | 0 |
| 7 | 6 | 2 | 6 | 50 | 43 | 15 | 0 | 93 | 81 | 7 | 6 |
| 8 | 7 | 0 | 0 | 51 | 44 | 12 | 6 | 94 | 82 | 5 | 0 |
| 9 | 7 | 17 | 6 | 52 | 45 | 10 | 0 | 95 | 83 | 2 | 6 |
| 10 | 8 | 15 | 0 | 53 | 46 | 7 | 6 | 96 | 84 | 0 | 0 |
| 11 | 9 | 12 | 6 | 54 | 47 | 5 | 0 | 97 | 84 | 17 | 6 |
| 12 | 10 | 10 | 0 | 55 | 48 | 2 | 6 | 98 | 85 | 15 | 0 |
| 13 | 11 | 7 | 6 | 56 | 49 | 0 | 0 | 99 | 86 | 12 | 6 |
| 14 | 12 | 5 | 0 | 57 | 49 | 17 | 6 | 100 | 87 | 10 | 0 |
| 15 | 13 | 2 | 6 | 58 | 50 | 15 | 0 | 108 | 94 | 10 | 0 |
| 16 | 14 | 0 | 0 | 59 | 51 | 12 | 6 | 110 | 96 | 5 | 0 |
| 17 | 14 | 17 | 6 | 60 | 52 | 10 | 0 | 112 | 98 | 0 | 0 |
| 18 | 15 | 15 | 0 | 61 | 53 | 7 | 6 | 120 | 105 | 0 | 0 |
| 19 | 16 | 12 | 6 | 62 | 54 | 5 | 0 | 130 | 113 | 15 | 0 |
| 20 | 17 | 10 | 0 | 63 | 55 | 2 | 6 | 132 | 115 | 10 | 0 |
| 21 | 18 | 7 | 6 | 64 | 56 | 0 | 0 | 140 | 122 | 10 | 0 |
| 22 | 19 | 5 | 0 | 65 | 56 | 17 | 6 | 144 | 126 | 0 | 0 |
| 23 | 20 | 2 | 6 | 66 | 57 | 15 | 0 | 150 | 131 | 5 | 0 |
| 24 | 21 | 0 | 0 | 67 | 58 | 12 | 6 | 175 | 153 | 2 | 6 |
| 25 | 21 | 17 | 6 | 68 | 59 | 10 | 0 | 200 | 175 | 0 | 0 |
| 26 | 22 | 15 | 0 | 69 | 60 | 7 | 6 | 250 | 218 | 15 | 0 |
| 27 | 23 | 12 | 6 | 70 | 61 | 5 | 0 | 300 | 262 | 10 | 0 |
| 28 | 24 | 10 | 0 | 71 | 62 | 2 | 6 | 365 | 319 | 7 | 6 |
| 29 | 25 | 7 | 6 | 72 | 63 | 0 | 0 | 400 | 350 | 0 | 0 |
| 30 | 26 | 5 | 0 | 73 | 63 | 17 | 6 | 500 | 437 | 10 | 0 |
| 31 | 27 | 2 | 6 | 74 | 64 | 15 | 0 | 600 | 525 | 0 | 0 |
| 32 | 28 | 0 | 0 | 75 | 65 | 12 | 6 | 700 | 612 | 10 | 0 |
| 33 | 28 | 17 | 6 | 76 | 66 | 10 | 0 | 750 | 656 | 5 | 0 |
| 34 | 29 | 15 | 0 | 77 | 67 | 7 | 6 | 800 | 700 | 0 | 0 |
| 35 | 30 | 12 | 6 | 78 | 68 | 5 | 0 | 900 | 787 | 10 | 0 |
| 36 | 31 | 10 | 0 | 79 | 69 | 2 | 6 | 1000 | 875 | 0 | 0 |
| 37 | 32 | 7 | 6 | 80 | 70 | 0 | 0 | 1250 | 1093 | 15 | 0 |
| 38 | 33 | 5 | 0 | 81 | 70 | 17 | 6 | 1500 | 1312 | 10 | 0 |
| 39 | 34 | 2 | 6 | 82 | 71 | 15 | 0 | 1750 | 1531 | 5 | 0 |
| 40 | 35 | 0 | 0 | 83 | 72 | 12 | 6 | 2000 | 1750 | 0 | 0 |
| 41 | 35 | 17 | 6 | 84 | 73 | 10 | 0 | 2240 | 1960 | 0 | 0 |
| 42 | 36 | 15 | 0 | 85 | 74 | 7 | 6 | 3000 | 2625 | 0 | 0 |
| 43 | 37 | 12 | 6 | 86 | 75 | 5 | 0 | 5000 | 4375 | 0 | 0 |

## 17s.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 17 | 0 | 44 | 37 | 8 | 0 | 87 | 73 | 19 | 0 |
| 2 | 1 | 14 | 0 | 45 | 38 | 5 | 0 | 88 | 74 | 16 | 0 |
| 3 | 2 | 11 | 0 | 46 | 39 | 2 | 0 | 89 | 75 | 13 | 0 |
| 4 | 3 | 8 | 0 | 47 | 39 | 19 | 0 | 90 | 76 | 10 | 0 |
| 5 | 4 | 5 | 0 | 48 | 40 | 16 | 0 | 91 | 77 | 7 | 0 |
| 6 | 5 | 2 | 0 | 49 | 41 | 13 | 0 | 92 | 78 | 4 | 0 |
| 7 | 5 | 19 | 0 | 50 | 42 | 10 | 0 | 93 | 79 | 1 | 0 |
| 8 | 6 | 16 | 0 | 51 | 43 | 7 | 0 | 94 | 79 | 18 | 0 |
| 9 | 7 | 13 | 0 | 52 | 44 | 4 | 0 | 95 | 80 | 15 | 0 |
| 10 | 8 | 10 | 0 | 53 | 45 | 1 | 0 | 96 | 81 | 12 | 0 |
| 11 | 9 | 7 | 0 | 54 | 45 | 18 | 0 | 97 | 82 | 9 | 0 |
| 12 | 10 | 4 | 0 | 55 | 46 | 15 | 0 | 98 | 83 | 6 | 0 |
| 13 | 11 | 1 | 0 | 56 | 47 | 12 | 0 | 99 | 84 | 3 | 0 |
| 14 | 11 | 18 | 0 | 57 | 48 | 9 | 0 | 100 | 85 | 0 | 0 |
| 15 | 12 | 15 | 0 | 58 | 49 | 6 | 0 | 108 | 91 | 16 | 0 |
| 16 | 13 | 12 | 0 | 59 | 50 | 3 | 0 | 110 | 93 | 10 | 0 |
| 17 | 14 | 9 | 0 | 60 | 51 | 0 | 0 | 112 | 95 | 4 | 0 |
| 18 | 15 | 6 | 0 | 61 | 51 | 17 | 0 | 120 | 102 | 0 | 0 |
| 19 | 16 | 3 | 0 | 62 | 52 | 14 | 0 | 130 | 110 | 10 | 0 |
| 20 | 17 | 0 | 0 | 63 | 53 | 11 | 0 | 132 | 112 | 4 | 0 |
| 21 | 17 | 17 | 0 | 64 | 54 | 8 | 0 | 140 | 119 | 0 | 0 |
| 22 | 18 | 14 | 0 | 65 | 55 | 5 | 0 | 144 | 122 | 8 | 0 |
| 23 | 19 | 11 | 0 | 66 | 56 | 2 | 0 | 150 | 127 | 10 | 0 |
| 24 | 20 | 8 | 0 | 67 | 56 | 19 | 0 | 175 | 148 | 15 | 0 |
| 25 | 21 | 5 | 0 | 68 | 57 | 16 | 0 | 200 | 170 | 0 | 0 |
| 26 | 22 | 2 | 0 | 69 | 58 | 13 | 0 | 250 | 212 | 10 | 0 |
| 27 | 22 | 19 | 0 | 70 | 59 | 10 | 0 | 300 | 255 | 0 | 0 |
| 28 | 23 | 16 | 0 | 71 | 60 | 7 | 0 | 365 | 310 | 5 | 0 |
| 29 | 24 | 13 | 0 | 72 | 61 | 4 | 0 | 400 | 340 | 0 | 0 |
| 30 | 25 | 10 | 0 | 73 | 62 | 1 | 0 | 500 | 425 | 0 | 0 |
| 31 | 26 | 7 | 0 | 74 | 62 | 18 | 0 | 600 | 510 | 0 | 0 |
| 32 | 27 | 4 | 0 | 75 | 63 | 15 | 0 | 700 | 595 | 0 | 0 |
| 33 | 28 | 1 | 0 | 76 | 64 | 12 | 0 | 750 | 637 | 10 | 0 |
| 34 | 28 | 18 | 0 | 77 | 65 | 9 | 0 | 800 | 680 | 0 | 0 |
| 35 | 29 | 15 | 0 | 78 | 66 | 6 | 0 | 900 | 765 | 0 | 0 |
| 36 | 30 | 12 | 0 | 79 | 67 | 3 | 0 | 1000 | 850 | 0 | 0 |
| 37 | 31 | 9 | 0 | 80 | 68 | 0 | 0 | 1250 | 1062 | 10 | 0 |
| 38 | 32 | 6 | 0 | 81 | 68 | 17 | 0 | 1500 | 1275 | 0 | 0 |
| 39 | 33 | 3 | 0 | 82 | 69 | 14 | 0 | 1750 | 1487 | 10 | 0 |
| 40 | 34 | 0 | 0 | 83 | 70 | 11 | 0 | 2000 | 1700 | 0 | 0 |
| 41 | 34 | 17 | 0 | 84 | 71 | 8 | 0 | 2240 | 1904 | 0 | 0 |
| 42 | 35 | 14 | 0 | 85 | 72 | 5 | 0 | 3000 | 2550 | 0 | 0 |
| 43 | 36 | 11 | 0 | 86 | 73 | 2 | 0 | 5000 | 4250 | 0 | 0 |

## 18s.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 18 | 0 | 44 | 39 | 12 | 0 | 87 | 78 | 6 | 0 |
| 2 | 1 | 16 | 0 | 45 | 40 | 10 | 0 | 88 | 79 | 4 | 0 |
| 3 | 2 | 14 | 0 | 46 | 41 | 8 | 0 | 89 | 80 | 2 | 0 |
| 4 | 3 | 12 | 0 | 47 | 42 | 6 | 0 | 90 | 81 | 0 | 0 |
| 5 | 4 | 10 | 0 | 48 | 43 | 4 | 0 | 91 | 81 | 18 | 0 |
| 6 | 5 | 8 | 0 | 49 | 44 | 2 | 0 | 92 | 82 | 16 | 0 |
| 7 | 6 | 6 | 0 | 50 | 45 | 0 | 0 | 93 | 83 | 14 | 0 |
| 8 | 7 | 4 | 0 | 51 | 45 | 18 | 0 | 94 | 84 | 12 | 0 |
| 9 | 8 | 2 | 0 | 52 | 46 | 16 | 0 | 95 | 85 | 10 | 0 |
| 10 | 9 | 0 | 0 | 53 | 47 | 14 | 0 | 96 | 86 | 8 | 0 |
| 11 | 9 | 18 | 0 | 54 | 48 | 12 | 0 | 97 | 87 | 6 | 0 |
| 12 | 10 | 16 | 0 | 55 | 49 | 10 | 0 | 98 | 88 | 4 | 0 |
| 13 | 11 | 14 | 0 | 56 | 50 | 8 | 0 | 99 | 89 | 2 | 0 |
| 14 | 12 | 12 | 0 | 57 | 51 | 6 | 0 | 100 | 90 | 0 | 0 |
| 15 | 13 | 10 | 0 | 58 | 52 | 4 | 0 | 108 | 97 | 4 | 0 |
| 16 | 14 | 8 | 0 | 59 | 53 | 2 | 0 | 110 | 99 | 0 | 0 |
| 17 | 15 | 6 | 0 | 60 | 54 | 0 | 0 | 112 | 100 | 16 | 0 |
| 18 | 16 | 4 | 0 | 61 | 54 | 18 | 0 | 120 | 108 | 0 | 0 |
| 19 | 17 | 2 | 0 | 62 | 55 | 16 | 0 | 130 | 117 | 0 | 0 |
| 20 | 18 | 0 | 0 | 63 | 56 | 14 | 0 | 132 | 118 | 16 | 0 |
| 21 | 18 | 18 | 0 | 64 | 57 | 12 | 0 | 140 | 126 | 0 | 0 |
| 22 | 19 | 16 | 0 | 65 | 58 | 10 | 0 | 144 | 129 | 12 | 0 |
| 23 | 20 | 14 | 0 | 66 | 59 | 8 | 0 | 150 | 135 | 0 | 0 |
| 24 | 21 | 12 | 0 | 67 | 60 | 6 | 0 | 175 | 157 | 10 | 0 |
| 25 | 22 | 10 | 0 | 68 | 61 | 4 | 0 | 200 | 180 | 0 | 0 |
| 26 | 23 | 8 | 0 | 69 | 62 | 2 | 0 | 250 | 225 | 0 | 0 |
| 27 | 24 | 6 | 0 | 70 | 63 | 0 | 0 | 300 | 270 | 0 | 0 |
| 28 | 25 | 4 | 0 | 71 | 63 | 18 | 0 | 365 | 328 | 10 | 0 |
| 29 | 26 | 2 | 0 | 72 | 64 | 16 | 0 | 400 | 360 | 0 | 0 |
| 30 | 27 | 0 | 0 | 73 | 65 | 14 | 0 | 500 | 450 | 0 | 0 |
| 31 | 27 | 18 | 0 | 74 | 66 | 12 | 0 | 600 | 540 | 0 | 0 |
| 32 | 28 | 16 | 0 | 75 | 67 | 10 | 0 | 700 | 630 | 0 | 0 |
| 33 | 29 | 14 | 0 | 76 | 68 | 8 | 0 | 750 | 675 | 0 | 0 |
| 34 | 30 | 12 | 0 | 77 | 69 | 6 | 0 | 800 | 720 | 0 | 0 |
| 35 | 31 | 10 | 0 | 78 | 70 | 4 | 0 | 900 | 810 | 0 | 0 |
| 36 | 32 | 8 | 0 | 79 | 71 | 2 | 0 | 1000 | 900 | 0 | 0 |
| 37 | 33 | 6 | 0 | 80 | 72 | 0 | 0 | 1250 | 1125 | 0 | 0 |
| 38 | 34 | 4 | 0 | 81 | 72 | 18 | 0 | 1500 | 1350 | 0 | 0 |
| 39 | 35 | 2 | 0 | 82 | 73 | 16 | 0 | 1750 | 1575 | 0 | 0 |
| 40 | 36 | 0 | 0 | 83 | 74 | 14 | 0 | 2000 | 1800 | 0 | 0 |
| 41 | 36 | 18 | 0 | 84 | 75 | 12 | 0 | 2240 | 2016 | 0 | 0 |
| 42 | 37 | 16 | 0 | 85 | 76 | 10 | 0 | 3000 | 2700 | 0 | 0 |
| 43 | 38 | 14 | 0 | 86 | 77 | 8 | 0 | 5000 | 4500 | 0 | 0 |

## 18s. 6d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 18 | 6 | 44 | 40 | 14 | 0 | 87 | 80 | 9 | 6 |
| 2 | 1 | 17 | 0 | 45 | 41 | 12 | 6 | 88 | 81 | 8 | 0 |
| 3 | 2 | 15 | 6 | 46 | 42 | 11 | 0 | 89 | 82 | 6 | 6 |
| 4 | 3 | 14 | 0 | 47 | 43 | 9 | 6 | 90 | 83 | 5 | 0 |
| 5 | 4 | 12 | 6 | 48 | 44 | 8 | 0 | 91 | 84 | 3 | 6 |
| 6 | 5 | 11 | 0 | 49 | 45 | 6 | 6 | 92 | 85 | 2 | 0 |
| 7 | 6 | 9 | 6 | 50 | 46 | 5 | 0 | 93 | 86 | 0 | 6 |
| 8 | 7 | 8 | 0 | 51 | 47 | 3 | 6 | 94 | 86 | 19 | 0 |
| 9 | 8 | 6 | 6 | 52 | 48 | 2 | 0 | 95 | 87 | 17 | 6 |
| 10 | 9 | 5 | 0 | 53 | 49 | 0 | 6 | 96 | 88 | 16 | 0 |
| 11 | 10 | 3 | 6 | 54 | 49 | 19 | 0 | 97 | 89 | 14 | 6 |
| 12 | 11 | 2 | 0 | 55 | 50 | 17 | 6 | 98 | 90 | 13 | 0 |
| 13 | 12 | 0 | 6 | 56 | 51 | 16 | 0 | 99 | 91 | 11 | 6 |
| 14 | 12 | 19 | 0 | 57 | 52 | 14 | 6 | 100 | 92 | 10 | 0 |
| 15 | 13 | 17 | 6 | 58 | 53 | 13 | 0 | 108 | 99 | 18 | 0 |
| 16 | 14 | 16 | 0 | 59 | 54 | 11 | 6 | 110 | 101 | 15 | 0 |
| 17 | 15 | 14 | 6 | 60 | 55 | 10 | 0 | 112 | 103 | 12 | 0 |
| 18 | 16 | 13 | 0 | 61 | 56 | 8 | 6 | 120 | 111 | 0 | 0 |
| 19 | 17 | 11 | 6 | 62 | 57 | 7 | 0 | 130 | 120 | 5 | 0 |
| 20 | 18 | 10 | 0 | 63 | 58 | 5 | 6 | 132 | 122 | 2 | 0 |
| 21 | 19 | 8 | 6 | 64 | 59 | 4 | 0 | 140 | 129 | 10 | 0 |
| 22 | 20 | 7 | 0 | 65 | 60 | 2 | 6 | 144 | 133 | 4 | 0 |
| 23 | 21 | 5 | 6 | 66 | 61 | 1 | 0 | 150 | 138 | 15 | 0 |
| 24 | 22 | 4 | 0 | 67 | 61 | 19 | 6 | 175 | 161 | 17 | 6 |
| 25 | 23 | 2 | 6 | 68 | 62 | 18 | 0 | 200 | 185 | 0 | 0 |
| 26 | 24 | 1 | 0 | 69 | 63 | 16 | 6 | 250 | 231 | 5 | 0 |
| 27 | 24 | 19 | 6 | 70 | 64 | 15 | 0 | 300 | 277 | 10 | 0 |
| 28 | 25 | 18 | 0 | 71 | 65 | 13 | 6 | 365 | 337 | 12 | 6 |
| 29 | 26 | 16 | 6 | 72 | 66 | 12 | 0 | 400 | 370 | 0 | 0 |
| 30 | 27 | 15 | 0 | 73 | 67 | 10 | 6 | 500 | 462 | 10 | 0 |
| 31 | 28 | 13 | 6 | 74 | 68 | 9 | 0 | 600 | 555 | 0 | 0 |
| 32 | 29 | 12 | 0 | 75 | 69 | 7 | 6 | 700 | 647 | 10 | 0 |
| 33 | 30 | 10 | 6 | 76 | 70 | 6 | 0 | 750 | 693 | 15 | 0 |
| 34 | 31 | 9 | 0 | 77 | 71 | 4 | 6 | 800 | 740 | 0 | 0 |
| 35 | 32 | 7 | 6 | 78 | 72 | 3 | 0 | 900 | 832 | 10 | 0 |
| 36 | 33 | 6 | 0 | 79 | 73 | 1 | 6 | 1000 | 925 | 0 | 0 |
| 37 | 34 | 4 | 6 | 80 | 74 | 0 | 0 | 1250 | 1156 | 5 | 0 |
| 38 | 35 | 3 | 0 | 81 | 74 | 18 | 6 | 1500 | 1387 | 10 | 0 |
| 39 | 36 | 1 | 6 | 82 | 75 | 17 | 0 | 1750 | 1618 | 15 | 0 |
| 40 | 37 | 0 | 0 | 83 | 76 | 15 | 6 | 2000 | 1850 | 0 | 0 |
| 41 | 37 | 18 | 6 | 84 | 77 | 14 | 0 | 2240 | 2072 | 0 | 0 |
| 42 | 38 | 17 | 0 | 85 | 78 | 12 | 6 | 3000 | 2775 | 0 | 0 |
| 43 | 39 | 15 | 6 | 86 | 79 | 11 | 0 | 5000 | 4625 | 0 | 0 |

## 19s. 6d.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 19 | 6 | 44 | 42 | 18 | 0 | 87 | 84 | 16 | 6 |
| 2 | 1 | 19 | 0 | 45 | 43 | 17 | 6 | 88 | 85 | 16 | 0 |
| 3 | 2 | 18 | 6 | 46 | 44 | 17 | 0 | 89 | 86 | 15 | 6 |
| 4 | 3 | 18 | 0 | 47 | 45 | 16 | 6 | 90 | 87 | 15 | 0 |
| 5 | 4 | 17 | 6 | 48 | 46 | 16 | 0 | 91 | 88 | 14 | 6 |
| 6 | 5 | 17 | 0 | 49 | 47 | 15 | 6 | 92 | 89 | 14 | 0 |
| 7 | 6 | 16 | 6 | 50 | 48 | 15 | 0 | 93 | 90 | 13 | 6 |
| 8 | 7 | 16 | 0 | 51 | 49 | 14 | 6 | 94 | 91 | 13 | 0 |
| 9 | 8 | 15 | 6 | 52 | 50 | 14 | 0 | 95 | 92 | 12 | 6 |
| 10 | 9 | 15 | 0 | 53 | 51 | 13 | 6 | 96 | 93 | 12 | 0 |
| 11 | 10 | 14 | 6 | 54 | 52 | 13 | 0 | 97 | 94 | 11 | 6 |
| 12 | 11 | 14 | 0 | 55 | 53 | 12 | 6 | 98 | 95 | 11 | 0 |
| 13 | 12 | 13 | 6 | 56 | 54 | 12 | 0 | 99 | 96 | 10 | 6 |
| 14 | 13 | 13 | 0 | 57 | 55 | 11 | 6 | 100 | 97 | 10 | 0 |
| 15 | 14 | 12 | 6 | 58 | 56 | 11 | 0 | 108 | 105 | 6 | 0 |
| 16 | 15 | 12 | 0 | 59 | 57 | 10 | 6 | 110 | 107 | 5 | 0 |
| 17 | 16 | 11 | 6 | 60 | 58 | 10 | 0 | 112 | 109 | 4 | 0 |
| 18 | 17 | 11 | 0 | 61 | 59 | 9 | 6 | 120 | 117 | 0 | 0 |
| 19 | 18 | 10 | 6 | 62 | 60 | 9 | 0 | 130 | 126 | 15 | 0 |
| 20 | 19 | 10 | 0 | 63 | 61 | 8 | 6 | 132 | 128 | 14 | 0 |
| 21 | 20 | 9 | 6 | 64 | 62 | 8 | 0 | 140 | 136 | 10 | 0 |
| 22 | 21 | 9 | 0 | 65 | 63 | 7 | 6 | 144 | 140 | 8 | 0 |
| 23 | 22 | 8 | 6 | 66 | 64 | 7 | 0 | 150 | 146 | 5 | 0 |
| 24 | 23 | 8 | 0 | 67 | 65 | 6 | 6 | 175 | 170 | 12 | 6 |
| 25 | 24 | 7 | 6 | 68 | 66 | 6 | 0 | 200 | 195 | 0 | 0 |
| 26 | 25 | 7 | 0 | 69 | 67 | 5 | 6 | 250 | 243 | 15 | 0 |
| 27 | 26 | 6 | 6 | 70 | 68 | 5 | 0 | 300 | 292 | 10 | 0 |
| 28 | 27 | 6 | 0 | 71 | 69 | 4 | 6 | 365 | 355 | 17 | 6 |
| 29 | 28 | 5 | 6 | 72 | 70 | 4 | 0 | 400 | 390 | 0 | 0 |
| 30 | 29 | 5 | 0 | 73 | 71 | 3 | 6 | 500 | 487 | 10 | 0 |
| 31 | 30 | 4 | 6 | 74 | 72 | 3 | 0 | 600 | 585 | 0 | 0 |
| 32 | 31 | 4 | 0 | 75 | 73 | 2 | 6 | 700 | 682 | 10 | 0 |
| 33 | 32 | 3 | 6 | 76 | 74 | 2 | 0 | 750 | 731 | 5 | 0 |
| 34 | 33 | 3 | 0 | 77 | 75 | 1 | 6 | 800 | 780 | 0 | 0 |
| 35 | 34 | 2 | 6 | 78 | 76 | 1 | 0 | 900 | 877 | 10 | 0 |
| 36 | 35 | 2 | 0 | 79 | 77 | 0 | 6 | 1000 | 975 | 0 | 0 |
| 37 | 36 | 1 | 6 | 80 | 78 | 0 | 0 | 1250 | 1218 | 15 | 0 |
| 38 | 37 | 1 | 0 | 81 | 78 | 19 | 6 | 1500 | 1462 | 10 | 0 |
| 39 | 38 | 0 | 6 | 82 | 79 | 19 | 0 | 1750 | 1706 | 5 | 0 |
| 40 | 39 | 0 | 0 | 83 | 80 | 18 | 6 | 2000 | 1950 | 0 | 0 |
| 41 | 39 | 19 | 6 | 84 | 81 | 18 | 0 | 2240 | 2184 | 0 | 0 |
| 42 | 40 | 19 | 0 | 85 | 82 | 17 | 6 | 3000 | 2925 | 0 | 0 |
| 43 | 41 | 18 | 6 | 86 | 83 | 17 | 0 | 5000 | 4875 | 0 | 0 |

## 19s.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 19 | 0 | 44 | 41 | 16 | 0 | 87 | 82 | 13 | 6 |
| 2 | 1 | 18 | 0 | 45 | 42 | 15 | 0 | 88 | 83 | 12 | 0 |
| 3 | 2 | 17 | 0 | 46 | 43 | 14 | 0 | 89 | 84 | 11 | 0 |
| 4 | 3 | 16 | 0 | 47 | 44 | 13 | 0 | 90 | 85 | 10 | 0 |
| 5 | 4 | 15 | 0 | 48 | 45 | 12 | 0 | 91 | 86 | 9 | 0 |
| 6 | 5 | 14 | 0 | 49 | 46 | 11 | 0 | 92 | 87 | 8 | 0 |
| 7 | 6 | 13 | 0 | 50 | 47 | 10 | 0 | 93 | 88 | 7 | 0 |
| 8 | 7 | 12 | 0 | 51 | 48 | 9 | 0 | 94 | 89 | 6 | 0 |
| 9 | 8 | 11 | 0 | 52 | 49 | 8 | 0 | 95 | 90 | 5 | 0 |
| 10 | 9 | 10 | 0 | 53 | 50 | 7 | 0 | 96 | 91 | 4 | 0 |
| 11 | 10 | 9 | 0 | 54 | 51 | 6 | 0 | 97 | 92 | 3 | 0 |
| 12 | 11 | 8 | 0 | 55 | 52 | 5 | 0 | 98 | 93 | 2 | 0 |
| 13 | 12 | 7 | 0 | 56 | 53 | 4 | 0 | 99 | 94 | 1 | 0 |
| 14 | 13 | 6 | 0 | 57 | 54 | 3 | 0 | 100 | 95 | 0 | 0 |
| 15 | 14 | 5 | 0 | 58 | 55 | 2 | 0 | 108 | 102 | 12 | 0 |
| 16 | 15 | 4 | 0 | 59 | 56 | 1 | 0 | 110 | 104 | 10 | 0 |
| 17 | 16 | 3 | 0 | 60 | 57 | 0 | 0 | 112 | 106 | 8 | 0 |
| 18 | 17 | 2 | 0 | 61 | 57 | 19 | 0 | 120 | 114 | 0 | 0 |
| 19 | 18 | 1 | 0 | 62 | 58 | 18 | 0 | 130 | 123 | 10 | 0 |
| 20 | 19 | 0 | 0 | 63 | 59 | 17 | 0 | 132 | 125 | 8 | 0 |
| 21 | 19 | 19 | 0 | 64 | 60 | 16 | 0 | 140 | 133 | 0 | 0 |
| 22 | 20 | 18 | 0 | 65 | 61 | 15 | 0 | 144 | 136 | 16 | 0 |
| 23 | 21 | 17 | 0 | 66 | 62 | 14 | 0 | 150 | 142 | 10 | 0 |
| 24 | 22 | 16 | 0 | 67 | 63 | 13 | 0 | 175 | 166 | 5 | 0 |
| 25 | 23 | 15 | 0 | 68 | 64 | 12 | 0 | 200 | 190 | 0 | 0 |
| 26 | 24 | 14 | 0 | 69 | 65 | 11 | 0 | 250 | 237 | 10 | 0 |
| 27 | 25 | 13 | 0 | 70 | 66 | 10 | 0 | 300 | 285 | 0 | 0 |
| 28 | 26 | 12 | 0 | 71 | 67 | 9 | 0 | 365 | 346 | 15 | 0 |
| 29 | 27 | 11 | 0 | 72 | 68 | 8 | 0 | 400 | 380 | 0 | 0 |
| 30 | 28 | 10 | 0 | 73 | 69 | 7 | 0 | 500 | 475 | 0 | 0 |
| 31 | 29 | 9 | 0 | 74 | 70 | 6 | 0 | 600 | 570 | 0 | 0 |
| 32 | 30 | 8 | 0 | 75 | 71 | 5 | 0 | 700 | 665 | 0 | 0 |
| 33 | 31 | 7 | 0 | 76 | 72 | 4 | 0 | 750 | 712 | 10 | 0 |
| 34 | 32 | 6 | 0 | 77 | 73 | 3 | 0 | 800 | 760 | 0 | 0 |
| 35 | 33 | 5 | 0 | 78 | 74 | 2 | 0 | 900 | 855 | 0 | 0 |
| 36 | 34 | 4 | 0 | 79 | 75 | 1 | 0 | 1000 | 950 | 0 | 0 |
| 37 | 35 | 3 | 0 | 80 | 76 | 0 | 0 | 1250 | 1187 | 10 | 0 |
| 38 | 36 | 2 | 0 | 81 | 76 | 19 | 0 | 1500 | 1425 | 0 | 0 |
| 39 | 37 | 1 | 0 | 82 | 77 | 18 | 0 | 1750 | 1662 | 10 | 0 |
| 40 | 38 | 0 | 0 | 83 | 78 | 17 | 0 | 2000 | 1900 | 0 | 0 |
| 41 | 38 | 19 | 0 | 84 | 79 | 16 | 0 | 2240 | 2128 | 0 | 0 |
| 42 | 39 | 18 | 0 | 85 | 80 | 15 | 0 | 3000 | 2850 | 0 | 0 |
| 43 | 40 | 17 | 0 | 86 | 81 | 14 | 0 | 5000 | 4750 | 0 | 0 |

## 21s.

| No | £ | s. | d. | No | £ | s. | d. | No | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1 | 0 | 44 | 46 | 4 | 0 | 87 | 91 | 7 | 0 |
| 2 | 2 | 2 | 0 | 45 | 47 | 5 | 0 | 88 | 92 | 8 | 0 |
| 3 | 3 | 3 | 0 | 46 | 48 | 6 | 0 | 89 | 93 | 9 | 0 |
| 4 | 4 | 4 | 0 | 47 | 49 | 7 | 0 | 90 | 94 | 10 | 0 |
| 5 | 5 | 5 | 0 | 48 | 50 | 8 | 0 | 91 | 95 | 11 | 0 |
| 6 | 6 | 6 | 0 | 49 | 51 | 9 | 0 | 92 | 96 | 12 | 0 |
| 7 | 7 | 7 | 0 | 50 | 52 | 10 | 0 | 93 | 97 | 13 | 0 |
| 8 | 8 | 8 | 0 | 51 | 53 | 11 | 0 | 94 | 98 | 14 | 0 |
| 9 | 9 | 9 | 0 | 52 | 54 | 12 | 0 | 95 | 99 | 15 | 0 |
| 10 | 10 | 10 | 0 | 53 | 55 | 13 | 0 | 96 | 100 | 16 | 0 |
| 11 | 11 | 11 | 0 | 54 | 56 | 14 | 0 | 97 | 101 | 17 | 0 |
| 12 | 12 | 12 | 0 | 55 | 57 | 15 | 0 | 98 | 102 | 18 | 0 |
| 13 | 13 | 13 | 0 | 56 | 58 | 16 | 0 | 99 | 103 | 19 | 0 |
| 14 | 14 | 14 | 0 | 57 | 59 | 17 | 0 | 100 | 105 | 0 | 0 |
| 15 | 15 | 15 | 0 | 58 | 60 | 18 | 0 | 108 | 113 | 8 | 0 |
| 16 | 16 | 16 | 0 | 59 | 61 | 19 | 0 | 110 | 115 | 10 | 0 |
| 17 | 17 | 17 | 0 | 60 | 63 | 0 | 0 | 112 | 117 | 12 | 0 |
| 18 | 18 | 18 | 0 | 61 | 64 | 1 | 0 | 120 | 126 | 0 | 0 |
| 19 | 19 | 19 | 0 | 62 | 65 | 2 | 0 | 130 | 136 | 10 | 0 |
| 20 | 21 | 0 | 0 | 63 | 66 | 3 | 0 | 132 | 138 | 12 | 0 |
| 21 | 22 | 1 | 0 | 64 | 67 | 4 | 0 | 140 | 147 | 0 | 0 |
| 22 | 23 | 2 | 0 | 65 | 68 | 5 | 0 | 144 | 151 | 4 | 0 |
| 23 | 24 | 3 | 0 | 66 | 69 | 6 | 0 | 150 | 157 | 10 | 0 |
| 24 | 25 | 4 | 0 | 67 | 70 | 7 | 0 | 175 | 183 | 15 | 0 |
| 25 | 26 | 5 | 0 | 68 | 71 | 8 | 0 | 200 | 210 | 0 | 0 |
| 26 | 27 | 6 | 0 | 69 | 72 | 9 | 0 | 250 | 262 | 10 | 0 |
| 27 | 28 | 7 | 0 | 70 | 73 | 10 | 0 | 300 | 315 | 0 | 0 |
| 28 | 29 | 8 | 0 | 71 | 74 | 11 | 0 | 365 | 383 | 5 | 0 |
| 29 | 30 | 9 | 0 | 72 | 75 | 12 | 0 | 400 | 420 | 0 | 0 |
| 30 | 31 | 10 | 0 | 73 | 76 | 13 | 0 | 500 | 525 | 0 | 0 |
| 31 | 32 | 11 | 0 | 74 | 77 | 14 | 0 | 600 | 630 | 0 | 0 |
| 32 | 33 | 12 | 0 | 75 | 78 | 15 | 0 | 700 | 735 | 0 | 0 |
| 33 | 34 | 13 | 0 | 76 | 79 | 16 | 0 | 750 | 787 | 10 | 0 |
| 34 | 35 | 14 | 0 | 77 | 80 | 17 | 0 | 800 | 840 | 0 | 0 |
| 35 | 36 | 15 | 0 | 78 | 81 | 18 | 0 | 900 | 945 | 0 | 0 |
| 36 | 37 | 16 | 0 | 79 | 82 | 19 | 0 | 1000 | 1050 | 0 | 0 |
| 37 | 38 | 17 | 0 | 80 | 84 | 0 | 0 | 1250 | 1312 | 10 | 0 |
| 38 | 39 | 18 | 0 | 81 | 85 | 1 | 0 | 1500 | 1575 | 0 | 0 |
| 39 | 40 | 19 | 0 | 82 | 86 | 2 | 0 | 1750 | 1837 | 10 | 0 |
| 40 | 42 | 0 | 0 | 83 | 87 | 3 | 0 | 2000 | 2100 | 0 | 0 |
| 41 | 43 | 1 | 0 | 84 | 88 | 4 | 0 | 2240 | 2352 | 0 | 0 |
| 42 | 44 | 2 | 0 | 85 | 89 | 5 | 0 | 3000 | 3150 | 0 | 0 |
| 43 | 45 | 3 | 0 | 86 | 90 | 6 | 0 | 5000 | 5250 | 0 | 0 |

## CALENDAR FOR 1931.

| January | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | | 1 | 2 | 3 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 |

| February | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |

| March | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | | | | |

| April | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | | |

| May | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | | | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | | | | | | |

| June | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | 30 | | | | |

| July | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | 31 | |

| August | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | | | | 1 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 30 | 31 | | | | | |

| September | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 | | | |

| October | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | | 1 | 2 | 3 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 |

| November | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | | | | | |

| December | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 | 31 | | |

## CALENDAR FOR 1932.

| January | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | | | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | | | | | | |

| February | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | | | | | |

| March | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 | 31 | | |

| April | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | | | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |

| May | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | | | | |

| June | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | | |

| July | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | | | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | | | | | | |

| August | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | 30 | 31 | | | |

| September | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | | 1 | 2 | 3 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | |

| October | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | | | | 1 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 30 | 31 | | | | | |

| November | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 | | | |

| December | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | | 1 | 2 | 3 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 |

## CALENDAR FOR 1933.

| January | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | | | | |

| February | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | | | | |

| March | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | 31 | |

| April | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | | | | 1 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 30 | | | | | | |

| May | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | | | | 1 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 30 | 31 | | | | | |

| June | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | | 1 | 2 | 3 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | |

| July | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | | | | 1 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 30 | 31 | | | | | |

| August | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 | 31 | | |

| September | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | | | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |

| October | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | | | | |

| November | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | | |

| December | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | | | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | | | | | | |

## CALENDAR FOR 1934.

| January | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | 30 | 31 | | | |

| February | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | | 1 | 2 | 3 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | | | |

| March | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | | 1 | 2 | 3 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 |

| April | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | | | | | |

| May | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 | 31 | | |

| June | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | | | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |

| July | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | | | | |

| August | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | 31 | |

| September | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | | | | 1 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 30 | | | | | | |

| October | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | 30 | 31 | | | |

| November | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | | 1 | 2 | 3 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | |

| December | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | | | | 1 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 30 | 31 | | | | | |

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## SOAPMAKERS

BY APPOINTMENT

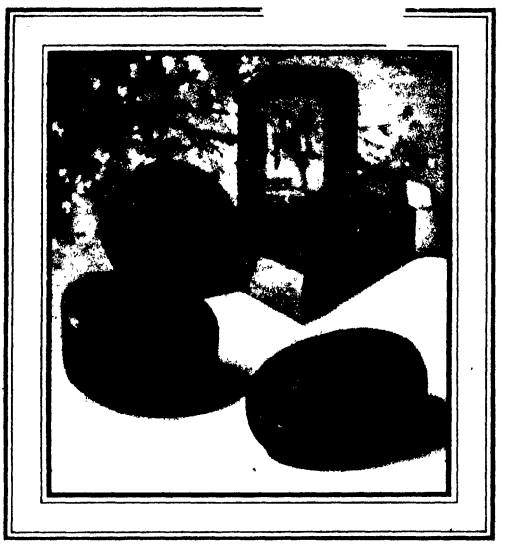
TO HER MAJESTY
THE QVEEN

BY APPOINTMENT TO
THEIR MAJESTIES

## THE KING & QVEEN

& TO THEIR LATE MAJESTIES

QVEEN VICTORIA & KING EDWARD VII



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GOLDEN GLORY represents the latest discovery in the technique of soap-making. In it are those freely-lathering vegetable oils which modern science has placed at our disposal, refined and purified to crystal clarity by our unique process. Delightfully perfumed, it is essentially the soap for the modern woman.

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